

CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY

DRAFT REVISED FEASIBILITY STUDY REPORT

Former Chevron Service Station No. 211556
Toledo, Washington

November 16, 2020



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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

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site	Former Chevron Service Station No. 211556 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), Arcadis U.S., Inc. (Arcadis) prepared this Draft Revised Feasibility Study Report for Former Chevron Service Station No. 211556 located at 101 Mulford Road in Toledo, WA (site). Agreed Order (AO) No. DE 5236 with Washington State Department of Ecology (Ecology) requires Chevron to prepare a feasibility study report; and prepare a draft Cleanup Action Plan. This Draft Revised Feasibility Study Report was prepared as required by AO No. DE5236.

The former Chevron property is also known as the Cowlitz Food and Fuel site, or Former Texaco Service Station No. 211556, and is identified by the Ecology Toxics Cleanup Program as Facility Site ID No. 1166.

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

This updated version of the FS was revised to address Ecology comments, provided by letter dated August 18, 2020, on the previous agency review draft FS that was submitted by Leidos in April 2017 (Leidos 2017). 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 2017. Added Table 2A, Summary of Groundwater Monitoring Data 2017-2020
- Section 5.2, Description of Cleanup Action Alternative 4 – Updated to indicate that the property transferred to a new owner in 2019, and Chevron EMC will work with the property owner to coordinate excavation activities in conjunction with service station upgrades.
- 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 unrevised from the previous draft FS submitted by Leidos.

BACKGROUND

This section describes the site and summarizes historical activities conducted at the property.

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 that are currently owned by Mr. Charles Vineyard (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 Number [APN] 012429003001 and APN 012429004000). This portion of the site will hereafter be referred to as the “active station.” The third parcel (APN 012429002001), which is located south of Mulford Road, was formerly the location of another gasoline service station (hereafter “inactive station”). This portion of the site has generally been vacant since approximately 1994. However, a drive-thru espresso stand (Ami Rae’s Espresso & More) is believed to have been operating on this portion of the site since sometime in 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 site improvements from West Coast Oil in 1986. In March 1990, four USTs and their 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 the current operator, Tri-Tex Oil Company of Castle Rock, Washington.

The property and station 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 has been vacant since the mid-1990s; however, a drive-thru espresso stand (Ami Rae's Espresso & More) is believed to have been operating on this portion of the site since sometime in 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 to 6,300 milligrams per kilogram (mg/kg). Approximately 1,000 cubic yards of petroleum contaminated soil was reportedly excavated from the UST basin and treated on-site via aeration remediation. (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, 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 also 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 reevaluation of the selected cleanup approach that had been presented in the 1994 CAP. This work was performed pursuant to Agreed Order Nos. DE S361, S362, and S368, which were issued by Ecology in May 1995.

In August 1995, a supplemental investigation was performed by SECOR International Incorporated (SECOR), on behalf of TDPI, to further assess the extent of petroleum contaminant impact 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 Agreed Order Nos. 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. 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

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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 contaminated 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 through 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 contaminated soil impacts from the active station did not appear to have migrated onto the inactive station portion of the site. (SAIC, 2004b)

On December 20, 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 Agreed Order could be prepared for the site.

The new Agreed Order (No. DE 08 TCPSR-5236) became effective on March 1, 2010 and fully supersedes and replaces Agreed Order Nos. DE-00TCPSR-297, -298, and -299. This Agreed Order requires 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.

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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 are 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 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 on December 1, 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 have not detected the presence of petroleum contamination at this location. Additional details regarding these assessment activities are 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 version of the 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 2013 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 cost 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 was 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 rain water 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 are 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 Agreed Order for the site.

2.4 Site Geology and Hydrology

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 below ground surface (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 indicate that current conditions at the site do 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 - Drinking-water wells are currently located within ¼ mile of the site, and 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 during 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 indicate that current site conditions do 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 2011 soil vapor sampling and conditions at the site would not result in indoor air conditions that would create a 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 excavated institutional controls preventing excavation of deeper soil, MTCA allows the use of a conditional point of compliance set in the soils throughout the site at a depth of 6 feet bgs).
- **Protection of Groundwater:** The point of compliance is throughout the site.

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	250	0.1
Soil (mg/kg) (0 – 15 ft bgs)	Entire Site	30	2,000	2,000	0.03	7	6	9	220	0.1
Groundwater (micrograms per liter)	Active Station Property Boundary	800	500	500	5	1,000	700	1,000	15	0.1

These cleanup levels presented above are derived from:

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

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 soils 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 these locations 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. Groundwater flow direction has continued to be primarily toward the southeast. In monitoring well MW-111, GRO, DRO and HRO continue to be regularly 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 cleanup levels in monitoring well B-4.

No LNAPL was observed in any of the monitoring wells during these sampling events. With the exception of wells MW-111, B-3, and B-4, COC concentrations in the well network were either not detected or detected at concentrations less than 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, Leidos identified the following remedial action approaches, 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 capillary fringe, and would not address contamination in saturated zone soils; therefore, it would not be well suited as a standalone 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 petroleum subsurface air flow that is inherent with both of these technologies, and because these technologies will 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 time frame 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 system 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 manner similar to the Interim Remedial Action 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 for 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, it 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, 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, cleanup goals throughout the site would be pursued through MNA, until a change in use of the active station property, such as upgrades to the existing service station, or redevelopment of the property, 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 right-of-ways. 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 land use scenario, 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. Prior to site redevelopment, exposure to hazardous substances would be prevented through the use of institutional controls, such as maintenance of asphalt/concrete surfaces to cap contaminated soil, and an environmental covenant to prevent groundwater use at the site.

The property was transferred to a new owner in December 2019. The new property owner has indicated that plans for upgrades to the service station are currently being developed. Therefore, the restoration timeframe for this alternative, which includes excavation implementation and post-excavation confirmation monitoring, is estimated to be less than 30 years. However, the restoration time frame for this alternative is highly dependent on the timing of station upgrades or a land-use change on the active station property. Therefore, if station upgrades or a redevelopment of the property were to occur sooner, for example in

the next five years, the restoration time frame would be reduced accordingly, and could potentially be equivalent or even less than the other alternatives. CEMC will work with the property owner to coordinate excavation activities in conjunction with service station upgrades.

Because Alternative 4 assumes that active remediation at the site could be delayed for a period of up to approximately 20 years, this alternative would also include institutional controls to establish financial assurances for funding to perform the property-wide excavation at the time of future station upgrades or redevelopment of the property.

Alternative 4 Conceptual Design Summary

- Institutional controls would be used to restrict site access, require asphalt/concrete cover maintenance, and restrict groundwater use and subsurface activities at the site. Institutional controls would also be used to assure funding for a future property-wide excavation.
- MNA would be performed to verify that the groundwater contaminant plume was stable and/or shrinking, until future service station upgrades or redevelopment of the property allowed a property-wide excavation to be performed.
- 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 to attain site cleanup levels is 10 to 30 years.

Alternative 4 - Advantages Compared to Other Alternatives

- Implementation of this alternative in conjunction with redevelopment or upgrades to the site would likely allow better management of short-term risks because the one or both of the businesses at the site 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 Shell 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 is difficult to predict due to unknowns regarding timing of future service station upgrades or redevelopment of the active station property.
- Potential to result in the longest restoration timeframe.

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 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]).
- 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 five to ten 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 - Advantages Compared to Other Alternatives

- Active remediation component of this alternative would result in the greatest reduction in contaminant source mass, which should result in the shortest restoration time frame of all alternatives evaluated.

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 time frame;

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 time frame:

- Potential risks posed by the site to human health and the environment;
- Practicability of achieving a shorter restoration time frame;
- 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, TDPI is 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. Under MTCA, the FS will be released for public comment prior to being finalized by Ecology; therefore, if necessary, the final FS will be revised to address any public comments that are received at that time.

Consideration of public concerns is also an evaluation criterion used in the disproportionate cost analysis performed for this FS. Additional details regarding the disproportionate cost analysis 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 uses permanent solutions to the maximum extent practicable, a disproportionate cost analysis (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

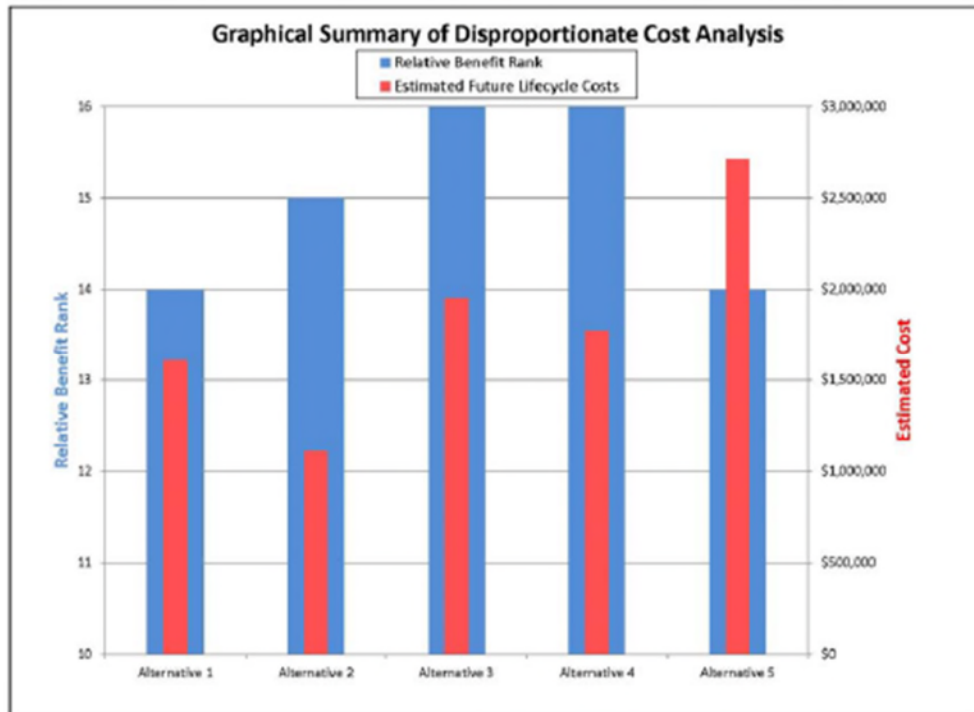
To complete the DCA, project lifecycle costs were estimated for each of the alternatives. The following estimated lifecycle costs include all costs associated with implementation of alternative, until the site cleanup levels are met and no further action is required by Ecology:

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 future property-wide excavation in conjunction with service station upgrades or redevelopment) 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 are based on current CEMC best practices for petroleum contamination remediation, and the professional experience and judgment of the CEMC and Leidos 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 five 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 time frame. 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. Therefore, a shorter restoration time frame 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 CEMC/Leidos project team recommends selection of Alternative 4 (MNA, institutional controls, and future property-wide excavation in conjunction with service station upgrades or redevelopment) as the preferred cleanup action for this site. Under this alternative no active remediation would take place at the site until service station upgrades or a redevelopment of the active service station property would allow a property-wide excavation to be performed.

Although this alternative has the potential for the longest restoration time frame (up to 30 years), the restoration time frame is still considered reasonable because an active service station continues to be operated at the site, and because the potential risks posed by the site to human health and the environment could be readily controlled by institutional controls. Also, as previously discussed, the restoration time frame for this alternative is highly dependent on the timing of station upgrades or a land-use change on the active station property. Therefore, if this type of event were to occur within a shorter time frame than the 20 year estimate assumed to evaluate this alternative, then the restoration time frame would be reduced accordingly, and could potentially be equivalent or even less than the other alternatives.

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TABLES



TABLE 1
SUMMARY OF HISTORICAL SOIL ANALYTICAL DATA
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington

SAMPLE ID	DEPTH (ft.)	DATE SAMPLED	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)	TPH-HRO (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-Benzene (mg/kg)	Total Xylenes (mg/kg)	Benzo(a)anthracene ¹ (mg/kg)	Benzo(a)pyrene ¹ (mg/kg)	Benzo(b)fluoranthene ¹ (mg/kg)	Benzo(k)fluoranthene ¹ (mg/kg)	Chrysene ¹ (mg/kg)	Dibenz(a,h)anthracene ¹ (mg/kg)	Indeno (1,2,3-cd)pyrene ¹ (mg/kg)	Total Toxicity of Benzo(a)pyrene ² (mg/kg)	Total Lead (mg/kg)
B-201-80	UNK	pre 2004	<1.0	--	--	<0.05	<0.1	<0.1	<0.1	--	--	--	--	--	--	--	--	--
B-202-80	UNK	pre 2004	<1.0	--	--	<0.05	<0.1	<0.1	<0.1	--	--	--	--	--	--	--	--	--
B-203-65	UNK	pre 2004	<1.0	--	--	<0.05	<0.1	<0.1	<0.1	--	--	--	--	--	--	--	--	--
B-204-75	UNK	pre 2004	55	--	--	<0.05	<0.1	<0.1	<0.1	--	--	--	--	--	--	--	--	--
B-204-125	UNK	pre 2004	14	--	--	<0.05	<0.1	<0.1	<0.1	--	--	--	--	--	--	--	--	--
SB-2	8	12/1/2004	<1.0	<3	<10	<0.005	<0.005	<0.005	<0.02	--	--	--	--	--	--	--	--	--
SB-3-4	4	12/1/2004	260	62	37	<0.02	<0.02	0.1	0.3	--	--	--	--	--	--	--	--	8.76
SB-3-10	10	12/1/2004	840	34	14	2.4	0.7	4.9	9.7	--	--	--	--	--	--	--	--	5.50
SB-3-13	13	12/1/2004	200	--	--	<0.08	<0.1	0.4	0.9	--	--	--	--	--	--	--	--	3.05
SB-4-5	5	12/1/2004	140	63	75	0.03	<0.02	0.07	<0.2	--	--	--	--	--	--	--	--	21.1
SB-4-9	9	12/1/2004	2500	130	<100	9.1	2.9	7.5	<8	--	--	--	--	--	--	--	--	5.90
SB-4-12	12	12/1/2004	250	--	--	<0.2	<0.2	0.6	0.8	--	--	--	--	--	--	--	--	2.93
SB-4-17.5	17.5	12/1/2004	7.0	<3.0	21	<0.005	<0.005	0.01	<0.02	--	--	--	--	--	--	--	--	8.09
SB-5-8	8	12/2/2004	3.4	--	--	<0.005	<0.005	0.006	<0.02	--	--	--	--	--	--	--	--	4.94
SB-5-13	13	12/2/2004	170	3.4	<10	0.6	<0.2	0.7	0.8	--	--	--	--	--	--	--	--	4.13
SB-5-15	15	12/2/2004	20	--	--	0.03	<0.005	0.1	0.1	--	--	--	--	--	--	--	--	4.89
SB-6-9	9	12/2/2004	410	--	--	2.6	0.8	3.4	4.5	--	--	--	--	--	--	--	--	6.82
SB-6-11	11	12/2/2004	810	--	--	3.2	0.8	4.7	6.3	--	--	--	--	--	--	--	--	3.4
SB-7-4	4	12/2/2004	8	<3.0	<10	0.02	<0.005	0.02	<0.02	--	--	--	--	--	--	--	--	4.89
D-120204-1	4	12/2/2004	7.6	<3.0	<10	0.02	<0.02	0.01	<0.02	--	--	--	--	--	--	--	--	4.76
SB-7-7.5	8	12/2/2004	750	--	--	1.1	<0.4	3.1	3	--	--	--	--	--	--	--	--	5.05
SB-7-12	12	12/2/2004	27	<3.0	<10	0.07	<0.02	0.05	0.1	--	--	--	--	--	--	--	--	2.77
SB-7-15	15	12/2/2004	130	--	--	0.6	<0.2	0.4	0.7	--	--	--	--	--	--	--	--	3.02
D-120204-2	15	12/2/2004	210	--	--	0.5	<0.08	0.6	1	--	--	--	--	--	--	--	--	2.45
SB-8-4	4	12/2/2004	6.9	<3.0	<10	<0.005	<0.005	0.008	<0.02	--	--	--	--	--	--	--	--	4.91
SB-8-4 Matrix Spike	4	12/2/2004	3.5	<3.0	<10	<0.005	<0.005	<0.005	<0.02	--	--	--	--	--	--	--	--	7.02
SB-8-4 Matrix Dup	4	12/2/2004	8.9	<3.0	<10	<0.005	<0.005	0.01	0.02	--	--	--	--	--	--	--	--	7.45
SB-8-8	8	12/2/2004	2500	130	<20	6.3	<4	6.1	11	--	--	--	--	--	--	--	--	6.52
SB-8-13	13	12/2/2004	11	<3.0	14	0.1	0.01	0.01	0.04	--	--	--	--	--	--	--	--	7.87
EXI-10-5	5	10/6/2010	<10	<50	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--
EXI-11-5	5	10/6/2010	16	<50	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--
EXI-12-3	3	10/6/2010	<10	<50	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--
EXI-13-3	3	10/6/2010	<10	<50	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--
EXI-14-9.5	9.5	10/6/2010	<10	140	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--
EXI-15-5	5	10/6/2010	<10	<50	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--
EXI-16-3	3	10/6/2010	<10	<50	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--
EXI-23-5	5	10/6/2010	22	160	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--
EXI-24-3	3	10/6/2010	<10	<50	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--
EXI-25-9.5	9.5	10/6/2010	28	<50	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--
EXI-26-5	5	10/6/2010	24	<50	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--
EXI-27-3	5	10/6/2010	<10	<50	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--
EXI-28-9.5	9.5	10/7/2010	12	<50	<100	<0.02	<0.05	<0.05	<0.15	0.0010	<0.00084	0.0016	<0.00084	0.0026	<0.00084	<0.00084	0.001	7.91
EXI-29-9.5	9.5	10/7/2010	25	<50	<100	<0.02	<0.05	<0.05	<0.15	0.00091	0.0011	0.0017	<0.00081	0.0014	<0.00081	0.00088	0.002	11.4
EXI-31-5	5	10/7/2010	<10	<50	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--
EXI-32-3	3	10/7/2010	<10	<50	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--
EXI-35-5	5	10/7/2010	<10	<50	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--
EXI-36-3	3	10/7/2010	<10	<50	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--
EXI-37-6	6	10/7/2010	<10	<50	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--



TABLE 1
SUMMARY OF HISTORICAL SOIL ANALYTICAL DATA
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington

SAMPLE ID	DEPTH (ft.)	DATE SAMPLED	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)	TPH-HRO (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-Benzene (mg/kg)	Total Xylenes (mg/kg)	Benzo(a)anthracene ¹ (mg/kg)	Benzo(a)pyrene ¹ (mg/kg)	Benzo(b)fluoranthene ¹ (mg/kg)	Benzo(k)fluoranthene ¹ (mg/kg)	Chrysene ¹ (mg/kg)	Dibenz(a,h)anthracene ¹ (mg/kg)	Indeno (1,2,3-cd)pyrene ¹ (mg/kg)	Total Toxicity of Benzo(a)pyrene ² (mg/kg)	Total Lead (mg/kg)
EX1-38-9	9	10/7/2010	22	<50	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--
EX1-39-3	3	10/7/2010	<10	<50	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--
EX1-40-10	10	10/7/2010	20	<50	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--
EX1-41-5	5	10/7/2010	10	<50	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--
EX1-42-3	3	10/7/2010	<10	<50	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--
EX1-49-9	9	10/8/2010	<10	<50	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--
EX1-50-9	9	10/8/2010	19	120	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--
EX1-52-9.5	9.5	10/8/2010	<10	<50	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--
EX1-52-9.5 Dup	9.5	10/8/2010	<10	<50	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--
EX1-53-10	10	10/11/2010	<10	<50	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--
EX1-53-10 Dup	10	10/11/2010	<10	--	--	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--
EX1-54-10	10	10/11/2010	<10	<50	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--
EX1-54-10 Dup	10	10/11/2010	--	<50	<100	--	--	--	<0.15	--	--	--	--	--	--	--	--	--
EX1-56-10	10	10/12/2010	<10	<50	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--
EX1-56-10 Dup	10	10/12/2010	<10	--	--	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--
EX1-57-10	10	10/12/2010	26	<50	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--
EX1-57-10 Dup	10	10/12/2010	--	<50	<100	--	--	--	<0.15	--	--	--	--	--	--	--	--	--
EX1-58-10	10	10/12/2010	<10	<50	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--
EX1-59-5	5	10/12/2010	<10	<50	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--
EX1-60-10	10	10/12/2010	<10	<50	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--
EX1-61-12	12	10/12/2010	260	105	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--
EX1-62-12	12	10/12/2010	50	<50	<100	<0.02	<0.05	<0.05	<0.15	0.00089	0.0011	0.0014	0.00089	0.0034	0.00089	0.00089	0.002	9.50
EX1-63-12	12	10/12/2010	750	<50	<100	<0.02	<0.05	<0.05	<0.15	0.00074	0.00074	0.00074	0.00074	0.0016	0.00074	0.00074	0.001	6.16
EX1-64-12	12	10/12/2010	71	<50	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--
EX1-65-12	12	10/12/2010	65	65	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--
EX2-1-8.5	8.5	10/13/2010	<10	<50	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--
EX2-2-8.5	8.5	10/14/2010	<10	<50	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--
EX2-3-5	5	10/14/2010	<10	<50	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--
EX2-4-3	3	10/14/2010	<10	<50	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--
EX2-5-8.5	8.5	10/14/2010	<10	<50	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--
EX2-5-8.5 Dup	8.5	10/14/2010	<10	<50	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--
EX2-6-5	5	10/14/2010	<10	<50	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--
EX2-7-3	3	10/14/2010	<10	<50	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--
EX2-8-8.5	8.5	10/14/2010	<10	<50	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--
EX2-9-5	5	10/14/2010	<10	<50	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--
EX2-10-3	3	10/14/2010	<10	<50	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--
EX2-11-8.5	8.5	10/14/2010	<10	<50	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--
EX2-12-5	5	10/14/2010	<10	<50	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--
EX2-13-3	3	10/14/2010	<10	<50	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--
EX2-13-3 Dup	3	10/14/2010	<10	<50	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--
EX2-15-3	3	10/18/2010	<10	<50	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--
EX2-15-3 Dup	3	10/18/2010	<10	<50	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--
EX2-16-5	5	10/18/2010	<10	<50	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--
EX2-17-8.5	8.5	10/18/2010	<10	<50	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--
EX2-18-3	3	10/18/2010	<10	<50	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--
EX2-19-5	5	10/18/2010	<10	<50	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--
EX2-20-8.5	8.5	10/18/2010	<10	<50	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--
EX2-21-3	3	10/18/2010	<10	<50	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--

TABLE 1
SUMMARY OF HISTORICAL SOIL ANALYTICAL DATA
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington

SAMPLE ID	DEPTH (ft.)	DATE SAMPLED	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)	TPH-HRO (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-Benzene (mg/kg)	Total Xylenes (mg/kg)	Benzo(a)anthracene ¹ (mg/kg)	Benzo(a)pyrene ¹ (mg/kg)	Benzo(b)fluoranthene ¹ (mg/kg)	Benzo(k)fluoranthene ¹ (mg/kg)	Chrysene ¹ (mg/kg)	Dibenz(a,h)anthracene ¹ (mg/kg)	Indeno(1,2,3-cd)pyrene ¹ (mg/kg)	Total Toxicity of Benzo(a)pyrene ² (mg/kg)	Total Lead (mg/kg)
EX2-22-5	5	10/18/2010	<10	<50	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--
EX2-23-3	3	10/18/2010	<10	<50	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--
EX2-24-5	5	10/18/2010	<10	<50	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--
EX2-25-8.5	8.5	10/18/2010	<10	<50	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--
EX2-26-8.5	8.5	10/19/2010	<10	<50	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--
EX2-27-3	3	10/19/2010	<10	<50	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--
EX2-28-5	5	10/19/2010	<10	<50	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--
EX2-29-8.5	8.5	10/19/2010	<10	<50	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--
EX2-30-3	3	10/19/2010	<10	<50	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--
EX2-30-3 Dup	3	10/19/2010	--	<50	<100	--	--	--	--	--	--	--	--	--	--	--	--	--
EX2-31-5	5	10/19/2010	<10	<50	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--
EX2-32-8.5	8.5	10/19/2010	<10	<50	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--
EX2-33-10.5	10.5	10/20/2010	29	<50	<100	<0.02	0.06	<0.05	0.18	--	--	--	--	--	--	--	--	--
EX2-34-10.5	10.5	10/20/2010	29	<50	<100	<0.02	<0.05	<0.05	0.11	--	--	--	--	--	--	--	--	--
EX2-35-10.5	10.5	10/20/2010	980	<50	<100	<0.02	0.08	1.1	4.40	--	--	--	--	--	--	--	--	--
EX2-36-10.5	10.5	10/20/2010	22	<50	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--
EX2-37-10.5	10.5	10/20/2010	22	<50	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--
EX2-37-10.5 Dup	10.5	10/20/2010	27	<50	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--
SB-9-4	4	11/4/2013	5.0	<3.7	<12	<0.065	<0.0065	0.0072	<0.019	<0.0082	<0.0082	<0.0082	<0.0082	<0.0041	<0.0082	<0.0082	0.001	8.80
SB-9-9	9	11/8/2013	2,400	52	<11	0.56	4.5	<2.7	5.0	0.0053	0.0020	0.0020	0.0082	0.0050	<0.0073	<0.0073	0.003	4.63
SB-9-11	11	11/8/2013	<0.9	<3.3	<11	<0.046	<0.0046	<0.0046	<0.014	<0.0074	<0.0074	<0.0074	<0.0074	<0.0037	<0.0074	<0.0074	0.001	3.40
DUP-3-110813	11	11/8/2013	<0.9	<3.2	<11	<0.043	0.0051	<0.0043	<0.013	<0.0072	<0.0072	<0.0072	<0.0072	<0.0036	<0.0072	<0.0072	0.001	2.64
SB-10-2	2	11/4/2013	2.5	<3.9	<13	<0.075	0.013	0.023	0.11	<0.0085	<0.0085	<0.0085	<0.0085	0.0013	<0.0085	<0.0085	0.001	7.57
SB-10-6	6	11/6/2013	1,800	96	<12	< 0.27	0.35	1.0	1.9	0.0070	0.0037	0.0036	0.0019	0.0080	<0.0082	<0.0082	0.005	10.7
SB-10-9	9	11/7/2013	5,900	160	<11	0.65	4.2	7.5	15	0.012	0.0046	0.0041	0.0014	0.011	<0.0075	0.0012	0.007	7.13
SB-10-13	13	11/7/2013	<1	<3.3	<11	<0.048	<0.0048	<0.0048	<0.015	<0.0073	<0.0073	<0.0073	<0.0073	0.0080	<0.0073	<0.0073	0.001	2.53
SB-11-10	10	11/6/2013	19	<3.3	<11	<0.048	0.0049	0.024	0.046	0.0075	<0.0073	0.0017	0.0097	0.0024	<0.0073	<0.0073	0.001	5.79
SB-11-12.5	12.5	11/6/2013	<1	<3.3	<11	<0.048	<0.0048	<0.0048	<0.014	<0.0073	<0.0073	<0.0073	<0.0073	<0.0037	<0.0073	<0.0073	0.001	6.79
SB-12-9.5	9.5	11/6/2013	1.5	<3.3	15	<0.055	<0.0055	<0.0055	<0.016	0.0015	0.0021	0.0032	0.0011	0.0026	<0.0074	0.0011	0.003	6.34
SB-12-10.5	10.5	11/6/2013	1,600	2,500	<110	< 0.19	2.2	<1.5	3.4	<0.0072	<0.0072	<0.0072	<0.0072	0.017	<0.0072	<0.0072	0.011	11.0
SB-12-12	12	11/6/2013	2.6	<3.3	<11	<0.046	<0.0046	<0.0046	<0.014	<0.0073	<0.0073	<0.0073	<0.0073	<0.0037	<0.0073	<0.0073	0.001	5.70
SB-12-13.5	13.5	11/6/2013	<1.0	<3.3	<11	<0.051	0.017	<0.0051	<0.015	<0.0073	<0.0073	<0.0073	<0.0073	<0.0036	<0.0073	<0.0073	0.001	7.21
SB-13-10.5	10.5	11/7/2013	150	82	14	0.085	0.32	0.17	0.88	<0.0074	<0.0074	0.0011	<0.0074	0.0014	<0.0074	<0.0074	0.001	7.34
SB-13-12.5	12.5	11/7/2013	>1.0	<3.4	<11	<0.052	<0.0052	<0.0052	<0.015	<0.0075	<0.0075	<0.0075	<0.0075	<0.0037	<0.0075	<0.0075	0.001	6.78
SB-14-7	7	11/5/2013	<1.1	<3.5	<12	<0.056	<0.0056	<0.0056	<0.017	0.0039	0.0055	0.0098	0.0042	0.018	0.0027	0.0017	0.008	8.67
SB-14-9.5	9.5	11/7/2013	4,500	190	<11	1.7	8.2	<5.3	9.7	0.027	0.012	0.011	0.0037	0.026	0.0011	0.0022	0.017	7.24
DUP-1-110713	9.5	11/7/2013	2,200	150	<11	< 0.45	<2.6	1.6	4.2	0.014	0.0060	0.0053	0.0021	0.013	<0.0073	0.0012	0.008	6.21
SB-14-12.5	12.5	11/7/2013	28	<3.3	<11	0.013	0.032	0.054	0.059	<0.0074	<0.0074	<0.0074	<0.0074	<0.0037	<0.0074	<0.0074	0.001	3.60
SB-14-14	14	11/7/2013	4.1	<3.2	<11	<0.053	0.0065	0.0059	<0.016	<0.0072	<0.0072	<0.0072	<0.0072	<0.0036	<0.0072	<0.0072	0.001	1.85
SB-15-2	2	11/5/2013	74	36	83	0.032	0.086	0.22	0.65	<0.0092	0.0093	0.0019	<0.0092	0.0034	<0.0092	<0.0092	0.002	11.5
SB-15-6	6	11/6/2013	3,300	160	<11	< 0.57	1.4	3.8	5.7	0.015	0.0079	0.0074	0.0037	0.016	0.0079	0.0013	0.011	12.5
SB-15-9	9	11/7/2013	1,100	69	<11	0.38	1.4	6.8	7.2	0.0051	0.0021	0.0021	0.0081	0.0048	<0.0071	<0.0071	0.003	4.24
SB-15-13	13	11/7/2013	3.6	<3.4	<11	<0.048	<0.0048	0.041	<0.014	<0.0076	<0.0076	<0.0076	<0.0076	<0.0038	<0.0076	<0.0076	0.001	1.78
SB-16-2	2	11/6/2013	210	7.2	<14	< 0.036	<0.15	0.15	0.24	<0.0091	<0.0091	<0.0091	<0.0091	<0.0045	<0.0091	<0.0091	0.001	11.4
SB-16-6	6	11/6/2013	77	4.1	<11	<0.055	0.034	0.012	0.096	0.0029	0.0018	0.0016	0.0081	0.0025	<0.0073	<0.0073	0.003	13.4
SB-16-8	8	11/7/2013	540	17	12	< 0.040	0.17	0.42	0.67	0.0070	0.0029	0.0024	0.0093	0.0055	<0.0074	<0.0074	0.004	5.05
SB-16-10	10	11/7/2013	99	<3.4	12	0.054	0.097	0.22	0.20	<0.0075	<0.0075	0.0018	<0.0075	0.0011	<0.0075	<0.0075	0.001	6.84
SB-17-2	2	11/6/2013	2,800	62	33	< 0.36	1.1	7.9	65	0.0018	<0.0086	0.0020	<0.0086	0.0026	<0.0086	<0.0086	0.002	19.3



TABLE 1
SUMMARY OF HISTORICAL SOIL ANALYTICAL DATA
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington

SAMPLE ID	DEPTH (ft.)	DATE SAMPLED	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)	TPH-HRO (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-Benzene (mg/kg)	Total Xylenes (mg/kg)	Benzo(a)anthracene ¹ (mg/kg)	Benzo(a)pyrene ¹ (mg/kg)	Benzo(b)fluoranthene ¹ (mg/kg)	Benzo(k)fluoranthene ¹ (mg/kg)	Chrysene ¹ (mg/kg)	Dibenz(a,h)anthracene ¹ (mg/kg)	Indeno (1,2,3-cd)pyrene ¹ (mg/kg)	Total Toxicity of Benzo(a)pyrene ² (mg/kg)	Total Lead (mg/kg)
SB-17-8	8	11/8/2013	1,300	25	<11	1.4	1.7	10	20	0.0027	0.0011	0.0013	<0.00074	0.0032	<0.00074	<0.00074	0.002	3.64
SB-17-11	11	11/8/2013	<0.9	<3.3	<11	<0.0046	<0.0046	<0.0046	<0.014	<0.00075	<0.00075	<0.00075	<0.00075	<0.00037	<0.00075	<0.000075	0.001	2.67
SB-18-8	8	11/7/2013	580	<3.4	<11	0.43	1.2	1.4	0.84	<0.00074	<0.00074	<0.00074	<0.00074	0.00055	<0.00074	<0.00074	0.001	4.55
DUP-2-110713	8	11/7/2013	620	7.8	<11	0.46	1.3	1.5	0.92	<0.00074	<0.00074	<0.00074	<0.00074	0.00044	<0.00074	<0.00074	0.001	4.09
SB-18-12	12	11/7/2013	<1	<3.5	<12	<0.0050	<0.0050	<0.0050	<0.015	<0.00077	<0.00077	<0.00077	<0.00077	<0.00038	<0.00077	<0.00077	0.001	3.00
SB-19-9	9	11/8/2013	5.7	<3.2	<11	<0.0048	0.014	0.014	0.042	<0.00072	<0.00072	<0.00072	<0.00072	0.00062	<0.00072	<0.00072	0.008	3.55
SB-19-11	11	11/8/2013	<1	<3.2	<11	<0.0050	<0.0050	<0.0050	<0.015	<0.00072	<0.00072	<0.00072	<0.00072	<0.00036	<0.00072	<0.00072	0.001	2.97
SB-20-2	2	11/8/2013	5.6	19	16	<0.0068	0.0068	<0.0091	<0.020	<0.00087	<0.00087	<0.00087	<0.00087	0.00098	<0.00087	<0.00087	0.001	5.29
SB-20-10	10	11/8/2013	730	65	<11	0.26	0.96	2.1	1.1	0.0054	0.0023	0.0021	0.00072	0.0050	<0.00071	<0.00071	0.003	5.80
SB-20-12	12	11/8/2013	2.1	<3.3	<11	<0.0048	<0.0048	0.0077	<0.014	<0.00073	<0.00073	<0.00073	<0.00073	<0.00036	<0.00073	<0.00073	0.001	6.07
SB-20-14	14	11/8/2013	<1.0	<3.4	<11	<0.0050	<0.0050	<0.0050	<0.015	<0.00075	<0.00075	<0.00075	<0.00075	<0.00037	<0.00075	<0.00075	0.001	3.94
SB-21-6	6	11/8/2013	<1.6	<3.7	<12	<0.0082	<0.0082	<0.0082	<0.025	<0.00082	<0.00082	<0.00082	<0.00082	<0.00041	<0.00082	<0.00082	0.001	3.83
SB-21-9	9	11/8/2013	61	3.3	<11	<0.020	<0.069	0.049	0.12	<0.00072	<0.00072	<0.00072	<0.00072	0.00061	<0.00072	<0.00072	0.001	4.42
SB-21-12	12	11/8/2013	<1.2	<3.3	<11	<0.0059	<0.0059	<0.0059	<0.018	<0.00073	<0.00073	<0.00073	<0.00073	<0.00037	<0.00073	<0.00073	0.001	4.62
Proposed Site Cleanup Standards			30	460³/2,000⁴	2,000	0.03	7.0	6.0	9.0	--	--	--	--	--	--	--	0.1	250

ABBREVIATIONS:

DRO = Diesel Range Organics
HRO = Oil Range Organics
GRO = Gasoline Range Organics
B = Benzene
T = Toluene
E = Ethylbenzene
X = Xylenes
T. LEAD = Total Lead

CULs = Cleanup levels

Dup = Duplicate

Ecology = Washington State Department of Ecology

EPA = United States Environmental Protection Agency

mg/kg = Milligrams per kilogram

MTCA = Model Toxics Control Act

UNK = Unknown

NOTES:

1 Carcinogenic polycyclic aromatic hydrocarbons (cPAHs).

2 Total toxicity of benzo(a)pyrene calculated using Toxicity Equivalency Factors provided in Table 708-2 of WAC 173-340-900. In cases where the analytical result was less than the reporting limit, the reporting limit value was used as the concentration to calculate total toxicity.

3 Proposed Cleanup Standard for TPH-DRO in soil from ground surface to 6 feet below ground surface.

4 Proposed Cleanup Standard for TPH-DRO in soil from 6 to 15 feet below ground surface.

Results in bold indicate analyte reported in concentration exceeding proposed site cleanup standards.

-- = Not Analyzed

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 by EPA Method 6020.

TABLE 2
SUMMARY OF HISTORICAL GROUNDWATER MONITORING DATA¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington

Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-103															
2/14/91		107.81	--	8.08	--	99.73	--	--	--	--	--	--	--	--	--
2/18/92		107.81	--	8.08	--	99.73	--	--	--	--	--	--	--	--	--
3/9/92		107.81	--	7.80	--	100.01	--	<50	--	--	--	--	--	--	--
3/13/92		107.81	--	8.08	--	99.73	<250	<250	<50	--	--	--	--	--	--
4/21/92		107.81	--	7.78	--	100.03	--	--	<50	--	--	--	--	--	--
3/3/94		107.81	--	--	--	--	<250	<250	<50	<13	--	--	--	--	--
6/13/95		107.81	--	8.55	--	99.26	<250	<250	<50	--	--	--	--	--	<3.0
8/22/95		107.81	--	--	--	--	<250	<250	<50	--	--	--	--	--	<2.0
8/23/95		107.81	--	8.91	--	98.90	<250	<250	<50	--	--	--	--	--	<2.0
11/28/95		107.81	--	7.30	--	100.51	<250	<250	<50	--	--	--	--	--	<2.0
3/12/96		107.81	--	8.03	--	99.78	<250	<250	<50	--	--	--	--	--	<2.0
6/26/96		107.81	--	8.67	--	99.14	<250	<250	<50	--	--	--	--	--	<2.0
10/9/96		107.81	--	8.82	--	98.99	<250	<250	<50	--	--	--	--	--	<2.0
2/12/97		107.81	--	7.81	--	100.00	<250	<250	<50	--	--	--	--	--	<2.0
4/22/97		107.81	--	7.42	--	100.39	<250	<250	<50	--	--	--	--	--	<2.0
8/5/97		107.81	--	8.83	--	98.98	257	110	257	--	--	--	--	--	<2.0
11/11/97		107.81	--	9.01	--	98.80	<250	<250	<50	--	--	--	--	--	<2.0
2/11/98		107.81	--	8.03	--	99.78	<250	<250	<50	--	--	--	--	--	<2.0
5/28/98		107.81	--	8.17	--	99.64	<250	<250	<50	--	--	--	--	--	2.84
8/20/98		107.81	--	9.21	--	98.60	<250	<250	<50	--	--	--	--	--	<1.0
11/19/98		107.81	--	9.03	--	98.78	<250	<250	<50	--	--	--	--	--	<1.0
3/11/99		107.81	--	7.51	--	100.30	<250	<250	<50	--	--	--	--	--	<1.0
5/25/99		107.81	--	8.51	--	99.30	<250	<250	<50	--	--	--	--	--	--
8/17/99		107.81	--	8.93	--	98.88	<250	<250	<50	--	--	--	--	--	<1.0
11/19/99		107.81	--	7.18	--	100.63	<250	<250	<80	--	--	--	--	--	<1.0
3/9/00		107.81	--	7.48	--	100.33	<250	<250	<80	--	--	--	--	--	<1.0
6/13/00		107.81	--	8.29	--	99.52	<250	<250	<80	--	--	--	--	--	<1.0
9/26/00		107.81	--	9.05	--	98.76	<250	<250	--	--	--	--	--	--	<1.0
12/13/00		107.81	--	8.65	--	99.16	<250	<250	--	--	--	--	--	--	<1.0
2/28/01		107.81	--	8.34	--	99.47	<250	<250	89	--	--	--	--	--	<1.0
5/2/01		107.81	--	8.12	--	99.69	<250	<250	214	--	--	--	--	--	<1.0
10/30/02		107.81	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
1/23/03		107.81	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
4/18/03		107.81	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
7/11/03		107.81	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
10/31/03		107.81	UNABLE TO LOCATE - COVERED BY SOIL			--	--	--	--	--	--	--	--	--	--



TABLE 2
SUMMARY OF HISTORICAL GROUNDWATER MONITORING DATA¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556

101 Mulford Road
 Toledo, Washington
 Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-103 (cont.)															
12/30/03		107.81	--	7.32	0.00	100.49	<50	<85	<110	<0.5	<0.5	<0.5	<1.5	--	<1.2
5/3/04		107.81	UNABLE TO LOCATE	UNABLE TO LOCATE	- COVERED BY SOIL										
7/20/04		107.81	--	9.09	0.00	98.72	<250	<500	<50.0	<0.500	<0.500	<0.500	<1.00	--	--
10/7/04		107.81	--	8.66	0.00	99.15	<160	<50	--	--	--	--	--	--	--
1/27/05		107.81	--	7.95	0.00	99.86	<83	<83	<48	<48	<48	<48	<48	--	--
4/12/05		107.81	--	7.65	0.00	100.16	<78	<78	<48	<48	<48	<48	<48	--	--
7/18/05		107.81	--	8.76	0.00	99.05	<79	<79	<48	<48	<48	<48	<48	--	--
10/21/05		107.81	--	8.87	0.00	98.94	<79	<79	<48	<48	<48	<48	<48	--	--
9/5/07		107.81	UNABLE TO LOCATE	UNABLE TO LOCATE		--	--	--	--	--	--	--	--	--	--
5/27-28/08		107.81	UNABLE TO LOCATE	UNABLE TO LOCATE		--	--	--	--	--	--	--	--	--	--
8/27-29/08		107.81	UNABLE TO LOCATE	UNABLE TO LOCATE		--	--	--	--	--	--	--	--	--	--
11/17-19/08		107.81	UNABLE TO LOCATE	UNABLE TO LOCATE		--	--	--	--	--	--	--	--	--	--
2/16-18/09		107.81	UNABLE TO LOCATE	UNABLE TO LOCATE		--	--	--	--	--	--	--	--	--	--
5/4-6/09		107.81	UNABLE TO LOCATE	UNABLE TO LOCATE		--	--	--	--	--	--	--	--	--	--
8/19-21/09		107.81	UNABLE TO LOCATE	UNABLE TO LOCATE		--	--	--	--	--	--	--	--	--	--
11/18-20/09		107.81	UNABLE TO LOCATE	UNABLE TO LOCATE		--	--	--	--	--	--	--	--	--	--
2/8-10/10		107.81	UNABLE TO LOCATE	UNABLE TO LOCATE		--	--	--	--	--	--	--	--	--	--
5/12-13/10		107.81	UNABLE TO LOCATE	UNABLE TO LOCATE		--	--	--	--	--	--	--	--	--	--
08/12/10	LFP	107.81	--	8.90	0.00	98.91	30	120	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.11
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
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
05/24/11	LFP	107.81	--	8.25	0.00	99.56	30	340	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.13
8/23-24/11	LFP	107.81	UNABLE TO LOCATE	UNABLE TO LOCATE		--	--	--	--	--	--	--	--	--	--
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
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
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
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
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
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
5/6-8/13	LFP	107.81	--	8.60	0.00	99.21	<29	<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.13
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
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
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
6/12-14/14	LFP	107.81	INACCESSIBLE	INACCESSIBLE		--	--	--	--	--	--	--	--	--	--



TABLE 2
SUMMARY OF HISTORICAL GROUNDWATER MONITORING DATA¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556

101 Mulford Road
 Toledo, Washington
 Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-103 (cont.)															
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
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
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
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
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
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
05/13-14/16	LFP	107.81	--	8.60	0.00	99.21	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY								
11/14/16	LFP	107.81	--	7.83	0.00	99.98	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY								
MW-109															
3/13/92		107.35	--	7.72	0.00	99.63	--	--	<50	--	--	--	--	--	--
4/21/92		107.35	--	7.42	0.00	99.93	--	--	--	--	--	--	--	--	--
3/3/94		107.35	--	--	0.00	--	900	1,500	4,900	--	--	--	--	--	--
8/22/95		107.35	--	8.57	0.00	98.78	2,900	2,400	<50	--	--	--	--	--	--
11/28/95		107.35	--	5.87	0.00	101.48	480	1,900	72	--	--	--	--	--	<2.0
3/12/96		107.35	--	7.16	0.00	100.19	<250	<750	<50	--	--	--	--	--	<2.0
6/26/96		107.35	--	8.24	0.00	99.11	554	<750	<50	--	--	--	--	--	<2.0
10/9/96		107.35	--	8.54	0.00	98.81	405	<750	<50	--	--	--	--	--	<2.0
2/12/97		107.35	--	5.82	0.00	101.53	393	1,290	<50	--	--	--	--	--	<2.0
4/22/97		107.35	--	7.10	0.00	100.25	356	1,270	<50	--	--	--	--	--	<2.0
8/5/97		107.35	--	8.81	0.00	98.54	560	1,690	<50	--	--	--	--	--	<2.0
11/11/97		107.35	--	7.57	0.00	99.78	269	780	<50	--	--	--	--	--	<2.0
2/11/98		107.35	--	6.20	0.00	101.15	387	1,700	<50	--	--	--	--	--	<2.0
5/28/98		107.35	--	7.62	0.00	99.73	332	920	<50	--	--	--	--	--	2.25
8/20/98		107.35	--	9.00	0.00	98.35	520	1,450	<50	--	--	--	--	--	<1.0
11/19/98		107.35	--	8.21	0.00	99.14	409	1,130	<50	--	--	--	--	--	<1.3
3/11/99		107.35	--	6.94	0.00	100.41	539	2,000	<80	--	--	--	--	--	<1.0
5/25/99		107.35	--	8.13	0.00	99.22	916	--	<80	--	--	--	--	--	--
8/17/99		107.35	--	8.66	0.00	98.69	1,520	7,770	<80	--	--	--	--	--	<1.0
11/19/99		107.35	--	6.65	0.00	100.70	<250	--	<80	--	--	--	--	--	<1.0
3/9/00		107.35	--	5.67	0.00	101.68	<250	<500	<80	--	--	--	--	--	<1.0
6/13/00		107.35	--	6.65	0.00	100.70	<250	<500	<80	--	--	--	--	--	<1.0
9/26/00		107.35	--	8.36	0.00	98.99	<250	<500	--	--	--	--	--	--	<1.0
12/13/00		107.35	--	7.72	0.00	99.63	<250	<500	--	--	--	--	--	--	<1.0
2/28/01		107.35	--	7.44	0.00	99.91	<250	<500	<80	--	--	--	--	--	<1.0
5/2/01		107.35	--	9.50	0.00	97.85	<250	<500	<80	--	--	--	--	--	<1.0
10/30/02		107.35	--	8.69	0.00	98.66	<250	<500	<80	<0.500	<0.500	<0.500	<1.0	--	6.44



TABLE 2
SUMMARY OF HISTORICAL GROUNDWATER MONITORING DATA¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556

101 Mulford Road
 Toledo, Washington
 Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead		
MW-109 (cont.)																	
1/23/03		107.35				MONITORED/SAMPLED ANNUALLY											
4/18/03		107.35				MONITORED/SAMPLED ANNUALLY											
7/11/03		107.35				MONITORED/SAMPLED ANNUALLY											
10/31/03		107.35	--	7.63	0.00	99.72	<250	<500	<50	<0.500	<0.500	<0.500	<1.0	--	<1.0 ⁵		
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		
5/3/04		107.35				MONITORED/SAMPLED ANNUALLY											
7/20/04		107.35				MONITORED/SAMPLED ANNUALLY											
10/6/04		107.35	--	7.71	0.00	99.64	<81	110	<50	--	--	--	--	--	--		
10/24/05		107.35	--	7.93	0.00	99.42	<81	<100	<48	--	--	--	--	--	--		
9/5/07		107.35	--	8.45	0.00	98.90	<79	240	91	--	--	--	--	--	0.15		
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		
8/27-29/08	LFP	107.35	--	7.92	0.00	99.43	<79	<99	<50	<5	<5	<5	<5	<5	<0.050		
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		
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		
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		
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		
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		
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		
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		
08/11/10	LFP	107.35	--	8.90	0.00	98.45	34	300	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.1		
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		
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		
05/23/11	LFP	107.35	--	7.26	0.00	100.09	47	520	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.052		
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		
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		
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		
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		
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		
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		
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		
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		
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		
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		
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		
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	-- ⁸		
8/18-21/14	LFP	107.35	--	9.93	0.00	97.42	INSUFFICIENT WATER									<0.5	<0.5



TABLE 2
SUMMARY OF HISTORICAL GROUNDWATER MONITORING DATA¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556

101 Mulford Road
 Toledo, Washington
 Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-109 (cont.)															
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
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
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
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
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
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
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-110															
8/22/95		108.89	--	9.62	0.00	99.27	400	<750	11,000	--	--	--	--	--	--
11/28/95		108.89	--	8.08	0.00	100.81	540	<750	6,000	--	--	--	--	--	14
3/12/96		108.89	--	8.74	0.00	100.15	340	<750	3,600	--	--	--	--	--	14
6/26/96		108.89	--	9.41	0.00	99.48	274	<750	2,750	--	--	--	--	--	8.14
10/9/96		108.89	--	9.67	0.00	99.22	<250	<750	1,160	--	--	--	--	--	5.96
2/12/97		108.89	--	8.42	0.00	100.47	393	<750	1,830	--	--	--	--	--	11.7
4/22/97		108.89	--	8.18	0.00	100.71	371	<750	1,950	--	--	--	--	--	7.27
8/5/97		108.89	--	9.80	0.00	99.09	282	<750	1,480	--	--	--	--	--	3.16
11/11/97		108.89	--	8.57	0.00	100.32	659	<750	2,330	--	--	--	--	--	22.9
2/11/98		108.89	--	8.54	0.00	100.35	390	<750	2,040	--	--	--	--	--	15.3
5/28/98		108.89	--	8.69	0.00	100.20	324	<750	1,350	--	--	--	--	--	15.5
8/20/98		108.89	--	10.91	0.00	97.98	<250	<750	812	--	--	--	--	--	1.55
11/19/98		108.89	--	9.51	0.00	99.38	258	<750	637	--	--	--	--	--	7.27
3/11/99		108.89	--	8.09	0.00	100.80	486	<500	2,350	--	--	--	--	--	11
5/25/99		108.89	--	9.28	0.00	99.61	<250	--	2,950	--	--	--	--	--	--
8/17/99		108.89	--	9.81	0.00	99.08	<250	<500	749	--	--	--	--	--	2.2
11/19/99		108.89	--	7.77	0.00	101.12	453	--	2,030	--	--	--	--	--	32.4
3/9/00		108.89	--	8.15	0.00	100.74	<250	<500	3,780	--	--	--	--	--	9.59
6/13/00		108.89	--	8.81	0.00	100.08	<250	<500	2,330	--	--	--	--	--	5.45
9/26/00		108.89	--	9.98	0.00	98.91	<250	<500	--	--	--	--	--	--	2.83
12/13/00		108.89	--	9.37	0.00	99.52	<250	<500	1,340	--	--	--	--	--	4.15
2/28/01		108.89	--	9.07	0.00	99.82	<250	<500	1,800	--	--	--	--	--	6.32
5/2/01		108.89	--	8.62	0.00	100.27	<250	<500	905	--	--	--	--	--	4.23
10/30/02		108.89	--	10.28	0.00	98.61	<250	<500	3,880	<2.50	<2.50	22.5	108	--	6.36
1/23/03		108.89	--	8.74	0.00	100.15	<250	<500	1,190	0.902	0.585	9.83	13.9	--	26.5
4/18/03		108.89	--	8.40	0.00	100.49	<250	<500	499	1.94	<0.500	0.799	1.65	--	16.8
7/11/03		108.89	--	9.99	0.00	98.90	<250	<500	586	1.76	<0.500	1.08	1.11	--	2.11 ⁵
10/31/03		108.89	--	9.25	0.00	99.64	<250	<500	184	0.529	<0.500	<0.500	<1.0	--	<1.0 ⁵



TABLE 2
SUMMARY OF HISTORICAL GROUNDWATER MONITORING DATA¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington

Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-110 (cont.)															
12/31/03		108.89	--	7.94	0.00	100.95	1,800	410	<99	<10	<2.0	23	25	--	17.3
5/3/04		108.89	--	9.56	0.00	99.33	<250	<500	454	1.8	<0.500	<0.500	<1.0	--	3.86 ^b
7/20/04		108.89	--	10.03	0.00	98.86	<250	<500	308	0.893	<0.500	<0.500	<1.0	--	<1.0 ^b
10/6/04		108.89	--	9.38	0.00	99.51	<79	<99	160	--	--	--	--	--	--
1/27/05		108.89	--	8.65	0.00	100.24	<81	<100	150	--	--	--	--	--	--
4/12/05		108.89	--	8.22	0.00	100.67	370	<100	290	--	--	--	--	--	--
7/18/05		108.89	--	9.50	0.00	99.39	<79	<99	100	--	--	--	--	--	--
7/18/05 (D)		108.89	--	9.50	0.00	99.39	<79	<99	100	--	--	--	--	--	--
10/20/05		108.89	--	9.62	0.00	99.27	82	100	110	--	--	--	--	--	--
9/4/07		108.89	--	10.08	0.00	98.81	<150	220	290	--	--	--	--	--	5
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
8/27-29/08	LFP	108.89	--	9.60	0.00	99.29	120	<100	240	<5	<5	<5	<5	<5	1.5
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
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
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
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
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
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
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
08/11/10	LFP	108.89	--	9.75	0.00	99.14	<29	<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.4
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
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
05/24/11	LFP	108.89	--	8.90	0.00	99.99	<29	180	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.43
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
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
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
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
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
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
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
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
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
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
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
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
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



TABLE 2
SUMMARY OF HISTORICAL GROUNDWATER MONITORING DATA¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556

101 Mulford Road
 Toledo, Washington
 Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-110 (cont.)															
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
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
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
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
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
5/13-14/16	LFP	108.89	--	9.04	0.00	99.85	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY								
11/14/16	LFP	108.89	--	8.21	0.00	100.68	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY								
MW-111															
8/22/95		107.12	--	7.86	0.00	99.26	360	<750	33,000	--	--	--	--	--	--
11/28/95		107.12	--	6.14	0.00	100.98	640	<750	17,000	--	--	--	--	--	10
3/12/96		107.12	--	6.84	0.00	100.28	290	<750	11,000	--	--	--	--	--	7.6
6/26/96		107.12	--	7.55	0.00	99.57	479	<750	7,690	--	--	--	--	--	4.8
10/9/96		107.12	--	7.81	0.00	99.31	256	<750	3,560	--	--	--	--	--	4.7
2/12/97		107.12	--	6.52	0.00	100.60	631	<750	17,200	--	--	--	--	--	8.7
4/22/97		107.12	--	6.31	0.00	100.81	920	<750	13,800	--	--	--	--	--	5.3
8/5/97		107.12	--	7.90	0.00	99.22	444	<750	4,290	--	--	--	--	--	3.5
11/11/97		107.12	--	6.70	0.00	100.42	770	<750	14,300	--	--	--	--	--	12.4
2/11/98		107.12	--	6.65	0.00	100.47	587	<750	13,600	--	--	--	--	--	8.3
5/28/98		107.12	--	6.89	0.00	100.23	526	<750	11,200	--	--	--	--	--	16.6
8/20/98		107.12	--	9.08	0.00	98.04	637	<750	5,950	--	--	--	--	--	1.7
11/19/98		107.12	--	7.60	0.00	99.52	3,890	<750	10,500,000	--	--	--	--	--	2.2
1/22/99		107.12	--	5.36	0.00	101.76	--	--	19,000	--	--	--	--	--	--
3/11/99		107.12	--	6.19	0.00	100.93	611	<500	6,910	--	--	--	--	--	6.3
5/25/99		107.12	--	7.43	0.00	99.69	388	--	8,500	--	--	--	--	--	4.2
8/17/99		107.12	--	7.98	0.00	99.14	547	<500	17,600	--	--	--	--	--	3
11/19/99		107.12	--	5.87	0.00	101.25	547	--	27,900	--	--	--	--	--	14.4
3/9/00		107.12	--	6.27	0.00	100.85	12,400	646	20,800	--	--	--	--	--	11.8
6/13/00		107.12	--	6.91	0.00	100.21	7,670	<500	29,600	--	--	--	--	--	12.8
9/26/00		107.12	--	8.37	0.00	98.75	--	--	--	--	--	--	--	--	--
12/13/00		107.12	--	7.65	0.00	99.47	13,800	<500	23,100	--	--	--	--	--	4.1
2/28/01		107.12	--	7.26	0.00	99.86	3,740	<500	16,400	--	--	--	--	--	5.6
5/2/01		107.12	--	6.89	0.00	100.23	7,530	<500	17,700	--	--	--	--	--	10.7
10/30/02		107.12	8.42	8.70	0.28	98.64	NOT SAMPLED DUE TO THE PRESENCE OF LNAPL								
1/23/03		107.12	6.95	6.99	0.04	100.16	NOT SAMPLED DUE TO THE PRESENCE OF LNAPL								
4/18/03		107.12	6.83	6.89	0.06	100.28	NOT SAMPLED DUE TO THE PRESENCE OF LNAPL								
7/11/03		107.12	8.18	8.25	0.07	98.93	NOT SAMPLED DUE TO THE PRESENCE OF LNAPL								



TABLE 2
SUMMARY OF HISTORICAL GROUNDWATER MONITORING DATA¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556

101 Mulford Road
 Toledo, Washington
 Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead	
MW-111 (cont.)																
10/31/03		107.12	7.45	7.48	0.03	99.66	NOT SAMPLED DUE TO THE PRESENCE OF LNAPL									
12/31/03		107.12	--	6.40	0.00	100.72	50,000	2,800	300	8.3	6.5	1,100	3,300	--	--	15.2
05/03/04		107.12	7.76	7.79	0.03	99.35	NOT SAMPLED DUE TO THE PRESENCE OF LNAPL									--
7/20/04		107.12	8.10	8.16	0.06	99.01	NOT SAMPLED DUE TO THE PRESENCE OF LNAPL									--
10/6/04		107.12	--	7.54	0.00	99.58	240	<100	5,700	--	--	--	--	--	--	--
1/27/05		107.12	--	6.79	0.00	100.33	310	<98	8,800	--	--	--	--	--	--	--
1/27/05(D)		107.12	--	6.79	0.00	100.33	310	<98	9,100	--	--	--	--	--	--	--
4/12/05		107.12	--	6.32	0.00	100.80	820	<100	10,000	--	--	--	--	--	--	--
4/12/05(D)		107.12	--	6.32	0.00	100.80	850	<110	10,000	--	--	--	--	--	--	--
7/18/05		107.12	--	7.75	0.00	99.37	460	<96	6,300	--	--	--	--	--	--	--
10/20/05		107.12	--	7.84	0.00	99.28	--	--	--	--	--	--	--	--	--	--
9/4/07		107.12	--	8.26	0.00	98.86	1,100	<220	6,800	--	--	--	--	--	--	2.8
9/4/07		107.12	--	--	0.00	--	<81	<100	<50	--	--	--	--	--	--	<0.047
5/27-28/08		107.12	--	7.64	0.00	99.48	NOT SAMPLED DUE TO OBSTRUCTION IN WELL @ 7 FEET									--
8/27-29/08		107.12	--	7.71	0.00	99.41	NOT SAMPLED DUE TO OBSTRUCTION IN WELL @ 8 FEET									--
11/17-19/08	LFP	107.12	--	6.27	0.00	100.85	2,300	<1,400	18,000	3	<1	300	220	<1	<1	36.8
2/16-18/09	LFP	107.12	--	7.36	0.00	99.76	350	74	20,000	4	2	190	110	<1	<1	8.5
5/4-6/09	LFP	107.12	--	6.62	0.00	100.50	1,200	<70	13,000	8	2	220	120	<0.5	<0.5	20.1
8/19-21/09	LFP	107.12	--	8.12	0.00	99.00	780	<70	11,000	4	0.6	180	130	<0.5	<0.5	5.3
11/18-20/09	LFP	107.12	--	5.42	0.00	101.70	400	<68	4,700	5	0.7	53	21	<0.5	<0.5	6.3
2/08-10/10	LFP	107.12	--	6.79	0.00	100.33	2,700	<140	19,000	16	1	270	110	<0.5	<0.5	18.8
5/11-13/10	LFP	107.12	--	7.25	0.00	99.87	3,400	380	21,000	10	1	300	110	<1	<1	22.6
08/11/10	LFP	107.12	--	7.92	0.00	99.20	1,300	<700	9,200	4	<1	220	55	<1	<1	20.2
11/3-4/10	LFP	107.12	--	6.12	0.00	101.00	1,700	640	7,000	4	<1	160	68	<1	<1	29.5
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	<0.5	19.9
05/24/11	LFP	107.12	--	7.03	0.00	100.09	500	130	2,700	<0.5	<0.5	65	15	<0.5	<0.5	2.8
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	<0.5	12.2
11/7-9/11	LFP	107.12	--	7.85	0.00	99.27	4,700	<730	20,000	1	<1	140	26	<1	<1	45.8
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	<0.5	22.1
5/2-4/12	LFP	107.12	--	6.50	0.00	100.62	420	<68	4,400	5	0.7	170	23	<0.5	<0.5	8.9
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	<0.5	22.9
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	<0.5	36.1
02/4-6/13	LFP	107.12	--	6.53	0.00	100.59	2,300	710	7,500	<3	<3	120	24	<0.5	<0.5	17.8
05/6-8/13	LFP	107.12	--	7.46	0.00	99.66	300	<67	5,500	2	<0.5	100	13	<0.5	<0.5	16.6
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	<0.5	59.4
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	<0.5	17.8



TABLE 2
SUMMARY OF HISTORICAL GROUNDWATER MONITORING DATA¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556

101 Mulford Road
 Toledo, Washington
 Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-111 (cont.)															
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
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
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
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
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
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
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
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
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
11/14/16	LFP	107.12	--	--	--	--	WELL FLOODED-UNABLE TO ACCESS						2	--	7.8
MW-112															
8/22/95		107.58	--	8.42	0.00	99.16	<250	<750	480	--	--	--	--	--	--
11/28/95		107.58	--	6.73	0.00	100.85	<250	<750	150	--	--	--	--	--	5.8
3/12/96		107.58	--	7.43	0.00	100.15	<250	<750	250	--	--	--	--	--	<2.0
6/26/96		107.58	--	8.12	0.00	99.46	<250	<750	63.8	--	--	--	--	--	<2.0
10/9/96		107.58	--	8.36	0.00	99.22	<250	<750	93.1	--	--	--	--	--	2.62
2/12/97		107.58	--	7.11	0.00	100.47	322	<750	1,250	--	--	--	--	--	2.99
4/22/97		107.58	--	6.85	0.00	100.73	<250	<750	323	--	--	--	--	--	<2.0
8/5/97		107.58	--	8.45	0.00	99.13	<250	<750	124	--	--	--	--	--	<2.0
11/11/97		107.58	--	7.26	0.00	100.32	<250	<750	112	--	--	--	--	--	<2.0
2/11/98		107.58	--	7.25	0.00	100.33	<250	<750	658	--	--	--	--	--	<2.0
5/28/98		107.58	--	7.46	0.00	100.12	315	<750	713	--	--	--	--	--	10.4
8/20/98		107.58	--	9.64	0.00	97.94	<250	<750	<50	--	--	--	--	--	<1.0
11/19/98		107.58	--	8.20	0.00	99.38	<250	<750	367	--	--	--	--	--	<1.0
3/11/99		107.58	--	6.79	0.00	100.79	<250	<500	1,370	--	--	--	--	--	1.42
5/25/99		107.58	--	7.97	0.00	99.61	<250	--	<80	--	--	--	--	--	--
8/17/99		107.58	--	8.51	0.00	99.07	<250	<500	106	--	--	--	--	--	<1.6
11/19/99		107.58	--	6.46	0.00	101.12	<250	--	<80	--	--	--	--	--	<1.0
3/9/00		107.58	--	6.85	0.00	100.73	<250	<500	<80	--	--	--	--	--	<1.0
6/13/00		107.58	--	7.48	0.00	100.10	<250	<500	824	--	--	--	--	--	2.14
9/26/00		107.58	--	8.66	0.00	98.92	<250	<500	--	--	--	--	--	--	<1.0
12/13/00		107.58	--	8.07	0.00	99.51	<250	<500	<80	--	--	--	--	--	<1.0
2/28/01		107.58	--	7.77	0.00	99.81	<250	<500	<80	--	--	--	--	--	<1.0
5/2/01		107.58	--	7.31	0.00	100.27	<250	<500	710	--	--	--	--	--	1.44
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
1/23/03		107.58	--	7.39	0.00	100.19	<250	<500	178	<0.500	<0.500	0.730	<1.00	--	<1.0 ⁵



TABLE 2
SUMMARY OF HISTORICAL GROUNDWATER MONITORING DATA¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556

101 Mulford Road
 Toledo, Washington
 Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-112 (cont.)															
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
7/11/03		107.58	--	8.68	0.00	98.90	--	--	<50.0	<0.500	<0.500	<0.500	<1.00	--	<1.0 ⁵
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
12/30/03		107.58	--	6.62	0.00	100.96	<50	<77	<97	<0.5	<0.5	<0.5	<1.5	--	<1.2
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
7/20/04		107.58	--	8.69	0.00	98.89	<250	<500	<50.0	<0.500	<0.500	<0.500	<1.00	--	--
10/7/04		107.58	--	8.06	0.00	99.52	<82	<100	<50	--	--	--	--	--	--
7/18/05		107.58	--	8.26	0.00	99.32	<77	<96	<48	--	--	--	--	--	--
10/21/05		107.58	--	8.25	0.00	99.33	<82	<100	48	--	--	--	--	--	--
9/5/07		107.58	--	8.79	0.00	98.79	<79	<99	<50	--	--	--	--	--	0.52
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
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
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
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
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
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
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
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
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
08/12/10	LFP	107.58	--	8.45	0.00	99.13	<29	<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.29
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
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
05/24/11	LFP	107.58	--	7.58	0.00	100.00	<29	270	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.49
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
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
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
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
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
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
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
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
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
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
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
6/12-14/14	LFP	107.58	INACCESSIBLE			--	--	--	--	--	--	--	--	--	--
8/18-21/14	LFP	107.58	--	8.63	0.00	98.95	<29/≤29	<68/≤68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.36



TABLE 2
SUMMARY OF HISTORICAL GROUNDWATER MONITORING DATA¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556

101 Mulford Road
 Toledo, Washington
 Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-112 (cont.)															
11/19-20/14	LFP	107.58	--	7.71	0.00	99.87	<29/<29	<68/<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.13
2/17-20/15	LFP	107.58	--	7.33	0.00	100.25	<30/<30	<69/<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.083
5/11-15/15	LFP	107.58	--	8.19	0.00	99.39	<28/<28	<66/<66	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.460
8/10-11/15	LFP	107.58	--	8.90	0.00	98.68	<28/<28	<66/<66	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.200
11/16-18/15	LFP	107.58	--	5.65	0.00	101.93	<29/<29	<67/<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.0014
5/13-14/16	LFP	107.58	--	8.18	0.00	99.40	<28	<66	<50	<0.5	<0.5	<0.5	<0.5	--	<0.13
11/14/16	LFP	107.58	--	6.90	0.00	100.68	56	<70	<50	<0.5	<0.5	<0.5	<0.5	--	0.33
MW-113															
8/22/95		108.44	--	9.26	0.00	99.18	320	<750	3,100	--	--	--	--	--	--
11/28/95		108.44	--	7.55	0.00	100.89	<250	<750	180	--	--	--	--	--	<2.0
3/12/96		108.44	--	8.26	0.00	100.18	<250	<750	750	--	--	--	--	--	<2.0
6/26/96		108.44	--	8.95	0.00	99.49	<250	<750	809	--	--	--	--	--	2.43
10/9/96		108.44	--	9.21	0.00	99.23	<250	<750	494	--	--	--	--	--	2.95
2/12/97		108.44	--	7.93	0.00	100.51	<250	<750	1,600	--	--	--	--	--	<2.0
4/22/97		108.44	--	7.71	0.00	100.73	291	<750	748	--	--	--	--	--	<2.0
8/5/97		108.44	--	9.37	0.00	99.07	<250	<750	876	--	--	--	--	--	<2.0
11/11/97		108.44	--	8.04	0.00	100.40	<250	<750	<50	--	--	--	--	--	<2.0
2/11/98		108.44	--	8.02	0.00	100.42	<250	<750	76.10	--	--	--	--	--	<2.0
5/28/98		108.44	--	8.31	0.00	100.13	<250	<750	116	--	--	--	--	--	6.26
8/20/98		108.44	--	10.48	0.00	97.96	<250	<750	235	--	--	--	--	--	<1.0
11/19/98		108.44	--	9.02	0.00	99.42	<250	<750	<50	--	--	--	--	--	<1.0
3/11/99		108.44	--	7.59	0.00	100.85	<250	<750	162	--	--	--	--	--	<1.0
5/25/99		108.44	--	8.83	0.00	99.61	<250	--	321	--	--	--	--	--	--
8/17/99		108.44	--	9.34	0.00	99.10	<250	<500	265	--	--	--	--	--	1.2
11/19/99		108.44	--	7.27	0.00	101.17	<250	--	<80	--	--	--	--	--	<1.0
3/9/00		108.44	--	7.66	0.00	100.78	<250	<500	96.70	--	--	--	--	--	<1.0
6/13/00		108.44	--	8.29	0.00	100.15	<250	<500	154	--	--	--	--	--	<1.0
9/26/00		108.44	--	9.51	0.00	98.93	<250	<500	--	--	--	--	--	--	<1.0
12/13/00		108.44	--	8.91	0.00	99.53	<250	588	<80	--	--	--	--	--	<1.0
2/28/01		108.44	--	8.60	0.00	99.84	<250	<500	<80	--	--	--	--	--	<1.0
5/2/01		108.44	--	8.14	0.00	100.30	<250	<500	<80	--	--	--	--	--	<1.0
10/30/02		108.44	--	9.85	0.00	98.59	<250	<500	<80	<0.500	<0.500	<0.500	<1.0	--	1.55
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
4/18/03		108.44	--	8.09	0.00	100.35	<250	<500	<50	<0.500	<0.500	<0.500	<1.0	--	<1.0 ⁵
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
10/31/03		108.44	--	8.80	0.00	99.64	<250	<500	<50	<0.500	<0.500	<0.500	<1.0	--	<1.0 ⁵



TABLE 2
SUMMARY OF HISTORICAL GROUNDWATER MONITORING DATA¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556

101 Mulford Road
 Toledo, Washington

Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-113 (cont.)															
12/31/03		108.44	--	7.44	0.00	101.00	<50	<77	<97	<0.5	<0.5	<0.5	<1.5	--	<1.2
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
7/20/04		108.44	--	9.58	0.00	98.86	<250	<500	<50	<0.500	<0.500	<0.500	<1.0	--	--
10/6/04		108.44	--	8.92	DRY	--	--	--	--	--	--	--	--	--	--
1/27/05		108.44	--	8.15	0.00	--	<84	<110	<48	--	--	--	--	--	--
4/12/05		108.44	--	7.76	0.00	--	<88	<110	<48	--	--	--	--	--	--
7/18/05		108.44	--	9.11	0.00	--	<79	<98	<48	--	--	--	--	--	--
10/26/05		108.44	--	9.10	0.00	--	<82	<100	<48	--	--	--	--	--	--
9/5/07		108.44	--	9.59	0.00	98.85	<82	<100	<50	--	--	--	--	--	0.32
9/5/07 (D)		108.44	--	9.59	0.00	98.85	<82	<100	<50	--	--	--	--	--	0.32
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
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
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
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
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
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
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
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
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
08/12/10	LFP	108.44	--	9.29	0.00	99.15	<29	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.077
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
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
05/24/11	LFP	108.44	--	8.42	0.00	100.02	<30	330	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.052
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
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
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
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
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
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
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
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
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
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
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
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
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



TABLE 2
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COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556

101 Mulford Road
 Toledo, Washington
 Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-113 (cont.)															
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
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
5/11-15/15	LFP	108.44	--	9.08	0.00	99.36	<29/<29	<67/<67	75	<0.5	<0.5	<0.5	<0.5	<0.5	<0.082
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
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
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
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-114															
8/22/95		106.89	--	7.47	0.00	99.42	<250	<750	<50	--	--	--	--	--	--
11/28/95		106.89	--	5.83	0.00	101.06	<250	<750	<50	--	--	--	--	--	<2.0
3/12/96		106.89	--	6.39	0.00	100.50	<250	<750	<50	--	--	--	--	--	<2.0
6/26/96		106.89	--	7.11	0.00	99.78	<250	<750	<50	--	--	--	--	--	<2.0
10/9/96		106.89	--	7.42	0.00	99.47	<250	<750	<50	--	--	--	--	--	<2.0
2/12/97		106.89	--	5.47	0.00	101.42	<250	<750	<50	--	--	--	--	--	<2.0
4/22/97		106.89	--	14.30	0.00	92.59	<250	<750	<50	--	--	--	--	--	<2.0
8/5/97		106.89	--	7.65	0.00	99.24	<250	1,410	<50	--	--	--	--	--	<2.0
11/11/97		106.89	--	6.45	0.00	100.44	<250	<750	<50	--	--	--	--	--	<2.0
2/11/98		106.89	--	6.23	0.00	100.66	<250	<750	<50	--	--	--	--	--	<2.0
5/28/98		106.89	--	6.44	0.00	100.45	<250	<750	<50	--	--	--	--	--	5.91
8/20/98		106.89	--	8.75	0.00	98.14	<250	<750	<50	--	--	--	--	--	<1.0
11/19/98		106.89	--	7.05	0.00	99.84	<250	<750	<50	--	--	--	--	--	<1.0
3/11/99		106.89	--	5.90	0.00	100.99	<250	<500	<80	--	--	--	--	--	<1.0
5/25/99		106.89	--	7.10	0.00	99.79	<250	--	<80	--	--	--	--	--	--
8/17/99		106.89	--	7.59	0.00	99.30	<250	607	<80	--	--	--	--	--	<1.0
11/19/99		106.89	--	5.59	0.00	101.30	<250	--	<80	--	--	--	--	--	<1.0
3/9/00		106.89	--	5.98	0.00	100.91	<250	<500	<80	--	--	--	--	--	<1.0
6/13/00		106.89	--	6.04	0.00	100.85	<250	<500	<80	--	--	--	--	--	<1.0
9/26/00		106.89	--	7.81	0.00	99.08	<250	<500	--	--	--	--	--	--	<1.0
12/13/00		106.89	--	7.06	0.00	99.83	<250	<500	--	--	--	--	--	--	<1.0
2/28/01		106.89	--	6.79	0.00	100.10	<250	<500	<80	--	--	--	--	--	<1.0
5/2/01		106.89	--	8.84	0.00	98.05	<250	1,880	<80	--	--	--	--	--	<1.0
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
1/23/03		106.89	MONITORED/SAMPLED ANNUALLY												
4/18/03		106.89	MONITORED/SAMPLED ANNUALLY												
7/11/03		106.89	MONITORED/SAMPLED ANNUALLY												
10/31/03		106.89	--	6.61	0.00	100.28	<250	<500	<50.0	<0.500	<0.500	<0.500	<1.0	--	<1.0 ⁵



TABLE 2
SUMMARY OF HISTORICAL GROUNDWATER MONITORING DATA¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556

101 Mulford Road
 Toledo, Washington
 Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-114 (cont.)															
12/30/03		106.89	--	5.81	0.00	101.08	<50	480	3,600	<0.5	<0.5	<0.5	<1.5	--	<1.2
5/3/04		106.89	MONITORED/SAMPLED ANNUALLY												
7/20/04		106.89	MONITORED/SAMPLED ANNUALLY												
10/6/04		106.89	--	6.98	0.00	99.91	<76	<95	<50	--	--	--	--	--	--
10/24/05		106.89	--	7.28	0.00	99.61	<79	<99	<48	--	--	--	--	--	--
9/5/07		106.89	--	7.87	0.00	99.02	94	810	<50	--	--	--	--	--	0.38
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
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
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
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
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
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
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
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
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
08/11/10	LFP	106.89	--	7.45	0.00	99.44	<29	220	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.15
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
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
05/23/11	LFP	106.89	--	6.55	0.00	100.34	55	380	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.36
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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



TABLE 2
SUMMARY OF HISTORICAL GROUNDWATER MONITORING DATA¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556

101 Mulford Road
 Toledo, Washington
 Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-114 (cont.)															
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
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
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-115															
8/22/95		107.94	--	8.79	0.00	99.15	<250	<750	1,800	--	--	--	--	--	--
11/28/95		107.94	--	7.05	0.00	100.89	<250	<750	460	--	--	--	--	--	<2.0
3/12/96		107.94	--	7.76	0.00	100.18	<250	<750	630	--	--	--	--	--	<2.0
6/26/96		107.94	--	8.45	0.00	99.49	<250	<750	706	--	--	--	--	--	<2.0
10/9/96		107.94	--	8.71	0.00	99.23	<250	<750	722	--	--	--	--	--	2.54
2/12/97		107.94	--	7.48	0.00	100.46	<250	<750	58	--	--	--	--	--	<2.0
4/22/97		107.94	--	7.25	0.00	100.69	<250	<750	<50	--	--	--	--	--	<2.0
8/5/97		107.94	--	8.77	0.00	99.17	<250	<750	611	--	--	--	--	--	2.0
11/11/97		107.94	--	7.71	0.00	100.23	<250	<750	57	--	--	--	--	--	<2.0
2/11/98		107.94	--	7.72	0.00	100.22	<250	<750	89.5	--	--	--	--	--	<2.0
5/28/98		107.94	--	7.92	0.00	100.02	<250	<750	<50	--	--	--	--	--	8.08
8/20/98		107.94	--	9.18	0.00	98.76	<250	<750	155	--	--	--	--	--	<1.0
11/19/98		107.94	--	8.58	0.00	99.36	<250	<750	<50	--	--	--	--	--	<1.0
3/11/99		107.94	--	7.12	0.00	100.82	<250	<750	<80	--	--	--	--	--	<1.0
5/25/99		107.94	--	8.33	0.00	99.61	<250	--	<80	--	--	--	--	--	--
8/17/99		107.94	--	8.87	0.00	99.07	<250	<500	163	--	--	--	--	--	1.4
11/19/99		107.94	--	6.82	0.00	101.12	<250	--	<80	--	--	--	--	--	<1.0
3/9/00		107.94	--	7.20	0.00	100.74	<250	<500	103	--	--	--	--	--	<1.0
6/13/00		107.94	--	7.82	0.00	100.12	--	--	<80	--	--	--	--	--	<1.0
9/26/00		107.94	--	9.02	0.00	98.92	<250	<500	--	--	--	--	--	--	1.02
12/13/00		107.94	--	8.43	0.00	99.51	<250	<500	313	--	--	--	--	--	<1.0
2/28/01		107.94	--	8.13	0.00	99.81	<250	<500	177	--	--	--	--	--	<1.0
5/2/01		107.94	--	10.37	0.00	97.57	<250	<500	162	--	--	--	--	--	<1.0
10/30/02		107.94	--	9.33	0.00	98.61	<250	<500	175	<0.500	<0.500	<0.500	<1.0	--	4.36
1/23/03		107.94	MONITORED/SAMPLED ANNUALLY												
4/18/03		107.94	MONITORED/SAMPLED ANNUALLY												
7/11/03		107.94	MONITORED/SAMPLED ANNUALLY												
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 ⁵
12/31/03		107.94	--	6.98	0.00	100.96	<50	<79	<99	<0.5	<0.5	<0.5	<1.5	--	<1.2
5/3/04		107.94	MONITORED/SAMPLED ANNUALLY												
7/20/04		107.94	MONITORED/SAMPLED ANNUALLY												
10/6/04		107.94	--	8.43	0.00	99.51	<160	<200	<50	--	--	--	--	--	--



TABLE 2
SUMMARY OF HISTORICAL GROUNDWATER MONITORING DATA¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington

Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-115 (cont.)															
10/21/05		107.94	--	8.67	0.00	99.27	<81	<100	<48	--	--	--	--	--	--
10/21/05(D)		107.94	--	8.67	0.00	99.27	<82	<100	<48	--	--	--	--	--	--
9/5/07		107.94	--	9.11	0.00	98.83	<76	<95	<50	--	--	--	--	--	0.37
5/27-28/08		107.94	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
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
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
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
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
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
10/19/09	LFP	107.94	--	8.70	0.00	99.24	<29	<68	--	--	--	--	--	--	--
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
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
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
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
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
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
05/24/11	LFP	107.94	--	7.95	0.00	99.99	42	220	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.53
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
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
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
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
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
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
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
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
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
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
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
6/12-14/14	LFP	107.94	INACCESSIBLE			--	--	--	--	--	--	--	--	--	--
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
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
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
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
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
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
5/13-14/16	LFP	107.94	--	8.48	0.00	99.46	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY								



TABLE 2
SUMMARY OF HISTORICAL GROUNDWATER MONITORING DATA¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556

101 Mulford Road
 Toledo, Washington
 Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-115 (cont.)															
11/14/16	LFP	107.94	--	7.35	0.00	100.59	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY								
MW-116															
8/22/95		107.56	--	8.82	0.00	98.74	<250	<750	<50	--	--	--	--	--	--
3/12/96		107.56	--	8.08	0.00	99.48	<250	<750	<50	--	--	--	--	--	<2.0
10/9/96		107.56	--	8.69	0.00	98.87	<250	<750	<50	--	--	--	--	--	<2.0
2/12/97		107.56	--	7.86	0.00	99.70	<250	<750	<50	--	--	--	--	--	<2.0
4/22/97		107.56	--	7.65	0.00	99.91	<250	<750	<50	--	--	--	--	--	<2.0
8/5/97		107.56	--	8.71	0.00	98.85	<250	<750	<50	--	--	--	--	--	<2.0
11/11/97		107.56	--	8.07	0.00	99.49	<250	<750	<50	--	--	--	--	--	<2.0
2/11/98		107.56	--	8.06	0.00	99.50	<250	<750	<50	--	--	--	--	--	<2.0
5/28/98		107.56	--	8.25	0.00	99.31	<250	<750	<50	--	--	--	--	--	4.66
8/20/98		107.56	--	9.05	0.00	98.51	<250	<750	<50	--	--	--	--	--	<1.0
11/19/98		107.56	--	9.16	0.00	98.40	<250	<750	<50	--	--	--	--	--	<1.0
3/11/99		107.56	--	7.64	0.00	99.92	<250	<750	<80	--	--	--	--	--	<1.0
5/25/99		107.56	--	8.40	0.00	99.16	<250	--	<80	--	--	--	--	--	--
8/17/99		107.56	--	8.78	0.00	98.78	<250	<500	<80	--	--	--	--	--	<1.0
11/19/99		107.56	--	7.60	0.00	99.96	<250	--	<80	--	--	--	--	--	<1.0
3/9/00		107.56	--	7.70	0.00	99.86	<250	<500	<80	--	--	--	--	--	<1.0
6/13/00		107.56	--	8.37	0.00	99.19	--	--	<80	--	--	--	--	--	<1.0
9/26/00		107.56	--	8.88	0.00	98.68	<250	<500	--	--	--	--	--	--	<1.0
12/13/00		107.56	--	8.52	0.00	99.04	<250	<500	--	--	--	--	--	--	<1.0
2/28/01		107.56	--	8.25	0.00	99.31	<250	<500	<80	--	--	--	--	--	<1.0
5/2/01		107.56	--	10.84	0.00	96.72	<250	<500	<80	--	--	--	--	--	<1.0
10/30/02		107.56	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
1/23/03		107.56	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
4/18/03		107.56	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
7/11/03		107.56	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
10/31/03		107.56	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
12/30/03		107.56	--	7.54	0.00	100.02	<50	<79	<99	<0.5	<0.5	<0.5	<1.5	--	<1.2
5/3/04		107.56	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
7/20/04		107.56	--	8.92	0.00	98.64	<284	<568	<50	<0.500	<0.500	<0.500	<1.00	--	--
10/7/04		107.56	--	7.54	0.00	100.02	<75	<94	<50	--	--	--	--	--	--
10/20/05		107.56	--	8.73	0.00	98.83	<81	<100	<48	--	--	--	--	--	--
9/6/07		107.56	--	9.00	0.00	98.56	<76	<95	<50	--	--	--	--	--	0.15
5/27-28/08		107.56	INACCESSIBLE			--	--	--	--	--	--	--	--	--	--
8/27-29/08	LFP	107.56	--	8.68	0.00	98.88	89	<100	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050



TABLE 2
SUMMARY OF HISTORICAL GROUNDWATER MONITORING DATA¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington

Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-116 (cont.)															
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
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
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
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
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
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
08/12/10	LFP	107.56	--	8.78	0.00	98.78	<30	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.15
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
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
05/24/11		107.56	UNABLE TO LOCATE												
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
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
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
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
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
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
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
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
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
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
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
6/12-14/14	LFP	107.56	INACCESSIBLE												
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
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
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
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
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
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
5/13-14/16	LFP	107.56	--	8.59	0.00	98.97	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY								
11/14/16	LFP	107.56	--	8.06	0.00	99.50	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY								
MW-117															
8/22/95		106.57	--	7.45	0.00	99.12	<250	<750	<50	--	--	--	--	--	--
11/28/95		106.57	--	5.45	0.00	101.12	<250	<750	<50	--	--	--	--	--	<2.0
3/12/96		106.57	--	6.32	0.00	100.25	<250	<750	<50	--	--	--	--	--	<2.0
6/26/96		106.57	--	7.18	0.00	99.39	<250	<750	<50	--	--	--	--	--	<2.0
10/9/96		106.57	--	7.42	0.00	99.15	<250	<750	<50	--	--	--	--	--	7.1



TABLE 2
SUMMARY OF HISTORICAL GROUNDWATER MONITORING DATA¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556

101 Mulford Road
 Toledo, Washington
 Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-117 (cont.)															
2/12/97		106.57	--	5.93	0.00	100.64	<250	<750	<50	--	--	--	--	--	<2.0
4/22/97		106.57	--	5.78	0.00	100.79	<250	<750	<50	--	--	--	--	--	<2.0
8/5/97		106.57	--	7.58	0.00	98.99	<250	<750	<50	--	--	--	--	--	<2.0
11/11/97		106.57	--	6.21	0.00	100.36	<250	<750	<50	--	--	--	--	--	<2.0
2/11/98		106.57	--	6.21	0.00	100.36	<250	<750	<50	--	--	--	--	--	<2.0
5/28/98		106.57	--	6.44	0.00	100.13	<250	<750	<50	--	--	--	--	--	2.68
8/20/98		106.57	--	7.90	0.00	98.67	<250	<750	<50	--	--	--	--	--	<1.0
11/19/98		106.57	--	7.18	0.00	99.39	<250	<750	<50	--	--	--	--	--	<1.0
3/11/99		106.57	--	5.51	0.00	101.06	<250	<500	<80	--	--	--	--	--	<1.0
5/25/99		106.57	--	7.00	0.00	99.57	<250	--	<80	--	--	--	--	--	--
8/17/99		106.57	--	7.56	0.00	99.01	<250	<500	<80	--	--	--	--	--	<1.0
11/19/99		106.57	--	5.11	0.00	101.46	<250	--	<80	--	--	--	--	--	<1.0
3/9/00		106.57	--	5.65	0.00	100.92	<250	<500	<80	--	--	--	--	--	<1.0
6/13/00		106.57	--	6.25	0.00	100.32	<250	<500	<80	--	--	--	--	--	<1.0
9/26/00		106.57	--	7.70	0.00	98.87	<250	<500	--	--	--	--	--	--	<1.0
12/13/00		106.57	--	7.11	0.00	99.46	<250	<500	--	--	--	--	--	--	<1.0
2/28/01		106.57	--	6.78	0.00	99.79	<250	<500	<80	--	--	--	--	--	<1.0
5/2/01		106.57	--	8.90	0.00	97.67	<250	<500	<80	--	--	--	--	--	<1.0
10/30/02		106.57	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
1/23/03		106.57	MONITORED/SAMPLED ANNUALLY			--	--	--	--	--	--	--	--	--	--
4/18/03		106.57	MONITORED/SAMPLED ANNUALLY			--	--	--	--	--	--	--	--	--	--
7/11/03		106.57	MONITORED/SAMPLED ANNUALLY			--	--	--	--	--	--	--	--	--	--
10/31/03		106.57	UNABLE TO LOCATE - POSSIBLY PAVED OVER			--	--	--	--	--	--	--	--	--	--
12/30/03		106.57	--	5.46	0.00	101.11	<50	<80	<100	<0.5	<0.5	<0.5	<1.5	--	<1.2
5/3/04		106.57	MONITORED/SAMPLED ANNUALLY			--	--	--	--	--	--	--	--	--	--
7/20/04		106.57	MONITORED/SAMPLED ANNUALLY			--	--	--	--	--	--	--	--	--	--
10/6/04		106.57	--	7.07	0.00	99.50	<79	<98	<50	--	--	--	--	--	--
10/21/05		106.57	--	7.33	0.00	99.24	<81	<100	<48	--	--	--	--	--	--
9/5/07		106.57	--	7.92	0.00	98.65	<82	<100	<50	--	--	--	--	--	0.22
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
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
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
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
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
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
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



TABLE 2
SUMMARY OF HISTORICAL GROUNDWATER MONITORING DATA¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556

101 Mulford Road
 Toledo, Washington
 Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-117 (cont.)															
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
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
08/12/10	LFP	106.57	--	7.68	0.00	98.89	<29	210	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.052
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
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
05/24/11	LFP	106.57	--	6.77	0.00	99.80	<30	150	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.052
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
5/13-14/16	LFP	106.57	--	7.38	0.00	99.19	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY								
11/14/16	LFP	106.57	--	5.60	0.00	100.97	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY								
MW-118															
8/22/95		106.72	--	7.87	0.00	98.85	470	<750	<50	--	--	--	--	--	--
11/28/95		106.72	--	5.76	0.00	100.96	<250	<750	<50	--	--	--	--	--	<2.0
3/12/96		106.72	--	6.67	0.00	100.05	<250	<750	<50	--	--	--	--	--	<2.0
6/26/96		106.72	--	7.51	0.00	99.21	<250	<750	<50	--	--	--	--	--	<2.0
10/9/96		106.72	--	7.78	0.00	98.94	<250	<750	50.1	--	--	--	--	--	<2.0
2/12/97		106.72	--	6.35	0.00	100.37	<250	<750	<50	--	--	--	--	--	<2.0
4/22/97		106.72	--	5.98	0.00	100.74	<250	<750	<50	--	--	--	--	--	<2.0
8/5/97		106.72	--	7.85	0.00	98.87	<250	<750	<50	--	--	--	--	--	<2.0
11/11/97		106.72	--	6.52	0.00	100.20	<250	<750	<50	--	--	--	--	--	<2.0



TABLE 2
SUMMARY OF HISTORICAL GROUNDWATER MONITORING DATA¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington

Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-118 (cont.)															
2/11/98		106.72	--	6.56	0.00	100.16	<250	<750	<50	--	--	--	--	--	<2.0
5/28/98		106.72	--	6.85	0.00	99.87	<250	<750	<50	--	--	--	--	--	2.84
8/20/98		106.72	--	7.26	0.00	99.46	<250	<750	<50	--	--	--	--	--	<1.0
11/19/98		106.72	--	7.70	0.00	99.02	<250	<750	<50	--	--	--	--	--	<1.0
3/11/99		106.72	--	5.81	0.00	100.91	<250	<750	<80	--	--	--	--	--	<1.0
5/25/99		106.72	--	7.39	0.00	99.33	<250	--	<80	--	--	--	--	--	--
8/17/99		106.72	--	7.95	0.00	98.77	<250	<500	<80	--	--	--	--	--	<1.0
11/19/99		106.72	--	5.53	0.00	101.19	<250	--	<80	--	--	--	--	--	<1.0
3/9/00		106.72	--	5.99	0.00	100.73	<250	<500	<80	--	--	--	--	--	<1.0
6/13/00		106.72	--	7.08	0.00	99.64	<250	<500	<80	--	--	--	--	--	<1.0
9/26/00		106.72	--	8.07	0.00	98.65	<250	<500	--	--	--	--	--	--	<1.0
12/13/00		106.72	--	7.53	0.00	99.19	<250	<500	--	--	--	--	--	--	<1.0
2/28/01		106.72	--	7.17	0.00	99.55	<250	<500	<80	--	--	--	--	--	<1.0
5/2/01		106.72	--	6.81	0.00	99.91	<250	<500	<80	--	--	--	--	--	<1.0
10/30/02		106.72	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
1/23/03		106.72	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
4/18/03		106.72	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
7/11/03		106.72	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
10/31/03		106.72	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
12/30/03		106.72	--	5.71	0.00	101.01	<50	<400	<500	<0.5	<0.5	<0.5	<1.5	--	<1.2
5/3/04		106.72	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
7/20/04		106.72	--	8.14	0.00	98.58	<250	<500	<50	<0.500	<0.500	<0.500	<1.00	--	--
10/7/04		106.72	--	7.55	0.00	99.17	<76	<96	<50	--	--	--	--	--	--
10/7/04(D)		106.72	--	7.55	0.00	99.17	<80	160	<50	--	--	--	--	--	--
10/20/05		106.72	--	7.78	0.00	98.94	<83	<100	<48	--	--	--	--	--	--
9/5/07		106.72	--	8.20	0.00	98.52	980	710	<50	--	--	--	--	--	0.13
5/27-28/08		106.72	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
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
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
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
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
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
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
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
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
08/12/10	LFP	106.72	--	7.90	0.00	98.82	<30	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.052



TABLE 2
SUMMARY OF HISTORICAL GROUNDWATER MONITORING DATA¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556

101 Mulford Road
 Toledo, Washington
 Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-118 (cont.)															
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
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
05/24/11		106.72	UNABLE TO LOCATE												
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
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
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
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
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
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
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
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
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
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
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
6/12-14/14	LFP	106.72	INACCESSIBLE												
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
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
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
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
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
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
5/13-14/16	LFP	106.72	--	7.61	0.00	99.11	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY								
11/14/16	LFP	106.72	--	6.36	0.00	100.36	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY								
MW-119															
8/22/95		108.35	--	9.22	0.00	99.13	<250	<750	<50	--	--	--	--	--	--
11/28/95		108.35	--	7.54	0.00	100.81	<250	<750	100	--	--	--	--	--	<2.0
3/12/96		108.35	--	8.21	0.00	100.14	<250	<750	240	--	--	--	--	--	2.2
6/26/96		108.35	--	8.91	0.00	99.44	<250	<750	174	--	--	--	--	--	<2.0
10/9/96		108.35	--	9.14	0.00	99.21	<250	<750	78	--	--	--	--	--	2.16
2/12/97		108.35	--	7.84	0.00	100.51	<250	<750	<50	--	--	--	--	--	<2.0
4/22/97		108.35	--	7.67	0.00	100.68	<250	<750	<50	--	--	--	--	--	<2.0
8/5/97		108.35	--	9.15	0.00	99.20	<250	<750	53.6	--	--	--	--	--	<2.0
11/11/97		108.35	--	8.02	0.00	100.33	264	<750	<50	--	--	--	--	--	<2.0
2/11/98		108.35	--	8.02	0.00	100.33	<250	<750	<50	--	--	--	--	--	<2.0
5/28/98		108.35	--	8.20	0.00	100.15	<250	<750	102	--	--	--	--	--	3.33
8/20/98		108.35	--	10.40	0.00	97.95	<250	<750	<50	--	--	--	--	--	<1.0



TABLE 2
SUMMARY OF HISTORICAL GROUNDWATER MONITORING DATA¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington

Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPL (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-119 (cont.)															
11/19/98		108.35	--	8.98	0.00	99.37	<250	<750	78.5	--	--	--	--	--	1.82
3/11/99		108.35	--	7.61	0.00	100.74	<250	<750	<80	--	--	--	--	--	<1.0
5/25/99		108.35	--	8.77	0.00	99.58	<250	--	<80	--	--	--	--	--	--
8/17/99		108.35	--	9.29	0.00	99.06	<250	<500	<80	--	--	--	--	--	<1.0
11/19/99		108.35	--	7.25	0.00	101.10	<250	--	<80	--	--	--	--	--	<1.0
3/9/00		108.35	--	7.63	0.00	100.72	<250	<500	<80	--	--	--	--	--	<1.0
6/13/00		108.35	--	8.28	0.00	100.07	<250	<500	413	--	--	--	--	--	2.64
9/26/00		108.35	--	9.44	0.00	98.91	<250	<500	--	--	--	--	--	--	<1.0
12/13/00		108.35	--	8.86	0.00	99.49	<250	<500	--	--	--	--	--	--	1.79
2/28/01		108.35	--	8.56	0.00	99.79	<250	<500	227	--	--	--	--	--	2.64
5/2/01		108.35	--	8.10	0.00	100.25	<250	<500	104	--	--	--	--	--	1.56
10/30/02		108.35	--	9.76	0.00	98.59	<250	<500	<80	<0.500	<0.500	<0.500	<1.00	--	4.2
1/23/03		108.35	MONITORED/SAMPLED ANNUALLY												
4/18/03		108.35	MONITORED/SAMPLED ANNUALLY												
7/11/03		108.35	MONITORED/SAMPLED ANNUALLY												
10/31/03		108.35	--	8.62	0.00	99.73	<250	<500	<50	<0.500	<0.500	<0.500	<1.00	--	1.31 ^b
12/30/03		108.35	--	7.40	0.00	100.95	<50	<77	<96	<0.5	<0.5	<0.5	<1.5	--	<1.2
5/3/04		108.35	MONITORED/SAMPLED ANNUALLY												
7/20/04		108.35	MONITORED/SAMPLED ANNUALLY												
10/7/04		108.35	--	8.85	0.00	99.50	<79	<98	<50	--	--	--	--	--	--
10/20/05		108.35	--	9.08	0.00	99.27	<80	<100	<48	--	--	--	--	--	--
9/5/07		108.35	--	9.53	0.00	98.82	<800	<1,000	<50	--	--	--	--	--	0.57
5/27-28/08		108.35	INACCESSIBLE												
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
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
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
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
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
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
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
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
08/12/10	LFP	108.35	--	9.22	0.00	99.13	<30	70	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.36
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
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
05/24/11	LFP	108.35	--	8.37	0.00	99.98	<30	210	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.49
8/23-24/11	LFP	108.35	UNABLE TO LOCATE												



TABLE 2
SUMMARY OF HISTORICAL GROUNDWATER MONITORING DATA¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington

Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-119 (cont.)															
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
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
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
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
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
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
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
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
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
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
6/12-14/14	LFP	108.35	INACCESSIBLE			--	--	--	--	--	--	--	--	--	--
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
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
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
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
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
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
5/13-14/16	LFP	108.35	--	8.39	0.00	99.96	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY								
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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



TABLE 2
SUMMARY OF HISTORICAL GROUNDWATER MONITORING DATA¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556

101 Mulford Road
 Toledo, Washington
 Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-120 (cont.)															
11/16-18/15	LFP	107.11	--	4.94	0.00	102.17	<28/<28	<66/<66	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.0019
5/13-14/16	LFP	107.11	--	7.81	0.00	99.30	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY								
11/14/16	LFP	107.11	--	6.47	0.00	100.64	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY								
B-1															
2/14/91		107.74	--	--	0.00	--	<250	--	5,100	--	--	--	--	--	--
2/14/92		107.74	--	6.90	0.00	100.84	--	--	--	--	--	--	--	--	--
2/18/92		107.74	--	6.72	0.00	101.02	--	--	--	--	--	--	--	--	--
3/13/92		107.74	--	6.93	0.00	100.81	--	--	<50	--	--	--	--	--	--
4/21/92		107.74	--	6.66	0.00	101.08	--	--	--	--	--	--	--	--	--
8/22/95		107.74	--	8.03	0.00	99.71	<250	<750	<50	--	--	--	--	--	--
11/28/95		107.74	--	6.13	0.00	101.61	<250	<750	<50	--	--	--	--	--	<2
3/11/96		107.74	--	6.99	0.00	100.75	<250	<750	<50	--	--	--	--	--	7.5
6/26/96		107.74	--	7.73	0.00	100.01	<250	<750	<50	--	--	--	--	--	<2
10/9/96		107.74	--	8.05	0.00	99.69	<250	<750	<50	--	--	--	--	--	<2
2/12/97		107.74	--	6.46	0.00	101.28	<250	<750	<50	--	--	--	--	--	<2
4/22/97		107.74	--	6.25	0.00	101.49	<250	<750	<50	--	--	--	--	--	<2
8/5/97		107.74	--	8.20	0.00	99.54	<250	<750	<50	--	--	--	--	--	<2
11/11/97		107.74	--	6.84	0.00	100.90	300	<750	<50	--	--	--	--	--	<2
2/11/98		107.74	--	6.70	0.00	101.04	<250	<750	<50	--	--	--	--	--	<2
5/28/98		107.74	--	6.85	0.00	100.89	<250	<750	<50	--	--	--	--	--	<1
8/20/98		107.74	--	9.42	0.00	98.32	<250	<750	<50	--	--	--	--	--	<1
11/19/98		107.74	--	7.43	0.00	100.31	<250	<750	<50	--	--	--	--	--	<1
3/11/99		107.74	--	6.34	0.00	101.40	<250	<750	<80	--	--	--	--	--	<1
5/25/99		107.74	--	7.60	0.00	100.14	<1,450	--	<80	--	--	--	--	--	--
8/17/99		107.74	--	8.28	0.00	99.46	<250	<500	<80	--	--	--	--	--	<1
11/19/99		107.74	--	5.90	0.00	101.84	<250	--	<80	--	--	--	--	--	<1
3/9/00		107.74	--	6.38	0.00	101.36	<250	<500	<80	--	--	--	--	--	<1
6/12/00		107.74	--	6.26	0.00	101.48	<250	<500	<80	--	--	--	--	--	<1
9/26/00		107.74	--	8.51	0.00	99.23	<250	<500	--	--	--	--	--	--	<1
12/13/00		107.74	--	7.69	0.00	100.05	<250	<500	--	--	--	--	--	--	<1
2/28/01		107.74	--	7.37	0.00	100.37	<250	<500	<80	--	--	--	--	--	<1
5/2/01		107.74	--	6.69	0.00	101.05	<250	<500	109	--	--	--	--	--	<1
10/30/02		107.74	UNABLE TO LOCATE - PAVED OVER												
1/23/03		107.74	MONITORED/SAMPLED ANNUALLY												
4/18/03		107.74	MONITORED/SAMPLED ANNUALLY												
7/11/03		107.74	MONITORED/SAMPLED ANNUALLY												



TABLE 2
SUMMARY OF HISTORICAL GROUNDWATER MONITORING DATA¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
B-1 (cont.)															
10/31/03		107.74	UNABLE TO LOCATE - PAVED OVER												
12/30/03		107.74	--	6.11	0.00	101.63	<50	<78	<98	<0.5	<0.5	<0.5	<1.5	--	<1.2
5/3/04		107.74	MONITORED/SAMPLED ANNUALLY												
7/20/04		107.74	MONITORED/SAMPLED ANNUALLY												
10/6/04		107.74	--	8.87	0.00	98.87	81	100	<50	--	--	--	--	--	--
10/24/05		107.74	--	7.96	0.00	99.78	<81	<100	<48	--	--	--	--	--	--
9/5/07		107.74	--	8.60	0.00	99.14	<80	<100	<50	--	--	--	--	--	0.13
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
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
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
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
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
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
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
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
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
08/11/10	LFP	107.74	--	8.16	0.00	99.58	<30	83	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.052
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
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
05/24/11	LFP	107.74	--	7.10	0.00	100.64	<29	<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.052
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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



TABLE 2
SUMMARY OF HISTORICAL GROUNDWATER MONITORING DATA¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556

101 Mulford Road
 Toledo, Washington
 Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
B-1 (cont.)															
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
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
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
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-2															
2/14/91		108.99	--	--	0.00	--	<250	--	180	--	--	--	--	--	--
2/14/92		108.99	--	8.08	0.00	100.91	--	--	--	--	--	--	--	--	--
2/18/92		108.99	--	7.97	0.00	101.02	--	--	--	--	--	--	--	--	--
3/9/92		108.99	--	7.88	0.00	101.11	--	--	--	--	--	--	--	--	--
3/13/92		108.99	--	8.12	0.00	100.87	--	--	--	--	--	--	--	--	--
4/21/92		108.99	--	7.82	0.00	101.17	--	--	--	--	--	--	--	--	--
8/22/95		108.99	--	9.30	0.00	99.69	<250	<750	<50	--	--	--	--	--	--
11/27/95		108.99	--	7.33	0.00	101.66	<250	<750	<50	--	--	--	--	--	<2
3/12/96		108.99	--	8.20	0.00	100.79	<250	<750	<50	--	--	--	--	--	<2
6/27/96		108.99	--	8.95	0.00	100.04	<250	<750	<50	--	--	--	--	--	<2
10/10/96		108.99	--	9.28	0.00	99.71	<250	<750	<50	--	--	--	--	--	<2
2/12/97		108.99	--	7.73	0.00	101.26	<250	<750	<50	--	--	--	--	--	<2
4/22/97		108.99	--	7.41	0.00	101.58	<250	<750	<50	--	--	--	--	--	2
8/5/97		108.99	--	9.40	0.00	99.59	<250	<750	<50	--	--	--	--	--	<2
11/11/97		108.99	--	8.00	0.00	100.99	<250	<750	<50	--	--	--	--	--	<2
2/11/98		108.99	--	7.90	0.00	101.09	<250	<750	<50	--	--	--	--	--	<2
5/28/98		108.99	--	8.03	0.00	100.96	<250	<750	<50	--	--	--	--	--	<1
8/20/98		108.99	--	10.64	0.00	98.35	<250	<750	<50	--	--	--	--	--	<1
11/19/98		108.99	--	8.67	0.00	100.32	<250	<750	<50	--	--	--	--	--	<1
3/11/99		108.99	--	7.56	0.00	101.43	<250	<500	<80	--	--	--	--	--	<1
5/25/99		108.99	--	8.82	0.00	100.17	<250	<1,600	<80	--	--	--	--	--	--
8/17/99		108.99	--	9.51	0.00	99.48	<250	<500	<80	--	--	--	--	--	<1
11/19/99		108.99	--	7.08	0.00	101.91	<250	<500	<80	--	--	--	--	--	<1
3/9/00		108.99	--	7.59	0.00	101.40	<250	<500	<80	--	--	--	--	--	<1
6/12/00		108.99	--	8.00	0.00	100.99	<250	<500	<80	--	--	--	--	--	<1
9/26/00		108.99	--	9.74	0.00	99.25	<250	<500	--	--	--	--	--	--	<1
12/13/00		108.99	--	8.91	0.00	100.08	<250	<500	--	--	--	--	--	--	<1
2/28/01		108.99	--	8.59	0.00	100.40	<250	<500	<80	--	--	--	--	--	<1
5/2/01		108.99	--	7.89	0.00	101.10	<250	<500	<80	--	--	--	--	--	<1
10/30/02		108.99	UNABLE TO LOCATE - PAVED OVER												--
1/23/03		108.99	MONITORED/SAMPLED ANNUALLY												--
4/18/03		108.99	MONITORED/SAMPLED ANNUALLY												--



TABLE 2
SUMMARY OF HISTORICAL GROUNDWATER MONITORING DATA¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington

Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
7/11/03		108.99													
10/31/03		108.99													
12/30/03		108.99		7.36	0.00	101.63	<50								
5/3/04		108.99													
7/20/04		108.99													
10/6/04		108.99		7.65	0.00	101.34	<79	<99	<50						
7/18/05		108.99		9.20	0.00	99.79	<71	<96	<48						
10/21/05		108.99		9.17	0.00	99.82	<82	<100	<48						
9/5/07		108.99		9.83	0.00	99.16	<81	<100	<50						0.1
5/27-28/08		108.99													
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
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
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
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
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
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
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
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
08/11/10	LFP	108.99		9.38	0.00	99.61	<29	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.052
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
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
05/24/11	LFP	108.99		8.33	0.00	100.66	<30	140	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.052
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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	<0.082



TABLE 2
SUMMARY OF HISTORICAL GROUNDWATER MONITORING DATA¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556

101 Mulford Road
 Toledo, Washington
 Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
B-2 (cont.)															
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
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
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
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-3															
2/14/91		108.46	--	--	0.00	--	<250	--	98,000	--	--	--	--	--	--
2/14/92		108.46	--	7.82	0.00	100.64	--	--	--	--	--	--	--	--	--
2/18/92		108.46	--	7.82	0.00	100.64	--	--	--	--	--	--	--	--	--
3/9/92		108.46	--	7.55	0.00	100.91	--	--	--	--	--	--	--	--	--
3/13/92		108.46	--	7.82	0.00	100.64	31,000	--	28,000	--	--	--	--	--	--
4/21/92		108.46	--	7.50	0.00	100.96	--	--	--	--	--	--	--	--	--
3/3/94		108.46	--	--	0.00	--	3,940	<750	43,000	--	--	--	--	--	--
8/23/95		108.46	--	8.93	0.00	99.53	2,600	<750	46,000	--	--	--	--	--	--
11/28/95		108.46	--	7.12	0.00	101.34	1,500	<750	63,000	--	--	--	--	--	--
3/12/96		108.46	--	7.85	0.00	100.61	900	<750	42,000	--	--	--	--	--	--
6/27/96		108.46	--	8.67	0.00	99.79	1,510	1,080	37,900	--	--	--	--	--	--
10/10/96		108.46	--	8.97	0.00	99.49	729	<750	16,200	--	--	--	--	--	--
2/12/97		108.46	--	7.55	0.00	100.91	4,060	986	35,200	--	--	--	--	--	--
4/22/97		108.46	--	7.30	0.00	101.16	3,980	767	31,900	--	--	--	--	--	--
8/2/97		108.46	--	9.05	0.00	99.41	3,370	1,270	20,400	--	--	--	--	--	--
11/11/97		108.46	--	6.76	0.00	101.70	3,230	777	28,400	--	--	--	--	--	--
2/11/98		108.46	--	7.54	0.00	100.92	3,240	1,460	28,400	--	--	--	--	--	--
5/28/98		108.46	--	7.76	0.00	100.70	3,360	<750	34,600	--	--	--	--	29.5	--
8/20/98		108.46	--	10.30	0.00	98.16	2,150	<750	32,900	--	--	--	--	<1.89	--
11/19/98		108.46	--	8.39	0.00	100.07	6,650	<3,750	23,800	--	--	--	--	--	--
3/11/99		108.46	--	7.15	0.00	101.31	2,920	<5,000	17,000	--	--	--	--	--	--
5/25/99		108.46	--	8.50	0.00	99.96	1,850	--	30,500	--	--	--	--	--	--
8/17/99		108.46	--	9.15	0.00	99.31	2,570	711	29,600	--	--	--	--	--	--
11/19/99		108.46	--	6.76	0.00	101.70	7,880	--	30,700	--	--	--	--	--	--
3/9/00		108.46	--	7.24	0.00	101.22	<250	<500	10,400	--	--	--	--	--	--
6/13/00		108.46	--	8.15	0.00	100.31	<250	<500	23,000	--	--	--	--	--	--
9/26/00		108.46	--	9.35	0.00	99.11	<250	<500	--	--	--	--	--	--	--
12/13/00		108.46	--	8.58	0.00	99.88	<250	<500	21,600	--	--	--	--	--	--
2/28/01		108.46	--	8.28	0.00	100.18	<250	<500	25,700	--	--	--	--	--	--
5/2/01		108.46	--	7.79	0.00	100.67	<250	<500	17,200	--	--	--	--	--	--
10/30/02		108.46	UNABLE TO LOCATE - PAVED OVER												



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101 Mulford Road
Toledo, Washington

Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
B-3 (cont.)															
1/23/03		108.46	UNABLE TO LOCATE - PAVED OVER												
4/18/03		108.46	UNABLE TO LOCATE - PAVED OVER												
7/11/03		108.46	UNABLE TO LOCATE - PAVED OVER												
10/31/03		108.46	UNABLE TO LOCATE - PAVED OVER												
12/30/03		108.46	--	7.04	0.00	101.42	14,000	3,800	<980	<5.0	1.9	130	61	--	17.3
5/3/04		108.46	UNABLE TO LOCATE												
7/20/04		108.46	--	9.31	0.00	99.15	1,220	<500	13,200	12.5	<10.0	874	204	--	24.6
10/6/04		108.46	--	8.68	0.00	99.78	1,200	<500	13,000	--	--	--	--	--	--
1/27/05		108.46	--	7.70	0.00	100.76	1,100	<190	6,200	--	--	--	--	--	--
4/12/05		108.46	--	7.21	0.00	101.25	1,200	<100	5,300	--	--	--	--	--	--
7/18/05		108.46	--	8.83	0.00	99.63	1,200	<97	6,400	--	--	--	--	--	--
10/21/05		108.46	--	8.85	0.00	99.61	2,400	<510	8,900	--	--	--	--	--	--
9/4/07		108.46	--	9.41	0.00	99.05	1,500	<200	10,000	--	--	--	--	--	--
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
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
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
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
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
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
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
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
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
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
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
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
05/24/11	LFP	108.46	--	7.96	0.00	100.50	1,200	300	1,800	1	<0.5	76	3	<0.5	14
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
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
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
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
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
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
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
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
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
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



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 Toledo, Washington
 Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
B-3 (cont.)															
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
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
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
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
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
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
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
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
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
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-4															
2/14/91		107.68	--	--	0.00	--	<250	--	33,000	--	--	--	--	--	--
2/14/92		107.68	--	6.82	0.00	100.86	--	--	--	--	--	--	--	--	--
2/18/92		107.68	--	5.94	0.00	101.74	--	--	--	--	--	--	--	--	--
3/9/92		107.68	--	6.62	0.00	101.06	--	--	--	--	--	--	--	--	--
3/13/92		107.68	--	6.88	0.00	100.80	--	--	21,000	--	--	--	--	--	--
4/21/92		107.68	--	6.57	0.00	101.11	--	--	--	--	--	--	--	--	--
3/3/94		107.68	--	--	0.00	--	1,040	1,250	15,800	--	--	--	--	--	--
8/22/95		107.68	--	7.92	0.00	99.76	840	820	22,000	--	--	--	--	--	--
11/28/95		107.68	--	6.11	0.00	101.57	1,900	990	22,000	--	--	--	--	--	3.1
3/12/96		107.68	--	6.85	0.00	100.83	3,200	2,500	11,000	--	--	--	--	--	4.7
6/26/96		107.68	--	7.58	0.00	100.10	757	<750	16,100	--	--	--	--	--	2.83
10/9/96		107.68	--	7.90	0.00	99.78	543	<750	10,200	--	--	--	--	--	4.13
2/12/97		107.68	--	6.01	0.00	101.67	4,710	4,830	12,200	--	--	--	--	--	2.82
4/22/97		107.68	--	10.10	0.00	97.58	5,840	1,191	15,500	--	--	--	--	--	4.18
8/5/97		107.68	--	8.37	0.00	99.31	2,560	3,160	15,800	--	--	--	--	--	6.26
11/11/97		107.68	--	7.67	0.00	100.01	2,080	1,040	31,100	--	--	--	--	--	4.75
2/11/98		107.68	--	6.45	0.00	101.23	1,340	1,630	3,750	--	--	--	--	--	<2.0
5/28/98		107.68	--	7.25	0.00	100.43	3,180	1,250	2,510	--	--	--	--	--	4.69
8/20/98		107.68	--	9.12	0.00	98.56	1,460	1,240	7,240	--	--	--	--	--	1.17
11/19/98		107.68	--	7.22	0.00	100.46	2,470	3,750	1,880	--	--	--	--	--	<1.0
3/11/99		107.68	--	5.41	0.00	102.27	1,130	585	11,900	--	--	--	--	--	3.54
5/25/99		107.68	--	7.45	0.00	100.23	<1,450	--	5,380	--	--	--	--	--	--
8/17/99		107.68	--	8.06	0.00	99.62	670	868	2,700	--	--	--	--	--	2.3
11/19/99		107.68	--	5.75	0.00	101.93	1,700	--	11,400	--	--	--	--	--	17.5
3/9/00		107.68	--	6.34	0.00	101.34	<1,250	2,830	105,000	--	--	--	--	--	10.9



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 Toledo, Washington
 Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
B-4 (cont.)															
6/13/00		107.68	--	6.80	0.00	100.88	<250	943	8,810	--	--	--	--	--	6.92
9/26/00		107.68	--	8.31	0.00	99.37	<250	0.565	--	--	--	--	--	--	5
12/13/00		107.68	--	7.54	0.00	100.14	1,250	<500	--	--	--	--	--	--	5.98
2/28/01		107.68	--	7.24	0.00	100.44	<250	<500	12,100	--	--	--	--	--	5.34
5/2/01		107.68	--	6.59	0.00	101.09	15,700	757	12,300	--	--	--	--	--	5.75
10/30/02		107.68	UNABLE TO LOCATE	UNABLE TO LOCATE	UNABLE TO LOCATE	UNABLE TO LOCATE									--
1/23/03		107.68	UNABLE TO LOCATE	UNABLE TO LOCATE	UNABLE TO LOCATE	UNABLE TO LOCATE									--
4/18/03		107.68	UNABLE TO LOCATE	UNABLE TO LOCATE	UNABLE TO LOCATE	UNABLE TO LOCATE									--
7/11/03		107.68	UNABLE TO LOCATE	UNABLE TO LOCATE	UNABLE TO LOCATE	UNABLE TO LOCATE									--
10/31/03		107.68	UNABLE TO LOCATE	UNABLE TO LOCATE	UNABLE TO LOCATE	UNABLE TO LOCATE									--
12/30/03		107.68	--	6.07	0.00	101.61	17,000	2,000	1,700	<10	<5.0	310	370	--	7.5
5/3/04		107.68	UNABLE TO LOCATE	UNABLE TO LOCATE	UNABLE TO LOCATE	UNABLE TO LOCATE									--
7/20/04		107.68	--	8.23	0.00	99.45	<250	<500	4,660	15.1	1.3	42.3	10.1	--	--
10/6/04		107.68	--	7.45	0.00	100.23	390	180	2,300	--	--	--	--	--	--
1/27/05		107.68	--	6.72	0.00	100.96	200	<195	2,800	--	--	--	--	--	--
4/12/05		107.68	--	6.62	0.00	101.06	340	<100	2,600	--	--	--	--	--	--
7/18/05		107.68	--	6.62	0.00	101.06	560	<1,100	1,600	--	--	--	--	--	--
10/21/05		107.68	--	7.81	0.00	99.87	190	260	1,800	--	--	--	--	--	--
9/4/07		107.68	--	8.40	0.00	99.28	310	<100	3,200	--	--	--	--	--	1.8
9/4/07 (D)		107.68	--	8.40	0.00	99.28	340	140	3,300	--	--	--	--	--	1.7
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
8/27-29/08	LFP	107.68	--	7.88	0.00	99.80	700	1,100	3,100	1	0.9	22	4	<0.5	1.6
11/17-19/08	LFP	107.68	--	6.26	0.00	101.42	330	2,600	3,500	1	0.7	27	3	<0.5	2.3
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
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
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
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
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
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
08/11/10	LFP	107.68	--	8.00	0.00	99.68	600	2,000	170	<0.5	<0.5	1	<0.5	<0.5	0.26
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
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
05/24/11	LFP	107.68	--	7.22	0.00	100.46	300	680	840	<0.5	<0.5	0.8	<0.5	<0.5	1.2
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
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
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



TABLE 2
SUMMARY OF HISTORICAL GROUNDWATER MONITORING DATA¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556

101 Mulford Road
 Toledo, Washington
 Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
B-4 (cont.)															
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
MW-101															
2/14/92		99.51	--	6.94	--	92.57	33,000	--	45,000	--	--	--	--	--	--
2/18/92		99.51	--	6.88	--	92.63	--	--	--	--	--	--	--	--	--
3/9/92		99.51	--	6.76	--	92.75	--	--	--	--	--	--	--	--	--
3/13/92		99.51	--	7.02	--	92.49	--	--	--	--	--	--	--	--	--
4/21/92		99.51	--	7.73	--	91.78	--	--	--	--	--	--	--	--	--
3/3/94		99.51	--	--	--	--	1,730	<750	73,000	--	--	--	--	--	--
8/22/95		99.51	--	7.90	--	91.61	1,300	<750	12,000	--	--	--	--	--	--
11/28/95		99.51	--	6.12	--	93.39	1,400	<750	49,000	--	--	--	--	--	24
3/12/96		99.51	--	6.86	--	92.65	760	<750	43,000	--	--	--	--	--	9.3
6/26/96		99.51	--	7.59	--	91.92	656	<750	22,000	--	--	--	--	--	8.22
10/9/96		99.51	--	7.85	--	91.66	309	<750	5,800	--	--	--	--	--	4.24
2/12/97		99.51	--	6.55	--	92.96	1,090	<750	33,900	--	--	--	--	--	7.04
4/22/97		99.51	--	6.31	--	93.20	1,870	977	21,500	--	--	--	--	--	7.41
11/11/97		99.51	--	6.76	--	92.75	952	<750	23,400	--	--	--	--	--	11.3
2/11/98		99.51	--	6.78	--	92.73	793	<750	28,400	--	--	--	--	--	6.51
5/28/98		99.51	--	6.91	--	92.60	798	<750	11,900	--	--	--	--	--	4.71
8/20/98		99.51	--	8.30	--	91.21	414	<750	4,400	--	--	--	--	--	1.6
11/19/98		99.51	--	7.69	--	91.82	714	<750	5,820	--	--	--	--	--	1.7



TABLE 2
SUMMARY OF HISTORICAL GROUNDWATER MONITORING DATA¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556

101 Mulford Road
 Toledo, Washington
 Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-101 (cont.)															
3/11/99		99.51	--	6.17	--	93.34	1,200	<500	38,500	--	--	--	--	--	6.82
5/25/99		99.51	--	100.97	--	-1.46	1,450	--	18,000	--	--	--	--	--	--
8/17/99		99.51	--	7.99	--	91.52	810	750	2,940	--	--	--	--	--	2.9
11/19/99		99.51	--	5.84	--	93.67	1,010	--	16,300	--	--	--	--	--	15.4
3/9/00		99.51	--	6.25	--	93.26	<250	<500	15,800	--	--	--	--	--	13
6/13/00		99.51	--	6.98	--	92.53	<250	<500	4,870	--	--	--	--	--	4.3
9/26/00		99.51	--	8.15	--	91.36	--	<250	<500	--	--	--	--	--	1.88
12/13/00		99.51	--	7.65	--	91.86	988	442	<500	--	--	--	--	--	1.13
2/28/01		99.51	--	7.25	--	92.26	<250	<500	2,710	--	--	--	--	--	2.45
5/2/01		99.51	--	9.55	--	89.96	<250	<500	2,280	--	--	--	--	--	2.6
10/30/02		99.54	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
1/23/03		99.54	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
4/18/03		99.54	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
7/11/03		99.54	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
10/31/03		99.54	UNABLE TO LOCATE - POSSIBLY PAVED OVER			--	--	--	--	--	--	--	--	--	--
12/30/03		99.54	--	6.04	0.00	93.50	13,000	890	<96	<5.0	0.6	260	290	--	27.9
5/3/04		99.54	UNABLE TO LOCATE - POSSIBLY PAVED OVER			--	--	--	--	--	--	--	--	--	--
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 ⁵
10/6/04		99.51	--	7.54	0.00	91.97	<81	<100	<260	--	--	--	--	--	--
1/27/05		99.51	--	6.78	0.00	92.73	190	<100	2,900	--	--	--	--	--	--
4/12/05		99.51	--	6.32	0.00	93.19	160	<100	1,700	--	--	--	--	--	--
7/18/05		99.51	--	7.78	0.00	91.73	93	<99	240	--	--	--	--	--	--
10/21/05		99.51	--	7.75	0.00	91.76	110	<100	470	--	--	--	--	--	--
9/5/07		99.51	--	8.22	0.00	91.29	110	140	200	--	--	--	--	--	1.2
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
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
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
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
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
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
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
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
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
08/12/10	LFP	99.51	--	7.96	0.00	91.55	52	<68	370	<0.5	<0.5	<0.5	<0.5	<0.5	0.24
MONITORING WELL DECOMMISSIONED/SAMPLING DISCONTINUED															



TABLE 2
SUMMARY OF HISTORICAL GROUNDWATER MONITORING DATA¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-102															
2/14/92		--	--	6.94	0.00	--	--	--	--	--	--	--	--	--	--
2/18/92		--	--	6.88	0.00	--	--	--	--	--	--	--	--	--	--
3/9/92		--	--	6.76	0.00	--	--	--	--	--	--	--	--	--	--
3/13/92		--	--	7.02	0.00	--	--	150	--	--	--	--	--	--	--
4/21/92		--	--	7.72	0.00	--	--	--	--	--	--	--	--	--	--
NOT PART OF MONITORING/SAMPLING PROGRAM															
MW-104															
2/14/92		100.45	--	8.86	0.00	91.59	--	--	--	--	--	--	--	--	--
02/18/92		100.45	--	8.84	0.00	91.61	--	--	--	--	--	--	--	--	--
3/9/92		100.45	--	8.73	0.00	91.72	--	--	--	--	--	--	--	--	--
3/13/92		100.45	--	8.84	0.00	91.61	--	--	<50	--	--	--	--	--	--
4/21/92		100.45	--	8.72	0.00	91.73	--	--	--	--	--	--	--	--	--
8/22/95		100.45	--	9.30	0.00	91.15	<250	<750	<50	--	--	--	--	--	--
11/27/95		100.45	--	8.39	0.00	92.06	--	--	--	--	--	--	--	--	--
3/12/96		100.45	--	8.78	0.00	91.67	--	--	--	--	--	--	--	--	--
6/27/96		100.45	--	9.00	0.00	91.45	--	--	--	--	--	--	--	--	--
10/10/96		100.45	--	9.18	0.00	91.27	--	--	--	--	--	--	--	--	--
2/12/97		100.45	--	8.65	0.00	91.80	<250	<750	<50	--	--	--	--	--	<2.0
4/22/97		100.45	--	8.50	0.00	91.95	<250	<750	<50	--	--	--	--	--	<2.0
8/5/97		100.45	--	9.20	0.00	91.25	<250	<750	<50	--	--	--	--	--	<2.0
11/11/97		100.45	--	8.81	0.00	91.64	<250	<750	<50	--	--	--	--	--	<2.0
2/11/98		100.45	--	8.83	0.00	91.62	<250	<750	<50	--	--	--	--	--	<2.0
5/28/98		100.45	--	8.97	0.00	91.48	<250	<750	<50	--	--	--	--	--	9.54
8/20/98		100.45	--	9.51	0.00	90.94	<250	<750	<50	--	--	--	--	--	<1.0
11/19/98		100.45	--	9.82	0.00	90.63	<250	<750	<50	--	--	--	--	--	<1.0
3/11/99		100.45	--	8.48	0.00	91.97	<250	<500	<80	--	--	--	--	--	<1.0
5/25/99		100.45	--	8.96	0.00	91.49	<250	--	<80	--	--	--	--	--	--
8/17/99		100.45	--	9.24	0.00	91.21	<250	<500	<80	--	--	--	--	--	<1.0
11/19/99		100.45	--	8.40	0.00	92.05	<250	--	<80	--	--	--	--	--	1.0
3/9/00		100.45	--	8.49	0.00	91.96	<250	<50	<80	--	--	--	--	--	<1.0
6/13/00		100.45	--	8.89	0.00	91.56	<250	<500	<80	--	--	--	--	--	<1.0
9/26/00		100.45	--	9.32	0.00	91.13	<250	<500	--	--	--	--	--	--	<1.0
12/13/00		100.45	--	9.09	0.00	91.36	<250	<500	--	--	--	--	--	--	<1.0
2/28/01		100.45	--	8.89	0.00	91.56	<250	<500	<80	--	--	--	--	--	<1.0
5/2/01		100.45	--	8.79	0.00	91.66	<250	<500	103	--	--	--	--	--	<1.0



TABLE 2
SUMMARY OF HISTORICAL GROUNDWATER MONITORING DATA¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556

101 Mulford Road
 Toledo, Washington
 Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPL (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-104 (cont.)															
10/30/02		100.44		UNABLE TO LOCATE		--	--	--	--	--	--	--	--	--	--
1/23/03		100.44		MONITORED/SAMPLED ANNUALLY											
4/18/03		100.44		MONITORED/SAMPLED ANNUALLY											
7/11/03		100.44		MONITORED/SAMPLED ANNUALLY											
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
12/30/03		100.44	--	8.39	0.00	92.05	<50	<77	<96	<0.5	<0.5	<0.5	<1.5	--	<1.2
5/3/04		100.44		MONITORED/SAMPLED ANNUALLY											
7/20/04		100.44		MONITORED/SAMPLED ANNUALLY											
10/7/04		100.45	--	9.09	0.00	91.36	<83	<100	<50	--	--	--	--	--	--
10/20/05		100.45	--	9.19	0.00	91.26	<82	<100	<48	--	--	--	--	--	--
9/6/07		100.45	--	9.42	0.00	91.03	<79	<98	<50	--	--	--	--	--	0.087
5/27-28/08		100.45		INACCESSIBLE		--	--	--	--	--	--	--	--	--	--
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
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
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
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
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
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
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
MONITORING WELL DECOMMISSIONED/SAMPLING DISCONTINUED															
MW-105															
2/14/92		96.14	--	3.36	0.00	92.78	--	--	--	--	--	--	--	--	--
2/18/92		96.14	--	3.34	0.00	92.80	--	--	--	--	--	--	--	--	--
3/9/92		96.14	--	3.25	0.00	92.89	--	--	--	--	--	--	--	--	--
3/13/92		96.14	--	3.60	0.00	92.54	--	--	<50	--	--	--	--	--	--
4/21/92		96.14	--	3.40	0.00	92.74	--	--	--	--	--	--	--	--	--
8/22/95		96.14	--	5.08	0.00	91.06	<250	900	<50	--	--	--	--	--	--
11/28/95		96.14	--	2.53	0.00	93.61	--	--	--	--	--	--	--	--	--
3/12/96		96.14	--	3.37	0.00	92.77	--	--	--	--	--	--	--	--	--
6/26/96		96.14	--	4.74	0.00	91.40	--	--	--	--	--	--	--	--	--
10/9/96		96.14	--	4.93	0.00	91.21	--	--	--	--	--	--	--	--	--
2/12/97		96.14	--	3.19	0.00	92.95	<250	<750	<50	--	--	--	--	--	2
4/22/97		96.14	--	3.08	0.00	93.06	<250	<750	<50	--	--	--	--	--	2
8/5/97		96.14	--	4.85	0.00	91.29	<250	<750	<50	--	--	--	--	--	2
11/11/97		96.14	--	3.11	0.00	93.03	<250	<750	<50	--	--	--	--	--	2



TABLE 2
SUMMARY OF HISTORICAL GROUNDWATER MONITORING DATA¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington

Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-105 (cont.)															
2/11/98		96.14	--	3.24	0.00	92.90	<250	<750	<50	--	--	--	--	--	2
5/28/98		96.14	--	3.91	0.00	92.23	<250	<750	<50	--	--	--	--	--	6.62
8/20/98		96.14	--	5.28	0.00	90.86	<250	<750	<50	--	--	--	--	--	<1.00
11/19/98		96.14	--	5.37	0.00	90.77	<250	<750	<50	--	--	--	--	--	<1.00
3/11/99		96.14	--	2.43	0.00	93.71	<250	<500	<80	--	--	--	--	--	<1.00
5/25/99		96.14	--	4.29	0.00	91.85	<250	--	<80	--	--	--	--	--	--
8/17/99		96.14	--	5.06	0.00	91.08	<250	<500	<80	--	--	--	--	--	<1.00
11/19/99		96.14	--	3.08	0.00	93.06	<250	--	<80	--	--	--	--	--	<1.00
3/9/00		96.14	--	2.75	0.00	93.39	<250	<500	<80	--	--	--	--	--	<1.00
6/13/00		96.14	--	4.45	0.00	91.69	<250	<500	<80	--	--	--	--	--	<1.00
9/26/00		96.14	--	5.20	0.00	90.94	<250	<500	--	--	--	--	--	--	<1.00
12/13/00		96.14	--	4.67	0.00	91.47	<250	<500	--	--	--	--	--	--	1.37
2/28/01		96.14	--	3.92	0.00	92.22	<250	<500	<80	--	--	--	--	--	<1.00
5/2/01		96.14	--	3.53	0.00	92.61	<250	<750	87	--	--	--	--	--	<1.00
10/30/02		96.15	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
1/23/03		96.15	MONITORED/SAMPLED ANNUALLY												--
4/18/03		96.15	MONITORED/SAMPLED ANNUALLY												--
7/11/03		96.15	MONITORED/SAMPLED ANNUALLY												--
10/31/03		96.15	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
12/31/03		96.15	--	2.45	0.00	93.70	<50	<400	<500	<0.5	<0.5	<0.5	<1.5	--	<1.2
5/3/04		96.15	MONITORED/SAMPLED ANNUALLY												--
7/20/04		96.15	MONITORED/SAMPLED ANNUALLY												--
10/7/04		96.14	--	4.71	0.00	91.43	<160	<200	<50	--	--	--	--	--	--
10/20/05		96.14	--	5.16	0.00	90.98	<82	<100	<48	--	--	--	--	--	--
9/6/07		96.14	--	5.34	0.00	90.80	<100	<81	<50	--	--	--	--	--	0.47
5/27-28/08		96.14	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
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
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
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
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
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
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
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
MONITORING WELL DECOMMISSIONED/SAMPLING DISCONTINUED															



TABLE 2
SUMMARY OF HISTORICAL GROUNDWATER MONITORING DATA¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington

Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-106															
2/14/92		99.71	--	8.18	0.00	91.53	--	--	--	--	--	--	--	--	--
2/18/92		99.71	--	8.20	0.00	91.51	--	--	--	--	--	--	--	--	--
3/9/92		99.71	--	8.04	0.00	91.67	--	--	--	--	--	--	--	--	--
3/13/92		99.71	--	8.18	0.00	91.53	--	<50	--	--	--	--	--	--	--
4/21/92		99.71	--	8.02	0.00	91.69	--	--	--	--	--	--	--	--	--
8/22/95		99.71	--	8.79	0.00	90.92	<250	<750	<50	--	--	--	--	--	--
11/28/95		99.71	--	7.63	0.00	92.08	--	--	--	--	--	--	--	--	--
3/12/96		99.71	--	8.04	0.00	91.67	<250	<750	<50	--	--	--	--	--	<2.0
6/26/96		99.71	--	8.61	0.00	91.10	<250	<750	<50	--	--	--	--	--	<2.0
10/9/96		99.71	--	8.65	0.00	91.06	<250	<750	<50	--	--	--	--	--	2.16
2/12/97		99.71	--	7.95	0.00	91.76	<250	<750	<50	--	--	--	--	--	<2.0
4/22/97		99.71	--	7.73	0.00	91.98	<250	<750	<50	--	--	--	--	--	<2.0
8/5/97		99.71	--	8.68	0.00	91.03	<250	<750	<50	--	--	--	--	--	<2.0
11/11/97		99.71	--	8.07	0.00	91.64	<250	<750	<50	--	--	--	--	--	<2.0
2/11/98		99.71	--	8.12	0.00	91.59	<250	<750	<50	--	--	--	--	--	<2.0
5/28/98		99.71	--	8.35	0.00	91.36	<250	<750	<50	--	--	--	--	--	4.53
8/20/98		99.71	--	8.96	0.00	90.75	<250	<750	<50	--	--	--	--	--	<1.0
11/19/98		99.71	--	9.37	0.00	90.34	<250	<750	<50	--	--	--	--	--	<1.0
3/11/99		99.71	--	7.70	0.00	92.01	<250	<50	<80	--	--	--	--	--	1.1
5/25/99		99.71	--	8.32	0.00	91.39	<250	--	<80	--	--	--	--	--	--
8/17/99		99.71	--	8.70	0.00	91.01	<250	<500	<80	--	--	--	--	--	<1.0
11/19/99		99.71	--	7.88	0.00	91.83	<250	--	<80	--	--	--	--	--	<1.0
3/9/00		99.71	--	7.74	0.00	91.97	<250	<500	<80	--	--	--	--	--	<1.0
6/13/00		99.71	--	8.39	0.00	91.32	<250	<500	<80	--	--	--	--	--	<1.0
9/26/00		99.71	--	8.79	0.00	90.92	<250	<500	--	--	--	--	--	--	<1.0
12/13/00		99.71	--	8.51	0.00	91.20	<250	<500	--	--	--	--	--	--	<1.0
2/28/01		99.71	--	8.18	0.00	91.53	<250	<500	<80	--	--	--	--	--	<2.0
5/2/01		99.71	--	8.17	0.00	91.54	<250	<500	88	--	--	--	--	--	<1.0
10/30/02		99.73	--	8.98	0.00	90.75	<250	<500	<80	<0.500	<0.500	<0.500	<1.00	--	<1.0
1/23/03		99.73	MONITORED/SAMPLED ANNUALLY												
4/18/03		99.73	MONITORED/SAMPLED ANNUALLY												
7/11/03		99.73	MONITORED/SAMPLED ANNUALLY												
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
12/31/03		99.73	--	7.54	0.00	92.19	<50	<78	<98	<0.5	<0.5	<0.5	<1.5	--	<1.2



TABLE 2
SUMMARY OF HISTORICAL GROUNDWATER MONITORING DATA¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556

101 Mulford Road
 Toledo, Washington
 Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-106 (cont.)															
5/3/04		99.73													
7/20/04		99.73													
10/7/04		99.71	--	8.50	0.00	91.21	<78	<97	<50						
10/20/05		99.71	--	8.70	0.00	91.01	<82	<100	<48						
9/6/07		99.71	--	8.88	0.00	90.83	<80	<100	<50						0.13
5/27-28/08		99.71		INACCESSIBLE											
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
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
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
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
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
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
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
MONITORING WELL DECOMMISSIONED/SAMPLING DISCONTINUED															
MW-107															
2/14/92		100.00	--	8.50	0.00	91.50									
2/18/92		100.00	--	8.50	0.00	91.50									
3/9/92		100.00	--	8.36	0.00	91.64									
3/13/92		100.00	--	8.52	0.00	91.48			<50						
4/21/92		100.00	--	8.36	0.00	91.64									
8/22/95		100.00	--	9.06	0.00	90.94	<250	<750	<50						
11/28/95		100.00	--	8.00	0.00	92.00									
3/12/96		100.00	--	8.36	0.00	91.64									
6/26/96		100.00	--	8.89	0.00	91.11									
10/9/96		100.00	--	8.94	0.00	91.06									
2/12/97		100.00	--	8.25	0.00	91.75	<250	<750	<50						<2.0
4/22/97		100.00	--	8.05	0.00	91.95	<250	<750	<50						<2.0
8/5/97		100.00	--	8.95	0.00	91.05	<250	<809	<50						<2.0
11/11/97		100.00	--	8.37	0.00	91.63	<250	750	<50						<2.0
2/11/98		100.00	--	8.44	0.00	91.56	351	750	<50						<2.0
5/28/98		100.00	--	8.73	0.00	91.27	<250	754	<50						--
8/20/98		100.00	--	9.24	0.00	90.76	<250	750	<50						1
11/19/98		100.00	--	9.65	0.00	90.35	<250	750	<50						<1.0
3/11/99		100.00	--	8.08	0.00	91.92	539	750	<80						<1.0
5/25/99		100.00	--	8.82	0.00	91.18	<250	<500	<80						--



TABLE 2
SUMMARY OF HISTORICAL GROUNDWATER MONITORING DATA¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-107 (cont.)															
8/17/99		100.00	--	8.10	0.00	91.90	<250	--	<80	--	--	--	--	--	<1.0
11/19/99		100.00	--	8.21	0.00	91.79	<250	<500	<80	--	--	--	--	--	<1.0
3/9/00		100.00	--	8.08	0.00	91.92	<250	--	<80	--	--	--	--	--	<1.0
6/13/00		100.00	--	8.88	0.00	91.12	<250	<500	<80	--	--	--	--	--	<1.0
9/26/00		100.00	--	9.07	0.00	90.93	<250	<500	--	--	--	--	--	--	<1.0
12/13/00		100.00	--	8.78	0.00	91.22	<250	<500	--	--	--	--	--	--	<1.0
2/28/01		100.00	--	8.63	0.00	91.37	<250	<500	<80	--	--	--	--	--	<1.0
5/2/01		100.00	--	8.63	0.00	91.37	<250	<500	88	--	--	--	--	--	<1.0
10/30/02		100.00	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
1/23/03		100.00	MONITORED/SAMPLED ANNUALLY												
4/18/03		100.00	MONITORED/SAMPLED ANNUALLY												
7/11/03		100.00	MONITORED/SAMPLED ANNUALLY												
10/31/03		100.00	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
12/31/03		100.00	--	7.92	0.00	92.08	<50	85	150	<0.5	<0.5	<0.5	<1.5	--	<1.2
5/3/04		100.00	MONITORED/SAMPLED ANNUALLY												
7/20/04		100.00	MONITORED/SAMPLED ANNUALLY												
10/7/04		100.00	--	8.78	0.00	91.22	<80	<100	<50	--	--	--	--	--	--
10/20/05		100.00	--	8.97	0.00	91.03	<81	<100	<48	--	--	--	--	--	--
9/6/07		100.00	--	9.18	0.00	90.82	<78	<98	<50	--	--	--	--	--	0.07
5/27-28/08		100.00	INACCESSIBLE			--	--	--	--	--	--	--	--	--	--
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
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
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
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
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
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
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
MONITORING WELL DECOMMISSIONED/SAMPLING DISCONTINUED															

TABLE 2
SUMMARY OF HISTORICAL GROUNDWATER MONITORING DATA¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556

101 Mulford Road
 Toledo, Washington
 Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-108															
2/14/92		99.79	--	8.10	0.00	91.69	--	--	--	--	--	--	--	--	--
2/18/92		99.79	--	8.62	0.00	91.17	--	--	--	--	--	--	--	--	--
3/9/92		99.79	--	8.49	0.00	91.30	--	--	--	--	--	--	--	--	--
3/13/92		99.79	--	8.63	0.00	91.16	--	<50	--	--	--	--	--	--	--
4/21/92		99.79	--	8.47	0.00	91.32	--	--	--	--	--	--	--	--	--
8/22/95		99.79	--	9.04	0.00	90.75	<250	<750	<50	--	--	--	--	--	--
11/28/95		99.79	--	7.98	0.00	91.81	--	--	--	--	--	--	--	--	--
3/12/96		99.79	--	8.50	0.00	91.29	--	--	--	--	--	--	--	--	--
6/26/96		99.79	--	8.86	0.00	90.93	--	--	--	--	--	--	--	--	--
10/9/96		99.79	--	8.91	0.00	90.88	--	--	--	--	--	--	--	--	--
2/12/97		99.79	--	8.41	0.00	91.38	<250	<750	<50	--	--	--	--	--	<2.0
4/22/97		99.79	--	8.08	0.00	91.71	<250	<750	<50	--	--	--	--	--	<2.0
8/5/97		99.79	--	8.94	0.00	90.85	<250	825	<50	--	--	--	--	--	<2.0
11/11/97		99.79	--	8.53	0.00	91.26	<250	<750	<50	--	--	--	--	--	<2.0
2/11/98		99.79	--	8.59	0.00	91.20	<250	873	<50	--	--	--	--	--	<2.0
5/28/98		99.79	--	8.72	0.00	91.07	<250	<750	<50	--	--	--	--	--	4.27
8/20/98		99.79	--	9.20	0.00	90.59	<250	<750	<50	--	--	--	--	--	<1.0
11/19/98		99.79	--	9.60	0.00	90.19	<250	<750	<50	--	--	--	--	--	<1.0
3/11/99		99.79	--	8.16	0.00	91.63	<250	<500	<80	--	--	--	--	--	<1.0
5/25/99		99.79	--	8.69	0.00	91.10	<250	--	<80	--	--	--	--	--	--
8/17/99		99.79	--	8.96	0.00	90.83	<250	<500	<80	--	--	--	--	--	<1.0
11/19/99		99.79	--	8.08	0.00	91.71	<250	--	<80	--	--	--	--	--	<1.0
3/9/00		99.79	--	8.16	0.00	91.63	<250	<500	<80	--	--	--	--	--	<1.0
6/13/00		99.79	--	8.69	0.00	91.10	<250	<500	<80	--	--	--	--	--	<1.0
9/26/00		99.79	--	9.04	0.00	90.75	<250	<500	--	--	--	--	--	--	<1.0
12/13/00		99.79	--	8.81	0.00	90.98	<250	<500	--	--	--	--	--	--	<1.0
2/28/01		99.79	--	8.60	0.00	91.19	<250	<500	<80	--	--	--	--	--	<1.0
5/2/01		99.79	--	8.53	0.00	91.26	<250	<500	<80	--	--	--	--	--	<1.0
10/30/02		99.79	--	9.24	0.00	90.55	<250	<500	<80	<0.500	<0.500	<0.500	<1.0	--	<1.0
1/23/03		99.79	MONITORED/SAMPLED ANNUALLY												
4/18/03		99.79	MONITORED/SAMPLED ANNUALLY												
7/11/03		99.79	MONITORED/SAMPLED ANNUALLY												
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
12/31/03		99.79	--	7.95	0.00	91.84	<50	<77	<97	<0.5	<0.5	<0.5	<1.5	--	<1.2



TABLE 2
SUMMARY OF HISTORICAL GROUNDWATER MONITORING DATA¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556

101 Mulford Road
 Toledo, Washington
 Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPL (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-108 (cont.)															
5/3/04		99.79		MONITORED/SAMPLED ANNUALLY											
7/20/04		99.79		MONITORED/SAMPLED ANNUALLY											
10/7/04		99.79	--	8.80	0.00	90.99	<80	<100	<50	--	--	--	--	--	--
10/20/05		99.79	--	8.89	0.00	90.90	<81	<100	<48	--	--	--	--	--	--
10/20/05(D)		99.79	--	8.89	0.00	90.90	<81	<100	<48	--	--	--	--	--	--
9/6/07		99.79	--	9.15	0.00	90.64	<80	<100	<50	--	--	--	--	--	0.12
5/27-28/08		99.79		INACCESSIBLE											
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
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
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
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
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
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
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
MONITORING WELL DECOMMISSIONED/SAMPLING DISCONTINUED															
TRIP BLANK															
10/30/02		--	--	--	--	--	--	--	--	--	--	--	--	--	--
1/23/03		--	--	--	--	--	--	--	<80	<0.500	<0.500	<0.500	<1.0	--	--
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	--	--
10/31/03		--	--	--	--	--	--	--	<50	<0.500	<0.500	<0.500	<1.00	--	--
12/31/03		--	--	--	--	--	<50	--	--	<0.5	<0.5	<1.5	--	--	--
5/3/04 ⁶		--	--	--	--	--	--	--	--	--	--	--	--	--	--
7/20/04		--	--	--	--	--	--	--	<50	<0.500	<0.500	<0.500	<1.00	--	--
5/27-28/08		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
8/27-29/08		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
11/17-19/08		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
2/16-18/09		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
5/4-6/09		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
8/19-21/09		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
11/18-20/09		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
2/8-10/10		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
5/12-13/10		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
08/11/10		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--



TABLE 2
SUMMARY OF HISTORICAL GROUNDWATER MONITORING DATA¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556

101 Mulford Road
Toledo, Washington

Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPL (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead		
QA (cont.)																	
11/3-4/10		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--		
2/3-4/11		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--		
05/23/11		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--		
8/23-24/11		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--		
11/7-9/11		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--		
2/6-8/12		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--		
5/2-4/12		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--		
8/1-3/12		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--		
11/26-28/12		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--		
02/4-6/13		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--		
05/6-8/13		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--		
9/9-13/13		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--		
11/18-22/13		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--		
2/4-11/14		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--		
6/12-14/14		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--		
8/18-21/14		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--		
11/19-20/14		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--		
2/17-20/14		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--		
5/11-15/15		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--		
8/10-11/15		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--		
11/16-18/15		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--		
5/13-14/16		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--		
11/14/16		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--		
Standard Laboratory Reporting Limits:																	
MTCA Method A Cleanup Levels:																	
							500	500	800/1,000	5	1,000	700	1,000	20	15		
Current Method: ¹																	
							NWTPH-Dx Extended									NWTPH-Gx and USEPA 8260B	
USEPA 6020																	



TABLE 2
SUMMARY OF HISTORICAL GROUNDWATER MONITORING DATA¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556

101 Mulford Road
 Toledo, Washington
 Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPL (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
Abbreviations:															
BTEX = Benzene, Toluene, Ethylbenzene, and Xylenes															
(D) = Duplicate															
D. Lead = Dissolved Lead															
DTP = Depth to Product															
DTW = Depth to Water															
(ft.) = Feet															
GWE = Groundwater Elevation															
LFP = Low Flow Purge															
LNAPL = Light Non-Aqueous Phase Liquid															
LNAPLT = LNAPL Thickness															
(mg/L) = Milligrams per liter															
MTBE = Methyl Tertiary Butyl Ether															
MTCA = Model Toxics Control Act															
QA = Quality Assurance/Trip Blank															
T. Lead = Total Lead															
TOC = Top of Casing															
TPH = Total Petroleum Hydrocarbons															
TPH-DRO = TPH as Diesel-Range Organics															
TPH-GRO = TPH as Gasoline-Range Organics															
TPH-HRO = TPH as Heavy Oil-Range Organics															
USEPA = United States Environmental Protection Agency															
µg/L = Micrograms per liter															
-- = Not Measured/Not Analyzed															

Notes:

- 1 Analytical results in bold font indicate concentrations exceed MTCA Method A cleanup levels.
- 2 TOC elevations have been surveyed in feet relative to the 1988 North American Vertical Datum.
- 3 When LNAPL is present, GWE has been corrected using the following formula: $GWE = [(TOC - DTW) + (LNAPLT \times 0.80)]$.
- 4 TPH-DRO and TPH-HRO results with multiple values are reported as follows: with silica gel cleanup/without silica gel cleanup. TPH-DRO and TPH-HRO analyses for monitoring completed between October 2004 and May 2013 was performed with silica gel cleanup. The use of silica gel cleanup for samples collected prior to October 2004 has not been confirmed.
- 5 Laboratory report indicates this sample was laboratory filtered.
- 6 Laboratory indicates they did not receive a QA sample. No results were provided.
- 7 Laboratory analytical methods for historical data may not be consistent with list of current analytical methods. When necessary, consult original laboratory reports to verify methods used.
- 8 Insufficient groundwater to collect sample.

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	<p>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.</p> <p>Long term – existing risks would be eliminated by achieving Site cleanup levels through MNA.</p> <p>Improvement of overall environmental quality is likely to be the same for each of the alternatives evaluated.</p> <p>The estimated restoration time frame to attain cleanup standards for the Site is approximately 10 - 15 years.</p> <p>This alternative is considered to be more protective than Alternative 4 due to reduction in short-term risks by active remediation.</p> <p>This alternative is considered to be similar to Alternative 2 in protectiveness.</p> <p>Protectiveness Rank = 2</p>	<p>Short term - existing risks would be reduced by partial source remediation by excavation, and by managing potential exposure pathways using institutional controls.</p> <p>Long term – existing risks would be eliminated by achieving Site cleanup levels through MNA.</p> <p>Improvement of overall environmental quality is likely to be the same for each of the alternatives evaluated.</p> <p>The estimated restoration time frame to attain cleanup standards for the Site is approximately 10 - 15 years.</p> <p>This alternative is considered to be more protective than Alternative 4 due to reduction in short-term risks by active remediation.</p> <p>This alternative is considered to be similar to Alternative 1 in protectiveness.</p> <p>Protectiveness Rank = 2</p>	<p>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.</p> <p>Long term – existing risks would be eliminated by achieving Site cleanup levels through MNA.</p> <p>Improvement of overall environmental quality is likely to be the same for each of the alternatives evaluated.</p> <p>The estimated restoration time frame to attain cleanup standards for the Site is approximately 10 years.</p> <p>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.</p> <p>Protectiveness Rank = 3</p>	<p>Short term - existing risks would be managed using institutional controls.</p> <p>Long term – existing risks would be eliminated by achieving Site cleanup levels through site-wide excavation and MNA.</p> <p>Improvement of overall environmental quality is likely to be the same for each of the alternatives evaluated.</p> <p>The estimated restoration time frame to attain cleanup standards for the Site is approximately 10 - 25 years.</p> <p>This alternative is considered the least protective because it has the potential to result in the longest restoration time frame.</p> <p>Protectiveness Rank = 1</p>	<p>Short term - existing risks would be reduced by source remediation through site-wide excavation, and by managing potential exposure pathways using institutional controls.</p> <p>Long term – existing risks would be eliminated by achieving Site cleanup levels through MNA.</p> <p>Improvement of overall environmental quality is likely to be the same for each of the alternatives evaluated.</p> <p>The estimated restoration time frame to attain cleanup standards for the Site is approximately 5 - 10 years.</p> <p>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.</p> <p>Protectiveness Rank = 4</p>

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
<p>Permanence</p>	<p>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.</p> <p>Permanence Rank = 1</p>	<p>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.</p> <p>Permanence Rank = 2</p>	<p>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.</p> <p>Permanence Rank = 2</p>	<p>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.</p> <p>Permanence Rank = 3</p>	<p>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.</p> <p>Permanence Rank = 3</p>
<p>Long-Term Effectiveness</p>	<p>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.</p> <p>Long-Term Effectiveness Rank = 1</p>	<p>Alternative 2 is considered to have more certainty 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).</p> <p>Long-Term Effectiveness Rank = 2</p>	<p>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.</p> <p>Long-Term Effectiveness Rank = 3</p>	<p>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.</p> <p>Long-Term Effectiveness Rank = 4</p>	<p>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.</p> <p>Long-Term Effectiveness Rank = 4</p>

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 Management of Short-Term Risks	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
	<p>Short-term risks associated with Alternative 1 include:</p> <ul style="list-style-type: none"> • 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. <p>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.</p> <p>Management of Short-Term Risks Rank = 3</p>	<p>Short-term risks associated with Alternative 2 include:</p> <ul style="list-style-type: none"> • 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. <p>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.</p> <p>Management of Short-Term Risks Rank = 3</p>	<p>Short-term risks associated with Alternative 3 include:</p> <ul style="list-style-type: none"> • 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. <p>This alternative is considered to have a greater degree of short-term risk than Alternative 1 because it includes two phases of construction.</p> <p>Management of Short-Term Risks Rank = 2</p>	<p>Short-term risks associated with Alternative 4 include:</p> <ul style="list-style-type: none"> • Risks to workers from physical hazards and/or exposure to hazardous substances during site monitoring activities. <p>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.</p> <p>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.</p> <p>Management of Short-Term Risks Rank = 3</p>	<p>Short-term risks associated with Alternative 5 include:</p> <ul style="list-style-type: none"> • 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. <p>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.</p> <p>Management of Short-Term Risks Rank = 1</p>

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
<p>Technical and Administrative Implementability</p>	<p>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.</p> <p>This alternative may also require an air discharge permit for the SVE system.</p> <p>Institutional controls needed for this alternative are similar to Alternatives 2 and 3.</p> <p>Implementation of this alternative is considered to be technically and administratively equivalent to Alternative 2.</p> <p>Technical and Administrative Implementability Rank = 4</p>	<p>This alternative is considered to be technically and administratively implementable.</p> <p>Institutional controls needed for this alternative are similar to Alternatives 1 and 3.</p> <p>Implementation of this alternative is considered to be technically and administratively equivalent to Alternative 1.</p> <p>Technical and Administrative Implementability Rank = 4</p>	<p>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.</p> <p>This alternative may also require an air discharge permit for the SVE system.</p> <p>Institutional controls needed for this alternative are similar to Alternatives 1 and 2.</p> <p>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.</p> <p>Technical and Administrative Implementability Rank = 2</p>	<p>This alternative is considered to be technically and administratively implementable.</p> <p>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.</p> <p>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.</p> <p>Technical and Administrative Implementability Rank = 3</p>	<p>Administratively, this would be the most difficult alternative to implement due to impacts to operations of the existing active station facility.</p> <p>This alternative would be the most logistically challenging to implement due to the need to remove and replace existing service station infrastructure.</p> <p>Technical and Administrative Implementability Rank = 1</p>

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

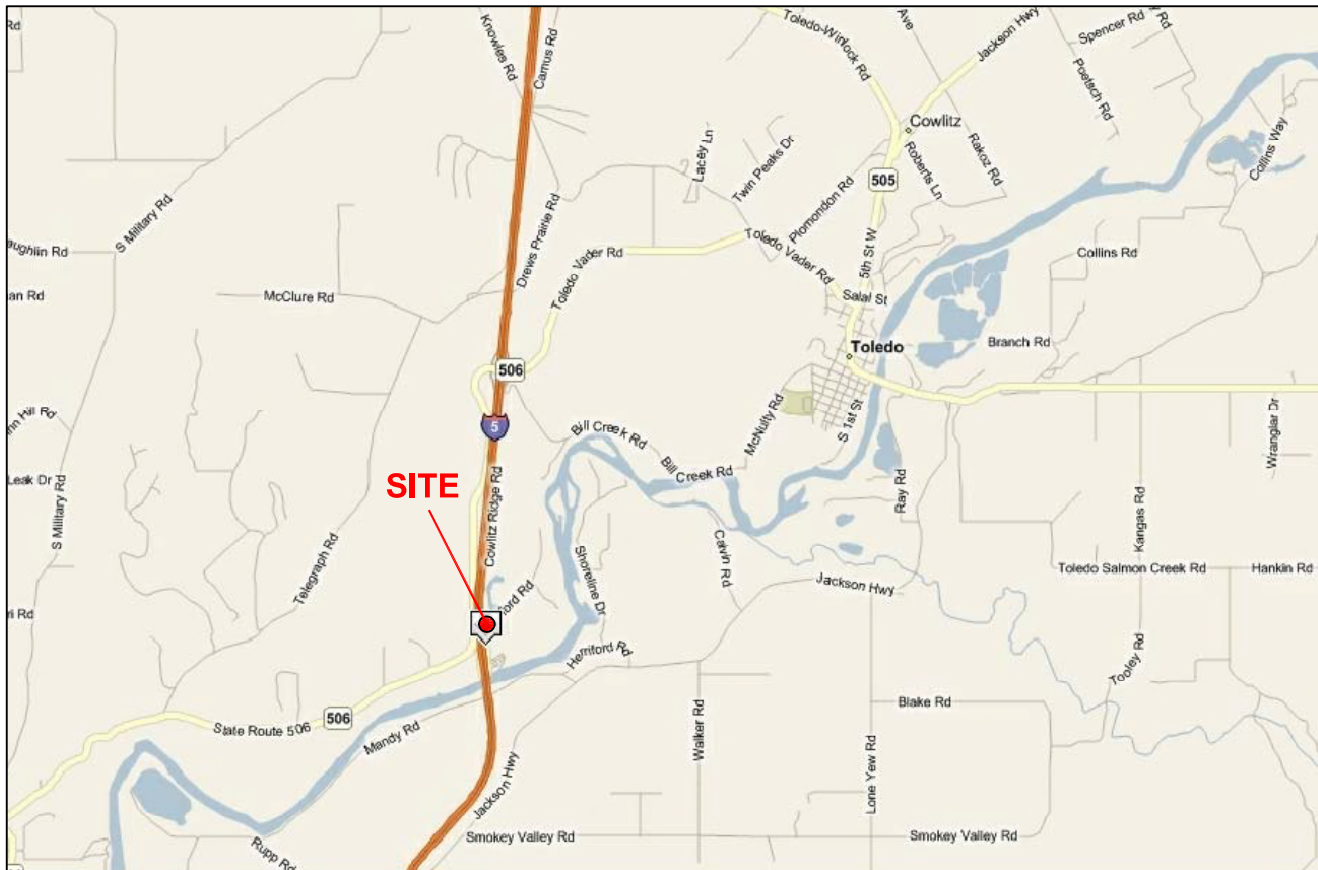
Evaluation Criteria	Alternative 1 Air Sparge/SVE, MNA, and Institutional Controls	Alternative 2 Partial Excavation, MNA, and Institutional Controls	Alternative 3 Partial Excavation, Air Sparge/SVE, MNA, and Institutional Controls	Alternative 4 MNA, Institutional Controls, and Site-Wide Excavation in 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.	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.	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.	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.	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.
Cumulative Ranking¹	14	15	16	16	14

Notes:

- 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





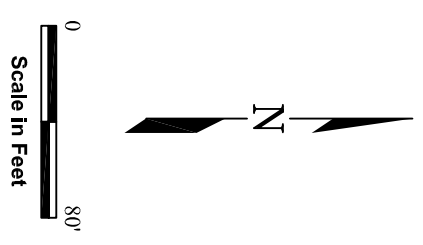
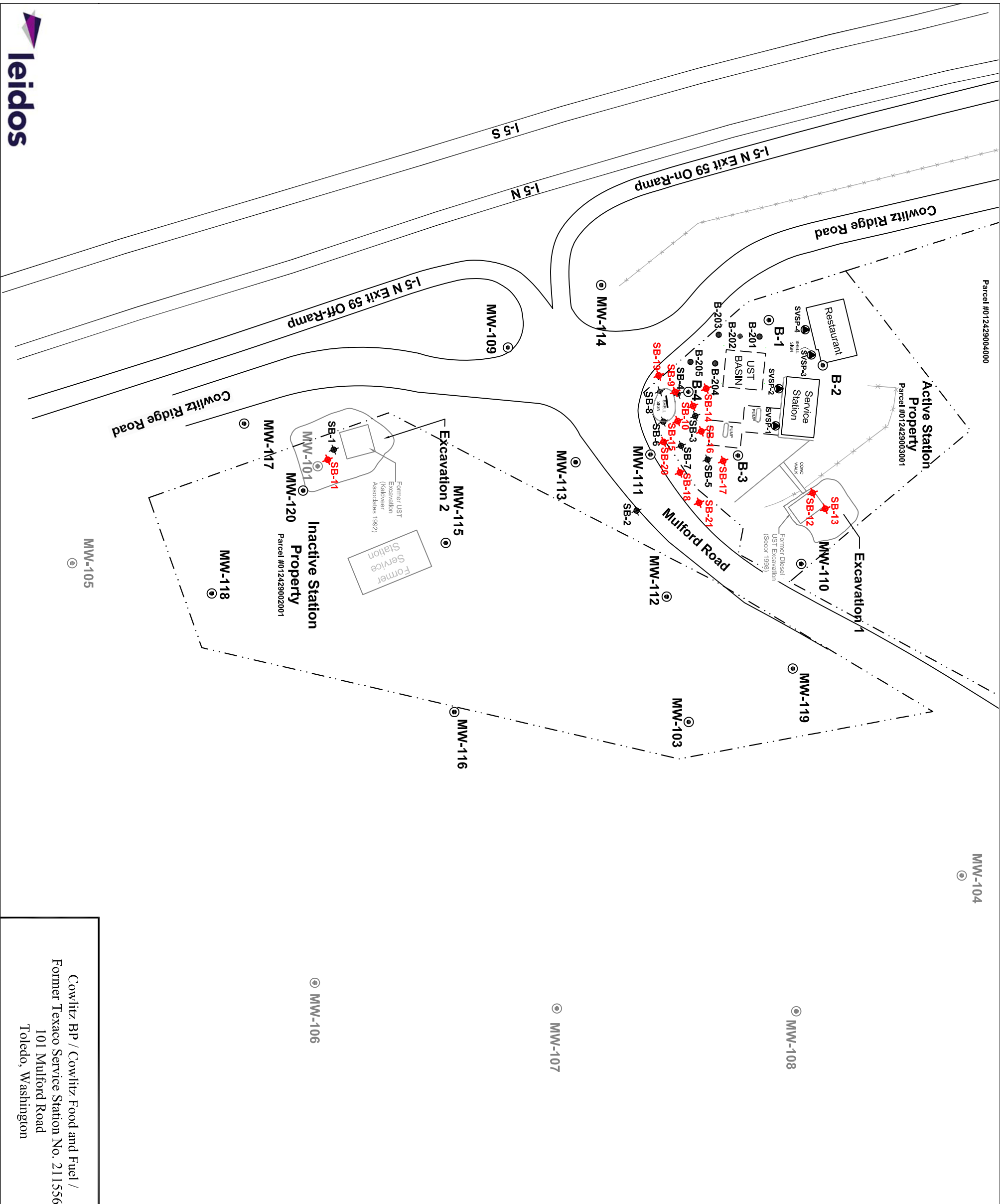
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101 Mulford Road
Toledo, Washington

FIGURE 1
Vicinity Map

DATE: 2/21/2014

DRAWING: 211556_VM.dwg

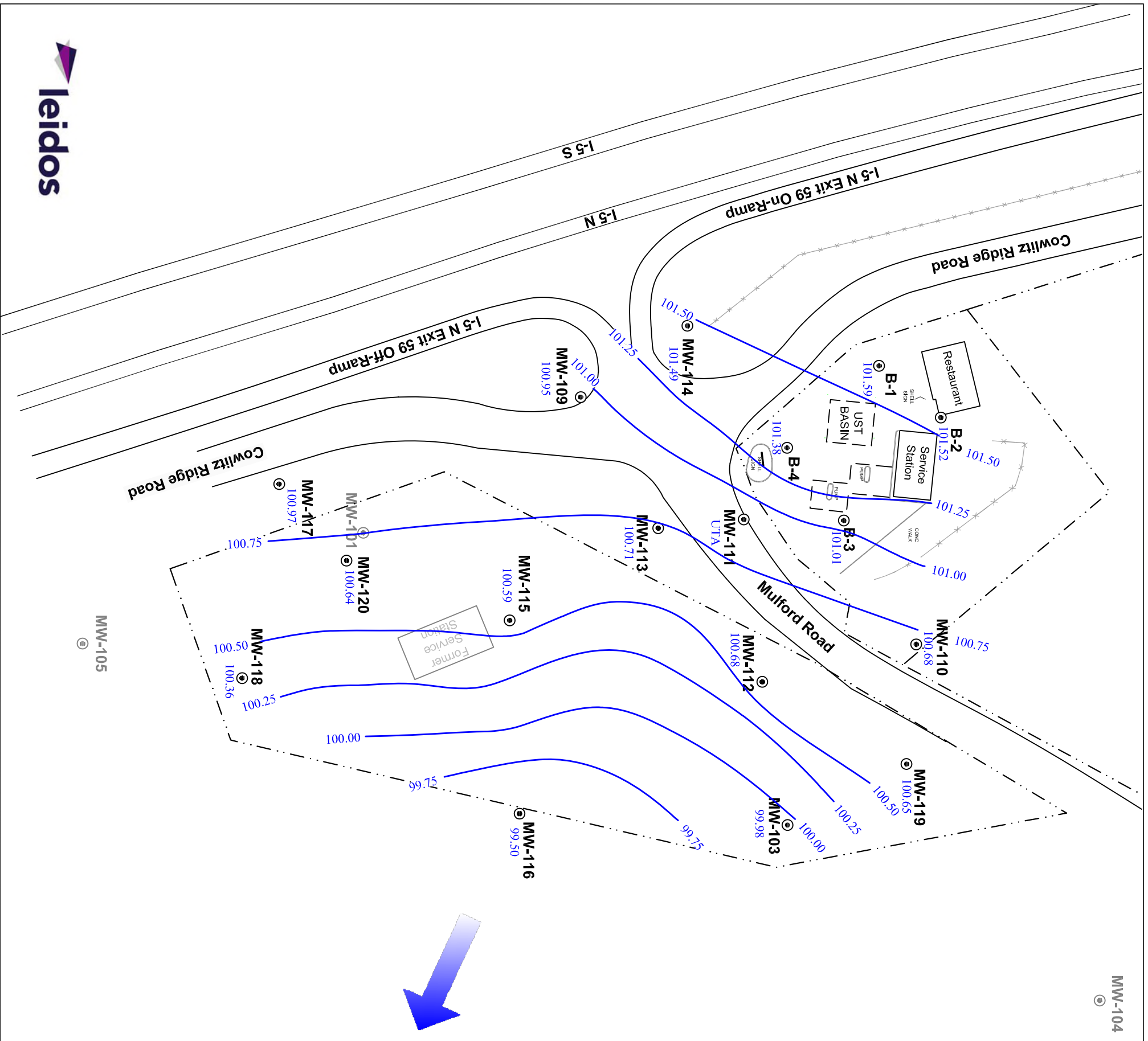




- LEGEND:**
- MW-114 Monitoring Well Location
 - MW-101 Former Monitoring Well Location Decommissioned October 2010
 - B-201 1992 Soil Boring Location (Kaldveer Associates)
 - SB-7 2004 Soil Boring Location (SAIC)
 - SB-9 2013 Soil Boring Location (Leidos)
 - svsp-3 Soil-Vapor Sampling Probe
 - Property 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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FIGURE 2
Site Map

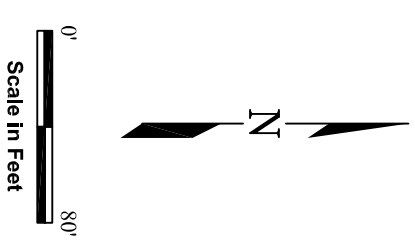


MW-104

MW-108

MW-107

MW-106



- LEGEND**
- MW-114 ● Monitoring Well Location
 - MW-101 ● Former Monitoring Well Location Decommissioned October 2010
 - - - - - Property Boundary
 - * * * - Fence
 - - - - - Current Site Features
 - - - - - Former Station Facilities
 - - - - - Underground Storage Tank
 - UST
 - 99.50 Groundwater Elevation in Feet
 - 100.00 — Groundwater Elevation Contour at 0.25-Foot Interval
 - [98.92] Groundwater Elevation Not Used in Contour Map
 - ↑ Approximate Groundwater Flow Direction at a Gradient of 0.005 to 0.008 Feet per Foot
 - UTA Unable To Access

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FIGURE 3
Potentiometric Map
November 14, 2016

DATE: 4/19/2017

DRAWING: Site Mapping



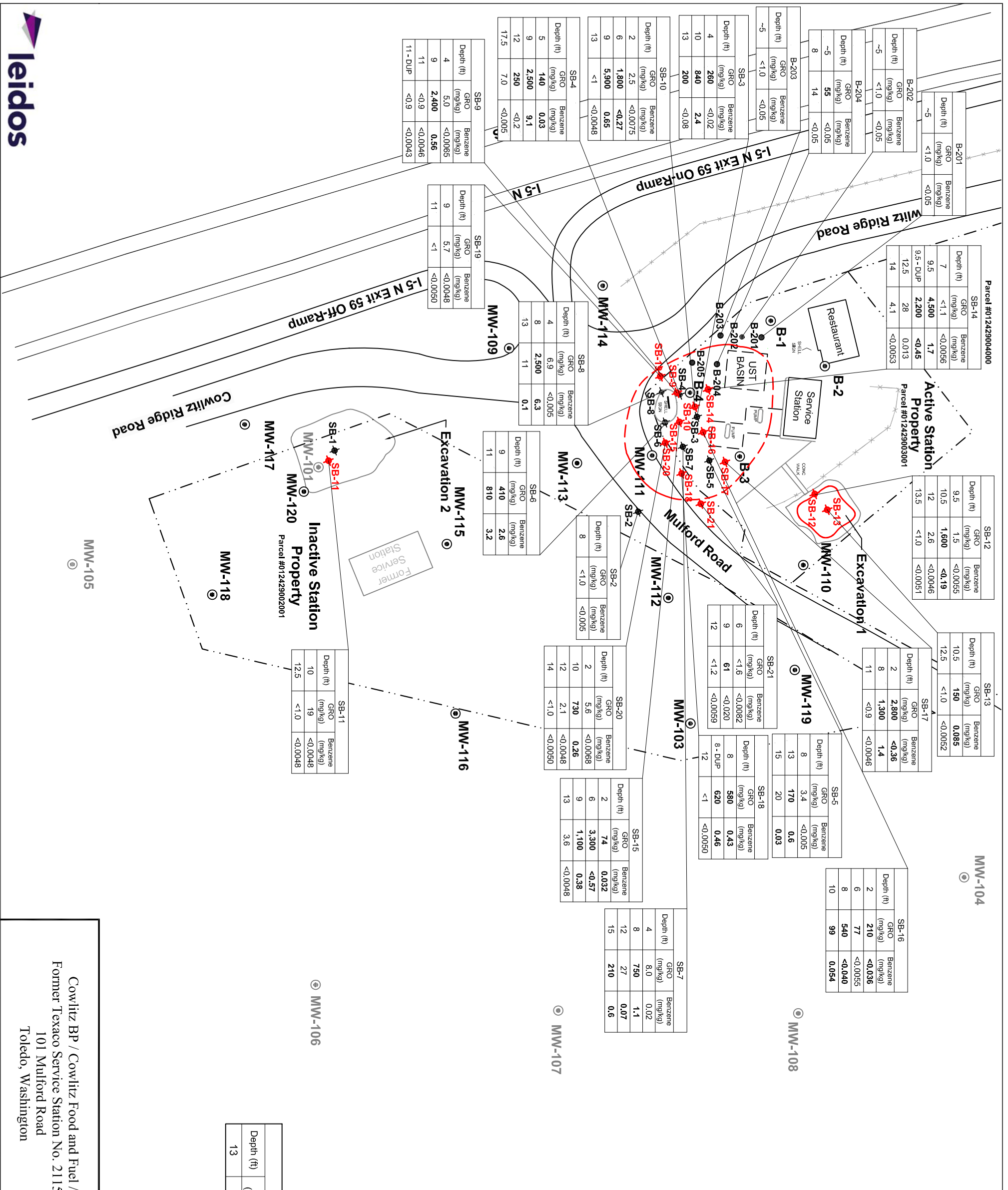
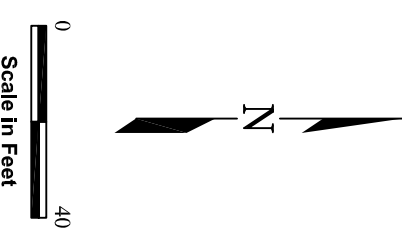
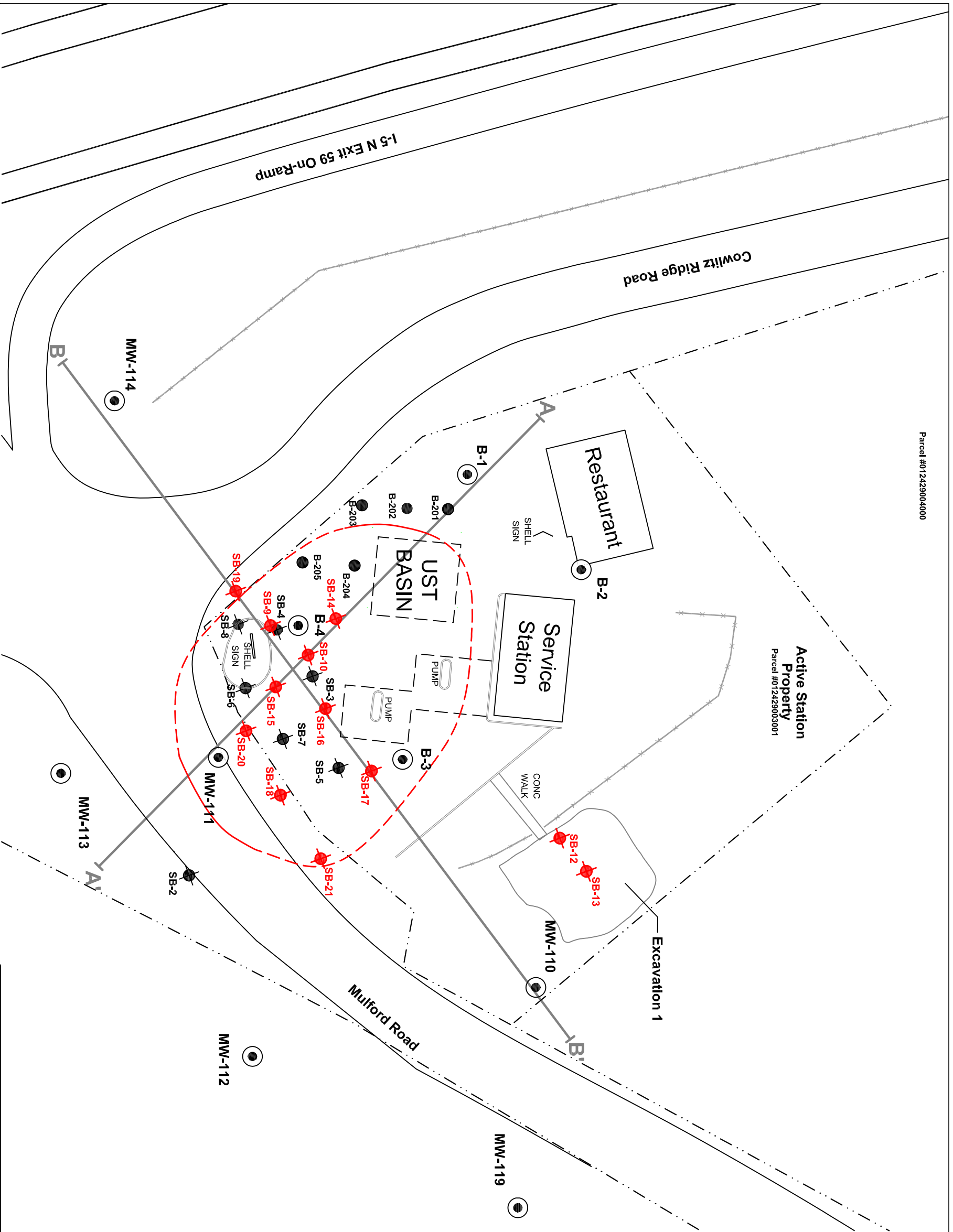


FIGURE 4
 Extent of Petroleum Contamination in Soil Exceeding Proposed Cleanup Levels

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 101 Mulford Road
 Toledo, Washington

DATE: 4/26/2017 DRAWING: 2017 DIS Site Mapping





- 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)
 - Approximate Geologic Cross Section
 - Transect Line

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
- Gasoline-range hydrocarbon concentration in milligrams per kilogram (mg/kg)
- Diesel-range hydrocarbon concentration in mg/kg
- Benzene concentration in mg/kg
- No analytes were detected at or above laboratory detection limits
- Bold indicates analyte concentration exceeding the proposed Site cleanup standard
- 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

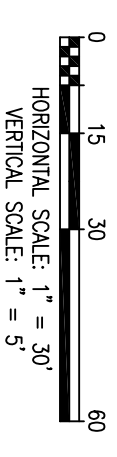
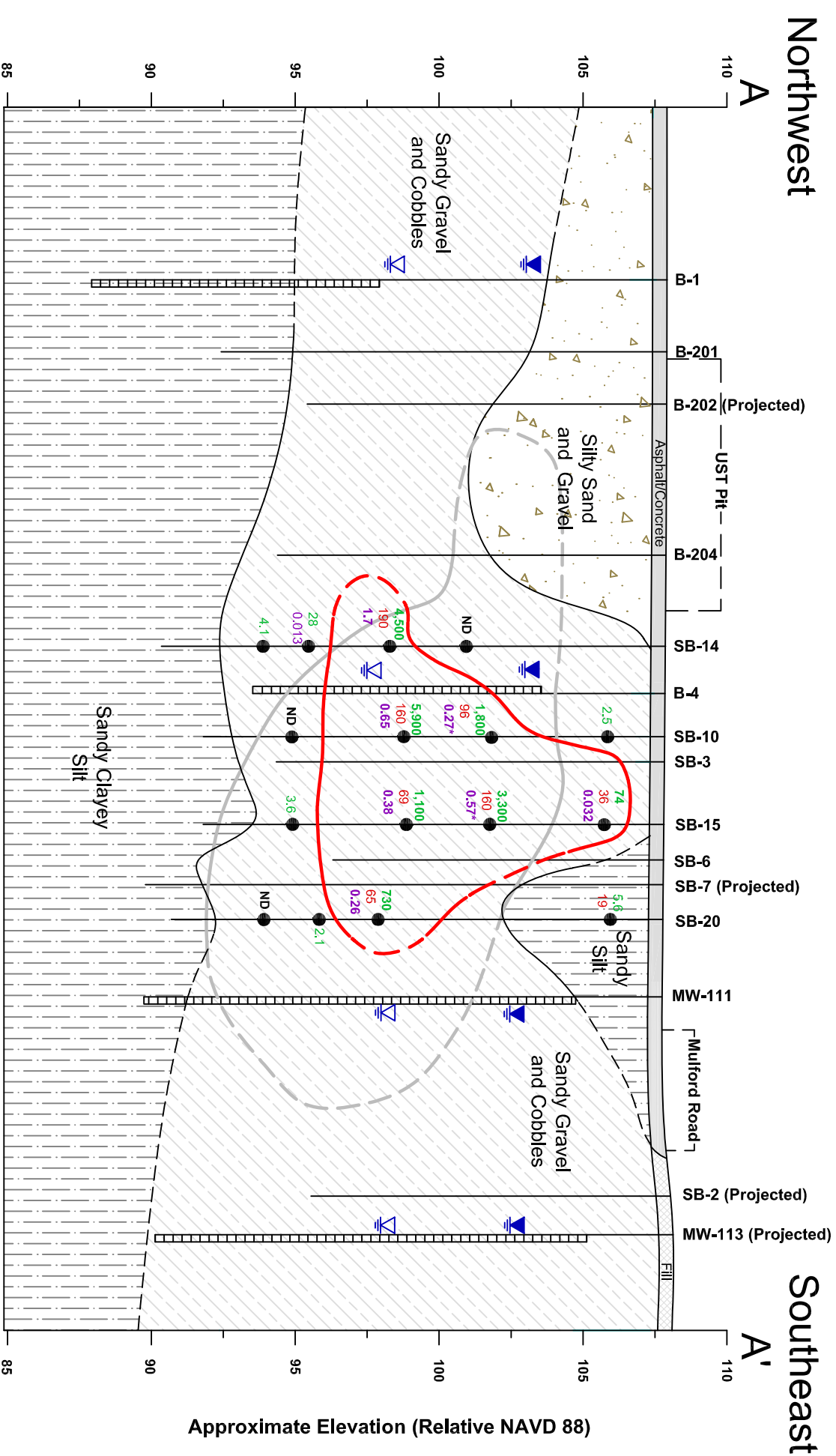


FIGURE 6
Geologic Cross-Section A-A'

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101 Mulford Road
Toledo, Washington

DATE: 4/28/2017 DRAWING: 2017 DHS X-section.dwg

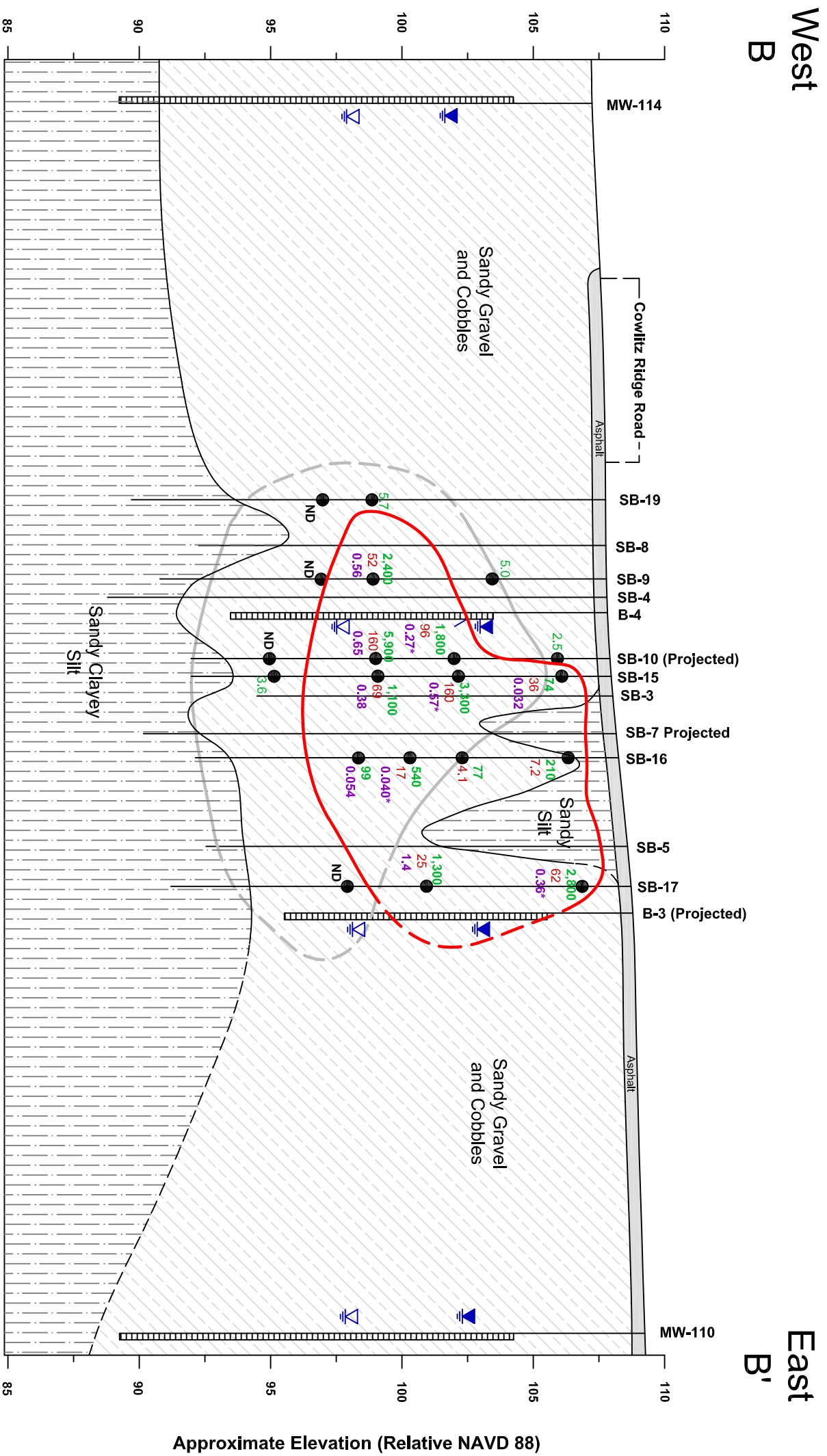


LEGEND:

- 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
- Gasoline-range hydrocarbon concentration in milligrams per kilogram (mg/kg)
- Diesel-range hydrocarbon concentration in mg/kg
- 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:

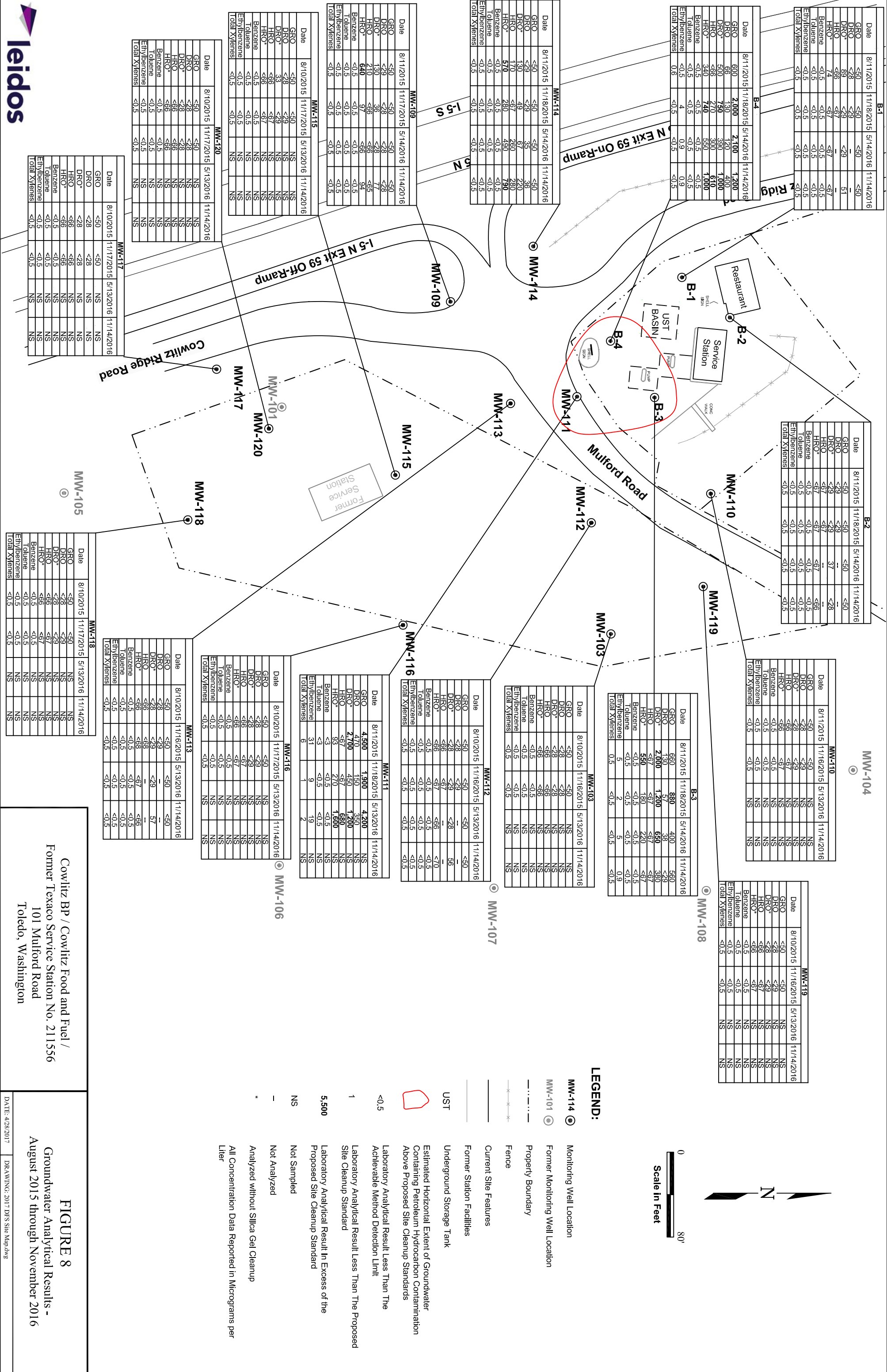
- Concrete or Asphalt
- Brown, fine to coarse Sand and Gravel with some cobbles and silt
- Brown to gray, medium to coarse sandy Gravel and Cobbles
- Brown to greenish gray, fine sandy, clayey Silt



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101 Mulford Road
Toledo, Washington

FIGURE 7
Geologic Cross-Section B-B'





Date	8/11/2015	11/18/2015	5/14/2016	11/14/2016
GRO	<50	<50	<50	<50
DRO	<68	<29	<29	51
HRO	<89	<87	<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

Date	8/11/2015	11/18/2015	5/14/2016	11/14/2016
GRO	<50	<29	<29	<28
DRO	<67	<67	37	<66
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

Date	8/11/2015	11/16/2015	5/13/2016	11/14/2016
GRO	<50	<29	NS	NS
DRO	<28	<29	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

Date	8/10/2015	11/16/2015	5/13/2016	11/14/2016
GRO	<50	<50	NS	NS
DRO	<28	<29	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

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	0.9	<0.5
Ethylbenzene	<0.5	4	0.9	0.9
Total Xylenes	0.6	<0.5	<0.5	<0.5

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*	930	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

Date	8/11/2015	11/18/2015	5/14/2016	11/14/2016
GRO	<50	<50	<50	<50
DRO	<29	35	36	<28
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

Date	8/10/2015	11/16/2015	5/13/2016	11/14/2016
GRO	<50	<50	<50	<50
DRO	<28	<28	<28	56
DRO*	<66	<67	<66	<70
HRO	<66	<67	<66	<66
HRO*	<66	<67	<66	<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

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	270	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

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

Date	8/10/2015	11/16/2015	5/13/2016	11/14/2016
GRO	<50	<50	<50	<50
DRO	<28	<29	<29	57
DRO*	<66	<66	<66	<66
HRO	<66	<67	<67	<66
HRO*	<66	<67	<66	<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

Date	8/10/2015	11/17/2015	5/13/2016	11/14/2016
GRO	<50	<50	NS	NS
DRO	<28	<28	NS	NS
DRO*	<66	<66	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

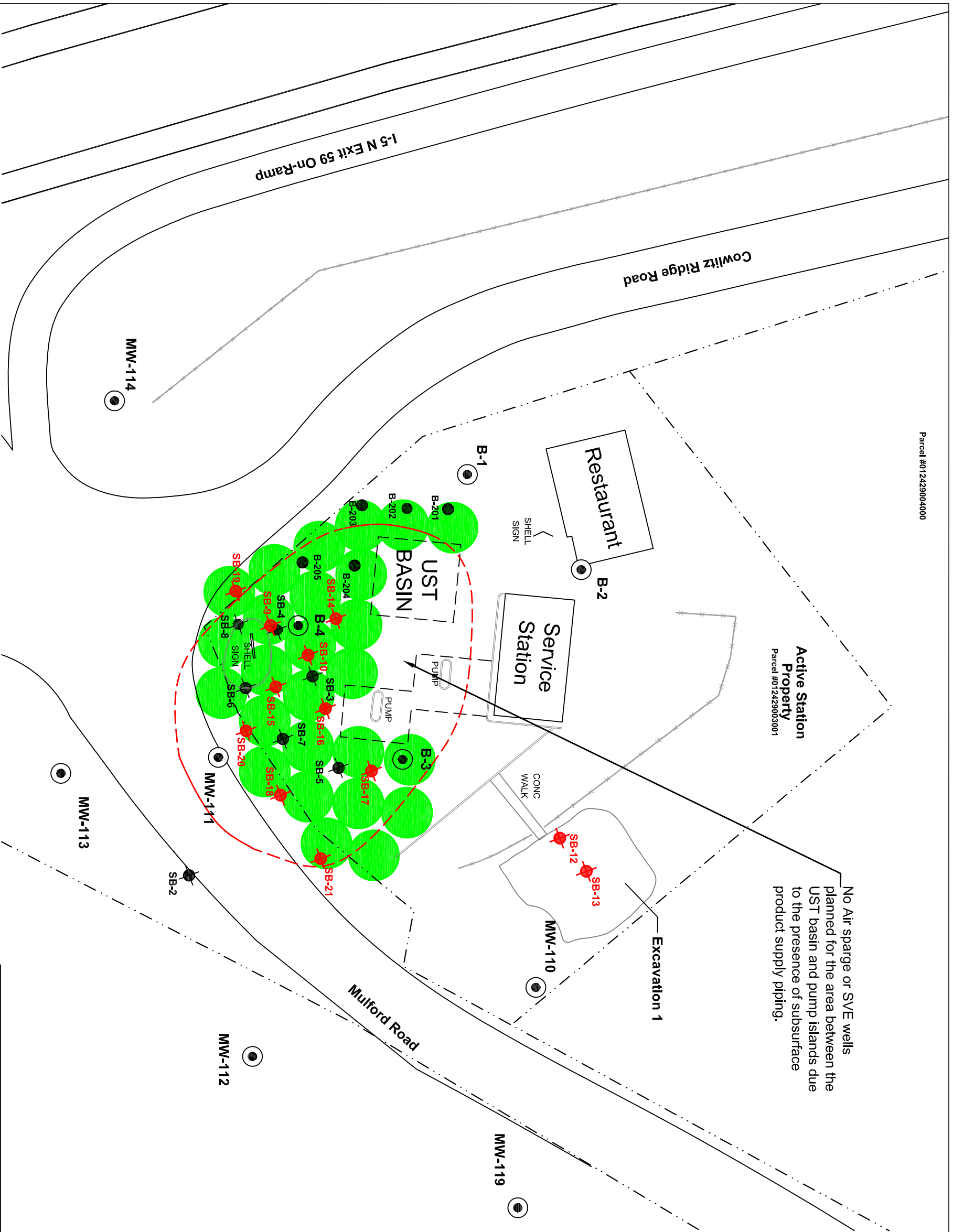
Date	8/10/2015	11/17/2015	5/13/2016	11/14/2016
GRO	<50	<50	NS	NS
DRO	<28	<28	NS	NS
DRO*	<66	<66	NS	NS
HRO	<66	<66	NS	NS
HRO*	<66	<66	NS	NS
Benzene	<0.5	<0.5	NS	NS
Toluene	<0.5	<0.5	NS	NS
Ethylbenzene	<0.5	<0.5	NS	NS
Total Xylenes	<0.5	<0.5	NS	NS

Date	8/10/2015	11/17/2015	5/13/2016	11/14/2016
GRO	<50	<50	NS	NS
DRO	<28	<28	NS	NS
DRO*	<66	<66	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

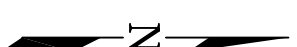
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101 Mulford Road
Toledo, Washington

FIGURE 8
Groundwater Analytical Results -
August 2015 through November 2016



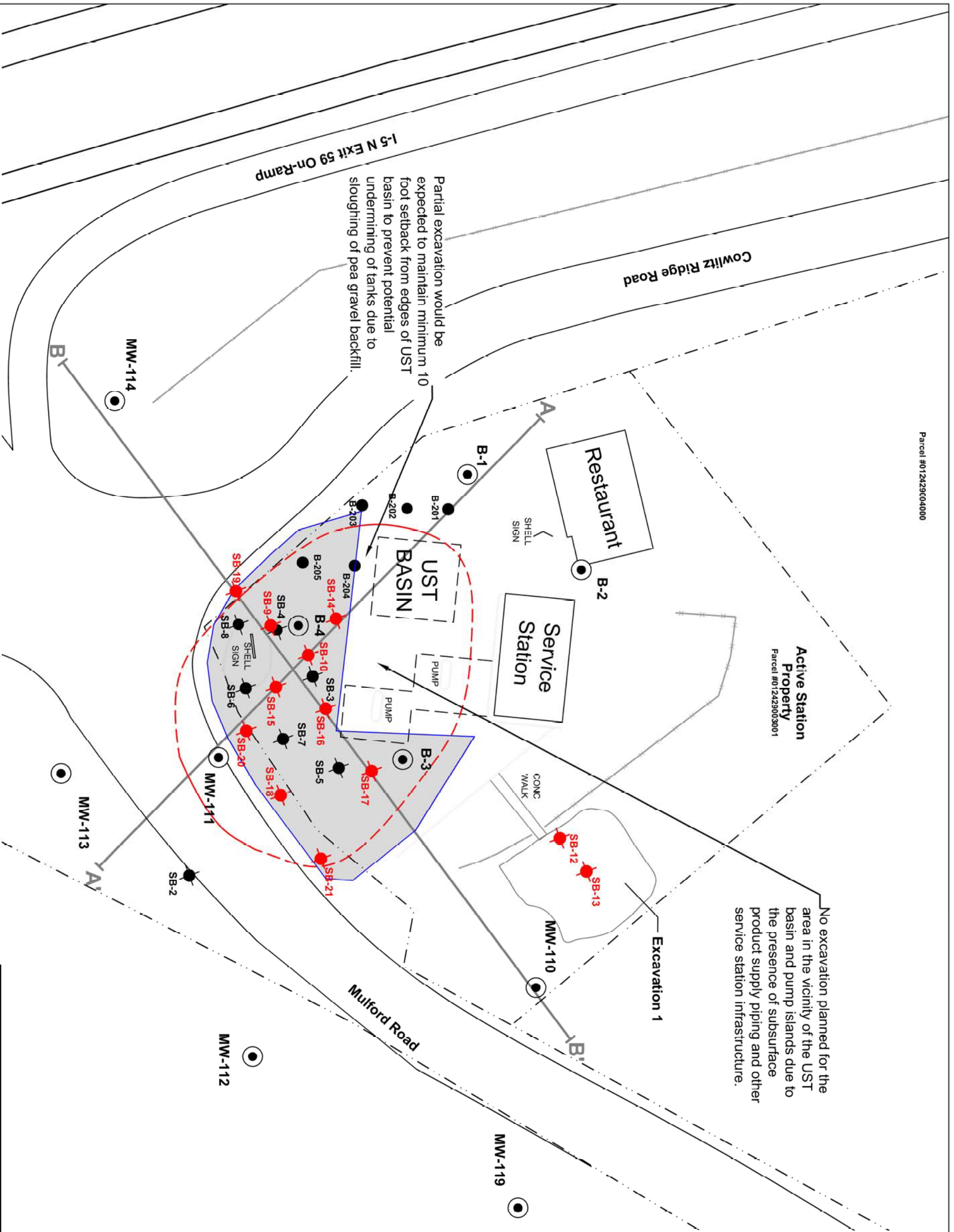


No Air sparge or SVE wells planned for the area between the UST basin and pump islands due to the presence of subsurface product supply piping.



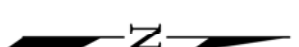
LEGEND:

- 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
- Underground Storage Tank
- UST
- Approximate Extent of Petroleum Contamination in Soil (Dashed Where Inferred)
- Anticipated Air Sparge Zone of Influence (20' Diameter), SVE Wells Omitted for Clarity



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.

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.



LEGEND:

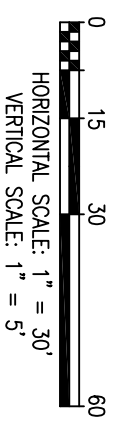
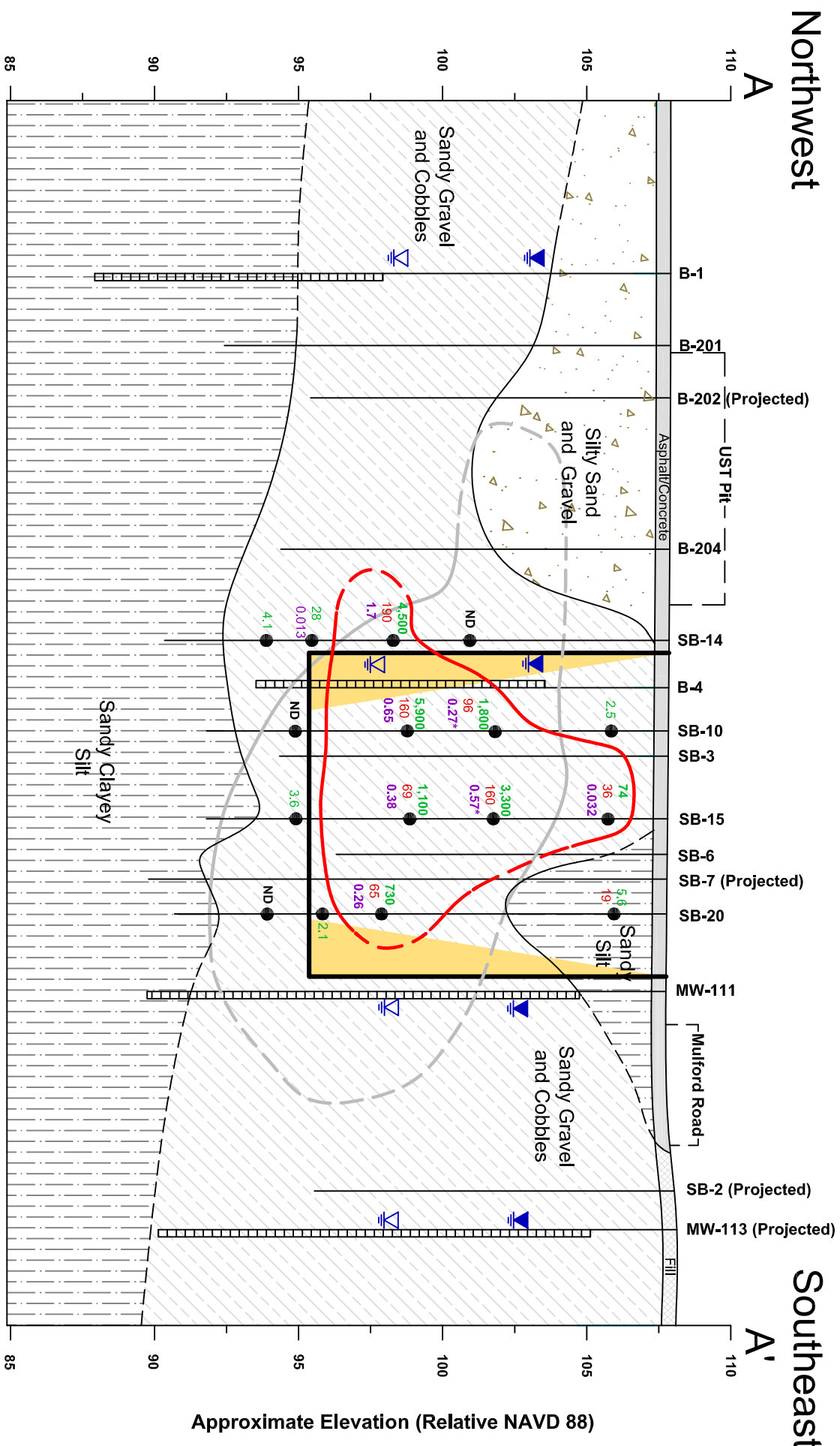
- MW-114 Monitoring Well Location
- B-201 1992 Soil Boring Location (Kaldveer Associates)
- SB-7 2004 Soil Boring Location (SAIC)
- SB-9 2013 Soil Boring Location (Leidos)
- Property Boundary
- Fence
- Current Site Features
- Underground Storage Tank
- UST
- Approximate Extent of Petroleum Contamination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

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
- Gasoline-range hydrocarbon concentration in milligrams per kilogram (mg/kg)
- Diesel-range hydrocarbon concentration in mg/kg
- 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; however, the detection limit exceeded the proposed Site cleanup standard
- 0.13**
Bold indicates analyte concentration exceeding 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








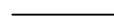




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FIGURE 11
Alternatives 2 & 3
Estimated Extent of Partial Excavation
(Cross-Sectional View A-A')



LEGEND:

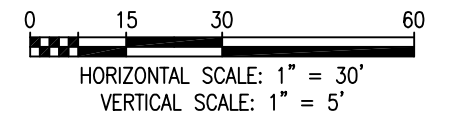
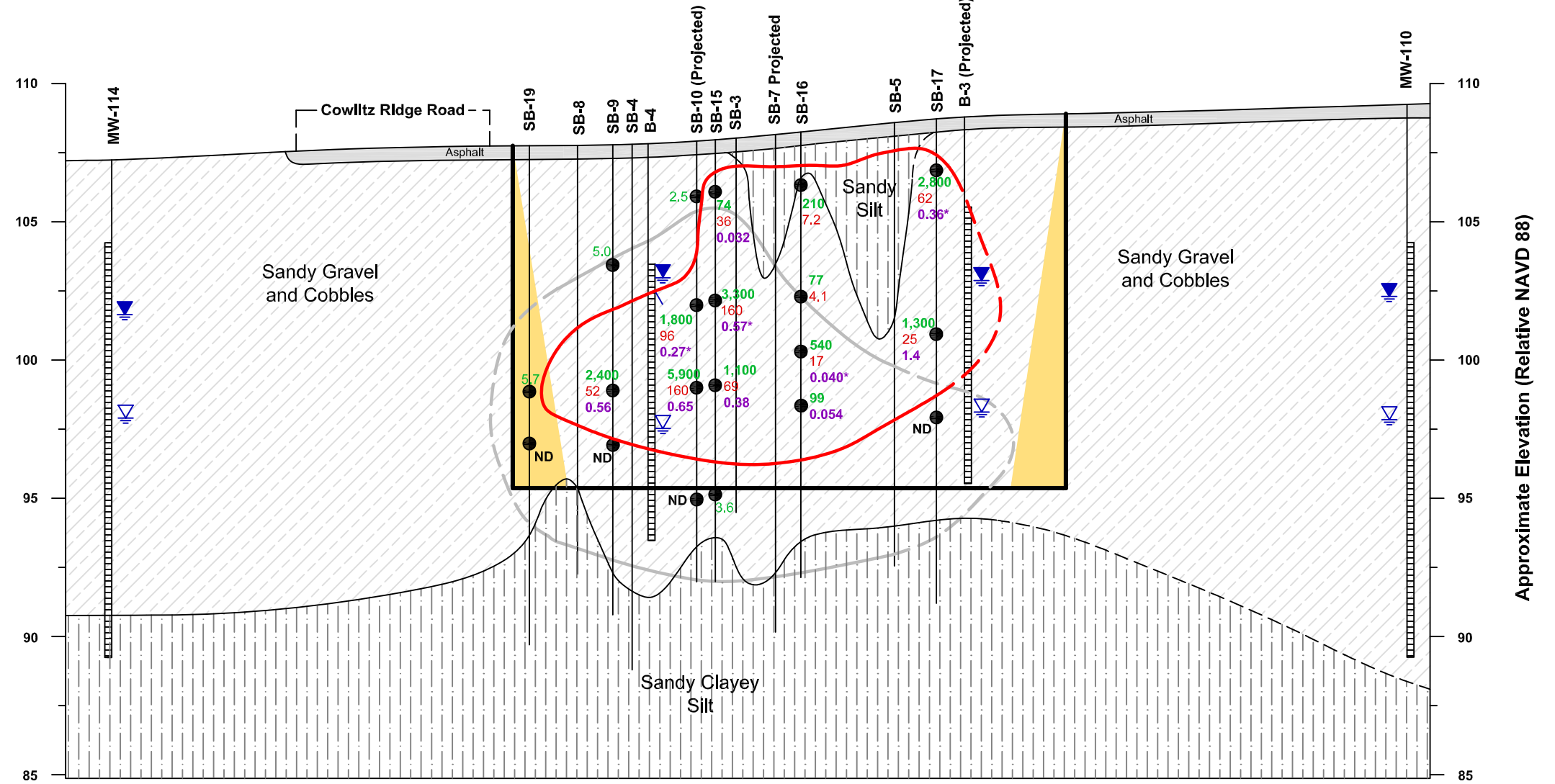
-  Boring
-  Screened interval
-  Estimated extent of soil contamination exceeding proposed Site cleanup standards, based on 2013 soil sampling results (dashed where inferred)
-  Estimated extent of soil contamination exceeding proposed Site cleanup standards, based on pre-2005 soil sampling results (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

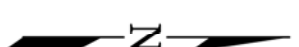
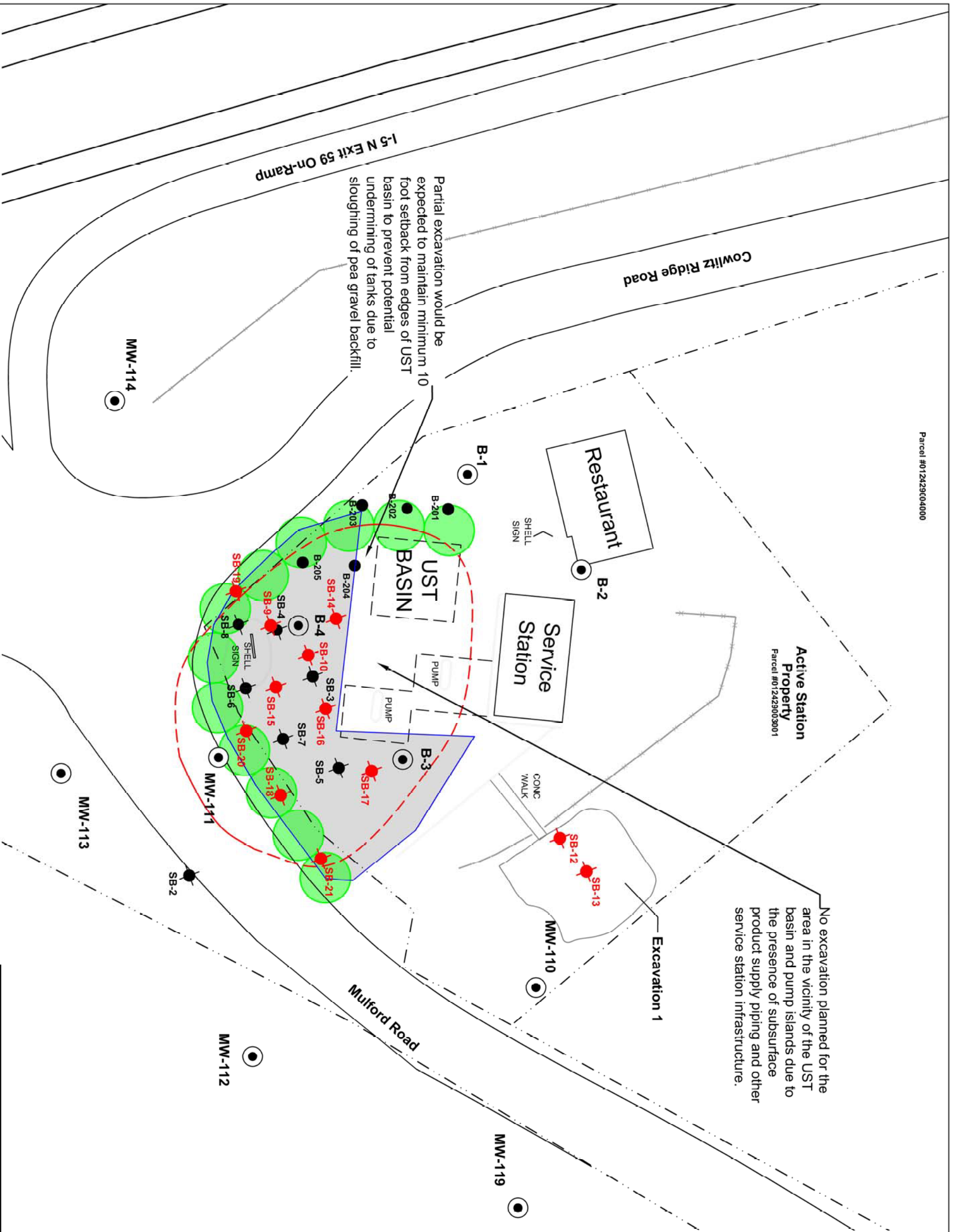
West
B

East
B'



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

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

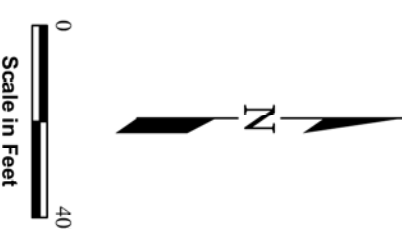
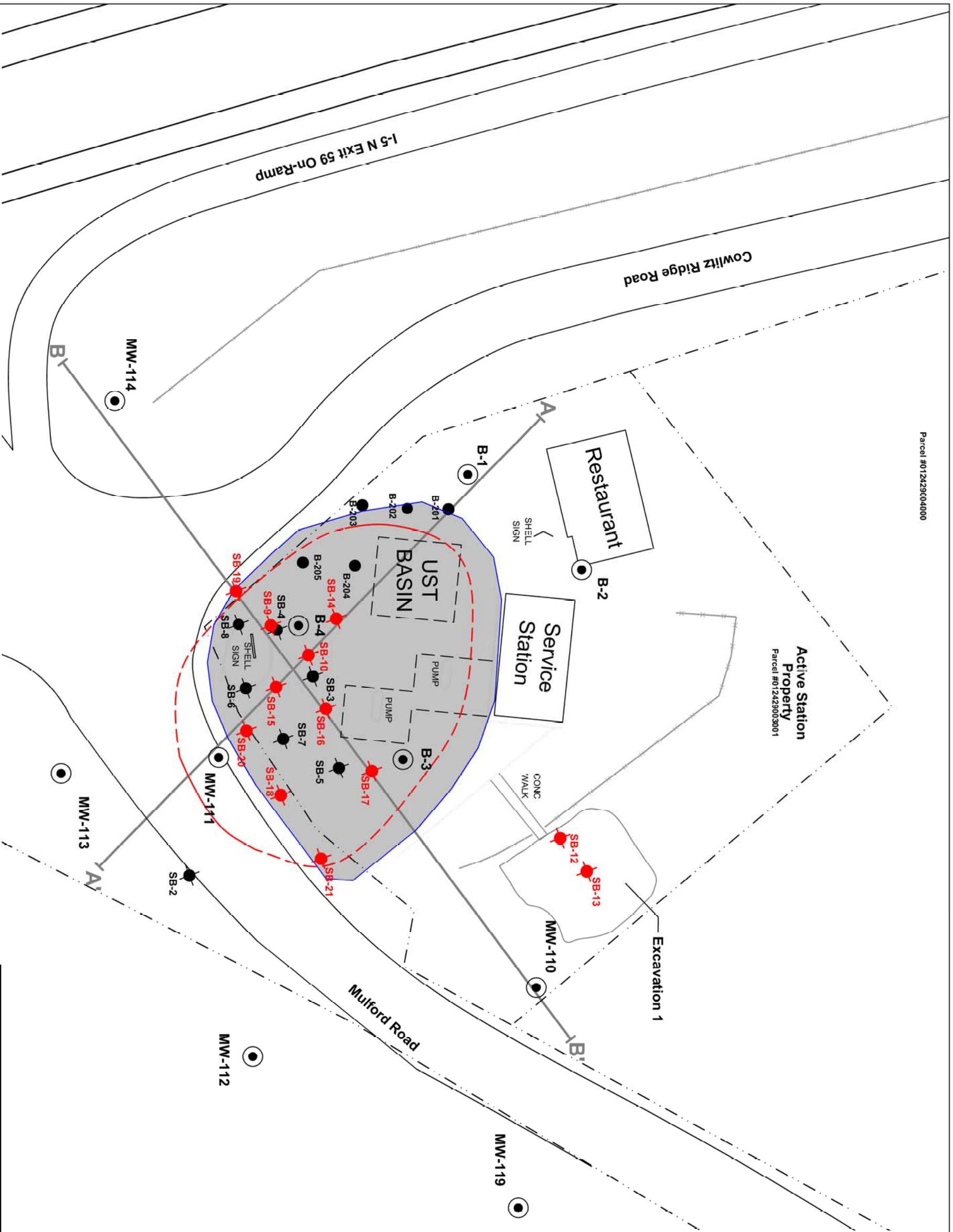


LEGEND:

- 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
- Underground Storage Tank
- UST
- Estimated Extent of Partial Excavation
- Anticipated Air Sparge Zone of Influence (20' Diameter). SVE Wells Omitted for Clarity

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.

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.



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
- Approximate Geologic Cross-Section Transect Line

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

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 Toledo, Washington

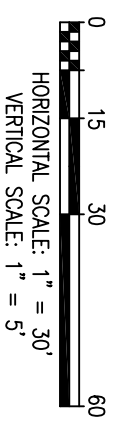
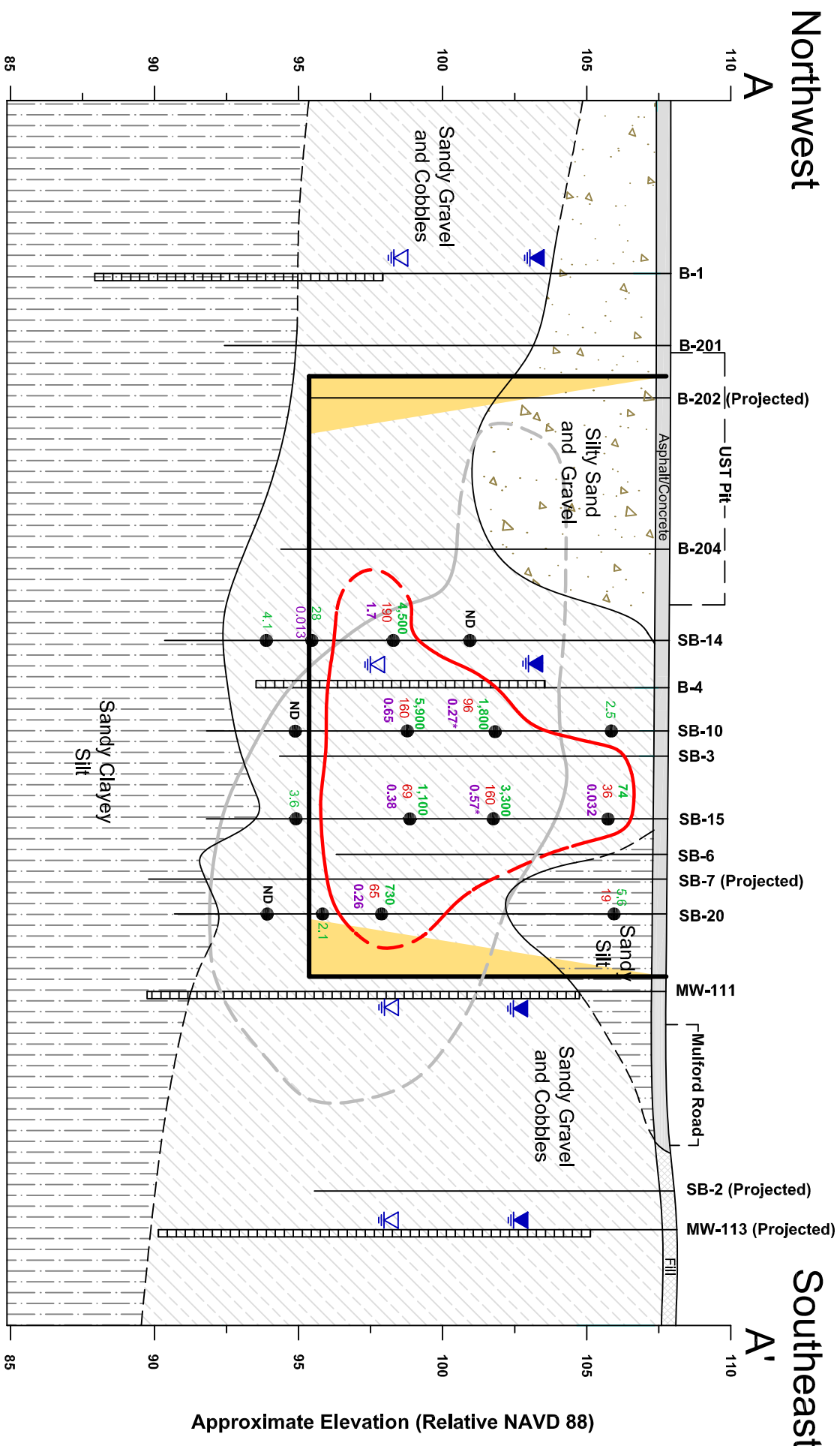
DATE: 4/26/2017 DRAVING: 2017 DRS Site Map.dwg

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
- Gasoline-range hydrocarbon concentration in milligrams per kilogram (mg/kg)
- Diesel-range hydrocarbon concentration in mg/kg
- Benzene concentration in mg/kg
- No analytes were detected at or above laboratory detection limits
- ND
- 0.001
- 0.13
- 0.05*
- Bold indicates analyte concentration exceeding the proposed Site cleanup standard
- 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













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



LEGEND:

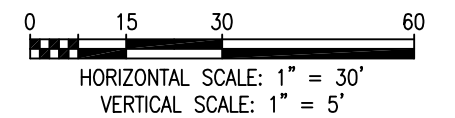
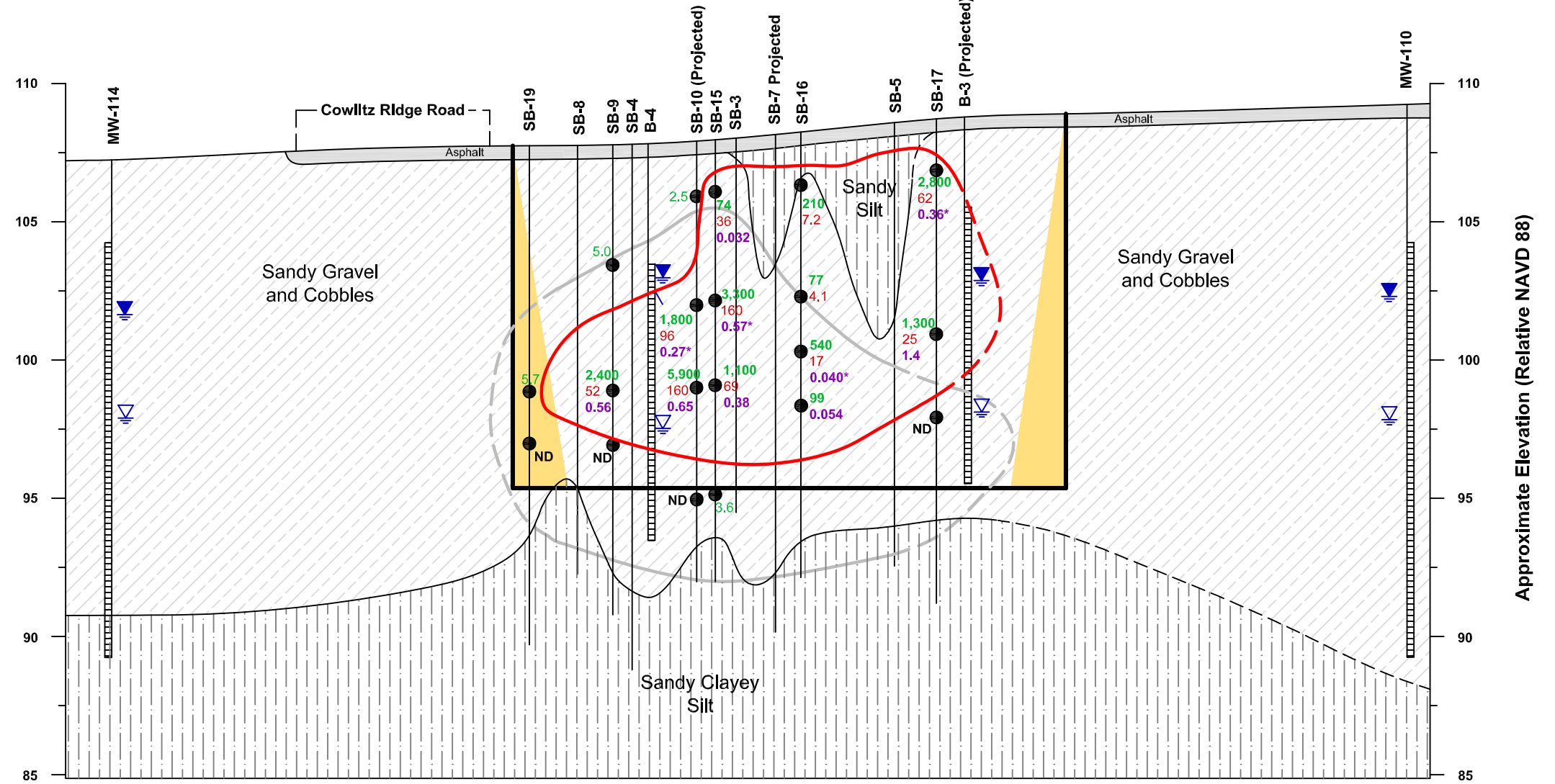
-  Boring
-  Screened interval
-  Estimated extent of soil contamination exceeding proposed Site cleanup standards, based on 2013 soil sampling results (dashed where inferred)
-  Estimated extent of soil contamination exceeding proposed Site cleanup standards, based on pre-2005 soil sampling results (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

West
B

East
B'



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

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

APPENDIX A

Soil Sampling Assessment Summary Report





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 plan¹, 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 levels² 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 1 and 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

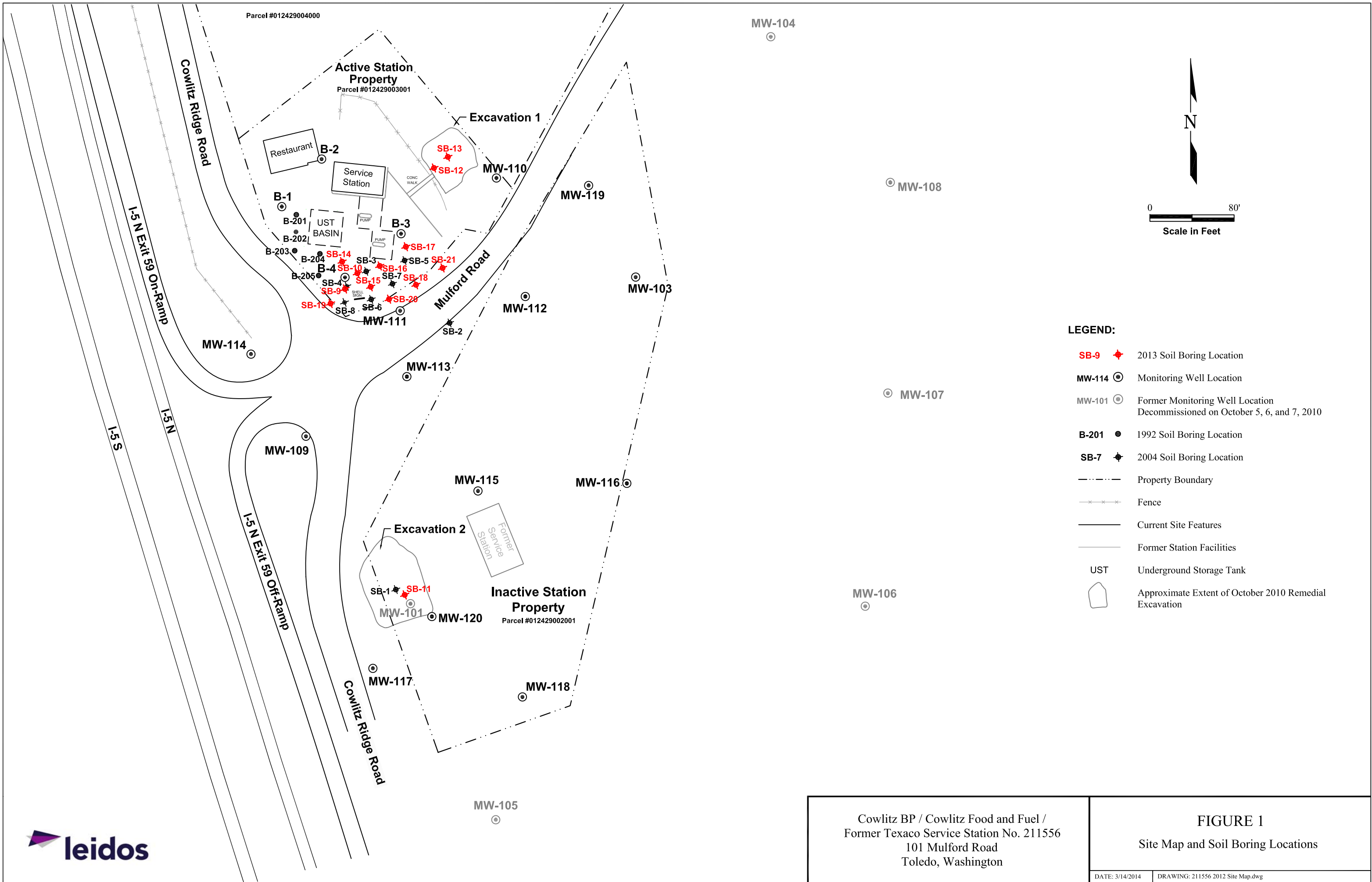
This technical document was prepared on behalf of CEMC and is intended for its sole use and for use by the local, state or federal regulatory agency that the technical document was sent to by Leidos. Any other person or entity obtaining, using, or relying on this technical document hereby acknowledges 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.



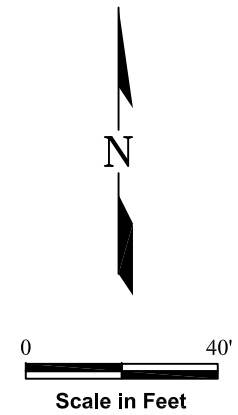
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 Former Texaco Service Station No. 211556
 101 Mulford Road
 Toledo, Washington

FIGURE 1
 Site Map and Soil Boring Locations

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

Parcel #012429004000

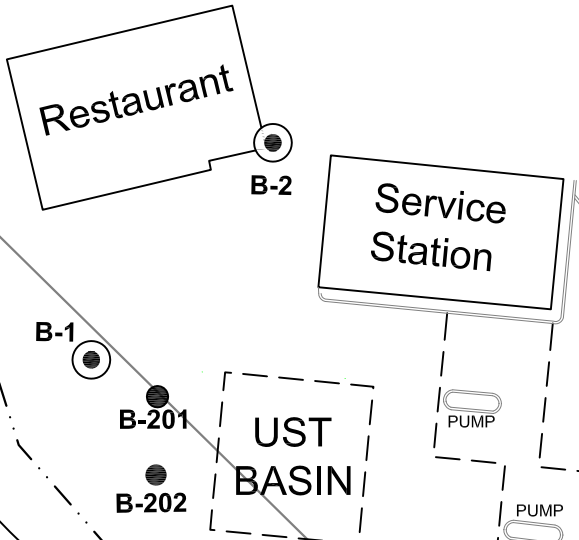
Active Station Property
Parcel #012429003001



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

I-5 N Exit 56 On-Ramp



Mulford Road

MW-114

MW-113

MW-111

MW-112









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FIGURE 2
Soil Boring Locations - Active Station
Property

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







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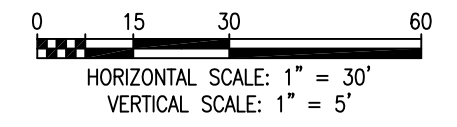
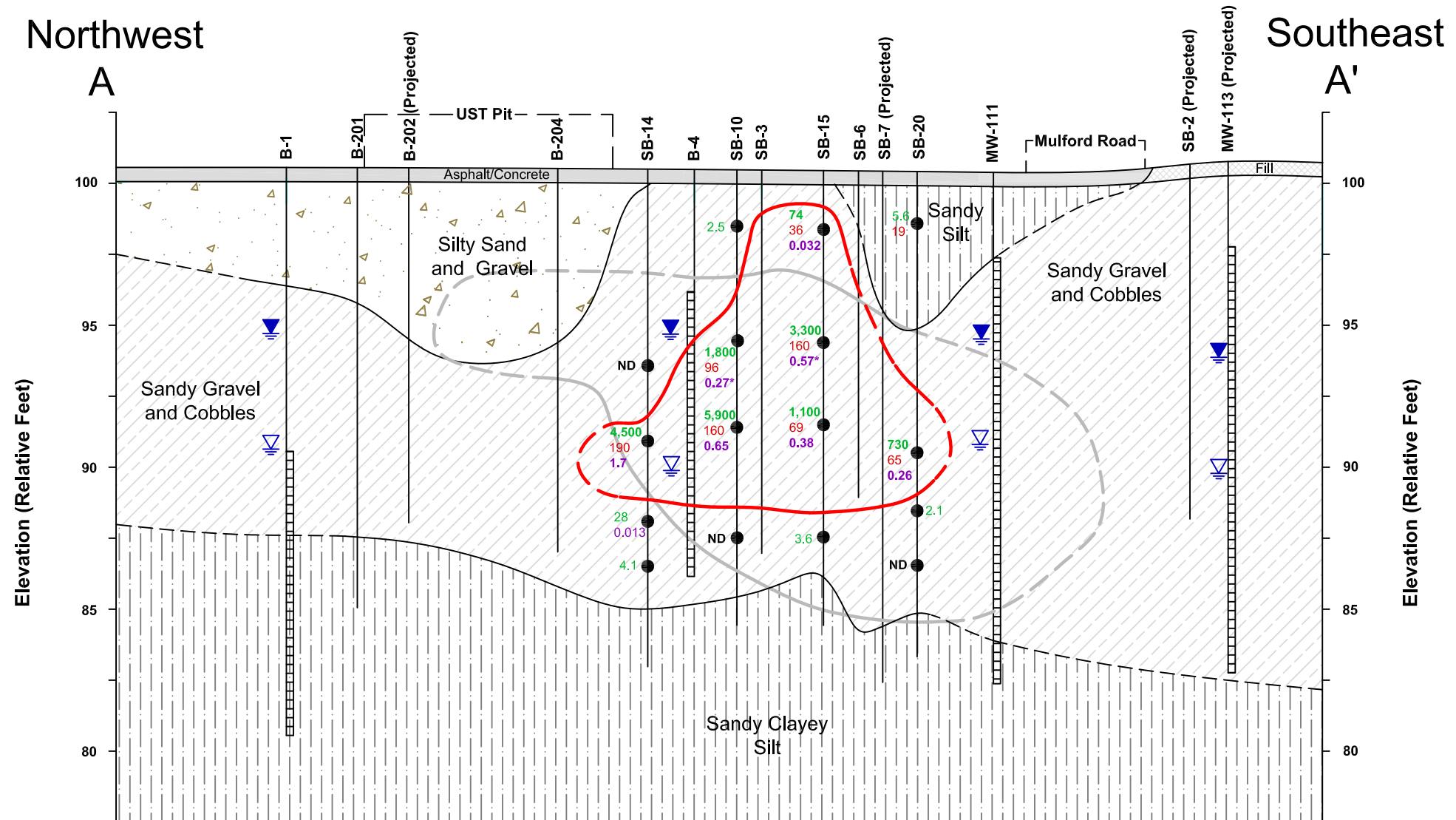
-  Boring
-  Screened interval
-  Estimated extent of soil contamination exceeding Site cleanup levels, based on November 2013 soil sampling results (dashed where inferred)
-  Estimated extent of soil contamination exceeding Site cleanup levels, based on pre-2005 soil sampling results (see Figure 4 for 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








Northwest



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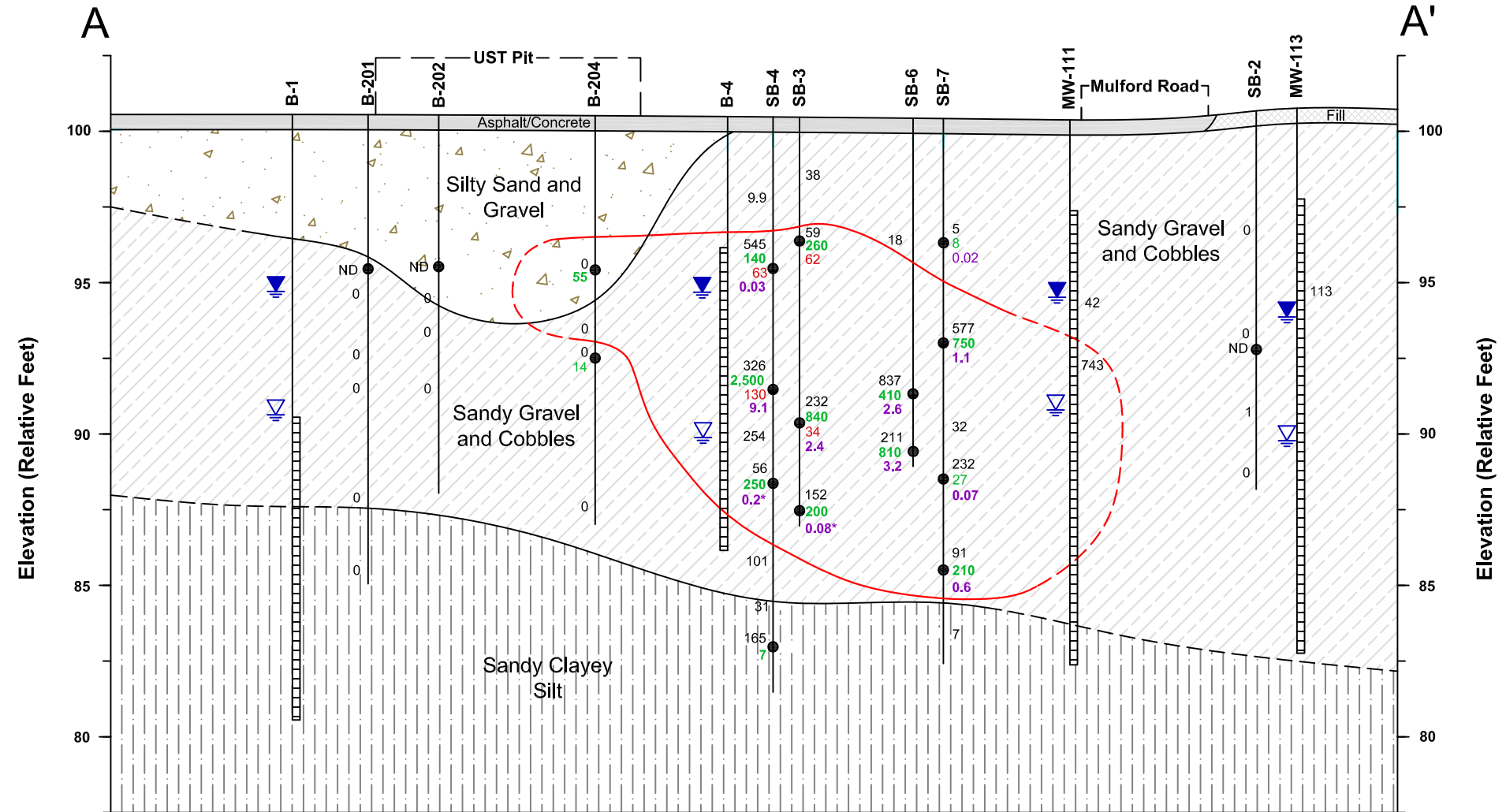
FIGURE 3
2013 Soil Sampling Results -
Cross-Section A-A'

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

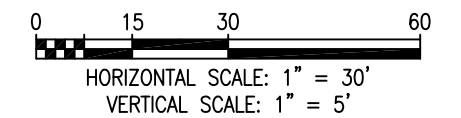
Northwest

Southeast



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

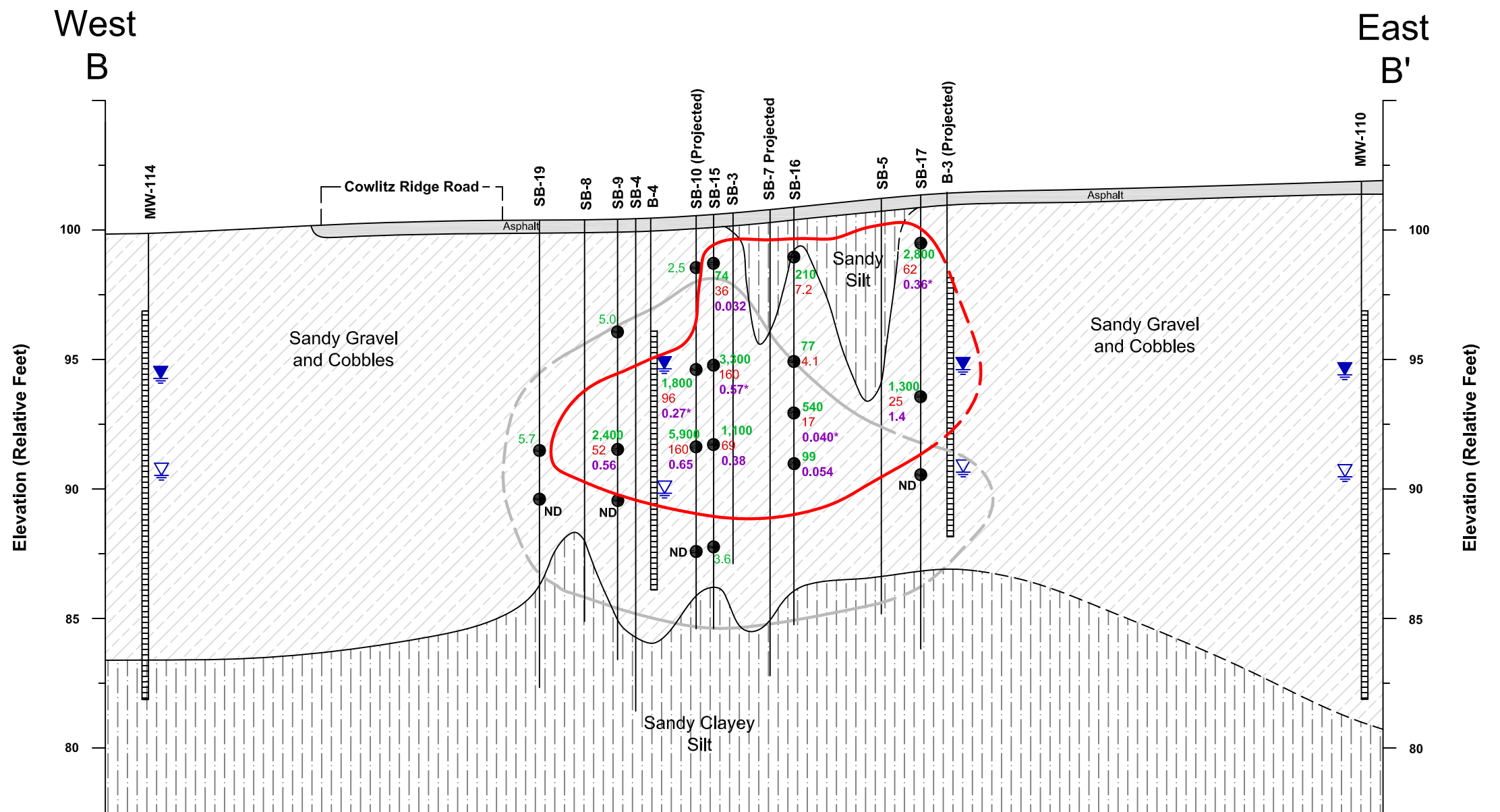
FIGURE 4
 Pre-2005 Soil Sampling Results -
 Cross-Section A-A'

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



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

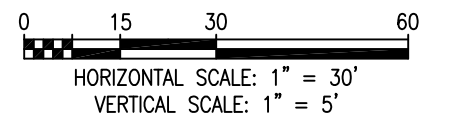












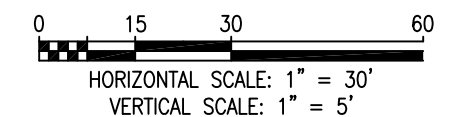
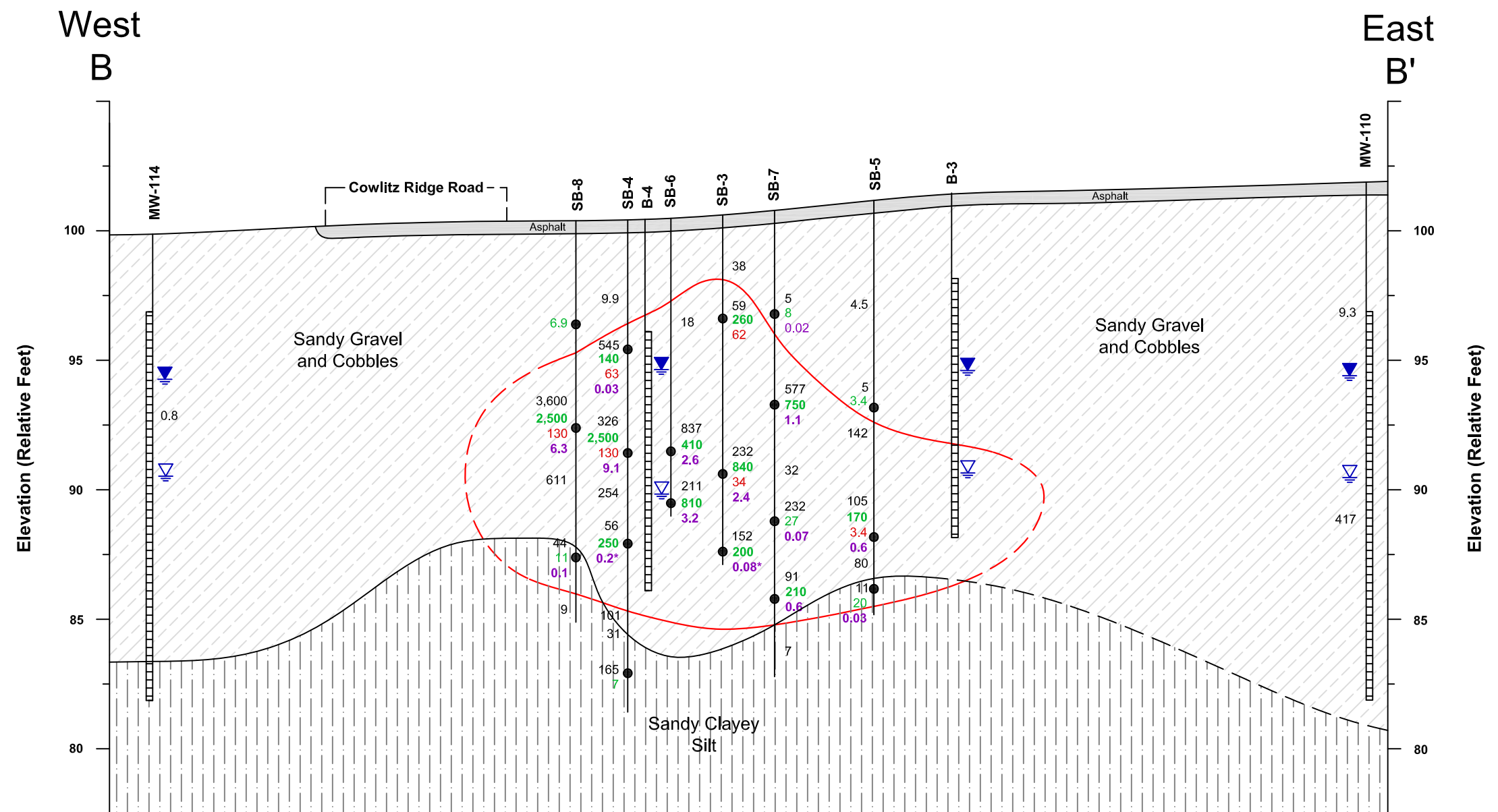
FIGURE 5
2013 Soil Sampling Results -
Cross-Section B-B'

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



Cowlitz BP Site
 (Cowlitz Food and Fuel / Former Texaco 211556)
 101 Mulford Road
 Toledo Washington

FIGURE 6
 Pre-2005 Soil Sampling Results -
 Cross-Section B-B'

TABLE 1
SUMMARY OF HISTORICAL ANALYTICAL DATA - TPH, BTEX¹
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

TABLE 1
SUMMARY OF HISTORICAL ANALYTICAL DATA - TPH, BTEX¹
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	Diesel Range		Heavy Oils (mg/kg)		Benzene	Toluene	Ethylbenzene	Total Xylenes	Total Lead
			Organics ² (mg/kg)	Organics (mg/kg)	Organics (mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(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 = Total Petroleum Hydrocarbons
BTEX = Benzene, toluene, ethylbenzene and total xylenes
w = with
w/o = without

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.

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

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) fluoranthene ¹ (mg/kg)	Chrysene ¹ (mg/kg)	Dibenz(a,h) anthracene ¹ (mg/kg)	(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	<0.00074
SB-17-11	11	11/8/2013	<0.00075	<0.00075	<0.00075	<0.00075	<0.00037	<0.00075	<0.00075
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) fluoranthene ¹ (mg/kg)	Chrysene ¹ (mg/kg)	Dibenz(a,h) anthracene ¹ (mg/kg)	(1,2,3-cd) pyrene ¹ (mg/kg)
SB-19-9	9	11/8/2013	<0.00072	<0.00072	<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

Attachment A:
Boring Logs



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
							1	Road base FILL. Geotextile fabric at 1.25 feet. Boring was cleared by airknife to 8 feet bgs.
							2	Excavation Backfill to 7.25 feet.
							3	
							4	
							5	
							6	
							7	
Wet							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	GP		12	
Sat.	0.0/0.0				GP		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				GP		15	Same as above. (no odor, no sheen)
Moist					GP		16	(GP) Same as above. (no odor, no sheen)
Moist	0.0/0.0				ML/CL		17	(ML/CL) Olive gray, very hard, silty CLAY/clayey SILT with high plasticity. (no odor, no sheen)
							18	
							19	Same as above. (no odor, no sheen)
							20	Bottom of borehole at 20.0 feet.



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

Attachment B:
Laboratory Analysis Report

ANALYTICAL RESULTS

Prepared by:

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

Prepared for:

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

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

<u>Client Sample Description</u>	<u>Lancaster Labs (LL) #</u>
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 Leidos
COPY TO

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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons w/Si modified					
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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons w/Si modified					
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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons w/Si modified					
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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons w/Si modified					
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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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 NWT PH-Gx			mg/kg	mg/kg	
02006	NWT PH-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 ECY 97-602 NWT PH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
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 ECY 97-602 NWT PH-Dx			mg/kg	mg/kg	
Hydrocarbons w/Si modified					
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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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 NWT PH-Gx			mg/kg	mg/kg	
02006	NWT PH-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 ECY 97-602 NWT PH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
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 ECY 97-602 NWT PH-Dx			mg/kg	mg/kg	
Hydrocarbons w/Si modified					
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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons w/Si modified					
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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons w/Si modified					
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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons w/Si modified					
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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons w/Si modified					
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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons w/Si modified					
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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons w/Si modified					
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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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 NWT PH-Gx			mg/kg	mg/kg	
02006	NWT PH-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 ECY 97-602 NWT PH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
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 ECY 97-602 NWT PH-Dx			mg/kg	mg/kg	
Hydrocarbons w/Si modified					
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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons w/Si modified					
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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons w/Si modified					
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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons w/Si modified					
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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons w/Si modified					
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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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 NWT PH-Gx			mg/kg	mg/kg	
02006	NWT PH-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 ECY 97-602 NWT PH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
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 ECY 97-602 NWT PH-Dx			mg/kg	mg/kg	
Hydrocarbons w/Si modified					
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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons w/Si modified					
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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons w/Si modified					
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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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					
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					
02006	NWTPH-GX Soil C7-C12	n.a.	4.1	1.1	24.9
GC Volatiles SW-846 8021B					
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 ECY 97-602 NWTPH-Dx					
Hydrocarbons modified					
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 ECY 97-602 NWTPH-Dx					
Hydrocarbons w/Si modified					
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					
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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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 Connors	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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons w/Si modified					
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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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 Connors	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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons w/Si modified					
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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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 Connors	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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons w/Si modified					
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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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					
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					
02006	NWTPH-GX Soil C7-C12	n.a.	N.D.	1	21.85
GC Volatiles SW-846 8021B					
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 ECY 97-602 NWTPH-Dx					
Hydrocarbons modified					
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 ECY 97-602 NWTPH-Dx					
Hydrocarbons w/Si modified					
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					
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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons w/Si modified					
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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons w/Si modified					
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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons w/Si modified					
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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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 Connors	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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons w/Si modified					
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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons w/Si modified					
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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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 Connors	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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons w/Si modified					
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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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 Connors	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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons w/Si modified					
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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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 Connors	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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons w/Si modified					
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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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 Connors	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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons w/Si modified					
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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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 Connors	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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons w/Si modified					
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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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 Connors	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

Chevron

Submitted: 11/12/2013 09:15

L4310

Reported: 11/27/2013 09:52

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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons w/Si modified					
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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons w/Si modified					
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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons w/Si modified					
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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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 Connors	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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons w/Si modified					
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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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 Connors	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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons w/Si modified					
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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons w/Si modified					
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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons w/Si modified					
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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons w/Si modified					
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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
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 ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons w/Si modified					
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

Chevron

L4310

Submitted: 11/12/2013 09:15

6001 Bollinger Canyon Road

Reported: 11/27/2013 09:52

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
Reported: 11/27/13 at 09:52 AM

Group Number: 1433626

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

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
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

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
	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							

*- 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

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
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

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
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				

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 11/27/13 at 09:52 AM

Group Number: 1433626

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

<u>Analysis Name</u>	<u>MS</u> <u>%REC</u>	<u>MSD</u> <u>%REC</u>	<u>MS/MSD</u> <u>Limits</u>	<u>RPD</u> <u>RPD</u>	<u>BKG</u> <u>MAX</u> <u>Conc</u>	<u>DUP</u> <u>Conc</u>	<u>DUP</u> <u>RPD</u>	<u>Dup RPD</u> <u>Max</u>	
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	

*- Outside of specification

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Quality Control Summary

Client Name: Chevron
Reported: 11/27/13 at 09:52 AM

Group Number: 1433626

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

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>						
Batch number: 133180027A DRO C12-C24 w/Si Gel HRO C24-C40 w/Si Gel	Sample number(s): 7275384-7275393				BKG: 7275384	N.D.	N.D.	0 (1)	20						
						N.D.	N.D.	0 (1)	20						
Batch number: 133200030A DRO C12-C24 w/Si Gel HRO C24-C40 w/Si Gel	Sample number(s): 7275394-7275403				BKG: 7275394	36	32	14 (1)	20						
						N.D.	N.D.	0 (1)	20						
Batch number: 133220010A DRO C12-C24 w/Si Gel HRO C24-C40 w/Si Gel	Sample number(s): 7275404-7275412				BKG: 7275404	N.D.	N.D.	0 (1)	20						
						N.D.	N.D.	0 (1)	20						
Batch number: 133220021A DRO C12-C24 w/Si Gel HRO C24-C40 w/Si Gel	Sample number(s): 7275413-7275422				BKG: 7275414	13	6.7	66* (1)	20						
						N.D.	N.D.	0 (1)	20						
Batch number: 133220023A DRO C12-C24 w/Si Gel HRO C24-C40 w/Si Gel	Sample number(s): 7275423-7275427				BKG: 7275423	N.D.	N.D.	0 (1)	20						
						N.D.	N.D.	0 (1)	20						
Batch number: 133225708003 Lead	Sample number(s): 7275384-7275402				UNSPK: 7275390	BKG: 7275390	95	89	75-125	4	20	8.29	7.97	4	20
Batch number: 133225708005 Lead	Sample number(s): 7275403-7275422				UNSPK: 7275414	BKG: 7275414	100	100	75-125	0	20	3.27	3.98	20 (1)	20
Batch number: 133235708001 Lead	Sample number(s): 7275423-7275427				UNSPK: P279024	BKG: P279024	-227	-340	75-125	6	20	334	285	16	20
							(2)	(2)							
Batch number: 13322820002A Moisture	Sample number(s): 7275384-7275393				BKG: 7275390	27.1	24.9	8*	5						
Batch number: 13322820002B Moisture	Sample number(s): 7275394-7275403				BKG: 7275395	9.9	10.4	4	5						
Batch number: 13322820003A Moisture	Sample number(s): 7275404-7275413				BKG: 7275409	6.6	6.4	3	5						
Batch number: 13322820003B Moisture	Sample number(s): 7275414-7275423				BKG: 7275417	23.0	24.7	7*	5						
Batch number: 13322820004B Moisture	Sample number(s): 7275424-7275427				BKG: P276499	15.8	14.8	7*	5						

Surrogate Quality Control

*- Outside of specification

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Quality Control Summary

Client Name: Chevron
Reported: 11/27/13 at 09:52 AM

Group Number: 1433626

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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*- Outside of specification

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Quality Control Summary

Client Name: Chevron
Reported: 11/27/13 at 09:52 AM

Group Number: 1433626

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

*- Outside of specification

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Quality Control Summary

Client Name: Chevron
Reported: 11/27/13 at 09:52 AM

Group Number: 1433626

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

*- Outside of specification

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Quality Control Summary

Client Name: Chevron
Reported: 11/27/13 at 09:52 AM

Group Number: 1433626

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
Reported: 11/27/13 at 09:52 AM

Group Number: 1433626

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

*- Outside of specification

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Quality Control Summary

Client Name: Chevron
Reported: 11/27/13 at 09:52 AM

Group Number: 1433626

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
Reported: 11/27/13 at 09:52 AM

Group Number: 1433626

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

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Quality Control Summary

Client Name: Chevron
Reported: 11/27/13 at 09:52 AM

Group Number: 1433626

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



Lancaster Laboratories

Acct. # 11255

For Lancaster Laboratories use only
 Group # 1433626 Sample # 1275384-421
 Instructions on reverse side correspond with circled numbers.

1 Client Information				4 Matrix				5 Analyses Requested										6 Remarks					
Facility # <u>211556</u> <u>211556</u> <u>WBS</u> Site Address <u>101 Mulford Rd, Toledo, WA</u> Chevron PM <u>Mark Horne</u> Lead Consultant <u>Leidos</u> Consultant/Office <u>Bothell</u> Consultant Project Mgr. <u>R. Shropshire</u> Consultant Phone # <u>425-482-3323</u> Sampler <u>A. Lumbriek & G. Civeros</u>				<input type="checkbox"/> Sediment <input type="checkbox"/> Potable <input type="checkbox"/> Ground <input type="checkbox"/> NPDES <input type="checkbox"/> Surface <input type="checkbox"/> Water <input type="checkbox"/> Oil <input type="checkbox"/> Air				Total Number of Containers <input checked="" type="checkbox"/> BTEX + MTBE 8021 <input checked="" type="checkbox"/> 8260 <input type="checkbox"/> Naphth 8260 full scan Oxygenates NWTPH GX NWTPH DX <input checked="" type="checkbox"/> Silica Gel Cleanup <input checked="" type="checkbox"/> Lead Total <input checked="" type="checkbox"/> Diss. <input type="checkbox"/> Method <u>Edco</u> WAVPH <input type="checkbox"/> WAEPH <input type="checkbox"/> <u>NWTPH DX No Silica Gel</u> <u>CPAHs 8270 SIM</u> <u>Meistene</u>										SCR #: _____ <input type="checkbox"/> Results in Dry Weight <input type="checkbox"/> J value reporting needed <input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds <input type="checkbox"/> 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run _____ oxy's on highest hit <input type="checkbox"/> Run _____ oxy's on all hits					
2 Sample Identification		3 Collected		Grab	Composite	Soil	Water	Oil	Total Number of Containers	BTEX + MTBE 8021	8260	Naphth	Oxygenates	NWTPH GX	NWTPH DX	Silica Gel Cleanup	Lead	Total	Diss.	Method	WAVPH	WAEPH	Remarks
Date	Time																						
<u>SB-9-4</u>	<u>11/4/13</u>	<u>1530</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>4</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<u>SB-10-2</u>	<u>11/4/13</u>	<u>1545</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>4</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<u>SB-15-2</u>	<u>11/5/13</u>	<u>1515</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>4</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<u>SB-14-7</u>	<u>11/5/13</u>	<u>1610</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>4</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<u>SB-15-6</u>	<u>11/6/13</u>	<u>0850</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>4</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<u>SB-10-6</u>	<u>11/6/13</u>	<u>1200</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>4</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<u>SB-16-2</u>	<u>11/6/13</u>	<u>1215</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>4</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<u>SB-16-6</u>	<u>11/6/13</u>	<u>1350</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>4</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<u>SB-11-10</u>	<u>11/6/13</u>	<u>1440</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>4</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<u>SB-11-12.5</u>	<u>11/6/13</u>	<u>1515</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>4</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<u>SB-17-2</u>	<u>11/6/13</u>	<u>1530</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>4</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<u>SB-12-9.5</u>	<u>11/6/13</u>	<u>1600</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>4</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<u>SB-12-10.5</u>	<u>11/6/13</u>	<u>1615</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>4</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7 Turnaround Time Requested (TAT) (please circle) <input checked="" type="checkbox"/> Standard 5 day <input type="checkbox"/> 4 day <input type="checkbox"/> 72 hour <input type="checkbox"/> 48 hour <input type="checkbox"/> 24 hour				Relinquished by <u>[Signature]</u> Date <u>11/11/13</u> Time <u>1330</u>				Received by _____ Date _____ Time _____				9											
8 Data Package Options (please circle if required) <input type="checkbox"/> Type I - Full <input type="checkbox"/> Type VI (Raw Data)				Relinquished by Commercial Carrier: UPS <input checked="" type="checkbox"/> FedEx _____ Other _____				Received by <u>[Signature]</u> Date <u>11/12/13</u> Time <u>0915</u>				Temperature Upon Receipt <u>11-0.5</u> °C Custody Seals Intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No											

Chevron Northwest Region Analysis Request/Chain of Custody



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Acct. # 11255

For Lancaster Laboratories use only
 Group # 1433626 Sample # 1275384-427
 Instructions on reverse side correspond with circled numbers.

1 Client Information				4 Matrix			5 Analyses Requested										6 Remarks						
Facility # <u>21556</u> WBS <u>0804</u> Site Address <u>211556 NWENY-02115560-0802</u> <u>255</u> Site Address <u>101 Mulford Rd, Toledo WA</u> Chevron PM <u>Mark Horne</u> Lead Consultant Consultant/Office <u>Leidos</u> <u>Bothell</u> Consultant Project Mgr. <u>R. Shropshire</u> Consultant Phone # <u>425-482-3323</u> Sampler <u>Adenbrück / G. Cisneros</u>				Sediment <input type="checkbox"/> Potable <input type="checkbox"/> Ground <input type="checkbox"/> NPDES <input type="checkbox"/> Surface <input type="checkbox"/> Oil <input type="checkbox"/> Air <input type="checkbox"/>			Total Number of Containers <u>4</u> <input checked="" type="checkbox"/> BTEX + MTBE 8021 <input checked="" type="checkbox"/> 8260 <input type="checkbox"/> Naphthn 8260 full scan Oxygenates NWTPH GX NWTPH DX <input checked="" type="checkbox"/> Silica Gel Cleanup <input checked="" type="checkbox"/> Lead Total <input checked="" type="checkbox"/> Diss. <input type="checkbox"/> Method <u>GC/MS</u> WAVPH <input type="checkbox"/> WAEPH <input type="checkbox"/> NWTPH DX No Silica Gel PAHs 8270 SIM MOISTURE										SCR #: <input type="checkbox"/> Results in Dry Weight <input type="checkbox"/> J value reporting needed <input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds <input type="checkbox"/> 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run ___ oxy's on highest hit <input type="checkbox"/> Run ___ oxy's on all hits						
2 Sample Identification			3 Composite																				
		Collected		Grab	Soil	Water	Oil	Total Number of Containers	BTEX + MTBE 8021	8260 full scan	Oxygenates	NWTPH GX	NWTPH DX	Lead Total	Diss.	Method	WAVPH	WAEPH	NWTPH DX No Silica Gel	PAHs 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 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		11/7/13 1320		/	/	/	/	4	/	/	/	/	/	/	/	/	/	/	/	/	/		
SB-9-13 SB-10-13		11/7/13 1330		/	/	/	/	4	/	/	/	/	/	/	/	/	/	/	/	/	/		
SB-15-9		11/7/13 1415		/	/	/	/	4	/	/	/	/	/	/	/	/	/	/	/	/	/		
7 Turnaround Time Requested (TAT) (please circle)				Relinquished by <u>[Signature]</u>				Date <u>11/6/13</u>		Time <u>1330</u>		Received by <u>[Signature]</u>				Date		Time <u>9</u>					
Standard <input checked="" type="radio"/> 5 day 4 day 72 hour 48 hour 24 hour				Relinquished by				Date		Time		Received by				Date		Time					
8 Data Package Options (please circle if required)				Relinquished by Commercial Carrier:				Received by <u>[Signature]</u>				Date <u>11/12/13</u>		Time <u>0915</u>									
Type I - Full Type VI (Raw Data)				UPS <input checked="" type="checkbox"/> FedEx _____ Other _____				Temperature Upon Receipt <u>0.5-1.1</u> °C				Custody Seals Intact? <input checked="" type="radio"/> Yes <input type="radio"/> No											

Chevron Northwest Region Analysis Request/Chain of Custody



Lancaster Laboratories

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 Group # 1433626 Sample # 7075384-427
 Instructions on reverse side correspond with circled numbers.

1 Client Information			4 Matrix			5 Analyses Requested										SCR #: _____																																																																																																																																																																																																																																																																																																																																																																
Facility # <u>211556</u> WBS NWENW-02115560-0804 Site Address <u>101 Mulford Road, Toledo, WA</u> Chevron PM <u>Mark Horne</u> Lead Consultant Consultant/Office <u>Bothe II</u> Consultant Project Mgr. <u>R. Shropshire</u> Consultant Phone # <u>425-482-3323</u> Sampler <u>A. Lembrick / G. Cisneros</u>			Sediment <input type="checkbox"/> Potable <input type="checkbox"/> Ground <input type="checkbox"/> NPDES <input type="checkbox"/> Surface <input type="checkbox"/> Oil <input type="checkbox"/> Air <input type="checkbox"/>			Total Number of Containers BTEX + MTBE 8021 <input checked="" type="checkbox"/> 8260 <input checked="" type="checkbox"/> Naphth <input type="checkbox"/> 8260 full scan Oxygenates NWTPH GX NWTPH DX <input checked="" type="checkbox"/> Silica Gel Cleanup <input checked="" type="checkbox"/> Lead Total <input checked="" type="checkbox"/> Diss. <input type="checkbox"/> Method <u>Gold</u> WAVPH <input type="checkbox"/> WAEPH <input type="checkbox"/> NWTPH Dx No Silica Gel CPAHS 8270 SIM Moisture										<input type="checkbox"/> Results in Dry Weight <input type="checkbox"/> J value reporting needed <input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds <input type="checkbox"/> 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run ___ oxy's on highest hit <input type="checkbox"/> Run ___ oxy's on all hits																																																																																																																																																																																																																																																																																																																																																																
2 Sample Identification			3 Composite			<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th rowspan="2">Sample Identification</th> <th colspan="2">Collected</th> <th rowspan="2">Grab</th> <th rowspan="2">Soil</th> <th rowspan="2">Water</th> <th rowspan="2">Oil</th> <th rowspan="2">Total Number of Containers</th> <th rowspan="2">BTEX + MTBE 8021</th> <th rowspan="2">8260</th> <th rowspan="2">Naphth</th> <th rowspan="2">8260 full scan</th> <th rowspan="2">Oxygenates</th> <th rowspan="2">NWTPH GX</th> <th rowspan="2">NWTPH DX</th> <th rowspan="2">Silica Gel Cleanup</th> <th rowspan="2">Lead Total</th> <th rowspan="2">Diss.</th> <th rowspan="2">Method</th> <th rowspan="2">WAVPH</th> <th rowspan="2">WAEPH</th> <th rowspan="2">NWTPH Dx No Silica Gel</th> <th rowspan="2">CPAHS 8270 SIM</th> <th rowspan="2">Moisture</th> </tr> <tr> <th>Date</th> <th>Time</th> </tr> <tr><td>SB-15-13</td><td>11/7/13</td><td>1440</td><td>/</td><td>/</td><td></td><td></td><td>4</td><td>/</td><td>/</td><td></td><td></td><td></td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td></td><td></td><td>/</td><td>/</td><td>/</td><td>/</td></tr> <tr><td>SB-18-8</td><td>11/7/13</td><td>1530</td><td>/</td><td>/</td><td></td><td></td><td>4</td><td>/</td><td>/</td><td></td><td></td><td></td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td></td><td></td><td>/</td><td>/</td><td>/</td><td>/</td></tr> <tr><td>SB-18-12</td><td>11/7/13</td><td>1540</td><td>/</td><td>/</td><td></td><td></td><td>4</td><td>/</td><td>/</td><td></td><td></td><td></td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td></td><td></td><td>/</td><td>/</td><td>/</td><td>/</td></tr> <tr><td>DUP-2-110713</td><td>11/7/13</td><td>--</td><td>/</td><td>/</td><td></td><td></td><td>4</td><td>/</td><td>/</td><td></td><td></td><td></td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td></td><td></td><td>/</td><td>/</td><td>/</td><td>/</td></tr> <tr><td>SB-17-8</td><td>11/8/13</td><td>0820</td><td>/</td><td>/</td><td></td><td></td><td>4</td><td>/</td><td>/</td><td></td><td></td><td></td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td></td><td></td><td>/</td><td>/</td><td>/</td><td>/</td></tr> <tr><td>SB-17-11</td><td>11/8/13</td><td>0830</td><td>/</td><td>/</td><td></td><td></td><td>4</td><td>/</td><td>/</td><td></td><td></td><td></td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td></td><td></td><td>/</td><td>/</td><td>/</td><td>/</td></tr> <tr><td>SB-9-9</td><td>11/8</td><td>0900</td><td>/</td><td>/</td><td></td><td></td><td>4</td><td>/</td><td>/</td><td></td><td></td><td></td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td></td><td></td><td>/</td><td>/</td><td>/</td><td>/</td></tr> <tr><td>SB-20-2</td><td>11/8</td><td>0910</td><td>/</td><td>/</td><td></td><td></td><td>4</td><td>/</td><td>/</td><td></td><td></td><td></td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td></td><td></td><td>/</td><td>/</td><td>/</td><td>/</td></tr> <tr><td>SB-9-11</td><td>11/8</td><td>0915</td><td>/</td><td>/</td><td></td><td></td><td>4</td><td>/</td><td>/</td><td></td><td></td><td></td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td></td><td></td><td>/</td><td>/</td><td>/</td><td>/</td></tr> <tr><td>DUP-3-110813</td><td>11/8</td><td>0915</td><td>/</td><td>/</td><td></td><td></td><td>4</td><td>/</td><td>/</td><td></td><td></td><td></td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td></td><td></td><td>/</td><td>/</td><td>/</td><td>/</td></tr> <tr><td>SB-19-9</td><td>11/8</td><td>1000</td><td>/</td><td>/</td><td></td><td></td><td>4</td><td>/</td><td>/</td><td></td><td></td><td></td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td></td><td></td><td>/</td><td>/</td><td>/</td><td>/</td></tr> <tr><td>SB-19-11</td><td>11/8</td><td>1015</td><td>/</td><td>/</td><td></td><td></td><td>4</td><td>/</td><td>/</td><td></td><td></td><td></td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td></td><td></td><td>/</td><td>/</td><td>/</td><td>/</td></tr> <tr><td>SB-20-10</td><td>11/8</td><td>1050</td><td>/</td><td>/</td><td></td><td></td><td>4</td><td>/</td><td>/</td><td></td><td></td><td></td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td></td><td></td><td>/</td><td>/</td><td>/</td><td>/</td></tr> </table>										Sample Identification	Collected		Grab	Soil	Water	Oil	Total Number of Containers	BTEX + MTBE 8021	8260	Naphth	8260 full scan	Oxygenates	NWTPH GX	NWTPH DX	Silica Gel Cleanup	Lead Total	Diss.	Method	WAVPH	WAEPH	NWTPH Dx No Silica Gel	CPAHS 8270 SIM	Moisture	Date	Time	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	/	/				/	/	/	/	/	/			/	/	/	/	6 Remarks	
Sample Identification	Collected		Grab	Soil	Water												Oil	Total Number of Containers																						BTEX + MTBE 8021	8260	Naphth	8260 full scan	Oxygenates	NWTPH GX	NWTPH DX	Silica Gel Cleanup	Lead Total	Diss.	Method	WAVPH	WAEPH	NWTPH Dx No Silica Gel	CPAHS 8270 SIM	Moisture																																																																																																																																																																																																																																																																																																																									
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Chevron Northwest Region Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # 11255 ^{11/13/13} Group # 1433626 Sample # 7275384-427
 For Lancaster Laboratories use only
 Instructions on reverse side correspond with circled numbers.

SCR #: 140481

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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 \geq 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 \geq 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.

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APPENDIX B

Natural Attenuation Assessment for Groundwater



**NATURAL ATTENUATION ASSESSMENT FOR GROUNDWATER
COWLITZ BP / COWLITZ FOOD AND FUEL /
FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington**

October 29, 2015

**Prepared for:
Washington State Department of Ecology
Southwest Regional Office – Toxics Cleanup Program
P.O. Box 47775
Olympia, Washington 98504-7775**

**Prepared by:
Leidos Engineering, LLC
18912 North Creek Parkway, Suite 101
Bothell, Washington 98011**

**On Behalf of:
Chevron Environmental Management Company
6101 Bollinger Canyon Road
San Ramon, California 94583**

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Russell S. Shropshire, PE
Principal Engineer

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**NATURAL ATTENUATION ASSESSMENT FOR GROUNDWATER
COWLITZ BP / COWLITZ FOOD AND FUEL /
FORMER TEXACO SERVICE STATION NO. 211556**

1. INTRODUCTION AND OBJECTIVE

Leidos Engineering, LLC (Leidos), on behalf of Chevron Environmental Management Company (CEMC), prepared this report to summarize the results of natural attenuation assessment activities performed at the above-referenced site (the Site) located at 101 Mulford Road in Toledo, Washington (Figure 1).

The objective of this assessment was to determine whether natural attenuation processes are occurring at the Site and, if so, to perform a preliminary feasibility screening for the use of natural attenuation as a cleanup action alternative. To perform this evaluation, Leidos used the framework provided in Section 3.2.1 of Washington State Department of Ecology (Ecology) Publication No. 05-09-091, “*Guidance on Remediation of Petroleum-Contaminated Ground Water by Natural Attenuation.*” This evaluation process is based upon the following questions:

1. What is the status of the groundwater plume at the site?
2. Is chemical or biological degradation a substantial mechanism of natural attenuation at the site?
3. What is the estimated restoration time frame?
4. Will the use of natural attenuation be protective of human health and the environment during the estimated restoration time frame?
5. Has source control been conducted to the maximum extent practicable?

To perform this assessment, Leidos used data from previous remedial investigation and assessment activities, results of interim remedial cleanup actions, long-term groundwater monitoring data, and recent data collected regarding geochemical indicators of natural attenuation in ground water.

2. BACKGROUND

**2.1 SUMMARY OF CURRENT GROUNDWATER QUALITY AND
HYDROGEOLOGIC CONDITIONS**

Groundwater quality is well documented throughout the Site. A network of twenty-three monitoring wells has been installed, seventeen of which remain in place and are monitored on a routine basis (Figure 2). All monitoring wells (with the exception of MW-120) were installed prior to 1996 and have been regularly monitored since that time.

Groundwater is generally encountered at depths of approximately 7 to 8 feet below ground surface (bgs) across the Site, with a seasonal fluctuation of approximately 2 feet. Groundwater flow is generally to the southeast, toward the Cowlitz River. A potentiometric map which presents groundwater elevation data collected during the most recent quarterly monitoring event (August 2015) is included as Figure 3.

Recent groundwater sampling data indicate that groundwater quality throughout the Site is in compliance with MTCA Method A cleanup levels, with the exception of three monitoring wells (B-3, B-4, and MW-111) located immediately downgradient of the service station underground

storage tank (UST) basin and pump islands. At these locations, dissolved-phase petroleum hydrocarbons (primarily gasoline-range organics [GRO]) continue to routinely exceed the regulatory standard. At monitoring wells B-3 and B-4, GRO concentrations have declined over time such that recent sampling results routinely fluctuate above and below the cleanup level. GRO concentrations at monitoring well MW-111 are several times higher than those typically detected at monitoring wells B-3 and B-4, and consistently exceed the cleanup level. Dissolved lead is also routinely detected in groundwater samples from MW-111 at concentrations exceeding the Method A cleanup level.

In addition to GRO, diesel-range organics (DRO) are also routinely detected above Method A cleanup levels in monitoring wells B-3, B-4, and MW-111. However, recent sampling results indicate that only samples analyzed without use of a silica-gel cleanup prior to analysis contain DRO concentrations in excess of the cleanup level. Based on DRO analysis research conducted by Zemo and Associates (Zemo, 2013), Leidos believes that DRO detections in groundwater at monitoring wells B-3, B-4, and MW-111 are most likely the result of GRO biodegradation metabolites (polar, nonhydrocarbon compounds) that are detected by the DRO analysis, but which are not representative of diesel-range petroleum hydrocarbons in groundwater. This conclusion is also supported by the results of recent soil sampling performed in the vicinity of monitoring wells B-3, B-4, and MW-111 (Leidos, 2014), which confirmed the presence of GRO impacts to soil in this area, but found no evidence of DRO contamination in soil.

Groundwater throughout the Site currently meets drinking water quality standards for benzene, toluene, ethylbenzene, and xylenes (BTEX). Long-term groundwater sampling data for these compounds suggest that the more volatile and soluble fractions of the gasoline source have been degraded by weathering.

Current and historical groundwater monitoring data are presented in Table 1 and laboratory results for selected analytes are also presented on Figure 4, for the most recent four quarters of monitoring.

3. FEASIBILITY EVALUATION OF NATURAL ATTENUATION AS A CLEANUP ACTION ALTERNATIVE

To assess natural attenuation at the Site, Leidos used the framework provided in Section 3.2.1 of Washington State Department of Ecology (Ecology) Publication No. 05-09-091, "*Guidance on Remediation of Petroleum-Contaminated Ground Water by Natural Attenuation*", which provides technical guidance on how to determine whether a cleanup action that relies on natural attenuation meets the minimum requirements for cleanup actions set forth in the Washington Administrative Code (WAC) 173-340-360(2) and the expectations for cleanup actions involving natural attenuation set forth in WAC 173-340-370(7). To make such a determination, the following five factors should be considered and evaluated:

1. What is the status of the groundwater plume at the site?
2. Is chemical or biological degradation a substantial mechanism of natural attenuation at the site?
3. What is the estimated restoration time frame?
4. Will the use of natural attenuation be protective of human health and the environment during the estimated restoration time frame?
5. Has source control been conducted to the maximum extent practicable?

3.1 WHAT IS THE STATUS OF THE GROUNDWATER PLUME AT THE SITE?

Per the Ecology guidance, in order for natural attenuation to be considered as a feasible cleanup action alternative, conditions at a site must currently indicate that natural attenuation has resulted in conditions where the contaminant plume is stable or shrinking. A plume is determined to be shrinking if selected monitoring wells within the contaminated plume that are above cleanup levels exhibit a trend of decreasing groundwater contaminant levels in the source, or most impacted area, and in the downgradient contaminant plume that is above cleanup levels (Ecology, 2005a)

To evaluate the contaminant plume status, Leidos analyzed long-term groundwater monitoring data for all monitoring wells within the contaminated plume (B-3, B-4, and MW-111). Temporal plots of groundwater contaminant concentration and depth-to-water data were created, which are included as Figures 5 through 7. In each plot, GRO and benzene concentration data are plotted versus time for groundwater sampling performed since at least August 1995.

Due to inconsistent methods in DRO analysis performed over this period, long-term historical DRO sampling results were not included, since they would not provide an “apples to apples” comparison of DRO concentrations over time. In addition, based on the predominance of GRO contamination in groundwater at the Site, detections of DRO are unlikely to impact the outcome of a plume status evaluation. Also, as previously discussed in Section 2.1, recent DRO detections at the Site are believed to be the result of natural degradation of GRO. Therefore, these data are considered indicators of GRO attenuation, instead of indicators of additional petroleum hydrocarbon impacts to groundwater.

As these data plots show, long-term historical data indicate trends of decreasing groundwater contaminant levels for GRO and benzene in all three of the source area monitoring wells. At each location, benzene concentrations have decreased to levels below the MTCA Method A cleanup level, and GRO concentrations have decreased by at least one order of magnitude in monitoring wells B-3 and B-4, such that recent GRO sampling results are frequently in compliance with the MTCA Method A level at these locations. GRO levels in monitoring well MW-111 also indicate a decreasing trend; however, GRO contaminant reductions at this location have been slower and concentrations remain significantly higher than at the other locations.

3.2 IS CHEMICAL OR BIOLOGICAL DEGRADATION A SUBSTANTIAL MECHANISM OF NATURAL ATTENUATION AT THE SITE?

Natural attenuation may be appropriate at sites where there is evidence that the destructive mechanisms of natural attenuation (i.e., chemical or biological degradation) that reduce the contaminant mass are occurring and are substantial contributors to contaminant reductions observed at the site. Natural attenuation may not be appropriate at sites where natural attenuation relies primarily on dilution and dispersion to reduce contaminant concentrations.

Evidence of biodegradation processes are commonly assessed qualitatively by analyzing changes in geochemical indicators within the groundwater plume over time. To perform this portion of the assessment, Leidos analyzed the results of geochemical indicator data collected from nine quarterly monitoring events performed between September 2013 and August 2015. Field measurements and groundwater samples were collected by Gettler-Ryan Inc. (Gettler-Ryan) for the following parameters:

Field Measurements:

The following parameters were measured in the field by a Gettler-Ryan sampling technician using a multi-parameter meter mounted in a flow-through cell, during low-flow purging of each monitoring well:

- Dissolved oxygen (DO)
- Oxidation reduction potential (ORP)
- pH
- Temperature
- Conductivity

Laboratory Analyses:

The following parameters were measured by laboratory analysis provided by Eurofins Lancaster Laboratories, Inc. using groundwater samples collected by Gettler-Ryan.

- Nitrate and sulfate by EPA 300.0
- Dissolved iron and dissolved manganese by SW846 6010B
- Sulfide by SM 4500-S2 D-2000
- Methane by RSKSOP-175 modified
- Alkalinity by SM 2320 B-1997

Samples submitted for dissolved iron, dissolved manganese, and alkalinity analyses were field filtered by Gettler-Ryan using a 0.45 micron in-line filter. Gettler-Ryan field data sheets are included in Appendix A and laboratory analytical reports for each of the nine natural attenuation monitoring events are included in Appendix B.

Geochemical indicator data from within, and downgradient of, the source area were compared to upgradient (i.e., background) levels. The following set of 11 monitoring wells was used to represent a cross section of groundwater conditions across the Site:

- Monitoring wells B-1 and B-2: Selected to be representative of background groundwater conditions upgradient of the contaminant source area.
- Monitoring wells MW-117 and MW-119: Selected to be representative of background groundwater conditions crossgradient of the contaminant source area.
- Monitoring wells B-3, B-4, and MW-111: Selected to be representative of groundwater conditions within the contaminant source area.
- Monitoring wells MW-112, MW-113: Selected to be representative of groundwater conditions immediately downgradient of the contaminant source area.
- Monitoring wells MW-103 and MW-116: Selected to be representative of groundwater conditions within downgradient sentinel wells.

Results of the geochemical indicator monitoring are presented in Table 2, which also includes recent benzene, GRO, DRO, and heavy-range organics (HRO) groundwater sampling data. In order to visualize changes in groundwater conditions across the Site, data within this table are arranged based on well location, relative to the source area. As organized, it is relatively easy to see, for example, that GRO is consistently detected within the source area wells, but is not regularly detected in the upgradient, crossgradient, or downgradient monitoring wells. Similarly, corresponding changes associated with groundwater moving from background areas, through the impacted source zone, and into non-impacted downgradient areas are also evident for some of

the geochemical indicator parameters, most notably dissolved manganese, dissolved iron, sulfate, methane, alkalinity, and ORP.

Monitoring data for each of these six parameters are also shown relative to GRO concentration data in geochemical indicator response plots, which are included as Figures 8 through 13. As noted on the figures, the plotted data points represent the average value for each analyte based on the nine sampling events performed (when available). Where a laboratory result was non-detect, the value of the detection limit was used in the calculation of the average value. A discussion of each of the plots is provided below:

Dissolved Manganese

Anaerobic biodegradation of organic carbon can occur using Mn(IV) as an electron acceptor, which is reduced to Mn(II) in the process. Mn(II) is more soluble in water than Mn(IV); therefore, increases of dissolved manganese in groundwater may be an indicator that anaerobic degradation of petroleum hydrocarbons has occurred via Mn(IV) reduction.

As shown in Table 2 and on Figure 8, monitoring data from this assessment indicate significant increases of dissolved manganese within the source area wells (B-3, B-4, and MW-111) and monitoring well MW-112, in comparison to other wells located in the non-impacted areas of the Site.

Dissolved Iron

Similar to dissolved manganese, increases of dissolved iron in groundwater may be an indicator that anaerobic degradation of petroleum hydrocarbons has occurred via Fe(III) reduction to Fe(II), which is more soluble in water.

Data presented in Table 2 and Figure 9 indicate a strong correlation between GRO and dissolved iron concentrations, which suggests that anaerobic degradation via Fe(III) reduction has occurred in the vicinity of the source area monitoring wells.

Sulfate

After biologically available Mn(IV) and Fe(III) have been depleted in the microbiological treatment zone, sulfate may be used as an electron acceptor for anaerobic biodegradation via sulfate reduction. The occurrence of sulfate reduction is demonstrated by reductions in sulfate concentrations within the treatment zone.

Sulfate monitoring data presented in Table 2 and Figure 10 suggest some reduction of sulfate levels in monitoring wells B-4 and MW-111, compared to background levels. However, the correlation between sulfate levels relative to GRO concentrations is not as pronounced as for several of the other indicators. Additionally, the relatively high sulfate concentrations seen at monitoring well B-3 are currently unclear and are not consistent with expectations.

Methane

The presence of methane in groundwater is indicative of methanogenesis, which results in the production of methane during biodegradation of organic carbon. Methane can also be transported by advective groundwater flow; therefore, its presence in groundwater does not ensure that the immediate environment is methanogenic, only that methanogenic conditions exist in the vicinity.

Methane monitoring data presented in Table 2 and Figure 11 indicate a very strong correlation between GRO and methane concentrations in groundwater, which suggests that methanogenesis has occurred in the vicinity of the source area monitoring wells.

Alkalinity

Biologically active portions of a dissolved contaminant plume may be identified by increases in alkalinity resulting from the production of carbon dioxide during the biodegradation of organic carbon.

Alkalinity monitoring data presented in Table 2 and Figure 12 indicate increases of alkalinity that strongly correlate with detections of GRO in the source area monitoring wells.

ORP

The ORP of groundwater is a measure of electron activity and is an indicator of the relative tendency of a solution to accept or transfer electrons. In general, the lower the ORP of groundwater, the more reducing the environment. ORP measurements are typically measured in the field and should be considered as semi-quantitative results.

ORP monitoring data presented in Table 2 and Figure 13 indicate decreases of ORP levels in the source zone wells and near downgradient monitoring well MW-112.

In summary, the results of geochemical indicator monitoring indicate that the dissolved phase contaminant plume is degrading with distance along the groundwater flow path, and that anaerobic degradation is a substantial component of the contaminant reductions observed at the Site.

3.3 WHAT IS THE ESTIMATED RESTORATION TIME FRAME?

To estimate the restoration time frame, Leidos used Module 2 of Ecology's *Natural Attenuation Analysis Tool Package for Petroleum-Contaminated Ground Water* (Ecology, 2005b), which performs a linear regression analysis of temporal contaminant concentration data for each monitoring well to estimate restoration time frame based on an 85% confidence level. The Ecology tool package accepts up to 20 data points for each monitoring well location; therefore, Leidos filtered the available long-term groundwater sampling data to develop a dataset that is representative of the GRO concentration trends over the lifetime of each well. Early data for B-3 and B-4 was filtered out since sampling data was not available for MW-111 until August 1995. In general, at least one representative sampling round was selected for each year of monitoring performed between 1995 and 2015, except in cases where no monitoring was performed (e.g., 2006) or where sampling results were considered to be outliers due to sampling results that were uncharacteristically higher or lower than the general data trend (e.g., 11/19/1998 for MW-111). Additional rounds of more recent data (e.g., 2014 and 2015) were also included.

Model input and output is included in Appendix C. As the output shows, the GRO plume was determined to be shrinking at each of the source area monitoring wells, and there is sufficient evidence to support a significant linear correlation (from 99.999 to 100.000%) between sampling time and log concentration of GRO at each location.

On average (at 50% confidence level), the estimated point decay-rate constants ranged from 0.21 to 0.07 per year (half-lives of 3.3 to 9.5 years). Under this scenario, monitoring wells B-3 and B-4 would be expected to be in compliance with the cleanup level in 2015 and monitoring well MW-111 is estimated to be in compliance in approximately 24 years (2040).

At 85% confidence level, the lower boundary of confidence interval of point decay-rate constants ranged from 0.06 to 0.19 per year (half-lives of 3.6 to 11.4 years). The upper bound of the time

expected to reach the GRO cleanup goal is approximately 2 years for monitoring well B-3, 4 years for B-4, and 33 years for MW-111.

3.4 WILL THE USE OF NATURAL ATTENUATION BE PROTECTIVE OF HUMAN HEALTH AND THE ENVIRONMENT DURING THE ESTIMATED RESTORATION TIME FRAME?

To be considered a feasible cleanup action alternative, the cleanup action should not only be able to achieve cleanup standards within a reasonable restoration time frame, but also be able to adequately protect human and ecological receptors during that time frame. If receptors are impacted by the contaminant, then an active cleanup action will be necessary to remove or contain the contamination such that the receptor is adequately protected (Ecology, 2005a).

Under the current land use scenario and conditions at the Site, there are no complete exposure pathways from petroleum contaminated groundwater to human and/or ecological receptors, based on the following:

- The dissolved-phase plume of petroleum impacted groundwater is confined to a relatively small area in the southern portion of the active service station property that is overlain by a maintained asphalt cap.
- There is no current or projected use of, or demand for, groundwater at the Site and all monitoring wells located downgradient of MW-111 are in compliance with drinking water quality standards (MTCA Method A); therefore, groundwater leaving the Site is not impacted.

Therefore, conditions at the Site are currently considered to be protective of human health and the environment, and these conditions are expected to remain in place unless a change in land use occurs. Land use at the Site has remained unchanged since 1955 (approximately 60 years) and no change is anticipated in the foreseeable future.

3.5 HAS SOURCE CONTROL BEEN CONDUCTED TO THE MAXIMUM EXTENT PRACTICABLE?

To be considered a feasible cleanup action alternative, source control should be conducted as part of the cleanup action to the maximum extent practicable before relying on natural attenuation to achieve groundwater cleanup standards. Source control consists of any remedial action other than natural attenuation that reduces the source mass and the mass loading rate to acceptable levels. Source control may be conducted as part of an interim action and/or as part of the final cleanup action (Ecology, 2005a).

Per Section 3.2.1.5 of Ecology's natural attenuation guidance (Ecology, 2005a), the following source control actions should be conducted:

- Remove hazardous substances from any leaking UST to the maximum extent possible;
- Remove any free product to the maximum extent practicable; and
- Remove any readily accessible contaminated soils that may act as a long-term source of groundwater contamination.

WAC 173-340-200 defines Practicable as *“capable of being designed, constructed and implemented in a reliable and effective manner including consideration of cost. When considering cost under this analysis, an alternative shall not be considered practicable if the*

incremental costs of the alternative are disproportionate to the incremental degree of benefits provided by the alternative over other lower cost alternatives.”

Under current land use conditions at the Site, previous cleanup actions are considered to have resulted in source control to the maximum extent practicable. These cleanup actions have included:

- UST upgrades and contaminated soil removal performed on the active service station portion of the Site in 1990 and the removal of USTs and contaminated soil excavation on the inactive service station portion of the Site in 1992.
- Removal of a former diesel UST and contaminated soil excavation on the active service station portion of the Site.
- In-situ source area remediation by injection of Oxygen Release Compound ® (ORC) in 2001.
- Interim remedial action excavations performed in 2010 to address readily accessible contaminated soils located in the vicinity of a former diesel UST on the active service station property and in the vicinity of the former UST basin on the former service station portion of the site, and the application of ORC to groundwater at the base of each excavation.

Contaminated soil and groundwater remaining at the Site is confined to a relatively small area located immediately downgradient of the UST basin and dispenser islands on the active service station area. Although additional source control measures have the potential to be implemented in this area, they are not considered practicable under current land use conditions because their cost, resource demands, and potential impact on current business operations at the Site would not be justified by the incremental degree of benefit provided by their implementation. In fact, due to the lack of a complete exposure pathway under the current land use scenario, there would be little benefit to the shorter restoration time frame that may be possible through implementation of additional active source control, except for reduced performance monitoring and administration costs.

4. CONCLUSIONS

Based on guidelines presented in Ecology’s *Guidance on Remediation of Petroleum-Contaminated Ground Water by Natural Attenuation*, Leidos believes that current conditions at the Site are appropriate to consider the use of natural attenuation as a cleanup action alternative for petroleum contaminated groundwater at the Site.

Long-term sampling results from a robust groundwater monitoring program indicate that groundwater conditions throughout much of the Site are in compliance with drinking water quality standards. Remaining dissolved phase petroleum impacts are confined to a small area of the Site where the dissolved phase plume is shrinking due to natural attenuation. Within this area, results of recent monitoring of geochemical indicators in groundwater indicate that microbial degradation is a substantial mechanism of the natural attenuation occurring at the Site.

Regression analysis of temporal data using Ecology’s natural attenuation tool package suggests that cleanup levels will be attained at monitoring wells B-3 and B-4 within approximately 2 to 4 years, and that the restoration time frame for monitoring well MW-111 is approximately 33 years. Although the restoration time frame for MW-111 using natural attenuation is longer than would be expected for an active cleanup action, groundwater impacts in this vicinity appear to be

highly localized. 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. There is no current or projected use of, or demand for, groundwater at the Site during the estimated restoration time frame.

The conclusions drawn by this assessment were made based on an assumption that land use will remain as current during the restoration time frame, with an operating service station present and no use of groundwater on the Site. Land use at the Site has remained unchanged since 1955 (approximately 60 years) and no change is anticipated in the foreseeable future. However, future land use changes have the potential to create complete exposure pathways or to provide opportunities for cost-effective remedial actions that could be implemented during property redevelopment or station upgrades. It is expected that these contingencies could be addressed by institutional controls developed for the Site.

5. REFERENCES

- Ecology. 2005a. *Guidance on Remediation of Petroleum-Contaminated Ground Water by Natural Attenuation*. Publication No. 05-09-091 (Version 1.0), July 2005.
- Ecology. 2005b. *User's Manual: Natural Attenuation Analysis Tool Package for Petroleum-Contaminated Ground Water*. Publication No. 05-09-091A (Version 1.0), July 2005.
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- Zemo, D.A., K.T. O'Reilly, R.E. Mohler, A.K. Tiwary, R.I. Magaw, and K.A. Synowiec. 2013. *Nature and Estimated Human Toxicity of Polar Metabolite Mixtures in Groundwater Quantified as TPHd/DRO at Biodegrading Fuel Release Sites, Groundwater Monitoring and Remediation* 33: 44-56.

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.

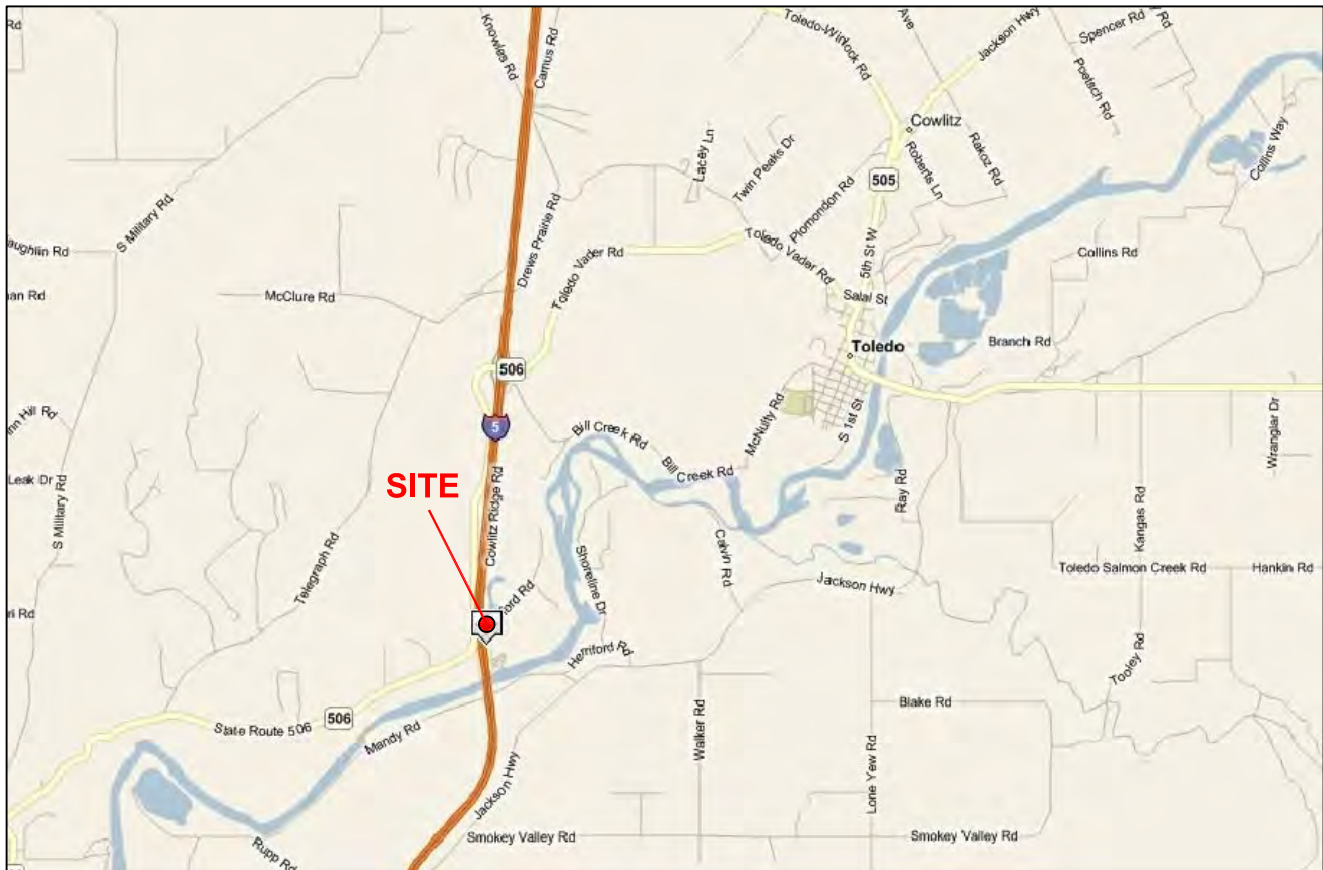
Site history and background information provided in this technical document are based on sources that may include interviews with environmental regulatory agencies and property management personnel and a review of acquired environmental regulatory agency documents and property information obtained from 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 on by Leidos in the context of this technical document. The conclusions, therefore, represent our professional opinion based on the identified sources of information.

Figures

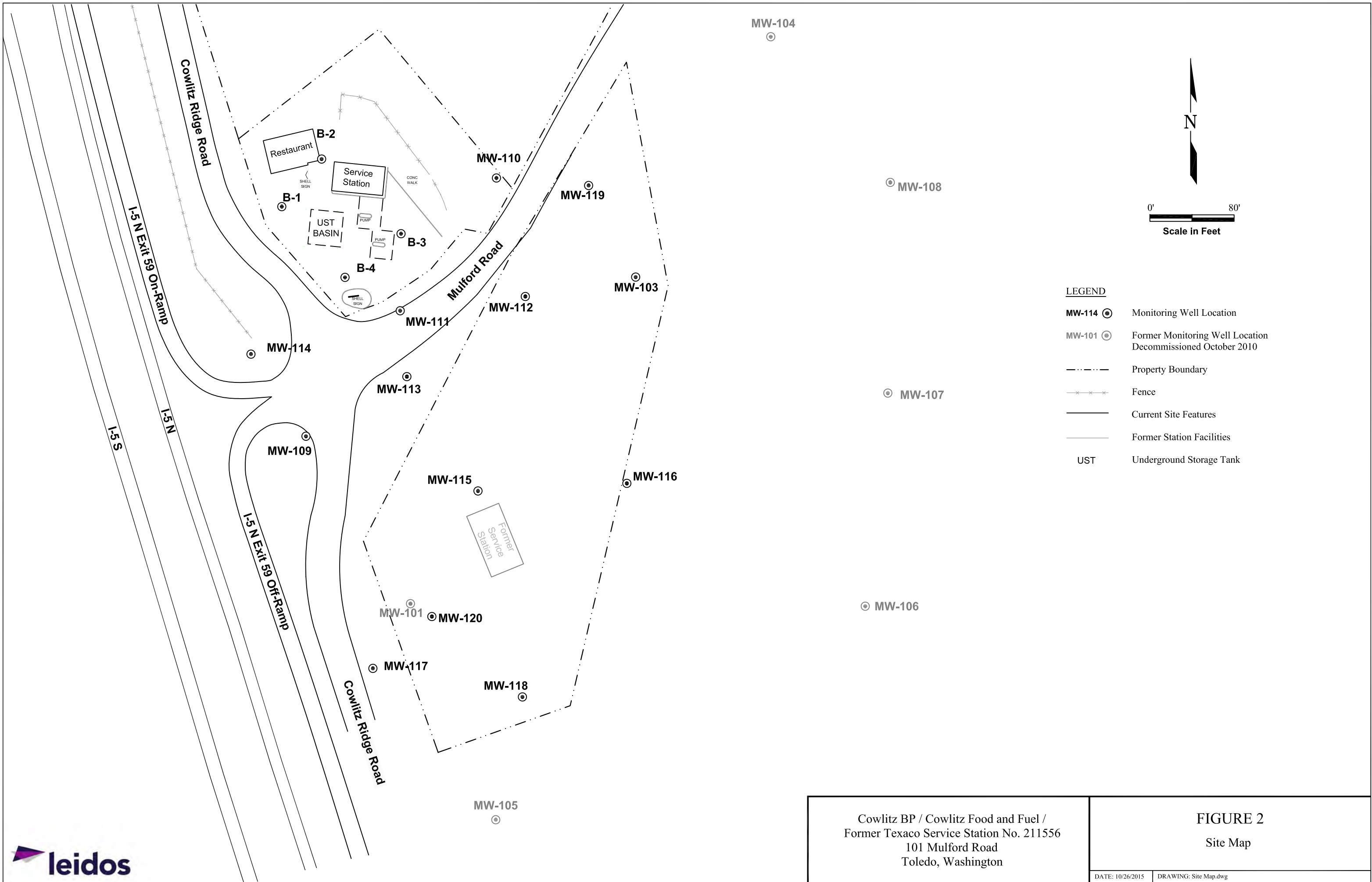


Cowlitz BP / Cowlitz Food and Fuel /
Former Texaco Service Station No. 211556
101 Mulford Road
Toledo, Washington

FIGURE 1
Vicinity Map

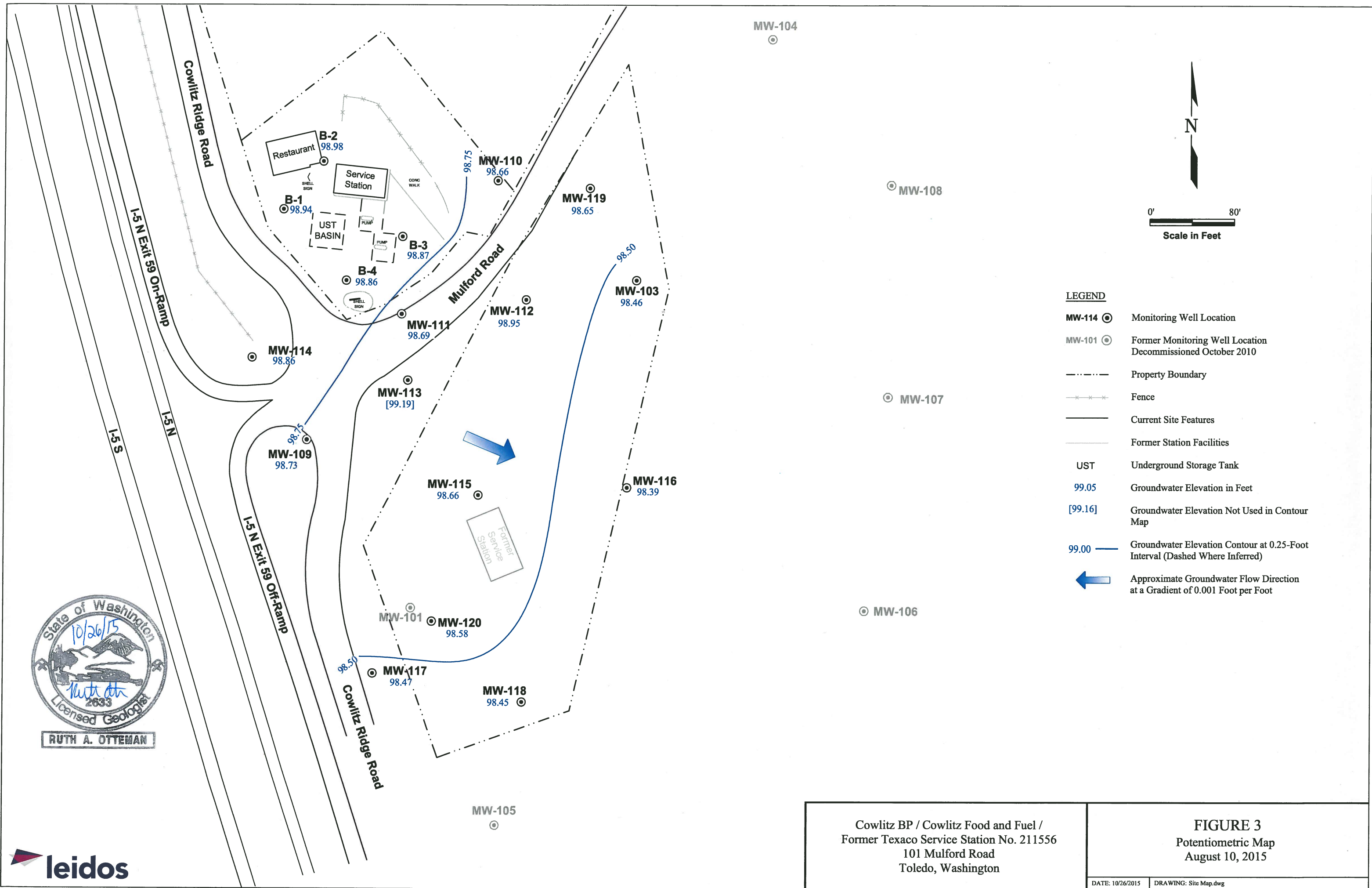
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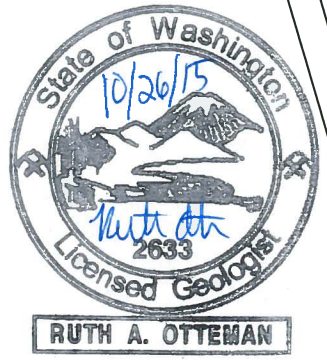


Cowlitz BP / Cowlitz Food and Fuel /
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 101 Mulford Road
 Toledo, Washington

FIGURE 2
 Site Map



- LEGEND**
- MW-114 ● Monitoring Well Location
 - MW-101 ● Former Monitoring Well Location Decommissioned October 2010
 - - - - - Property Boundary
 - x - x - Fence
 - Current Site Features
 - - - - - Former Station Facilities
 - UST Underground Storage Tank
 - 99.05 Groundwater Elevation in Feet
 - [99.16] Groundwater Elevation Not Used in Contour Map
 - 99.00 — Groundwater Elevation Contour at 0.25-Foot Interval (Dashed Where Inferred)
 - ← Approximate Groundwater Flow Direction at a Gradient of 0.001 Foot per Foot



Cowlitz BP / Cowlitz Food and Fuel / Former Texaco Service Station No. 211556 101 Mulford Road Toledo, Washington	FIGURE 3 Potentiometric Map August 10, 2015
DATE: 10/26/2015	DRAWING: Site Map.dwg

FIGURE 5
GW CONTAMINANT CONCENTRATIONS AND DEPTH TO WATER VS. TIME: B-3
 Cowlitz BP / Cowlitz Food and Fuel / Former Texaco Service Station No. 211556
 101 Mulford Road, Toledo, Washington

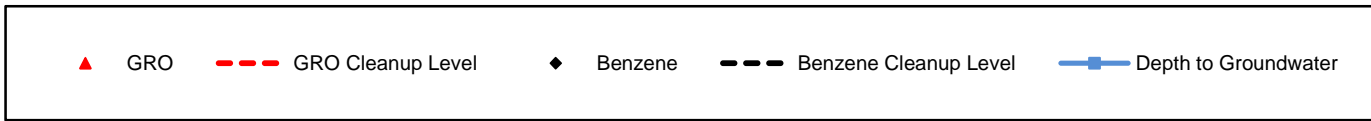
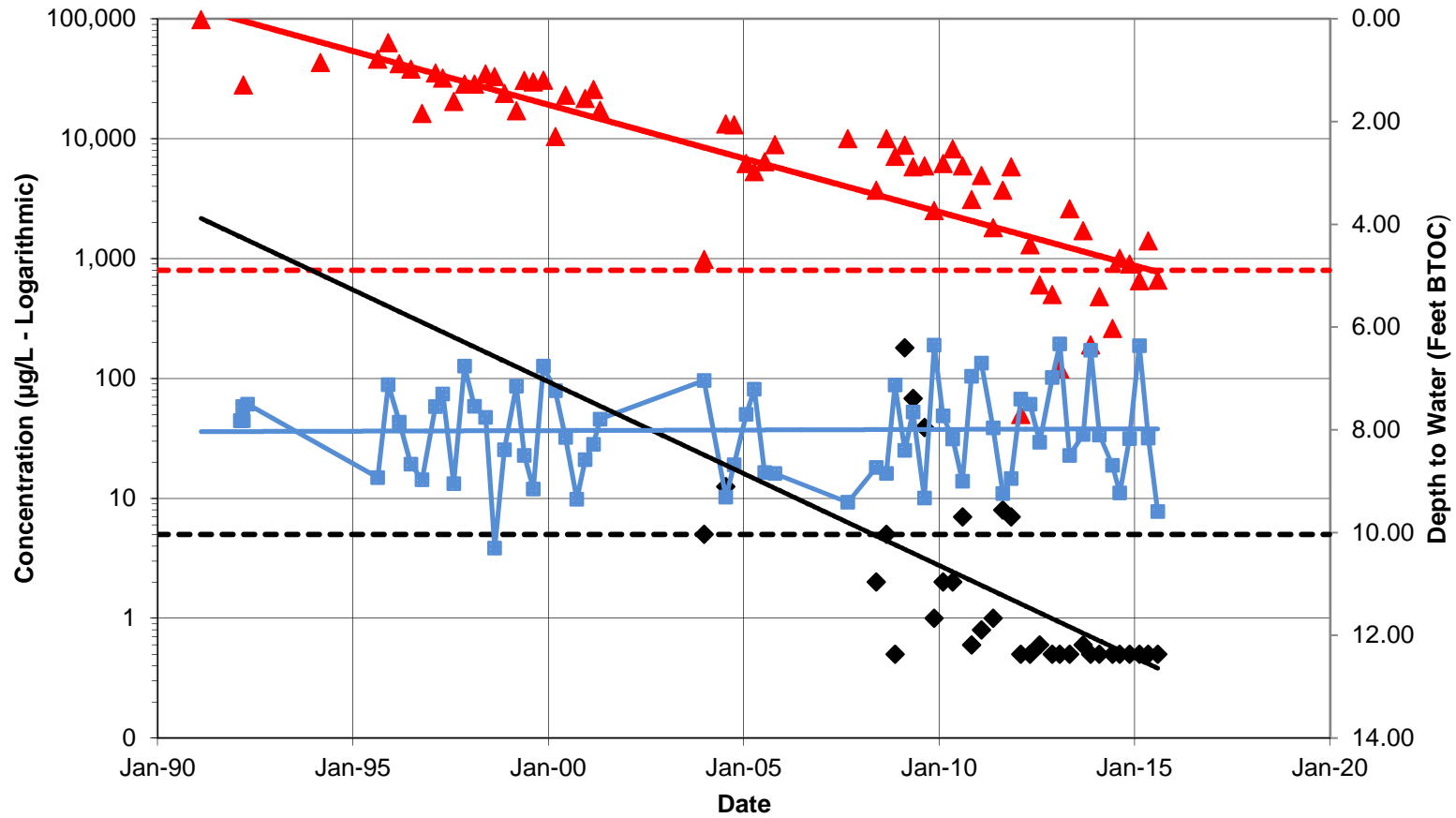


FIGURE 6
GW CONTAMINANT CONCENTRATIONS AND DEPTH TO WATER VS. TIME: B-4
 Cowlitz BP / Cowlitz Food and Fuel / Former Texaco Service Station No. 211556
 101 Mulford Road, Toledo, Washington

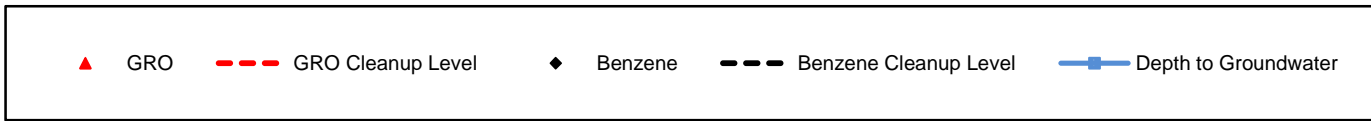
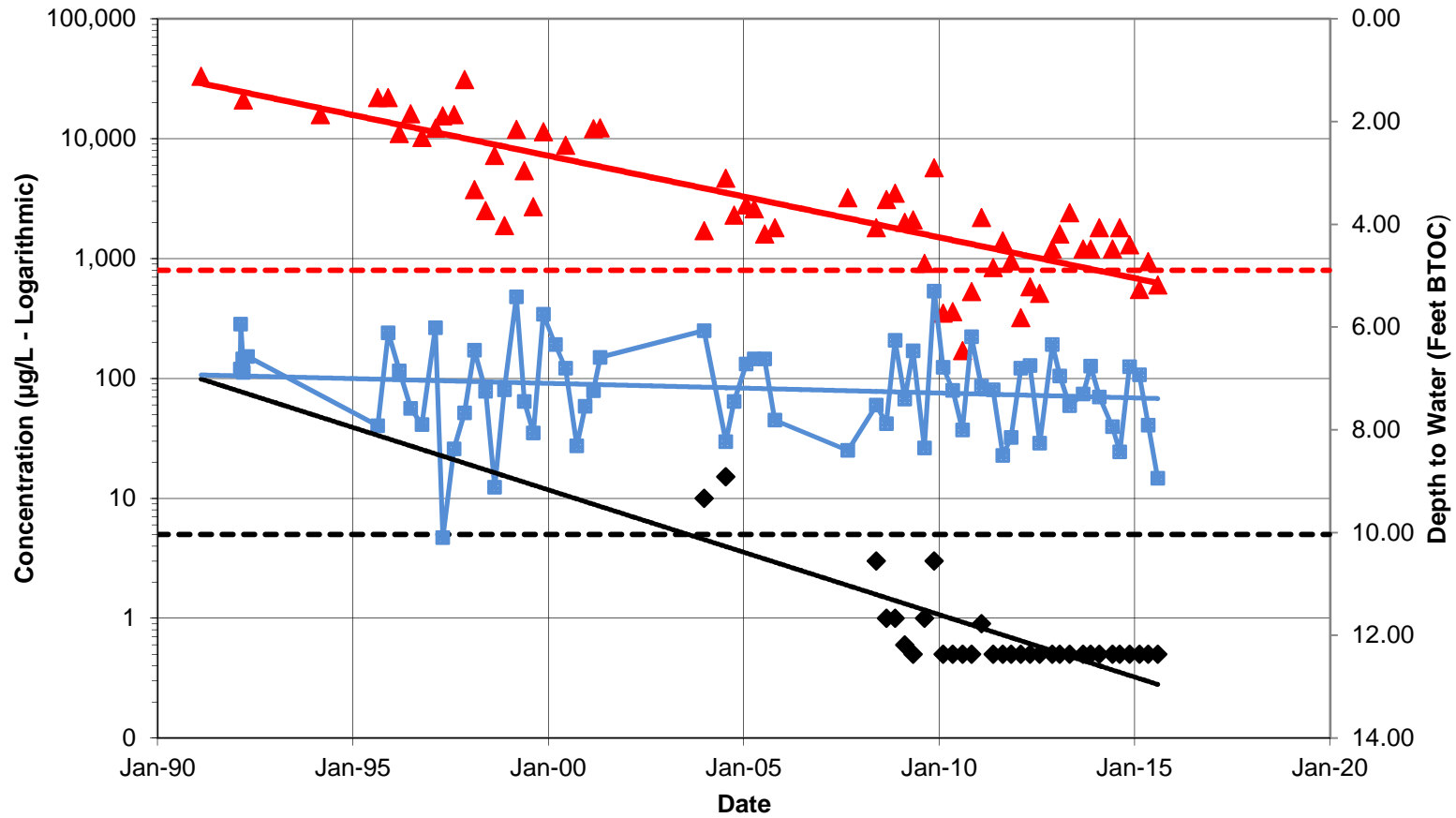


FIGURE 7
GW CONTAMINANT CONCENTRATIONS AND DEPTH TO WATER VS. TIME: MW-111
 Cowlitz BP / Cowlitz Food and Fuel / Former Texaco Service Station No. 211556
 101 Mulford Road, Toledo, Washington

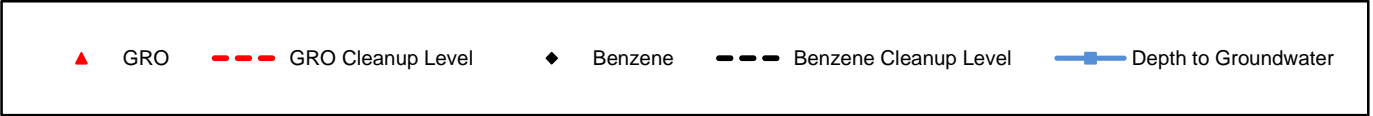
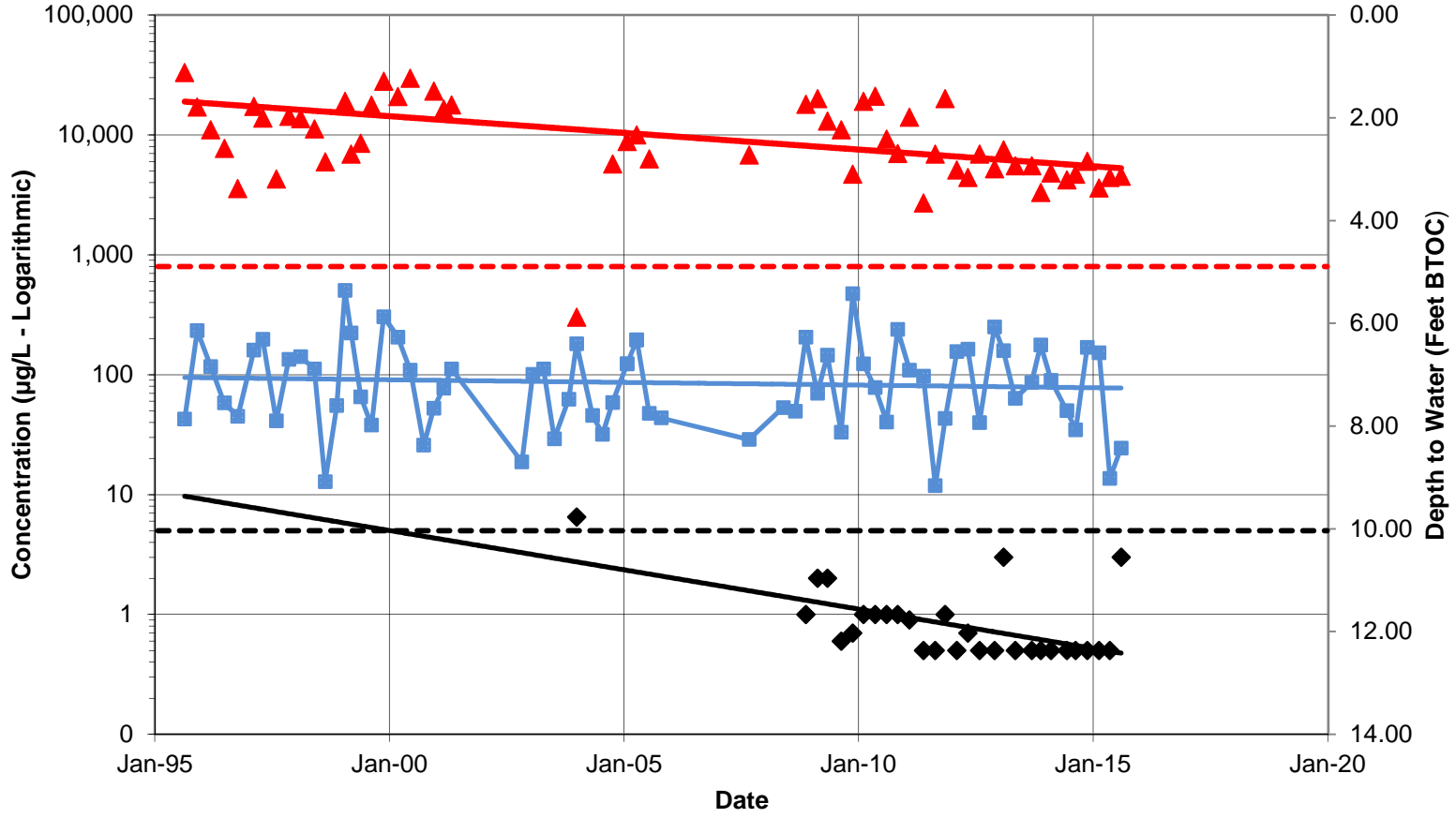


FIGURE 8
GEOCHEMICAL INDICATOR RESPONSE - DISSOLVED MANGANESE AND GRO VS. LOCATION
 Cowlitz BP / Cowlitz Food and Fuel / Former Texaco Service Station No. 211556
 101 Mulford Road, Toledo, Washington

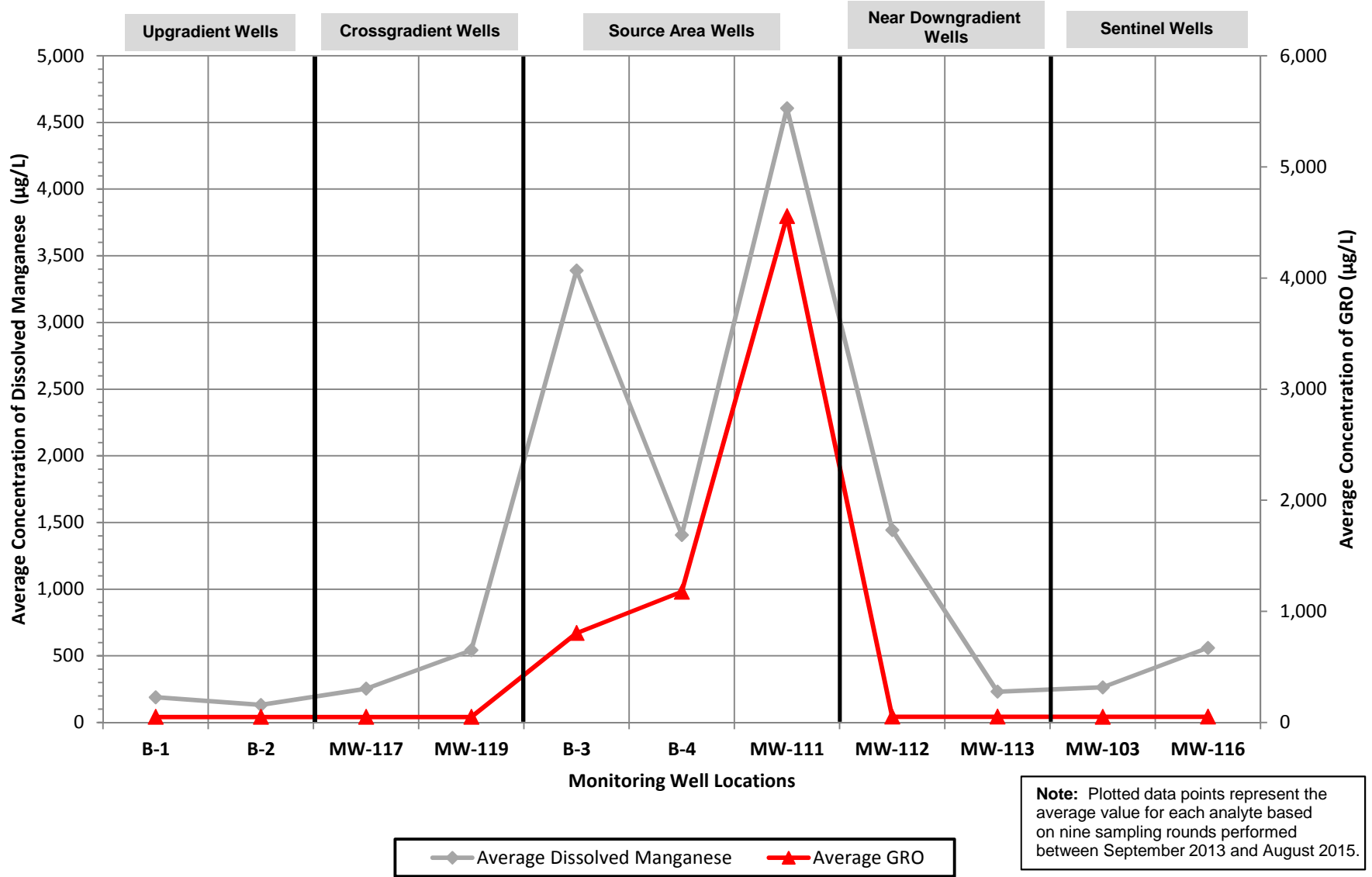


FIGURE 9
GEOCHEMICAL INDICATOR RESPONSE - DISSOLVED IRON AND GRO VS. LOCATION
 Cowlitz BP / Cowlitz Food and Fuel / Former Texaco Service Station No. 211556
 101 Mulford Road, Toledo, Washington

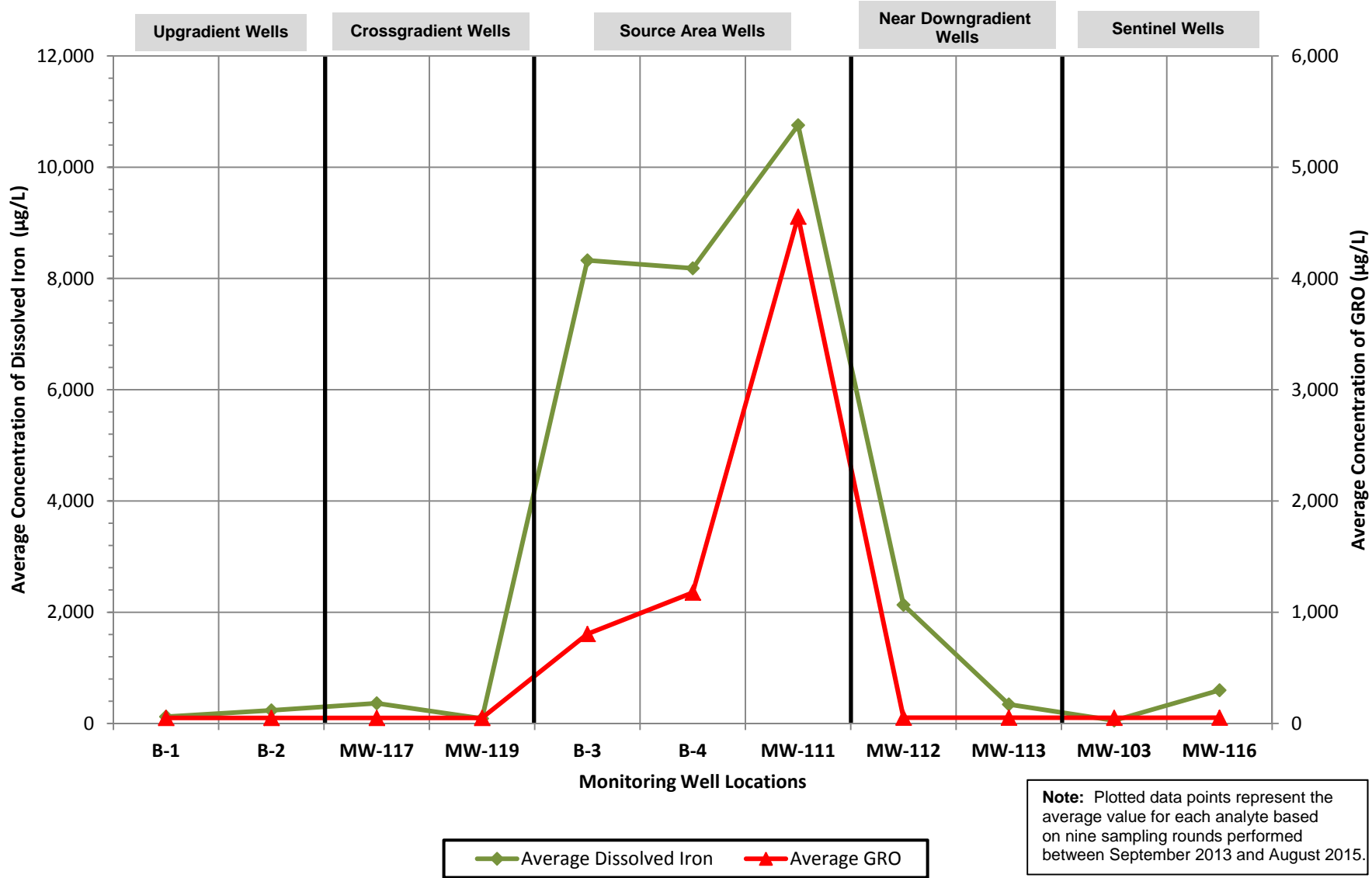


FIGURE 10
GEOCHEMICAL INDICATOR RESPONSE - SULFATE AND GRO VS. LOCATION
 Cowlitz BP / Cowlitz Food and Fuel / Former Texaco Service Station No. 211556
 101 Mulford Road, Toledo, Washington

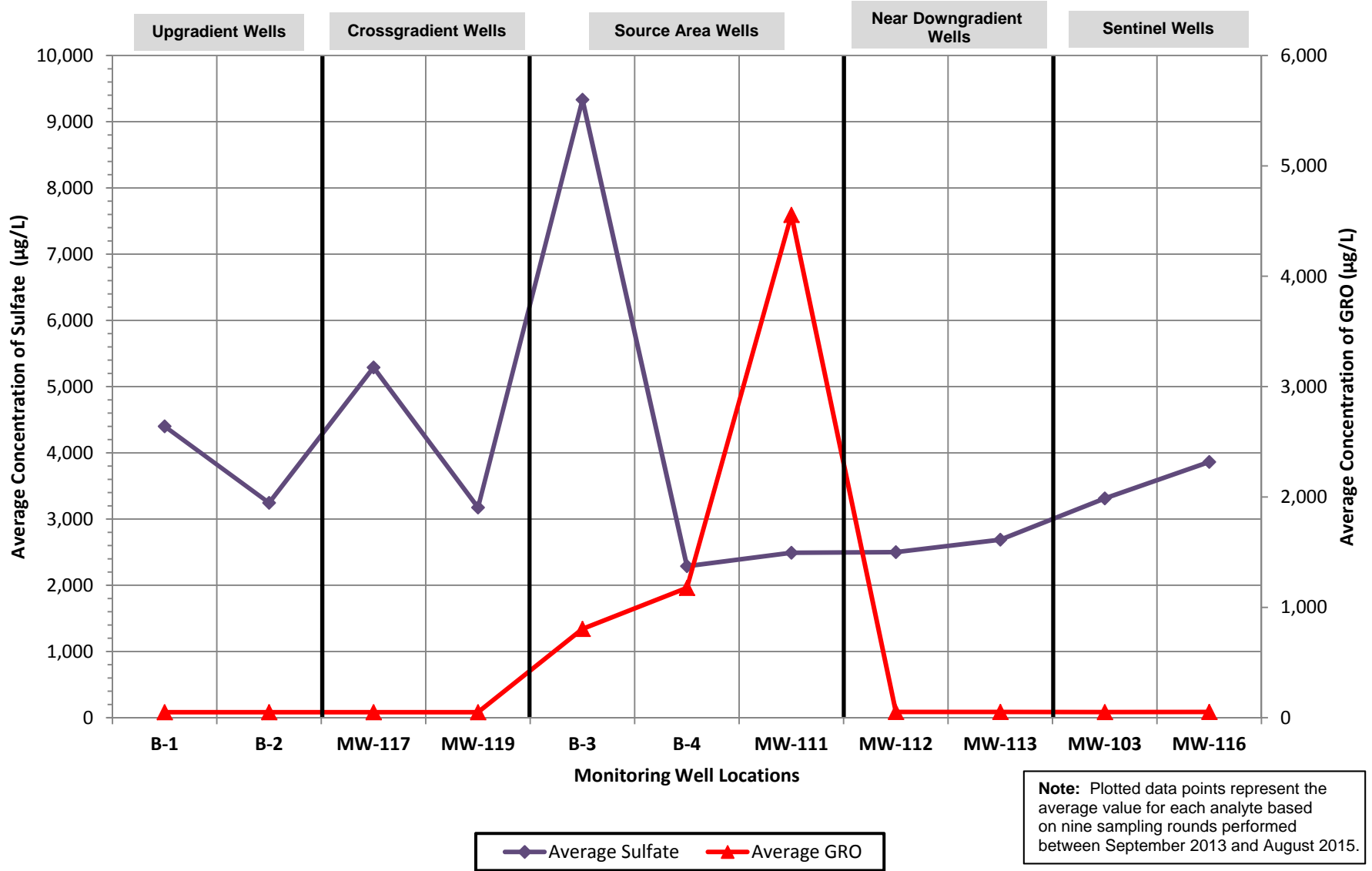


FIGURE 11
GEOCHEMICAL INDICATOR RESPONSE - METHANE AND GRO VS. LOCATION
 Cowlitz BP / Cowlitz Food and Fuel / Former Texaco Service Station No. 211556
 101 Mulford Road, Toledo, Washington

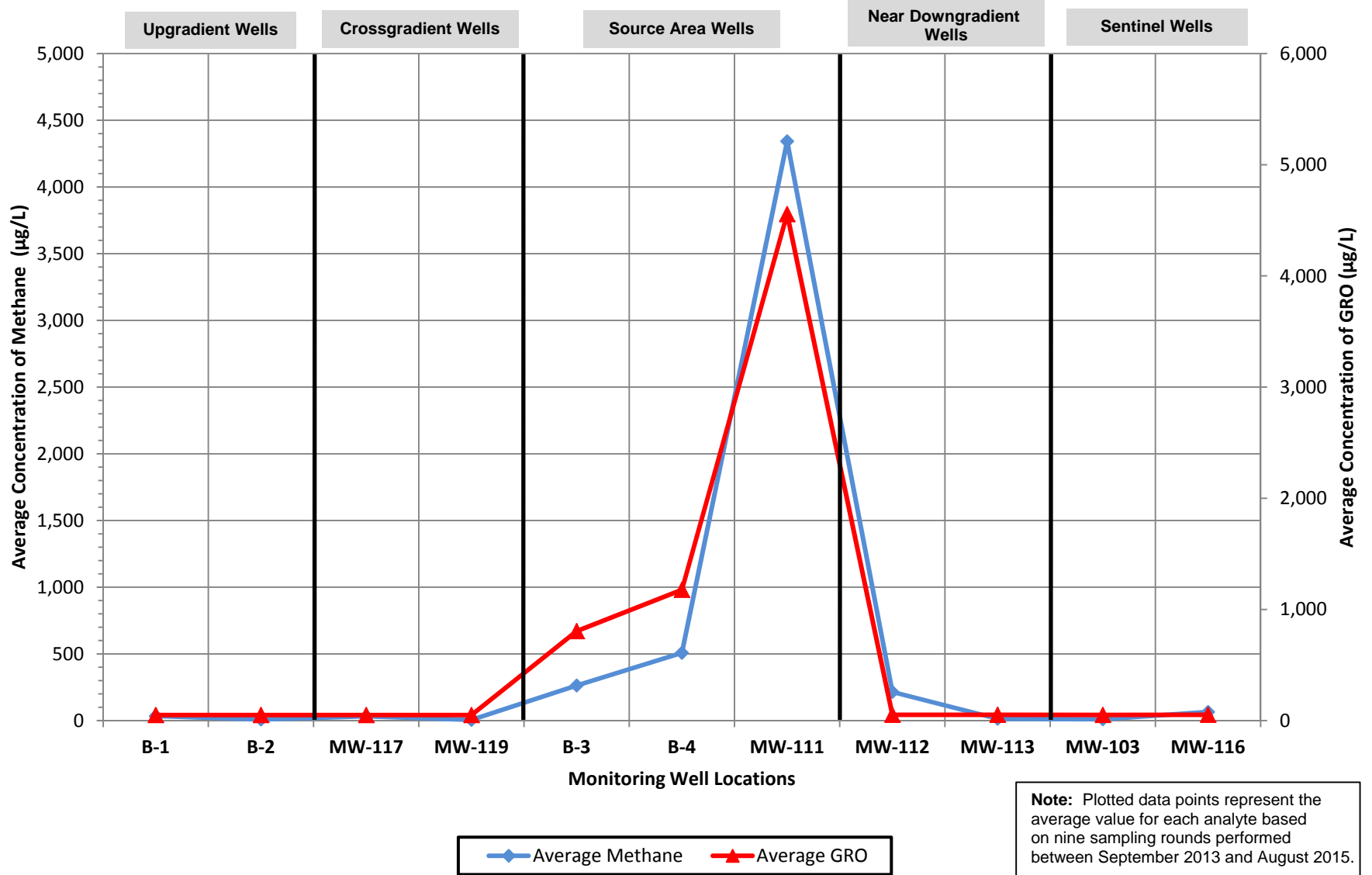


FIGURE 12
GEOCHEMICAL INDICATOR RESPONSE - ALKALINITY AND GRO VS. LOCATION
 Cowlitz BP / Cowlitz Food and Fuel / Former Texaco Service Station No. 211556
 101 Mulford Road, Toledo, Washington

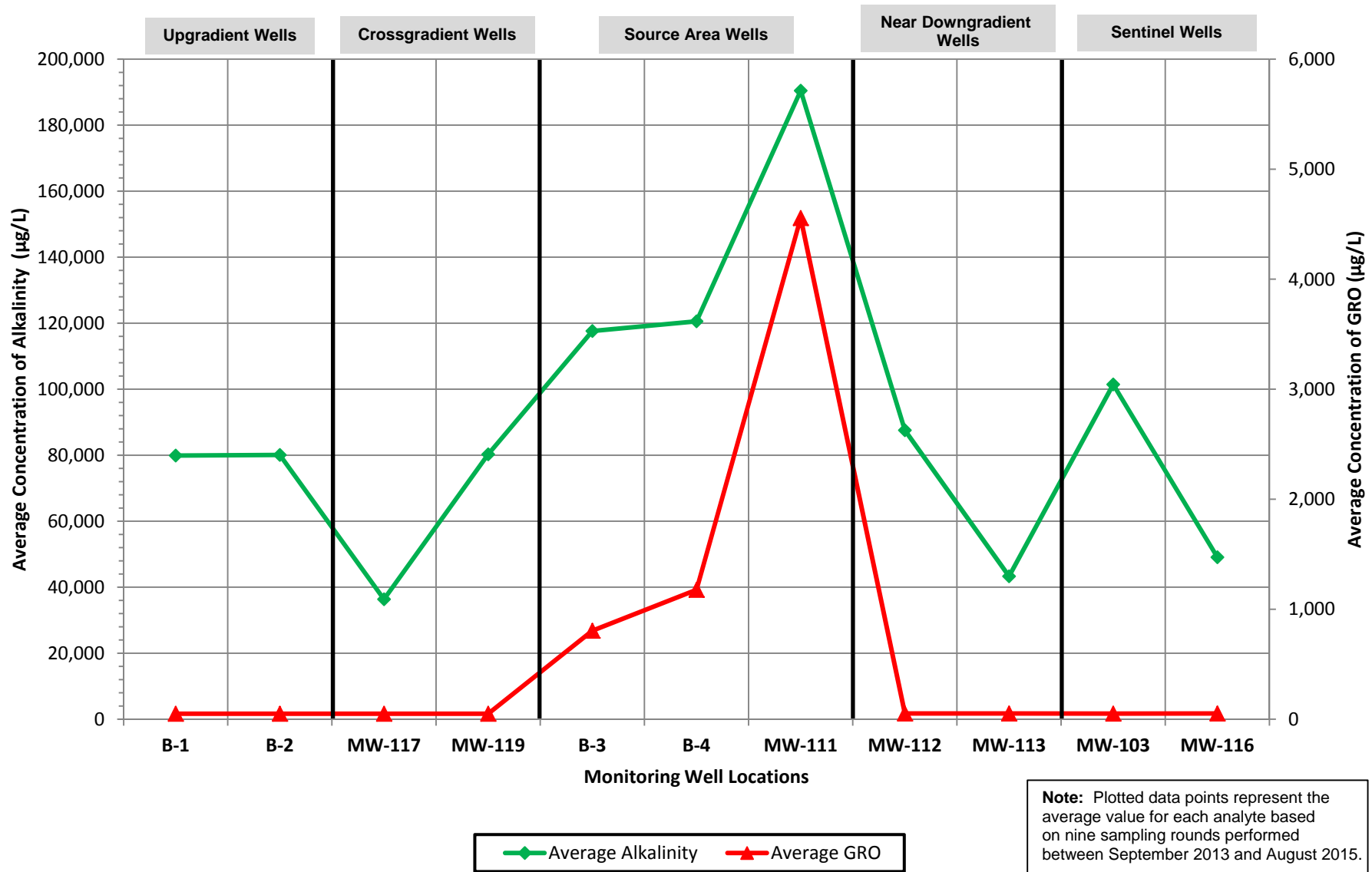
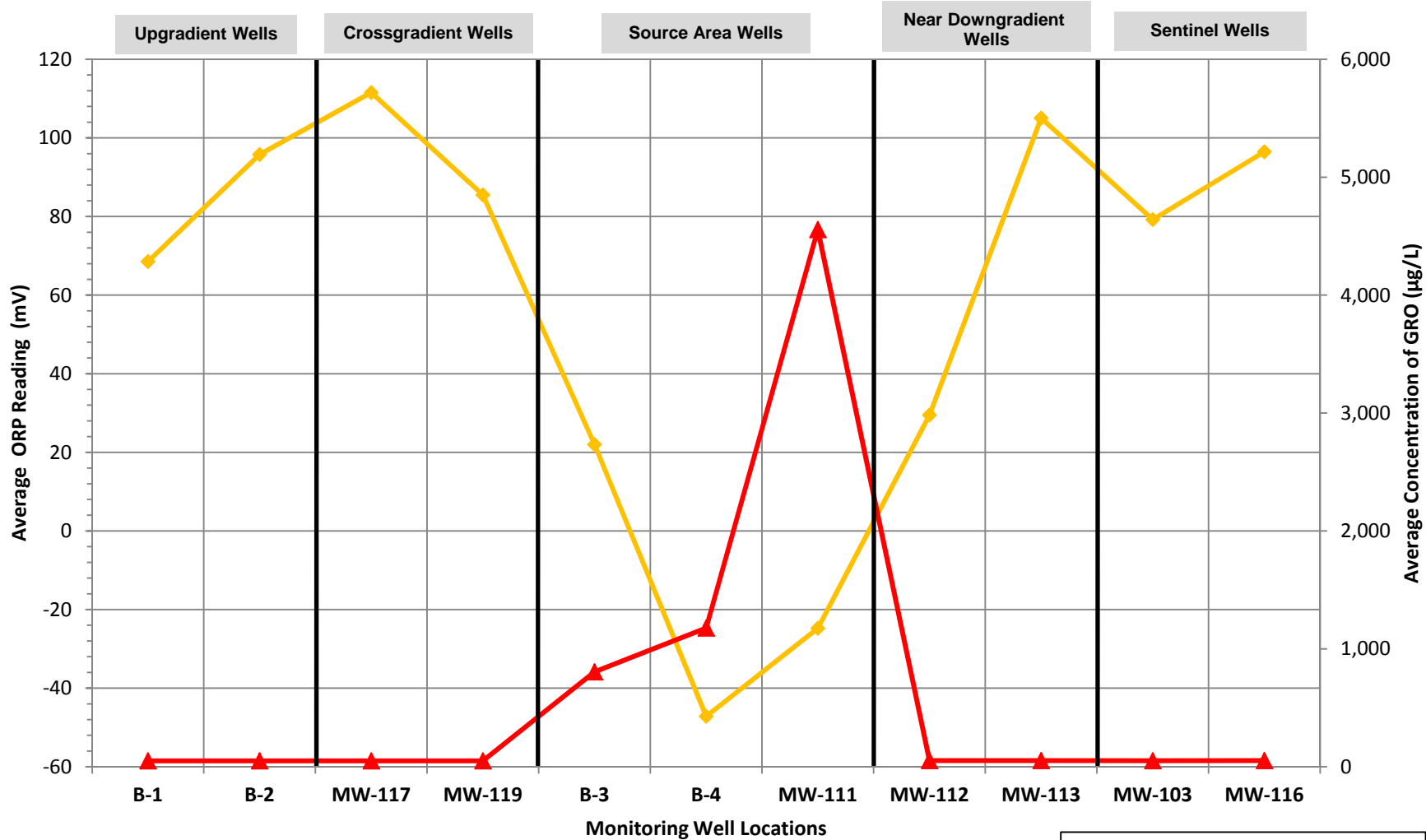


FIGURE 13
GEOCHEMICAL INDICATOR RESPONSE - ORP AND GRO VS. LOCATION
 Cowlitz BP / Cowlitz Food and Fuel / Former Texaco Service Station No. 211556
 101 Mulford Road, Toledo, Washington



Note: Plotted data points represent the average value for each analyte based on nine sampling rounds performed between September 2013 and August 2015.

◆ Average ORP
 ▲ Average GRO

Tables

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-103															
2/14/91		107.81	--	8.08	--	99.73	--	--	--	--	--	--	--	--	--
2/18/92		107.81	--	8.08	--	99.73	--	--	--	--	--	--	--	--	--
3/9/92		107.81	--	7.80	--	100.01	--	<50	--	--	--	--	--	--	--
3/13/92		107.81	--	8.08	--	99.73	<250	<250	<50	--	--	--	--	--	--
4/21/92		107.81	--	7.78	--	100.03	--	--	<50	--	--	--	--	--	--
3/3/94		107.81	--	--	--	--	<250	<250	<50	<13	--	--	--	--	--
6/13/95		107.81	--	8.55	--	99.26	<250	<250	<50	--	--	--	--	--	<3.0
8/22/95		107.81	--	--	--	--	<250	<250	<50	--	--	--	--	--	<2.0
8/23/95		107.81	--	8.91	--	98.90	<250	<250	<50	--	--	--	--	--	<2.0
11/28/95		107.81	--	7.30	--	100.51	<250	<250	<50	--	--	--	--	--	<2.0
3/12/96		107.81	--	8.03	--	99.78	<250	<250	<50	--	--	--	--	--	<2.0
6/26/96		107.81	--	8.67	--	99.14	<250	<250	<50	--	--	--	--	--	<2.0
10/9/96		107.81	--	8.82	--	98.99	<250	<250	<50	--	--	--	--	--	<2.0
2/12/97		107.81	--	7.81	--	100.00	<250	<250	<50	--	--	--	--	--	<2.0
4/22/97		107.81	--	7.42	--	100.39	<250	<250	<50	--	--	--	--	--	<2.0
8/5/97		107.81	--	8.83	--	98.98	257	110	257	--	--	--	--	--	<2.0
11/11/97		107.81	--	9.01	--	98.80	<250	<250	<50	--	--	--	--	--	<2.0
2/11/98		107.81	--	8.03	--	99.78	<250	<250	<50	--	--	--	--	--	<2.0
5/28/98		107.81	--	8.17	--	99.64	<250	<250	<50	--	--	--	--	--	2.84
8/20/98		107.81	--	9.21	--	98.60	<250	<250	<50	--	--	--	--	--	<1.0
11/19/98		107.81	--	9.03	--	98.78	<250	<250	<50	--	--	--	--	--	<1.0
3/11/99		107.81	--	7.51	--	100.30	<250	<250	<50	--	--	--	--	--	<1.0
5/25/99		107.81	--	8.51	--	99.30	<250	<250	<50	--	--	--	--	--	--
8/17/99		107.81	--	8.93	--	98.88	<250	<250	<50	--	--	--	--	--	<1.0
11/19/99		107.81	--	7.18	--	100.63	<250	<250	<80	--	--	--	--	--	<1.0
3/9/00		107.81	--	7.48	--	100.33	<250	<250	<80	--	--	--	--	--	<1.0
6/13/00		107.81	--	8.29	--	99.52	<250	<250	<80	--	--	--	--	--	<1.0
9/26/00		107.81	--	9.05	--	98.76	<250	<250	--	--	--	--	--	--	<1.0
12/13/00		107.81	--	8.65	--	99.16	<250	<250	--	--	--	--	--	--	<1.0
2/28/01		107.81	--	8.34	--	99.47	<250	<250	89	--	--	--	--	--	<1.0
5/2/01		107.81	--	8.12	--	99.69	<250	<250	214	--	--	--	--	--	<1.0
10/30/02		107.81	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
1/23/03		107.81	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
4/18/03		107.81	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
7/11/03		107.81	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
10/31/03		107.81	UNABLE TO LOCATE - COVERED BY SOIL			--	--	--	--	--	--	--	--	--	--

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COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
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Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-103 (cont)															
12/30/03		107.81	--	7.32	0.00	100.49	<50	<85	<110	<0.5	<0.5	<0.5	<1.5	--	<1.2
5/3/04		107.81	UNABLE TO LOCATE - COVERED BY SOIL												
7/20/04		107.81	--	9.09	0.00	98.72	<250	<500	<50.0	<0.500	<0.500	<0.500	<1.00	--	--
10/7/04		107.81	--	8.66	0.00	99.15	<160	<50	--	--	--	--	--	--	--
1/27/05		107.81	--	7.95	0.00	99.86	<83	<83	<48	--	--	--	--	--	--
4/12/05		107.81	--	7.65	0.00	100.16	<78	<78	<48	--	--	--	--	--	--
7/18/05		107.81	--	8.76	0.00	99.05	<79	<79	<48	--	--	--	--	--	--
10/21/05		107.81	--	8.87	0.00	98.94	<79	<79	<48	--	--	--	--	--	--
9/5/07		107.81	UNABLE TO LOCATE												
5/27-28/08		107.81	UNABLE TO LOCATE												
8/27-29/08		107.81	UNABLE TO LOCATE												
11/17-19/08		107.81	UNABLE TO LOCATE												
2/16-18/09		107.81	UNABLE TO LOCATE												
5/4-6/09		107.81	UNABLE TO LOCATE												
8/19-21/09		107.81	UNABLE TO LOCATE												
11/18-20/09		107.81	UNABLE TO LOCATE												
2/8-10/10		107.81	UNABLE TO LOCATE												
5/12-13/10		107.81	UNABLE TO LOCATE												
08/12/10	LFP	107.81	--	8.90	0.00	98.91	30	120	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.11
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
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
05/24/11	LFP	107.81	--	8.25	0.00	99.56	30	340	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.13
8/23-24/11	LFP	107.81	UNABLE TO LOCATE												
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
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
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
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
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
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
5/6-8//13	LFP	107.81	--	8.60	0.00	99.21	<29	<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.13
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
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
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
6/12-14/14	LFP	107.81	INACCESSIBLE			--	--	--	--	--	--	--	--	--	--

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead	
MW-103 (cont)																
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	
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	
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	
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	
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-109																
3/13/92		107.35	--	7.72	0.00	99.63	--	--	<50	--	--	--	--	--	--	
4/21/92		107.35	--	7.42	0.00	99.93	--	--	--	--	--	--	--	--	--	
3/3/94		107.35	--	--	0.00	--	900	1,500	4,900	--	--	--	--	--	--	
8/22/95		107.35	--	8.57	0.00	98.78	2,900	2,400	<50	--	--	--	--	--	--	
11/28/95		107.35	--	5.87	0.00	101.48	480	1,900	72	--	--	--	--	--	<2.0	
3/12/96		107.35	--	7.16	0.00	100.19	<250	<750	<50	--	--	--	--	--	<2.0	
6/26/96		107.35	--	8.24	0.00	99.11	554	<750	<50	--	--	--	--	--	<2.0	
10/9/96		107.35	--	8.54	0.00	98.81	405	<750	<50	--	--	--	--	--	<2.0	
2/12/97		107.35	--	5.82	0.00	101.53	393	1,290	<50	--	--	--	--	--	<2.0	
4/22/97		107.35	--	7.10	0.00	100.25	356	1,270	<50	--	--	--	--	--	<2.0	
8/5/97		107.35	--	8.81	0.00	98.54	560	1,690	<50	--	--	--	--	--	<2.0	
11/11/97		107.35	--	7.57	0.00	99.78	269	780	<50	--	--	--	--	--	<2.0	
2/11/98		107.35	--	6.20	0.00	101.15	387	1,700	<50	--	--	--	--	--	<2.0	
5/28/98		107.35	--	7.62	0.00	99.73	332	920	<50	--	--	--	--	--	2.25	
8/20/98		107.35	--	9.00	0.00	98.35	520	1,450	<50	--	--	--	--	--	<1.0	
11/19/98		107.35	--	8.21	0.00	99.14	409	1,130	<50	--	--	--	--	--	<1.3	
3/11/99		107.35	--	6.94	0.00	100.41	539	2,000	<80	--	--	--	--	--	<1.0	
5/25/99		107.35	--	8.13	0.00	99.22	916	--	<80	--	--	--	--	--	--	
8/17/99		107.35	--	8.66	0.00	98.69	1,520	7,770	<80	--	--	--	--	--	<1.0	
11/19/99		107.35	--	6.65	0.00	100.70	<250	--	<80	--	--	--	--	--	<1.0	
3/9/00		107.35	--	5.67	0.00	101.68	<250	<500	<80	--	--	--	--	--	<1.0	
6/13/00		107.35	--	6.65	0.00	100.70	<250	<500	<80	--	--	--	--	--	<1.0	
9/26/00		107.35	--	8.36	0.00	98.99	<250	<500	--	--	--	--	--	--	<1.0	
12/13/00		107.35	--	7.72	0.00	99.63	<250	<500	--	--	--	--	--	--	<1.0	
2/28/01		107.35	--	7.44	0.00	99.91	<250	<500	<80	--	--	--	--	--	<1.0	
5/2/01		107.35	--	9.50	0.00	97.85	<250	<500	<80	--	--	--	--	--	<1.0	
10/30/02		107.35	--	8.69	0.00	98.66	<250	<500	<80	<0.500	<0.500	<0.500	<1.0	--	6.44	
1/23/03		107.35	MONITORED/SAMPLED ANNUALLY					--	--	--	--	--	--	--	--	--
4/18/03		107.35	MONITORED/SAMPLED ANNUALLY					--	--	--	--	--	--	--	--	--

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-109 (cont.)															
7/11/03		107.35	MONITORED/SAMPLED ANNUALLY												
10/31/03		107.35	--	7.63	0.00	99.72	<250	<500	<50	<0.500	<0.500	<0.500	<1.0	--	<1.0 ⁵
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
5/3/04		107.35	MONITORED/SAMPLED ANNUALLY												
7/20/04		107.35	MONITORED/SAMPLED ANNUALLY												
10/6/04		107.35	--	7.71	0.00	99.64	<81	110	<50	--	--	--	--	--	--
10/24/05		107.35	--	7.93	0.00	99.42	<81	<100	<48	--	--	--	--	--	--
9/5/07		107.35	--	8.45	0.00	98.90	<79	240	91	--	--	--	--	--	0.15
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
8/27-29/08	LFP	107.35	--	7.92	0.00	99.43	<79	<99	<50	<5	<5	<5	<5	<5	<0.050
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
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
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
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
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
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
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
08/11/10	LFP	107.35	--	8.90	0.00	98.45	34	300	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.1
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
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
05/23/11	LFP	107.35	--	7.26	0.00	100.09	47	520	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.052
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
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
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
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
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
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
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
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
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
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
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
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	-- ⁸
8/18-21/14	LFP	107.35	--	9.93	0.00	97.42	INSUFFICIENT WATER								
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

TABLE 1
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COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-109 (cont.)															
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
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
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-110															
8/22/95		108.89	--	9.62	0.00	99.27	400	<750	11,000	--	--	--	--	--	--
11/28/95		108.89	--	8.08	0.00	100.81	540	<750	6,000	--	--	--	--	--	14
3/12/96		108.89	--	8.74	0.00	100.15	340	<750	3,600	--	--	--	--	--	14
6/26/96		108.89	--	9.41	0.00	99.48	274	<750	2,750	--	--	--	--	--	8.14
10/9/96		108.89	--	9.67	0.00	99.22	<250	<750	1,160	--	--	--	--	--	5.96
2/12/97		108.89	--	8.42	0.00	100.47	393	<750	1,830	--	--	--	--	--	11.7
4/22/97		108.89	--	8.18	0.00	100.71	371	<750	1,950	--	--	--	--	--	7.27
8/5/97		108.89	--	9.80	0.00	99.09	282	<750	1,480	--	--	--	--	--	3.16
11/11/97		108.89	--	8.57	0.00	100.32	659	<750	2,330	--	--	--	--	--	22.9
2/11/98		108.89	--	8.54	0.00	100.35	390	<750	2,040	--	--	--	--	--	15.3
5/28/98		108.89	--	8.69	0.00	100.20	324	<750	1,350	--	--	--	--	--	15.5
8/20/98		108.89	--	10.91	0.00	97.98	<250	<750	812	--	--	--	--	--	1.55
11/19/98		108.89	--	9.51	0.00	99.38	258	<750	637	--	--	--	--	--	7.27
3/11/99		108.89	--	8.09	0.00	100.80	486	<500	2,350	--	--	--	--	--	11
5/25/99		108.89	--	9.28	0.00	99.61	<250	--	2,950	--	--	--	--	--	--
8/17/99		108.89	--	9.81	0.00	99.08	<250	<500	749	--	--	--	--	--	2.2
11/19/99		108.89	--	7.77	0.00	101.12	453	--	2,030	--	--	--	--	--	32.4
3/9/00		108.89	--	8.15	0.00	100.74	<250	<500	3,780	--	--	--	--	--	9.59
6/13/00		108.89	--	8.81	0.00	100.08	<250	<500	2,330	--	--	--	--	--	5.45
9/26/00		108.89	--	9.98	0.00	98.91	<250	<500	--	--	--	--	--	--	2.83
12/13/00		108.89	--	9.37	0.00	99.52	<250	<500	1,340	--	--	--	--	--	4.15
2/28/01		108.89	--	9.07	0.00	99.82	<250	<500	1,800	--	--	--	--	--	6.32
5/2/01		108.89	--	8.62	0.00	100.27	<250	<500	905	--	--	--	--	--	4.23
10/30/02		108.89	--	10.28	0.00	98.61	<250	<500	3,880	<2.50	<2.50	22.5	108	--	6.36
1/23/03		108.89	--	8.74	0.00	100.15	<250	<500	1,190	0.902	0.585	9.83	13.9	--	26.5^b
4/18/03		108.89	--	8.40	0.00	100.49	<250	<500	499	1.94	<0.500	0.799	1.65	--	16.8^b
7/11/03		108.89	--	9.99	0.00	98.90	<250	<500	586	1.76	<0.500	1.08	1.11	--	2.11 ^b
10/31/03		108.89	--	9.25	0.00	99.64	<250	<500	184	0.529	<0.500	<0.500	<1.0	--	<1.0 ^b
12/31/03		108.89	--	7.94	0.00	100.95	1,800	410	<99	<10	<2.0	23	25	--	17.3
5/3/04		108.89	--	9.56	0.00	99.33	<250	<500	454	1.8	<0.500	<0.500	<1.0	--	3.86 ^b

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101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-110 (cont)															
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
10/6/04		108.89	--	9.38	0.00	99.51	<79	<99	160	--	--	--	--	--	--
1/27/05		108.89	--	8.65	0.00	100.24	<81	<100	150	--	--	--	--	--	--
4/12/05		108.89	--	8.22	0.00	100.67	370	<100	290	--	--	--	--	--	--
7/18/05		108.89	--	9.50	0.00	99.39	<79	<99	100	--	--	--	--	--	--
7/18/05 (D)		108.89	--	9.50	0.00	99.39	<79	<99	100	--	--	--	--	--	--
10/20/05		108.89	--	9.62	0.00	99.27	82	100	110	--	--	--	--	--	--
9/4/07		108.89	--	10.08	0.00	98.81	<150	220	290	--	--	--	--	--	5
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
8/27-29/08	LFP	108.89	--	9.60	0.00	99.29	120	<100	240	<5	<5	<5	<5	<5	1.5
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
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
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
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
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
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
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
08/11/10	LFP	108.89	--	9.75	0.00	99.14	<29	<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.4
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
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
05/24/11	LFP	108.89	--	8.90	0.00	99.99	<29	180	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.43
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
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
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
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
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
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
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
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
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
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
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
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
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

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-110 (cont)															
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
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
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
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-111															
8/22/95		107.12	--	7.86	0.00	99.26	360	<750	33,000	--	--	--	--	--	--
11/28/95		107.12	--	6.14	0.00	100.98	640	<750	17,000	--	--	--	--	--	10
3/12/96		107.12	--	6.84	0.00	100.28	290	<750	11,000	--	--	--	--	--	7.6
6/26/96		107.12	--	7.55	0.00	99.57	479	<750	7,690	--	--	--	--	--	4.8
10/9/96		107.12	--	7.81	0.00	99.31	256	<750	3,560	--	--	--	--	--	4.7
2/12/97		107.12	--	6.52	0.00	100.60	631	<750	17,200	--	--	--	--	--	8.7
4/22/97		107.12	--	6.31	0.00	100.81	920	<750	13,800	--	--	--	--	--	5.3
8/5/97		107.12	--	7.90	0.00	99.22	444	<750	4,290	--	--	--	--	--	3.5
11/11/97		107.12	--	6.70	0.00	100.42	770	<750	14,300	--	--	--	--	--	12.4
2/11/98		107.12	--	6.65	0.00	100.47	587	<750	13,600	--	--	--	--	--	8.3
5/28/98		107.12	--	6.89	0.00	100.23	526	<750	11,200	--	--	--	--	--	16.6
8/20/98		107.12	--	9.08	0.00	98.04	637	<750	5,950	--	--	--	--	--	1.7
11/19/98		107.12	--	7.60	0.00	99.52	3,890	<750	10,500,000	--	--	--	--	--	2.2
1/22/99		107.12	--	5.36	0.00	101.76	--	--	19,000	--	--	--	--	--	--
3/11/99		107.12	--	6.19	0.00	100.93	611	<500	6,910	--	--	--	--	--	6.3
5/25/99		107.12	--	7.43	0.00	99.69	388	--	8,500	--	--	--	--	--	4.2
8/17/99		107.12	--	7.98	0.00	99.14	547	<500	17,600	--	--	--	--	--	3
11/19/99		107.12	--	5.87	0.00	101.25	547	--	27,900	--	--	--	--	--	14.4
3/9/00		107.12	--	6.27	0.00	100.85	12,400	646	20,800	--	--	--	--	--	11.8
6/13/00		107.12	--	6.91	0.00	100.21	7,670	<500	29,600	--	--	--	--	--	12.8
9/26/00		107.12	--	8.37	0.00	98.75	--	--	--	--	--	--	--	--	--
12/13/00		107.12	--	7.65	0.00	99.47	13,800	<500	23,100	--	--	--	--	--	4.1
2/28/01		107.12	--	7.26	0.00	99.86	3,740	<500	16,400	--	--	--	--	--	5.6
5/2/01		107.12	--	6.89	0.00	100.23	7,530	<500	17,700	--	--	--	--	--	10.7
10/30/02		107.12	8.42	8.70	0.28	98.64	NOT SAMPLED DUE TO THE PRESENCE OF LNAPL					--	--	--	--
1/23/03		107.12	6.95	6.99	0.04	100.16	NOT SAMPLED DUE TO THE PRESENCE OF LNAPL					--	--	--	--
4/18/03		107.12	6.83	6.89	0.06	100.28	NOT SAMPLED DUE TO THE PRESENCE OF LNAPL					--	--	--	--
7/11/03		107.12	8.18	8.25	0.07	98.93	NOT SAMPLED DUE TO THE PRESENCE OF LNAPL					--	--	--	--
10/31/03		107.12	7.45	7.48	0.03	99.66	NOT SAMPLED DUE TO THE PRESENCE OF LNAPL					--	--	--	--
12/31/03		107.12	--	6.40	0.00	100.72	50,000	2,800	300	8.3	6.5	1,100	3,300	--	15.2

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-111 (cont)															
05/03/04		107.12	7.76	7.79	0.03	99.35	NOT SAMPLED DUE TO THE PRESENCE OF LNAPL					--	--	--	--
7/20/04		107.12	8.10	8.16	0.06	99.01	NOT SAMPLED DUE TO THE PRESENCE OF LNAPL					--	--	--	--
10/6/04		107.12	--	7.54	0.00	99.58	240	<100	5,700	--	--	--	--	--	--
1/27/05		107.12	--	6.79	0.00	100.33	310	<98	8,800	--	--	--	--	--	--
1/27/05(D)		107.12	--	6.79	0.00	100.33	310	<98	9,100	--	--	--	--	--	--
4/12/05		107.12	--	6.32	0.00	100.80	820	<100	10,000	--	--	--	--	--	--
4/12/05(D)		107.12	--	6.32	0.00	100.80	850	<110	10,000	--	--	--	--	--	--
7/18/05		107.12	--	7.75	0.00	99.37	460	<96	6,300	--	--	--	--	--	--
10/20/05		107.12	--	7.84	0.00	99.28	--	--	--	--	--	--	--	--	--
9/4/07		107.12	--	8.26	0.00	98.86	1,100	<220	6,800	--	--	--	--	--	2.8
9/4/07		107.12	--	--	0.00	--	<81	<100	<50	--	--	--	--	--	<0.047
5/27-28/08		107.12	--	7.64	0.00	99.48	NOT SAMPLED DUE TO OBSTRUCTION IN WELL @ 7 FEET					--	--	--	
8/27-29/08		107.12	--	7.71	0.00	99.41	NOT SAMPLED DUE TO OBSTRUCTION IN WELL @ 8 FEET					--	--	--	
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
2/16-18/09	LFP	107.12	--	7.36	0.00	99.76	350	74	20,000	4	2	190	110	<1	8.5
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
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
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
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
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
08/11/10	LFP	107.12	--	7.92	0.00	99.20	1,300	<700	9,200	4	<1	220	55	<1	20.2
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
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
05/24/11	LFP	107.12	--	7.03	0.00	100.09	500	130	2,700	<0.5	<0.5	65	15	<0.5	2.8
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
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
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
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
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
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
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
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
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
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
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
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

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-111 (cont)															
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
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
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
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
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-112															
8/22/95		107.58	--	8.42	0.00	99.16	<250	<750	480	--	--	--	--	--	--
11/28/95		107.58	--	6.73	0.00	100.85	<250	<750	150	--	--	--	--	--	5.8
3/12/96		107.58	--	7.43	0.00	100.15	<250	<750	250	--	--	--	--	--	<2.0
6/26/96		107.58	--	8.12	0.00	99.46	<250	<750	63.8	--	--	--	--	--	<2.0
10/9/96		107.58	--	8.36	0.00	99.22	<250	<750	93.1	--	--	--	--	--	2.62
2/12/97		107.58	--	7.11	0.00	100.47	322	<750	1,250	--	--	--	--	--	2.99
4/22/97		107.58	--	6.85	0.00	100.73	<250	<750	323	--	--	--	--	--	<2.0
8/5/97		107.58	--	8.45	0.00	99.13	<250	<750	124	--	--	--	--	--	<2.0
11/11/97		107.58	--	7.26	0.00	100.32	<250	<750	112	--	--	--	--	--	<2.0
2/11/98		107.58	--	7.25	0.00	100.33	<250	<750	658	--	--	--	--	--	<2.0
5/28/98		107.58	--	7.46	0.00	100.12	315	<750	713	--	--	--	--	--	10.4
8/20/98		107.58	--	9.64	0.00	97.94	<250	<750	<50	--	--	--	--	--	<1.0
11/19/98		107.58	--	8.20	0.00	99.38	<250	<750	367	--	--	--	--	--	<1.0
3/11/99		107.58	--	6.79	0.00	100.79	<250	<500	1,370	--	--	--	--	--	1.42
5/25/99		107.58	--	7.97	0.00	99.61	<250	--	<80	--	--	--	--	--	--
8/17/99		107.58	--	8.51	0.00	99.07	<250	<500	106	--	--	--	--	--	<1.6
11/19/99		107.58	--	6.46	0.00	101.12	<250	--	<80	--	--	--	--	--	<1.0
3/9/00		107.58	--	6.85	0.00	100.73	<250	<500	<80	--	--	--	--	--	<1.0
6/13/00		107.58	--	7.48	0.00	100.10	<250	<500	824	--	--	--	--	--	2.14
9/26/00		107.58	--	8.66	0.00	98.92	<250	<500	--	--	--	--	--	--	<1.0
12/13/00		107.58	--	8.07	0.00	99.51	<250	<500	<80	--	--	--	--	--	<1.0
2/28/01		107.58	--	7.77	0.00	99.81	<250	<500	<80	--	--	--	--	--	<1.0
5/2/01		107.58	--	7.31	0.00	100.27	<250	<500	710	--	--	--	--	--	1.44
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
1/23/03		107.58	--	7.39	0.00	100.19	<250	<500	178	<0.500	<0.500	0.730	<1.00	--	<1.0 ⁵
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
7/11/03		107.58	--	8.68	0.00	98.90	--	--	<50.0	<0.500	<0.500	<0.500	<1.00	--	<1.0 ⁵
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
12/30/03		107.58	--	6.62	0.00	100.96	<50	<77	<97	<0.5	<0.5	<0.5	<1.5	--	<1.2

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-112 (cont)															
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
7/20/04		107.58	--	8.69	0.00	98.89	<250	<500	<50.0	<0.500	<0.500	<0.500	<1.00	--	--
10/7/04		107.58	--	8.06	0.00	99.52	<82	<100	<50	--	--	--	--	--	--
7/18/05		107.58	--	8.26	0.00	99.32	<77	<96	<48	--	--	--	--	--	--
10/21/05		107.58	--	8.25	0.00	99.33	<82	<100	48	--	--	--	--	--	--
9/5/07		107.58	--	8.79	0.00	98.79	<79	<99	<50	--	--	--	--	--	0.52
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
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
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
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
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
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
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
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
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
08/12/10	LFP	107.58	--	8.45	0.00	99.13	<29	<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.29
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
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
05/24/11	LFP	107.58	--	7.58	0.00	100.00	<29	270	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.49
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
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
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
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
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
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
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
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
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
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
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
6/12-14/14	LFP	107.58	INACCESSIBLE			--	--	--	--	--	--	--	--	--	--
8/18-21/14	LFP	107.58	--	8.63	0.00	98.95	<29/<29	<68/<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.36
11/19-20/14	LFP	107.58	--	7.71	0.00	99.87	<29/<29	<68/<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.13
2/17-20/15	LFP	107.58	--	7.33	0.00	100.25	<30/<30	<69/<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.083
5/11-15/15	LFP	107.58	--	8.19	0.00	99.39	<28/<28	<66/<66	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.460
8/10-11/15	LFP	107.58	--	8.90	0.00	98.68	<28/<28	<66/<66	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.200

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-113															
8/22/95		108.44	--	9.26	0.00	99.18	320	<750	3,100	--	--	--	--	--	--
11/28/95		108.44	--	7.55	0.00	100.89	<250	<750	180	--	--	--	--	--	<2.0
3/12/96		108.44	--	8.26	0.00	100.18	<250	<750	750	--	--	--	--	--	<2.0
6/26/96		108.44	--	8.95	0.00	99.49	<250	<750	809	--	--	--	--	--	2.43
10/9/96		108.44	--	9.21	0.00	99.23	<250	<750	494	--	--	--	--	--	2.95
2/12/97		108.44	--	7.93	0.00	100.51	<250	<750	1,600	--	--	--	--	--	<2.0
4/22/97		108.44	--	7.71	0.00	100.73	291	<750	748	--	--	--	--	--	<2.0
8/5/97		108.44	--	9.37	0.00	99.07	<250	<750	876	--	--	--	--	--	<2.0
11/11/97		108.44	--	8.04	0.00	100.40	<250	<750	<50	--	--	--	--	--	<2.0
2/11/98		108.44	--	8.02	0.00	100.42	<250	<750	76.10	--	--	--	--	--	<2.0
5/28/98		108.44	--	8.31	0.00	100.13	<250	<750	116	--	--	--	--	--	6.26
8/20/98		108.44	--	10.48	0.00	97.96	<250	<750	235	--	--	--	--	--	<1.0
11/19/98		108.44	--	9.02	0.00	99.42	<250	<750	<50	--	--	--	--	--	<1.0
3/11/99		108.44	--	7.59	0.00	100.85	<250	<750	162	--	--	--	--	--	<1.0
5/25/99		108.44	--	8.83	0.00	99.61	<250	--	321	--	--	--	--	--	--
8/17/99		108.44	--	9.34	0.00	99.10	<250	<500	265	--	--	--	--	--	1.2
11/19/99		108.44	--	7.27	0.00	101.17	<250	--	<80	--	--	--	--	--	<1.0
3/9/00		108.44	--	7.66	0.00	100.78	<250	<500	96.70	--	--	--	--	--	<1.0
6/13/00		108.44	--	8.29	0.00	100.15	<250	<500	154	--	--	--	--	--	<1.0
9/26/00		108.44	--	9.51	0.00	98.93	<250	<500	--	--	--	--	--	--	<1.0
12/13/00		108.44	--	8.91	0.00	99.53	<250	588	<80	--	--	--	--	--	<1.0
2/28/01		108.44	--	8.60	0.00	99.84	<250	<500	<80	--	--	--	--	--	<1.0
5/2/01		108.44	--	8.14	0.00	100.30	<250	<500	<80	--	--	--	--	--	<1.0
10/30/02		108.44	--	9.85	0.00	98.59	<250	<500	<80	<0.500	<0.500	<0.500	<1.0	--	1.55
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
4/18/03		108.44	--	8.09	0.00	100.35	<250	<500	<50	<0.500	<0.500	<0.500	<1.0	--	<1.0 ⁵
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
10/31/03		108.44	--	8.80	0.00	99.64	<250	<500	<50	<0.500	<0.500	<0.500	<1.0	--	<1.0 ⁵
12/31/03		108.44	--	7.44	0.00	101.00	<50	<77	<97	<0.5	<0.5	<0.5	<1.5	--	<1.2
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
7/20/04		108.44	--	9.58	0.00	98.86	<250	<500	<50	<0.500	<0.500	<0.500	<1.0	--	--
10/6/04		108.44	--	8.92	DRY	--	--	--	--	--	--	--	--	--	--
1/27/05		108.44	--	8.15	0.00	--	<84	<110	<48	--	--	--	--	--	--
4/12/05		108.44	--	7.76	0.00	--	<88	<110	<48	--	--	--	--	--	--
7/18/05		108.44	--	9.11	0.00	--	<79	<98	<48	--	--	--	--	--	--

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-113 (cont)															
10/26/05		108.44	--	9.10	0.00	--	<82	<100	<48	--	--	--	--	--	--
9/5/07		108.44	--	9.59	0.00	98.85	<82	<100	<50	--	--	--	--	--	0.32
9/5/07 (D)		108.44	--	9.59	0.00	98.85	<82	<100	<50	--	--	--	--	--	0.32
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
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
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
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
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
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
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
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
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
08/12/10	LFP	108.44	--	9.29	0.00	99.15	<29	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.077
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
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
05/24/11	LFP	108.44	--	8.42	0.00	100.02	<30	330	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.052
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
5/11-15/15	LFP	108.44	--	9.08	0.00	99.36	<29/<29	<67/<67	75.00	<0.5	<0.5	<0.5	<0.5	<0.5	<0.082
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

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead	
MW-114																
8/22/95		106.89	--	7.47	0.00	99.42	<250	<750	<50	--	--	--	--	--	--	
11/28/95		106.89	--	58.30	0.00	48.59	<250	<750	<50	--	--	--	--	--	<2.0	
3/12/96		106.89	--	6.39	0.00	100.50	<250	<750	<50	--	--	--	--	--	<2.0	
6/26/96		106.89	--	7.11	0.00	99.78	<250	<750	<50	--	--	--	--	--	<2.0	
10/9/96		106.89	--	7.42	0.00	99.47	<250	<750	<50	--	--	--	--	--	<2.0	
2/12/97		106.89	--	5.47	0.00	101.42	<250	<750	<50	--	--	--	--	--	<2.0	
4/22/97		106.89	--	14.30	0.00	92.59	<250	<750	<50	--	--	--	--	--	<2.0	
8/5/97		106.89	--	7.65	0.00	99.24	<250	1,410	<50	--	--	--	--	--	<2.0	
11/11/97		106.89	--	6.45	0.00	100.44	<250	<750	<50	--	--	--	--	--	<2.0	
2/11/98		106.89	--	6.23	0.00	100.66	<250	<750	<50	--	--	--	--	--	<2.0	
5/28/98		106.89	--	6.44	0.00	100.45	<250	<750	<50	--	--	--	--	--	5.91	
8/20/98		106.89	--	8.75	0.00	98.14	<250	<750	<50	--	--	--	--	--	<1.0	
11/19/98		106.89	--	7.05	0.00	99.84	<250	<750	<50	--	--	--	--	--	<1.0	
3/11/99		106.89	--	5.90	0.00	100.99	<250	<500	<80	--	--	--	--	--	<1.0	
5/25/99		106.89	--	7.10	0.00	99.79	<250	--	<80	--	--	--	--	--	--	
8/17/99		106.89	--	7.59	0.00	99.30	<250	607	<80	--	--	--	--	--	<1.0	
11/19/99		106.89	--	5.59	0.00	101.30	<250	--	<80	--	--	--	--	--	<1.0	
3/9/00		106.89	--	5.98	0.00	100.91	<250	<500	<80	--	--	--	--	--	<1.0	
6/13/00		106.89	--	6.04	0.00	100.85	<250	<500	<80	--	--	--	--	--	<1.0	
9/26/00		106.89	--	7.81	0.00	99.08	<250	<500	--	--	--	--	--	--	<1.0	
12/13/00		106.89	--	7.06	0.00	99.83	<250	<500	--	--	--	--	--	--	<1.0	
2/28/01		106.89	--	6.79	0.00	100.10	<250	<500	<80	--	--	--	--	--	<1.0	
5/2/01		106.89	--	8.84	0.00	98.05	<250	1,880	<80	--	--	--	--	--	<1.0	
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	
1/23/03		106.89	MONITORED/SAMPLED ANNUALLY					--	--	--	--	--	--	--	--	--
4/18/03		106.89	MONITORED/SAMPLED ANNUALLY					--	--	--	--	--	--	--	--	--
7/11/03		106.89	MONITORED/SAMPLED ANNUALLY					--	--	--	--	--	--	--	--	--
10/31/03		106.89	--	6.61	0.00	100.28	<250	<500	<50.0	<0.500	<0.500	<0.500	<1.0	--	<1.0 ³	
12/30/03		106.89	--	5.81	0.00	101.08	<50	480	3,600	<0.5	<0.5	<0.5	<1.5	--	<1.2	
5/3/04		106.89	MONITORED/SAMPLED ANNUALLY					--	--	--	--	--	--	--	--	--
7/20/04		106.89	MONITORED/SAMPLED ANNUALLY					--	--	--	--	--	--	--	--	--
10/6/04		106.89	--	6.98	0.00	99.91	<76	<95	<50	--	--	--	--	--	--	
10/24/05		106.89	--	7.28	0.00	99.61	<79	<99	<48	--	--	--	--	--	--	
9/5/07		106.89	--	7.87	0.00	99.02	94	810	<50	--	--	--	--	--	0.38	
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	

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-114 (cont)															
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
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
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
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
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
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
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
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
08/11/10	LFP	106.89	--	7.45	0.00	99.44	<29	220	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.15
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
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
05/23/11	LFP	106.89	--	6.55	0.00	100.34	55	380	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.36
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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	39.20

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead	
MW-115																
8/22/95		107.94	--	8.79	0.00	99.15	<250	<750	1,800	--	--	--	--	--	--	
11/28/95		107.94	--	7.05	0.00	100.89	<250	<750	460	--	--	--	--	--	<2.0	
3/12/96		107.94	--	7.76	0.00	100.18	<250	<750	630	--	--	--	--	--	<2.0	
6/26/96		107.94	--	8.45	0.00	99.49	<250	<750	706	--	--	--	--	--	<2.0	
10/9/96		107.94	--	8.71	0.00	99.23	<250	<750	722	--	--	--	--	--	2.54	
2/12/97		107.94	--	7.48	0.00	100.46	<250	<750	58	--	--	--	--	--	<2.0	
4/22/97		107.94	--	7.25	0.00	100.69	<250	<750	<50	--	--	--	--	--	<2.0	
8/5/97		107.94	--	8.77	0.00	99.17	<250	<750	611	--	--	--	--	--	2.0	
11/11/97		107.94	--	7.71	0.00	100.23	<250	<750	57	--	--	--	--	--	<2.0	
2/11/98		107.94	--	7.72	0.00	100.22	<250	<750	89.5	--	--	--	--	--	<2.0	
5/28/98		107.94	--	7.92	0.00	100.02	<250	<750	<50	--	--	--	--	--	8.08	
8/20/98		107.94	--	9.18	0.00	98.76	<250	<750	155	--	--	--	--	--	<1.0	
11/19/98		107.94	--	8.58	0.00	99.36	<250	<750	<50	--	--	--	--	--	<1.0	
3/11/99		107.94	--	7.12	0.00	100.82	<250	<750	<80	--	--	--	--	--	<1.0	
5/25/99		107.94	--	8.33	0.00	99.61	<250	--	<80	--	--	--	--	--	--	
8/17/99		107.94	--	8.87	0.00	99.07	<250	<500	163	--	--	--	--	--	1.4	
11/19/99		107.94	--	6.82	0.00	101.12	<250	--	<80	--	--	--	--	--	<1.0	
3/9/00		107.94	--	7.20	0.00	100.74	<250	<500	103	--	--	--	--	--	<1.0	
6/13/00		107.94	--	7.82	0.00	100.12	--	--	<80	--	--	--	--	--	<1.0	
9/26/00		107.94	--	9.02	0.00	98.92	<250	<500	--	--	--	--	--	--	1.02	
12/13/00		107.94	--	8.43	0.00	99.51	<250	<500	313	--	--	--	--	--	<1.0	
2/28/01		107.94	--	8.13	0.00	99.81	<250	<500	177	--	--	--	--	--	<1.0	
5/2/01		107.94	--	10.37	0.00	97.57	<250	<500	162	--	--	--	--	--	<1.0	
10/30/02		107.94	--	9.33	0.00	98.61	<250	<500	175	<0.500	<0.500	<0.500	<1.0	--	4.36	
1/23/03		107.94	MONITORED/SAMPLED ANNUALLY					--	--	--	--	--	--	--	--	--
4/18/03		107.94	MONITORED/SAMPLED ANNUALLY					--	--	--	--	--	--	--	--	--
7/11/03		107.94	MONITORED/SAMPLED ANNUALLY					--	--	--	--	--	--	--	--	--
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 ³	
12/31/03		107.94	--	6.98	0.00	100.96	<50	<79	<99	<0.5	<0.5	<0.5	<1.5	--	<1.2	
5/3/04		107.94	MONITORED/SAMPLED ANNUALLY					--	--	--	--	--	--	--	--	--
7/20/04		107.94	MONITORED/SAMPLED ANNUALLY					--	--	--	--	--	--	--	--	--
10/6/04		107.94	--	8.43	0.00	99.51	<160	<200	<50	--	--	--	--	--	--	
10/21/05		107.94	--	8.67	0.00	99.27	<81	<100	<48	--	--	--	--	--	--	
10/21/05(D)		107.94	--	8.67	0.00	99.27	<82	<100	<48	--	--	--	--	--	--	
9/5/07		107.94	--	9.11	0.00	98.83	<76	<95	<50	--	--	--	--	--	0.37	
5/27-28/08		107.94	UNABLE TO LOCATE					--	--	--	--	--	--	--	--	--

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COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-115 (cont)															
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
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
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
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
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
10/19/09	LFP	107.94	--	8.70	0.00	99.24	<29	<68	--	--	--	--	--	--	--
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
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
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
08/12/10	LFP	107.94	--	8.81	0.00	99.13	<29	<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.92
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
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
05/24/11	LFP	107.94	--	7.95	0.00	99.99	42	220	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.53
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
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
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
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
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
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
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
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
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
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
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
6/12-14/14	LFP	107.94	INACCESSIBLE			--	--	--	--	--	--	--	--	--	--
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
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
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
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
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

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COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-116															
8/22/95		107.56	--	8.82	0.00	98.74	<250	<750	<50	--	--	--	--	--	--
3/12/96		107.56	--	8.08	0.00	99.48	<250	<750	<50	--	--	--	--	--	<2.0
10/9/96		107.56	--	8.69	0.00	98.87	<250	<750	<50	--	--	--	--	--	<2.0
2/12/97		107.56	--	7.86	0.00	99.70	<250	<750	<50	--	--	--	--	--	<2.0
4/22/97		107.56	--	7.65	0.00	99.91	<250	<750	<50	--	--	--	--	--	<2.0
8/5/97		107.56	--	8.71	0.00	98.85	<250	<750	<50	--	--	--	--	--	<2.0
11/11/97		107.56	--	8.07	0.00	99.49	<250	<750	<50	--	--	--	--	--	<2.0
2/11/98		107.56	--	8.06	0.00	99.50	<250	<750	<50	--	--	--	--	--	<2.0
5/28/98		107.56	--	8.25	0.00	99.31	<250	<750	<50	--	--	--	--	--	4.66
8/20/98		107.56	--	9.05	0.00	98.51	<250	<750	<50	--	--	--	--	--	<1.0
11/19/98		107.56	--	9.16	0.00	98.40	<250	<750	<50	--	--	--	--	--	<1.0
3/11/99		107.56	--	7.64	0.00	99.92	<250	<750	<80	--	--	--	--	--	<1.0
5/25/99		107.56	--	8.40	0.00	99.16	<250	--	<80	--	--	--	--	--	--
8/17/99		107.56	--	8.78	0.00	98.78	<250	<500	<80	--	--	--	--	--	<1.0
11/19/99		107.56	--	7.60	0.00	99.96	<250	--	<80	--	--	--	--	--	<1.0
3/9/00		107.56	--	7.70	0.00	99.86	<250	<500	<80	--	--	--	--	--	<1.0
6/13/00		107.56	--	8.37	0.00	99.19	--	--	<80	--	--	--	--	--	<1.0
9/26/00		107.56	--	8.88	0.00	98.68	<250	<500	--	--	--	--	--	--	<1.0
12/13/00		107.56	--	8.52	0.00	99.04	<250	<500	--	--	--	--	--	--	<1.0
2/28/01		107.56	--	8.25	0.00	99.31	<250	<500	<80	--	--	--	--	--	<1.0
5/2/01		107.56	--	10.84	0.00	96.72	<250	<500	<80	--	--	--	--	--	<1.0
10/30/02		107.56	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
1/23/03		107.56	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
4/18/03		107.56	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
7/11/03		107.56	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
10/31/03		107.56	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
12/30/03		107.56	--	7.54	0.00	100.02	<50	<79	<99	<0.5	<0.5	<0.5	<1.5	--	<1.2
5/3/04		107.56	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
7/20/04		107.56	--	8.92	0.00	98.64	<284	<568	<50	<0.500	<0.500	<0.500	<1.00	--	--
10/7/04		107.56	--	7.54	0.00	100.02	<75	<94	<50	--	--	--	--	--	--
10/20/05		107.56	--	8.73	0.00	98.83	<81	<100	<48	--	--	--	--	--	--
9/6/07		107.56	--	9.00	0.00	98.56	<76	<95	<50	--	--	--	--	--	0.15
5/27-28/08		107.56	INACCESSIBLE			--	--	--	--	--	--	--	--	--	--
8/27-29/08	LFP	107.56	--	8.68	0.00	98.88	89	<100	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
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
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

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-116 (cont)															
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
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
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
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
08/12/10	LFP	107.56	--	8.78	0.00	98.78	<30	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.15
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
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
05/24/11		107.56	UNABLE TO LOCATE				--	--	--	--	--	--	--	--	--
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
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
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
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
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
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
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
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
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
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
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
6/12-14/14	LFP	107.56	INACCESSIBLE				--	--	--	--	--	--	--	--	--
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
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
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
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
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-117															
8/22/95		106.57	--	7.45	0.00	99.12	<250	<750	<50	--	--	--	--	--	--
11/28/95		106.57	--	5.45	0.00	101.12	<250	<750	<50	--	--	--	--	--	<2.0
3/12/96		106.57	--	6.32	0.00	100.25	<250	<750	<50	--	--	--	--	--	<2.0
6/26/96		106.57	--	7.18	0.00	99.39	<250	<750	<50	--	--	--	--	--	<2.0
10/9/96		106.57	--	7.42	0.00	99.15	<250	<750	<50	--	--	--	--	--	7.1
2/12/97		106.57	--	5.93	0.00	100.64	<250	<750	<50	--	--	--	--	--	<2.0
4/22/97		106.57	--	5.78	0.00	100.79	<250	<750	<50	--	--	--	--	--	<2.0
8/5/97		106.57	--	7.58	0.00	98.99	<250	<750	<50	--	--	--	--	--	<2.0
11/11/97		106.57	--	6.21	0.00	100.36	<250	<750	<50	--	--	--	--	--	<2.0
2/11/98		106.57	--	6.21	0.00	100.36	<250	<750	<50	--	--	--	--	--	<2.0

TABLE 1
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COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-117 (cont)															
5/28/98		106.57	--	6.44	0.00	100.13	<250	<750	<50	--	--	--	--	--	2.68
8/20/98		106.57	--	7.90	0.00	98.67	<250	<750	<50	--	--	--	--	--	<1.0
11/19/98		106.57	--	7.18	0.00	99.39	<250	<750	<50	--	--	--	--	--	<1.0
3/11/99		106.57	--	5.51	0.00	101.06	<250	<500	<80	--	--	--	--	--	<1.0
5/25/99		106.57	--	7.00	0.00	99.57	<250	--	<80	--	--	--	--	--	--
8/17/99		106.57	--	7.56	0.00	99.01	<250	<500	<80	--	--	--	--	--	<1.0
11/19/99		106.57	--	5.11	0.00	101.46	<250	--	<80	--	--	--	--	--	<1.0
3/9/00		106.57	--	5.65	0.00	100.92	<250	<500	<80	--	--	--	--	--	<1.0
6/13/00		106.57	--	6.25	0.00	100.32	<250	<500	<80	--	--	--	--	--	<1.0
9/26/00		106.57	--	7.70	0.00	98.87	<250	<500	--	--	--	--	--	--	<1.0
12/13/00		106.57	--	7.11	0.00	99.46	<250	<500	--	--	--	--	--	--	<1.0
2/28/01		106.57	--	6.78	0.00	99.79	<250	<500	<80	--	--	--	--	--	<1.0
5/2/01		106.57	--	8.90	0.00	97.67	<250	<500	<80	--	--	--	--	--	<1.0
10/30/02		106.57	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
1/23/03		106.57	MONITORED/SAMPLED ANNUALLY												
4/18/03		106.57	MONITORED/SAMPLED ANNUALLY												
7/11/03		106.57	MONITORED/SAMPLED ANNUALLY												
10/31/03		106.57	UNABLE TO LOCATE - POSSIBLY PAVED OVER												
12/30/03		106.57	--	5.46	0.00	101.11	<50	<80	<100	<0.5	<0.5	<0.5	<1.5	--	<1.2
5/3/04		106.57	MONITORED/SAMPLED ANNUALLY												
7/20/04		106.57	MONITORED/SAMPLED ANNUALLY												
10/6/04		106.57	--	7.07	0.00	99.50	<79	<98	<50	--	--	--	--	--	--
10/21/05		106.57	--	7.33	0.00	99.24	<81	<100	<48	--	--	--	--	--	--
9/5/07		106.57	--	7.92	0.00	98.65	<82	<100	<50	--	--	--	--	--	0.22
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
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
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
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
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
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
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
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
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
08/12/10	LFP	106.57	--	7.68	0.00	98.89	<29	210	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.052
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
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

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-117 (cont)															
05/24/11	LFP	106.57	--	6.77	0.00	99.80	<30	150	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.052
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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-118															
8/22/95		106.72	--	7.87	0.00	98.85	470	<750	<50	--	--	--	--	--	--
11/28/95		106.72	--	5.76	0.00	100.96	<250	<750	<50	--	--	--	--	--	<2.0
3/12/96		106.72	--	6.67	0.00	100.05	<250	<750	<50	--	--	--	--	--	<2.0
6/26/96		106.72	--	7.51	0.00	99.21	<250	<750	<50	--	--	--	--	--	<2.0
10/9/96		106.72	--	7.78	0.00	98.94	<250	<750	50.1	--	--	--	--	--	<2.0
2/12/97		106.72	--	6.35	0.00	100.37	<250	<750	<50	--	--	--	--	--	<2.0
4/22/97		106.72	--	5.98	0.00	100.74	<250	<750	<50	--	--	--	--	--	<2.0
8/5/97		106.72	--	7.85	0.00	98.87	<250	<750	<50	--	--	--	--	--	<2.0
11/11/97		106.72	--	6.52	0.00	100.20	<250	<750	<50	--	--	--	--	--	<2.0
2/11/98		106.72	--	6.56	0.00	100.16	<250	<750	<50	--	--	--	--	--	<2.0
5/28/98		106.72	--	6.85	0.00	99.87	<250	<750	<50	--	--	--	--	--	2.84
8/20/98		106.72	--	7.26	0.00	99.46	<250	<750	<50	--	--	--	--	--	<1.0
11/19/98		106.72	--	7.70	0.00	99.02	<250	<750	<50	--	--	--	--	--	<1.0
3/11/99		106.72	--	5.81	0.00	100.91	<250	<750	<80	--	--	--	--	--	<1.0
5/25/99		106.72	--	7.39	0.00	99.33	<250	--	<80	--	--	--	--	--	--
8/17/99		106.72	--	7.95	0.00	98.77	<250	<500	<80	--	--	--	--	--	<1.0
11/19/99		106.72	--	5.53	0.00	101.19	<250	--	<80	--	--	--	--	--	<1.0

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-118 (cont)															
3/9/00		106.72	--	5.99	0.00	100.73	<250	<500	<80	--	--	--	--	--	<1.0
6/13/00		106.72	--	7.08	0.00	99.64	<250	<500	<80	--	--	--	--	--	<1.0
9/26/00		106.72	--	8.07	0.00	98.65	<250	<500	--	--	--	--	--	--	<1.0
12/13/00		106.72	--	7.53	0.00	99.19	<250	<500	--	--	--	--	--	--	<1.0
2/28/01		106.72	--	7.17	0.00	99.55	<250	<500	<80	--	--	--	--	--	<1.0
5/2/01		106.72	--	6.81	0.00	99.91	<250	<500	<80	--	--	--	--	--	<1.0
10/30/02		106.72	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
1/23/03		106.72	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
4/18/03		106.72	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
7/11/03		106.72	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
10/31/03		106.72	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
12/30/03		106.72	--	5.71	0.00	101.01	<50	<400	<500	<0.5	<0.5	<0.5	<1.5	--	<1.2
5/3/04		106.72	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
7/20/04		106.72	--	8.14	0.00	98.58	<250	<500	<50	<0.500	<0.500	<0.500	<1.00	--	--
10/7/04		106.72	--	7.55	0.00	99.17	<76	<96	<50	--	--	--	--	--	--
10/7/04(D)		106.72	--	7.55	0.00	99.17	<80	160	<50	--	--	--	--	--	--
10/20/05		106.72	--	7.78	0.00	98.94	<83	<100	<48	--	--	--	--	--	--
9/5/07		106.72	--	8.20	0.00	98.52	980	710	<50	--	--	--	--	--	0.13
5/27-28/08		106.72	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
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
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
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
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
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
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
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
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
08/12/10	LFP	106.72	--	7.90	0.00	98.82	<30	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.052
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
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
05/24/11		106.72	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
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
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
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
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
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

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-118 (cont)															
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
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
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
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
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
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
6/12-14/14	LFP	106.72	INACCESSIBLE			--	--	--	--	--	--	--	--	--	--
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
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
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
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
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-119															
8/22/95		108.35	--	9.22	0.00	99.13	<250	<750	<50	--	--	--	--	--	--
11/28/95		108.35	--	7.54	0.00	100.81	<250	<750	100	--	--	--	--	--	<2.0
3/12/96		108.35	--	8.21	0.00	100.14	<250	<750	240	--	--	--	--	--	2.2
6/26/96		108.35	--	8.91	0.00	99.44	<250	<750	174	--	--	--	--	--	<2.0
10/9/96		108.35	--	9.14	0.00	99.21	<250	<750	78	--	--	--	--	--	2.16
2/12/97		108.35	--	7.84	0.00	100.51	<250	<750	<50	--	--	--	--	--	<2.0
4/22/97		108.35	--	7.67	0.00	100.68	<250	<750	<50	--	--	--	--	--	<2.0
8/5/97		108.35	--	9.15	0.00	99.20	<250	<750	53.6	--	--	--	--	--	<2.0
11/11/97		108.35	--	8.02	0.00	100.33	264	<750	<50	--	--	--	--	--	<2.0
2/11/98		108.35	--	8.02	0.00	100.33	<250	<750	<50	--	--	--	--	--	<2.0
5/28/98		108.35	--	8.20	0.00	100.15	<250	<750	102	--	--	--	--	--	3.33
8/20/98		108.35	--	10.40	0.00	97.95	<250	<750	<50	--	--	--	--	--	<1.0
11/19/98		108.35	--	8.98	0.00	99.37	<250	<750	78.5	--	--	--	--	--	1.82
3/11/99		108.35	--	7.61	0.00	100.74	<250	<750	<80	--	--	--	--	--	<1.0
5/25/99		108.35	--	8.77	0.00	99.58	<250	--	<80	--	--	--	--	--	--
8/17/99		108.35	--	9.29	0.00	99.06	<250	<500	<80	--	--	--	--	--	<1.0
11/19/99		108.35	--	7.25	0.00	101.10	<250	--	<80	--	--	--	--	--	<1.0
3/9/00		108.35	--	7.63	0.00	100.72	<250	<500	<80	--	--	--	--	--	<1.0
6/13/00		108.35	--	8.28	0.00	100.07	<250	<500	413	--	--	--	--	--	2.64
9/26/00		108.35	--	9.44	0.00	98.91	<250	<500	--	--	--	--	--	--	<1.0
12/13/00		108.35	--	8.86	0.00	99.49	<250	<500	--	--	--	--	--	--	1.79
2/28/01		108.35	--	8.56	0.00	99.79	<250	<500	227	--	--	--	--	--	2.64

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COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-119 (cont)															
5/2/01		108.35	--	8.10	0.00	100.25	<250	<500	104	--	--	--	--	--	1.56
10/30/02		108.35	--	9.76	0.00	98.59	<250	<500	<80	<0.500	<0.500	<0.500	<1.00	--	4.2
1/23/03		108.35	MONITORED/SAMPLED ANNUALLY												
4/18/03		108.35	MONITORED/SAMPLED ANNUALLY												
7/11/03		108.35	MONITORED/SAMPLED ANNUALLY												
10/31/03		108.35	--	8.62	0.00	99.73	<250	<500	<50	<0.500	<0.500	<0.500	<1.00	--	1.31 ⁵
12/30/03		108.35	--	7.40	0.00	100.95	<50	<77	<96	<0.5	<0.5	<0.5	<1.5	--	<1.2
5/3/04		108.35	MONITORED/SAMPLED ANNUALLY												
7/20/04		108.35	MONITORED/SAMPLED ANNUALLY												
10/7/04		108.35	--	8.85	0.00	99.50	<79	<98	<50	--	--	--	--	--	--
10/20/05		108.35	--	9.08	0.00	99.27	<80	<100	<48	--	--	--	--	--	--
9/5/07		108.35	--	9.53	0.00	98.82	<800	<1,000	<50	--	--	--	--	--	0.57
5/27-28/08		108.35	INACCESSIBLE												
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
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
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
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
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
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
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
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
08/12/10	LFP	108.35	--	9.22	0.00	99.13	<30	70	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.36
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
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
05/24/11	LFP	108.35	--	8.37	0.00	99.98	<30	210	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.49
8/23-24/11	LFP	108.35	UNABLE TO LOCATE												
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
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
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
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
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
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
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
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
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

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101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-119 (cont)															
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
6/12-14/14	LFP	108.35	INACCESSIBLE			--	--	--	--	--	--	--	--	--	--
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
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
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
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
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-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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
B-1															
2/14/91		107.74	--	--	0.00	--	<250	--	5,100	--	--	--	--	--	--
2/14/92		107.74	--	6.90	0.00	100.84	--	--	--	--	--	--	--	--	--
2/18/92		107.74	--	6.72	0.00	101.02	--	--	--	--	--	--	--	--	--
3/13/92		107.74	--	6.93	0.00	100.81	--	--	<50	--	--	--	--	--	--
4/21/92		107.74	--	6.66	0.00	101.08	--	--	--	--	--	--	--	--	--
8/22/95		107.74	--	8.03	0.00	99.71	<250	<750	<50	--	--	--	--	--	--
11/28/95		107.74	--	6.13	0.00	101.61	<250	<750	<50	--	--	--	--	--	<2
3/11/96		107.74	--	6.99	0.00	100.75	<250	<750	<50	--	--	--	--	--	7.5
6/26/96		107.74	--	7.73	0.00	100.01	<250	<750	<50	--	--	--	--	--	<2
10/9/96		107.74	--	8.05	0.00	99.69	<250	<750	<50	--	--	--	--	--	<2

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead	
B-1 (cont)																
2/12/97		107.74	--	6.46	0.00	101.28	<250	<750	<50	--	--	--	--	--	<2	
4/22/97		107.74	--	6.25	0.00	101.49	<250	<750	<50	--	--	--	--	--	<2	
8/5/97		107.74	--	8.20	0.00	99.54	<250	<750	<50	--	--	--	--	--	<2	
11/11/97		107.74	--	6.84	0.00	100.90	300	<750	<50	--	--	--	--	--	<2	
2/11/98		107.74	--	6.70	0.00	101.04	<250	<750	<50	--	--	--	--	--	<2	
5/28/98		107.74	--	6.85	0.00	100.89	<250	<750	<50	--	--	--	--	--	<1	
8/20/98		107.74	--	9.42	0.00	98.32	<250	<750	<50	--	--	--	--	--	<1	
11/19/98		107.74	--	7.43	0.00	100.31	<250	<750	<50	--	--	--	--	--	<1	
3/11/99		107.74	--	6.34	0.00	101.40	<250	<750	<80	--	--	--	--	--	<1	
5/25/99		107.74	--	7.60	0.00	100.14	<1,450	--	<80	--	--	--	--	--	--	
8/17/99		107.74	--	8.28	0.00	99.46	<250	<500	<80	--	--	--	--	--	<1	
11/19/99		107.74	--	5.90	0.00	101.84	<250	--	<80	--	--	--	--	--	<1	
3/9/00		107.74	--	6.38	0.00	101.36	<250	<500	<80	--	--	--	--	--	<1	
6/12/00		107.74	--	6.26	0.00	101.48	<250	<500	<80	--	--	--	--	--	<1	
9/26/00		107.74	--	8.51	0.00	99.23	<250	<500	--	--	--	--	--	--	<1	
12/13/00		107.74	--	7.69	0.00	100.05	<250	<500	--	--	--	--	--	--	<1	
2/28/01		107.74	--	7.37	0.00	100.37	<250	<500	<80	--	--	--	--	--	<1	
5/2/01		107.74	--	6.69	0.00	101.05	<250	<500	109	--	--	--	--	--	<1	
10/30/02		107.74	UNABLE TO LOCATE - PAVED OVER					--	--	--	--	--	--	--	--	--
1/23/03		107.74	MONITORED/SAMPLED ANNUALLY					--	--	--	--	--	--	--	--	--
4/18/03		107.74	MONITORED/SAMPLED ANNUALLY					--	--	--	--	--	--	--	--	--
7/11/03		107.74	MONITORED/SAMPLED ANNUALLY					--	--	--	--	--	--	--	--	--
10/31/03		107.74	UNABLE TO LOCATE - PAVED OVER					--	--	--	--	--	--	--	--	--
12/30/03		107.74	--	6.11	0.00	101.63	<50	<78	<98	<0.5	<0.5	<0.5	<1.5	--	<1.2	
5/3/04		107.74	MONITORED/SAMPLED ANNUALLY					--	--	--	--	--	--	--	--	--
7/20/04		107.74	MONITORED/SAMPLED ANNUALLY					--	--	--	--	--	--	--	--	--
10/6/04		107.74	--	8.87	0.00	98.87	81	100	<50	--	--	--	--	--	--	
10/24/05		107.74	--	7.96	0.00	99.78	<81	<100	<48	--	--	--	--	--	--	
9/5/07		107.74	--	8.60	0.00	99.14	<80	<100	<50	--	--	--	--	--	0.13	
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	
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	
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	
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	

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
B-1 (cont)															
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
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
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
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
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
08/11/10	LFP	107.74	--	8.16	0.00	99.58	<30	83	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.052
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
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
05/24/11	LFP	107.74	--	7.10	0.00	100.64	<29	<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.052
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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-2															
2/14/91		108.99	--	--	0.00	--	<250	--	180	--	--	--	--	--	--
2/14/92		108.99	--	8.08	0.00	100.91	--	--	--	--	--	--	--	--	--
2/18/92		108.99	--	7.97	0.00	101.02	--	--	--	--	--	--	--	--	--
3/9/92		108.99	--	7.88	0.00	101.11	--	--	--	--	--	--	--	--	--
3/13/92		108.99	--	8.12	0.00	100.87	--	--	--	--	--	--	--	--	--
4/21/92		108.99	--	7.82	0.00	101.17	--	--	--	--	--	--	--	--	--
8/22/95		108.99	--	9.30	0.00	99.69	<250	<750	<50	--	--	--	--	--	--
11/27/95		108.99	--	7.33	0.00	101.66	<250	<750	<50	--	--	--	--	--	<2
3/12/96		108.99	--	8.20	0.00	100.79	<250	<750	<50	--	--	--	--	--	<2

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GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead	
B-2 (cont)																
6/27/96		108.99	--	8.95	0.00	100.04	<250	<750	<50	--	--	--	--	--	<2	
10/10/96		108.99	--	9.28	0.00	99.71	<250	<750	<50	--	--	--	--	--	<2	
2/12/97		108.99	--	7.73	0.00	101.26	<250	<750	<50	--	--	--	--	--	<2	
4/22/97		108.99	--	7.41	0.00	101.58	<250	<750	<50	--	--	--	--	--	2	
8/5/97		108.99	--	9.40	0.00	99.59	<250	<750	<50	--	--	--	--	--	<2	
11/11/97		108.99	--	8.00	0.00	100.99	<250	<750	<50	--	--	--	--	--	<2	
2/11/98		108.99	--	7.90	0.00	101.09	<250	<750	<50	--	--	--	--	--	<2	
5/28/98		108.99	--	8.03	0.00	100.96	<250	<750	<50	--	--	--	--	--	<1	
8/20/98		108.99	--	10.64	0.00	98.35	<250	<750	<50	--	--	--	--	--	<1	
11/19/98		108.99	--	8.67	0.00	100.32	<250	<750	<50	--	--	--	--	--	<1	
3/11/99		108.99	--	7.56	0.00	101.43	<250	<500	<80	--	--	--	--	--	<1	
5/25/99		108.99	--	8.82	0.00	100.17	<250	<1,600	<80	--	--	--	--	--	--	
8/17/99		108.99	--	9.51	0.00	99.48	<250	<500	<80	--	--	--	--	--	<1	
11/19/99		108.99	--	7.08	0.00	101.91	<250	<500	<80	--	--	--	--	--	<1	
3/9/00		108.99	--	7.59	0.00	101.40	<250	<500	<80	--	--	--	--	--	<1	
6/12/00		108.99	--	8.00	0.00	100.99	<250	<500	<80	--	--	--	--	--	<1	
9/26/00		108.99	--	9.74	0.00	99.25	<250	<500	--	--	--	--	--	--	<1	
12/13/00		108.99	--	8.91	0.00	100.08	<250	<500	--	--	--	--	--	--	<1	
2/28/01		108.99	--	8.59	0.00	100.40	<250	<500	<80	--	--	--	--	--	<1	
5/2/01		108.99	--	7.89	0.00	101.10	<250	<500	<80	--	--	--	--	--	<1	
10/30/02		108.99	UNABLE TO LOCATE - PAVED OVER					--	--	--	--	--	--	--	--	--
1/23/03		108.99	MONITORED/SAMPLED ANNUALLY					--	--	--	--	--	--	--	--	--
4/18/03		108.99	MONITORED/SAMPLED ANNUALLY					--	--	--	--	--	--	--	--	--
7/11/03		108.99	MONITORED/SAMPLED ANNUALLY					--	--	--	--	--	--	--	--	--
10/31/03		108.99	UNABLE TO LOCATE - PAVED OVER					--	--	--	--	--	--	--	--	--
12/30/03		108.99	--	7.36	0.00	101.63	<50	--	--	<0.5	<0.5	<0.5	<1.5	--	<1.2	
5/3/04		108.99	MONITORED/SAMPLED ANNUALLY					--	--	--	--	--	--	--	--	--
7/20/04		108.99	MONITORED/SAMPLED ANNUALLY					--	--	--	--	--	--	--	--	--
10/6/04		108.99	--	7.65	0.00	101.34	<79	<99	<50	--	--	--	--	--	--	
7/18/05		108.99	--	9.20	0.00	99.79	<77	<96	<48	--	--	--	--	--	--	
10/21/05		108.99	--	9.17	0.00	99.82	<82	<100	<48	--	--	--	--	--	--	
9/5/07		108.99	--	9.83	0.00	99.16	<81	<100	<50	--	--	--	--	--	0.1	
5/27-28/08		108.99	UNABLE TO LOCATE					--	--	--	--	--	--	--	--	--
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	
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	
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	
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	
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	

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GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
B-2 (cont)															
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
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
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
08/11/10	LFP	108.99	--	9.38	0.00	99.61	<29	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.052
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
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
05/24/11	LFP	108.99	--	8.33	0.00	100.66	<30	140	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.052
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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	<0.082
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-3															
2/14/91		108.46	--	--	0.00	--	<250	--	98,000	--	--	--	--	--	--
2/14/92		108.46	--	7.82	0.00	100.64	--	--	--	--	--	--	--	--	--
2/18/92		108.46	--	7.82	0.00	100.64	--	--	--	--	--	--	--	--	--
3/9/92		108.46	--	7.55	0.00	100.91	--	--	--	--	--	--	--	--	--
3/13/92		108.46	--	7.82	0.00	100.64	31,000	--	28,000	--	--	--	--	--	--
4/21/92		108.46	--	7.50	0.00	100.96	--	--	--	--	--	--	--	--	--
3/3/94		108.46	--	--	0.00	--	3,940	<750	43,000	--	--	--	--	--	--
8/23/95		108.46	--	8.93	0.00	99.53	2,600	<750	46,000	--	--	--	--	--	--
11/28/95		108.46	--	7.12	0.00	101.34	1,500	<750	63,000	--	--	--	--	--	--
3/12/96		108.46	--	7.85	0.00	100.61	900	<750	42,000	--	--	--	--	--	--
6/27/96		108.46	--	8.67	0.00	99.79	1,510	1,080	37,900	--	--	--	--	--	--
10/10/96		108.46	--	8.97	0.00	99.49	729	<750	16,200	--	--	--	--	--	--

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
B-3 (cont)															
2/12/97		108.46	--	7.55	0.00	100.91	4,060	986	35,200	--	--	--	--	--	--
4/22/97		108.46	--	7.30	0.00	101.16	3,980	767	31,900	--	--	--	--	--	--
8/2/97		108.46	--	9.05	0.00	99.41	3,370	1,270	20,400	--	--	--	--	--	--
11/11/97		108.46	--	6.76	0.00	101.70	3,230	777	28,400	--	--	--	--	--	--
2/11/98		108.46	--	7.54	0.00	100.92	3,240	1,460	28,400	--	--	--	--	--	--
5/28/98		108.46	--	7.76	0.00	100.70	3,360	<750	34,600	--	--	--	--	29.5	--
8/20/98		108.46	--	10.30	0.00	98.16	2,150	<750	32,900	--	--	--	--	<1.89	--
11/19/98		108.46	--	8.39	0.00	100.07	6,650	<3,750	23,800	--	--	--	--	--	--
3/11/99		108.46	--	7.15	0.00	101.31	2,920	<5,000	17,000	--	--	--	--	--	--
5/25/99		108.46	--	8.50	0.00	99.96	1,850	--	30,500	--	--	--	--	--	--
8/17/99		108.46	--	9.15	0.00	99.31	2,570	711	29,600	--	--	--	--	--	--
11/19/99		108.46	--	6.76	0.00	101.70	7,880	--	30,700	--	--	--	--	--	--
3/9/00		108.46	--	7.24	0.00	101.22	<250	<500	10,400	--	--	--	--	--	--
6/13/00		108.46	--	8.15	0.00	100.31	<250	<500	23,000	--	--	--	--	--	--
9/26/00		108.46	--	9.35	0.00	99.11	<250	<500	--	--	--	--	--	--	--
12/13/00		108.46	--	8.58	0.00	99.88	<250	<500	21,600	--	--	--	--	--	--
2/28/01		108.46	--	8.28	0.00	100.18	<250	<500	25,700	--	--	--	--	--	--
5/2/01		108.46	--	7.79	0.00	100.67	<250	<500	17,200	--	--	--	--	--	--
10/30/02		108.46	UNABLE TO LOCATE - PAVED OVER				--	--	--	--	--	--	--	--	--
1/23/03		108.46	UNABLE TO LOCATE - PAVED OVER				--	--	--	--	--	--	--	--	--
4/18/03		108.46	UNABLE TO LOCATE - PAVED OVER				--	--	--	--	--	--	--	--	--
7/11/03		108.46	UNABLE TO LOCATE - PAVED OVER				--	--	--	--	--	--	--	--	--
10/31/03		108.46	UNABLE TO LOCATE - PAVED OVER				--	--	--	--	--	--	--	--	--
12/30/03		108.46	--	7.04	0.00	101.42	14,000	3,800	<980	<5.0	1.9	130	61	--	17.3
5/3/04		108.46	UNABLE TO LOCATE				--	--	--	--	--	--	--	--	--
7/20/04		108.46	--	9.31	0.00	99.15	1,220	<500	13,200	12.5	<10.0	874	204	--	24.6⁵
10/6/04		108.46	--	8.68	0.00	99.78	1,200	<500	13,000	--	--	--	--	--	--
1/27/05		108.46	--	7.70	0.00	100.76	1,100	<190	6,200	--	--	--	--	--	--
4/12/05		108.46	--	7.21	0.00	101.25	1,200	<100	5,300	--	--	--	--	--	--
7/18/05		108.46	--	8.83	0.00	99.63	1,200	<97	6,400	--	--	--	--	--	--
10/21/05		108.46	--	8.85	0.00	99.61	2,400	<510	8,900	--	--	--	--	--	--
9/4/07		108.46	--	9.41	0.00	99.05	1,500	<200	10,000	--	--	--	--	--	--
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
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
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
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

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
B-3 (cont)															
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
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
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
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
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
08/11/10	LFP	108.46	--	9.00	0.00	99.46	2,700	<340	5,900	7	1.0	270	20	<0.5	19.3
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
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
05/24/11	LFP	108.46	--	7.96	0.00	100.50	1,200	300	1,800	1	<0.5	76	3	<0.5	14
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
5/11-15/15	LFP	108.46	--	8.16	0.00	100.30	690/120	<66/<66	1,400	<0.5	<0.5	33	0.9	<0.5	0.0081
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-4															
2/14/91		107.68	--	--	0.00	--	<250	--	33,000	--	--	--	--	--	--
2/14/92		107.68	--	6.82	0.00	100.86	--	--	--	--	--	--	--	--	--
2/18/92		107.68	--	5.94	0.00	101.74	--	--	--	--	--	--	--	--	--
3/9/92		107.68	--	6.62	0.00	101.06	--	--	--	--	--	--	--	--	--
3/13/92		107.68	--	6.88	0.00	100.80	--	--	21,000	--	--	--	--	--	--
4/21/92		107.68	--	6.57	0.00	101.11	--	--	--	--	--	--	--	--	--
3/3/94		107.68	--	--	0.00	--	1,040	1,250	15,800	--	--	--	--	--	--
8/22/95		107.68	--	7.92	0.00	99.76	840	820	22,000	--	--	--	--	--	--
11/28/95		107.68	--	6.11	0.00	101.57	1,900	990	22,000	--	--	--	--	--	3.1

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
B-4 (cont)															
3/12/96		107.68	--	6.85	0.00	100.83	3,200	2,500	11,000	--	--	--	--	--	4.7
6/26/96		107.68	--	7.58	0.00	100.10	757	<750	16,100	--	--	--	--	--	2.83
10/9/96		107.68	--	7.90	0.00	99.78	543	<750	10,200	--	--	--	--	--	4.13
2/12/97		107.68	--	6.01	0.00	101.67	4,710	4,830	12,200	--	--	--	--	--	2.82
4/22/97		107.68	--	10.10	0.00	97.58	5,840	1,191	15,500	--	--	--	--	--	4.18
8/5/97		107.68	--	8.37	0.00	99.31	2,560	3,160	15,800	--	--	--	--	--	6.26
11/11/97		107.68	--	7.67	0.00	100.01	2,080	1,040	31,100	--	--	--	--	--	4.75
2/11/98		107.68	--	6.45	0.00	101.23	1,340	1,630	3,750	--	--	--	--	--	<2.0
5/28/98		107.68	--	7.25	0.00	100.43	3,180	1,250	2,510	--	--	--	--	--	4.69
8/20/98		107.68	--	9.12	0.00	98.56	1,460	1,240	7,240	--	--	--	--	--	1.17
11/19/98		107.68	--	7.22	0.00	100.46	2,470	3,750	1,880	--	--	--	--	--	<1.0
3/11/99		107.68	--	5.41	0.00	102.27	1,130	585	11,900	--	--	--	--	--	3.54
5/25/99		107.68	--	7.45	0.00	100.23	<1,450	--	5,380	--	--	--	--	--	--
8/17/99		107.68	--	8.06	0.00	99.62	670	868	2,700	--	--	--	--	--	2.3
11/19/99		107.68	--	5.75	0.00	101.93	1,700	--	11,400	--	--	--	--	--	17.5
3/9/00		107.68	--	6.34	0.00	101.34	<1,250	2,830	105,000	--	--	--	--	--	10.9
6/13/00		107.68	--	6.80	0.00	100.88	<250	943	8,810	--	--	--	--	--	6.92
9/26/00		107.68	--	8.31	0.00	99.37	<250	0.565	--	--	--	--	--	--	5
12/13/00		107.68	--	7.54	0.00	100.14	1,250	<500	--	--	--	--	--	--	5.98
2/28/01		107.68	--	7.24	0.00	100.44	<250	<500	12,100	--	--	--	--	--	5.34
5/2/01		107.68	--	6.59	0.00	101.09	15,700	757	12,300	--	--	--	--	--	5.75
10/30/02		107.68	UNABLE TO LOCATE - PAVED OVER												
1/23/03		107.68	UNABLE TO LOCATE - PAVED OVER												
4/18/03		107.68	UNABLE TO LOCATE - PAVED OVER												
7/11/03		107.68	UNABLE TO LOCATE - PAVED OVER												
10/31/03		107.68	UNABLE TO LOCATE - PAVED OVER												
12/30/03		107.68	--	6.07	0.00	101.61	17,000	2,000	1,700	<10	<5.0	310	370	--	7.5
5/3/04		107.68	UNABLE TO LOCATE - PAVED OVER												
7/20/04		107.68	--	8.23	0.00	99.45	<250	<500	4,660	15.1	1.3	42.3	10.1	--	--
10/6/04		107.68	--	7.45	0.00	100.23	390	180	2,300	--	--	--	--	--	--
1/27/05		107.68	--	6.72	0.00	100.96	200	<195	2,800	--	--	--	--	--	--
4/12/05		107.68	--	6.62	0.00	101.06	340	<100	2,600	--	--	--	--	--	--
7/18/05		107.68	--	6.62	0.00	101.06	560	<1,100	1,600	--	--	--	--	--	--
10/21/05		107.68	--	7.81	0.00	99.87	190	260	1,800	--	--	--	--	--	--
9/4/07		107.68	--	8.40	0.00	99.28	310	<100	3,200	--	--	--	--	--	1.8
9/4/07 (D)		107.68	--	8.40	0.00	99.28	340	140	3,300	--	--	--	--	--	1.7

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COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
B-4 (cont)															
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
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
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
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
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
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
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
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
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
08/11/10	LFP	107.68	--	8.00	0.00	99.68	600	2,000	170	<0.5	<0.5	1	<0.5	<0.5	0.26
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
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
05/24/11	LFP	107.68	--	7.22	0.00	100.46	300	680	840	<0.5	<0.5	0.8	<0.5	<0.5	1.2
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
5/11-15/15	LFP	107.68	--	7.91	0.00	99.77	210/130	<66/<66	940	<0.5	<0.5	1	<0.5	<0.5	0.0016
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

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-101															
2/14/92		99.51	--	6.94	--	92.57	33,000	--	45,000	--	--	--	--	--	--
2/18/92		99.51	--	6.88	--	92.63	--	--	--	--	--	--	--	--	--
3/9/92		99.51	--	6.76	--	92.75	--	--	--	--	--	--	--	--	--
3/13/92		99.51	--	7.02	--	92.49	--	--	--	--	--	--	--	--	--
4/21/92		99.51	--	7.73	--	91.78	--	--	--	--	--	--	--	--	--
3/3/94		99.51	--	--	--	--	1,730	<750	73,000	--	--	--	--	--	--
8/22/95		99.51	--	7.90	--	91.61	1,300	<750	12,000	--	--	--	--	--	--
11/28/95		99.51	--	6.12	--	93.39	1,400	<750	49,000	--	--	--	--	--	24
3/12/96		99.51	--	6.86	--	92.65	760	<750	43,000	--	--	--	--	--	9.3
6/26/96		99.51	--	7.59	--	91.92	656	<750	22,000	--	--	--	--	--	8.22
10/9/96		99.51	--	7.85	--	91.66	309	<750	5,800	--	--	--	--	--	4.24
2/12/97		99.51	--	6.55	--	92.96	1,090	<750	33,900	--	--	--	--	--	7.04
4/22/97		99.51	--	6.31	--	93.20	1,870	977	21,500	--	--	--	--	--	7.41
11/11/97		99.51	--	6.76	--	92.75	952	<750	23,400	--	--	--	--	--	11.3
2/11/98		99.51	--	6.78	--	92.73	793	<750	28,400	--	--	--	--	--	6.51
5/28/98		99.51	--	6.91	--	92.60	798	<750	11,900	--	--	--	--	--	4.71
8/20/98		99.51	--	8.30	--	91.21	414	<750	4,400	--	--	--	--	--	1.6
11/19/98		99.51	--	7.69	--	91.82	714	<750	5,820	--	--	--	--	--	1.7
3/11/99		99.51	--	6.17	--	93.34	1,200	<500	38,500	--	--	--	--	--	6.82
5/25/99		99.51	--	7.47	--	92.04	1,450	--	18,000	--	--	--	--	--	--
8/17/99		99.51	--	7.99	--	91.52	810	750	2,940	--	--	--	--	--	2.9
11/19/99		99.51	--	5.84	--	93.67	1,010	--	16,300	--	--	--	--	--	15.4
3/9/00		99.51	--	6.25	--	93.26	<250	<500	15,800	--	--	--	--	--	13
6/13/00		99.51	--	6.98	--	92.53	<250	<500	4,870	--	--	--	--	--	4.3
9/26/00		99.51	--	8.15	--	91.36	--	<250	<500	--	--	--	--	--	1.88
12/13/00		99.51	--	7.65	--	91.86	988	442	<500	--	--	--	--	--	1.13
2/28/01		99.51	--	7.25	--	92.26	<250	<500	2,710	--	--	--	--	--	2.45
5/2/01		99.51	--	9.55	--	89.96	<250	<500	2,280	--	--	--	--	--	2.6
10/30/02		99.54	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
1/23/03		99.54	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
4/18/03		99.54	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
7/11/03		99.54	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
10/31/03		99.54	UNABLE TO LOCATE - POSSIBLY PAVED OVER			--	--	--	--	--	--	--	--	--	--
12/30/03		99.54	--	6.04	0.00	93.50	13,000	890	<96	<5.0	0.6	260	290	--	27.9
5/3/04		99.54	UNABLE TO LOCATE - POSSIBLY PAVED OVER			--	--	--	--	--	--	--	--	--	--

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COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-101 (cont)															
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 ⁵
10/6/04		99.51	--	7.54	0.00	91.97	<81	<100	<260	--	--	--	--	--	--
1/27/05		99.51	--	6.78	0.00	92.73	190	<100	2,900	--	--	--	--	--	--
4/12/05		99.51	--	6.32	0.00	93.19	160	<100	1,700	--	--	--	--	--	--
7/18/05		99.51	--	7.78	0.00	91.73	93	<99	240	--	--	--	--	--	--
10/21/05		99.51	--	7.75	0.00	91.76	110	<100	470	--	--	--	--	--	--
9/5/07		99.51	--	8.22	0.00	91.29	110	140	200	--	--	--	--	--	1.2
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
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
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
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
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
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
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
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
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
08/12/10	LFP	99.51	--	7.96	0.00	91.55	52	<68	370	<0.5	<0.5	<0.5	<0.5	<0.5	0.24
MONITORING WELL DECOMMISSIONED/SAMPLING DISCONTINUED															
MW-102															
2/14/92		--	--	6.94	0.00	--	--	--	--	--	--	--	--	--	--
2/18/92		--	--	6.88	0.00	--	--	--	--	--	--	--	--	--	--
3/9/92		--	--	6.76	0.00	--	--	--	--	--	--	--	--	--	--
3/13/92		--	--	7.02	0.00	--	--	--	150	--	--	--	--	--	--
4/21/92		--	--	7.72	0.00	--	--	--	--	--	--	--	--	--	--
NOT PART OF MONITORING/SAMPLING PROGRAM															
MW-104															
2/14/92		100.45	--	8.86	0.00	91.59	--	--	--	--	--	--	--	--	--
02/18/92		100.45	--	8.84	0.00	91.61	--	--	--	--	--	--	--	--	--
3/9/92		100.45	--	8.73	0.00	91.72	--	--	--	--	--	--	--	--	--
3/13/92		100.45	--	8.84	0.00	91.61	--	--	<50	--	--	--	--	--	--
4/21/92		100.45	--	8.72	0.00	91.73	--	--	--	--	--	--	--	--	--
8/22/95		100.45	--	9.30	0.00	91.15	<250	<750	<50	--	--	--	--	--	--
11/27/95		100.45	--	8.39	0.00	92.06	--	--	--	--	--	--	--	--	--
3/12/96		100.45	--	8.78	0.00	91.67	--	--	--	--	--	--	--	--	--
6/27/96		100.45	--	9.00	0.00	91.45	--	--	--	--	--	--	--	--	--
10/10/96		100.45	--	9.18	0.00	91.27	--	--	--	--	--	--	--	--	--

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101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-104 (cont)															
2/12/97		100.45	--	8.65	0.00	91.80	<250	<750	<50	--	--	--	--	--	<2.0
4/22/97		100.45	--	8.50	0.00	91.95	<250	<750	<50	--	--	--	--	--	<2.0
8/5/97		100.45	--	9.20	0.00	91.25	<250	<750	<50	--	--	--	--	--	<2.0
11/11/97		100.45	--	8.81	0.00	91.64	<250	<750	<50	--	--	--	--	--	<2.0
2/11/98		100.45	--	8.83	0.00	91.62	<250	<750	<50	--	--	--	--	--	<2.0
5/28/98		100.45	--	8.97	0.00	91.48	<250	<750	<50	--	--	--	--	--	9.54
8/20/98		100.45	--	9.51	0.00	90.94	<250	<750	<50	--	--	--	--	--	<1.0
11/19/98		100.45	--	9.82	0.00	90.63	<250	<750	<50	--	--	--	--	--	<1.0
3/11/99		100.45	--	8.48	0.00	91.97	<250	<500	<80	--	--	--	--	--	<1.0
5/25/99		100.45	--	8.96	0.00	91.49	<250	--	<80	--	--	--	--	--	--
8/17/99		100.45	--	9.24	0.00	91.21	<250	<500	<80	--	--	--	--	--	<1.0
11/19/99		100.45	--	8.40	0.00	92.05	<250	--	<80	--	--	--	--	--	1.0
3/9/00		100.45	--	8.49	0.00	91.96	<250	<50	<80	--	--	--	--	--	<1.0
6/13/00		100.45	--	8.89	0.00	91.56	<250	<500	<80	--	--	--	--	--	<1.0
9/26/00		100.45	--	9.32	0.00	91.13	<250	<500	--	--	--	--	--	--	<1.0
12/13/00		100.45	--	9.09	0.00	91.36	<250	<500	--	--	--	--	--	--	<1.0
2/28/01		100.45	--	8.89	0.00	91.56	<250	<500	<80	--	--	--	--	--	<1.0
5/2/01		100.45	--	8.79	0.00	91.66	<250	<500	103	--	--	--	--	--	<1.0
10/30/02		100.44	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
1/23/03		100.44	MONITORED/SAMPLED ANNUALLY			--	--	--	--	--	--	--	--	--	--
4/18/03		100.44	MONITORED/SAMPLED ANNUALLY			--	--	--	--	--	--	--	--	--	--
7/11/03		100.44	MONITORED/SAMPLED ANNUALLY			--	--	--	--	--	--	--	--	--	--
10/31/03		100.44	--	9.15	0.00	91.29	<250	<500	<50	<0.500	<0.500	<0.500	<1.00	--	<1.0 ³
12/30/03		100.44	--	8.39	0.00	92.05	<50	<77	<96	<0.5	<0.5	<0.5	<1.5	--	<1.2
5/3/04		100.44	MONITORED/SAMPLED ANNUALLY			--	--	--	--	--	--	--	--	--	--
7/20/04		100.44	MONITORED/SAMPLED ANNUALLY			--	--	--	--	--	--	--	--	--	--
10/7/04		100.45	--	9.09	0.00	91.36	<83	<100	<50	--	--	--	--	--	--
10/20/05		100.45	--	9.19	0.00	91.26	<82	<100	<48	--	--	--	--	--	--
9/6/07		100.45	--	9.42	0.00	91.03	<79	<98	<50	--	--	--	--	--	0.087
5/27-28/08		100.45	INACCESSIBLE			--	--	--	--	--	--	--	--	--	--
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
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
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
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

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101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-104 (cont)															
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
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
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
MONITORING WELL DECOMMISSIONED/SAMPLING DISCONTINUED															
MW-105															
2/14/92		96.14	--	3.36	0.00	92.78	--	--	--	--	--	--	--	--	--
2/18/92		96.14	--	3.34	0.00	92.80	--	--	--	--	--	--	--	--	--
3/9/92		96.14	--	3.25	0.00	92.89	--	--	--	--	--	--	--	--	--
3/13/92		96.14	--	3.60	0.00	92.54	--	--	<50	--	--	--	--	--	--
4/21/92		96.14	--	3.40	0.00	92.74	--	--	--	--	--	--	--	--	--
8/22/95		96.14	--	5.08	0.00	91.06	<250	900	<50	--	--	--	--	--	--
11/28/95		96.14	--	2.53	0.00	93.61	--	--	--	--	--	--	--	--	--
3/12/96		96.14	--	3.37	0.00	92.77	--	--	--	--	--	--	--	--	--
6/26/96		96.14	--	4.74	0.00	91.40	--	--	--	--	--	--	--	--	--
10/9/96		96.14	--	4.93	0.00	91.21	--	--	--	--	--	--	--	--	--
2/12/97		96.14	--	3.19	0.00	92.95	<250	<750	<50	--	--	--	--	--	2
4/22/97		96.14	--	3.08	0.00	93.06	<250	<750	<50	--	--	--	--	--	2
8/5/97		96.14	--	4.85	0.00	91.29	<250	<750	<50	--	--	--	--	--	2
11/11/97		96.14	--	3.11	0.00	93.03	<250	<750	<50	--	--	--	--	--	2
2/11/98		96.14	--	3.24	0.00	92.90	<250	<750	<50	--	--	--	--	--	2
5/28/98		96.14	--	3.91	0.00	92.23	<250	<750	<50	--	--	--	--	--	6.62
8/20/98		96.14	--	5.28	0.00	90.86	<250	<750	<50	--	--	--	--	--	<1.00
11/19/98		96.14	--	5.37	0.00	90.77	<250	<750	<50	--	--	--	--	--	<1.00
3/11/99		96.14	--	2.43	0.00	93.71	<250	<500	<80	--	--	--	--	--	<1.00
5/25/99		96.14	--	4.29	0.00	91.85	<250	--	<80	--	--	--	--	--	--
8/17/99		96.14	--	5.06	0.00	91.08	<250	<500	<80	--	--	--	--	--	<1.00
11/19/99		96.14	--	3.08	0.00	93.06	<250	--	<80	--	--	--	--	--	<1.00
3/9/00		96.14	--	2.75	0.00	93.39	<250	<500	<80	--	--	--	--	--	<1.00
6/13/00		96.14	--	4.45	0.00	91.69	<250	<500	<80	--	--	--	--	--	<1.00
9/26/00		96.14	--	5.20	0.00	90.94	<250	<500	--	--	--	--	--	--	<1.00
12/13/00		96.14	--	4.67	0.00	91.47	<250	<500	--	--	--	--	--	--	1.37
2/28/01		96.14	--	3.92	0.00	92.22	<250	<500	<80	--	--	--	--	--	<1.00
5/2/01		96.14	--	3.53	0.00	92.61	<250	<750	87	--	--	--	--	--	<1.00
10/30/02		96.15	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
1/23/03		96.15	MONITORED/SAMPLED ANNUALLY			--	--	--	--	--	--	--	--	--	--

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-105 (cont)															
4/18/03		96.15	MONITORED/SAMPLED ANNUALLY												
7/11/03		96.15	MONITORED/SAMPLED ANNUALLY												
10/31/03		96.15	UNABLE TO LOCATE												
12/31/03		96.15	--	2.45	0.00	93.70	<50	<400	<500	<0.5	<0.5	<0.5	<1.5	--	<1.2
5/3/04		96.15	MONITORED/SAMPLED ANNUALLY												
7/20/04		96.15	MONITORED/SAMPLED ANNUALLY												
10/7/04		96.14	--	4.71	0.00	91.43	<160	<200	<50	--	--	--	--	--	--
10/20/05		96.14	--	5.16	0.00	90.98	<82	<100	<48	--	--	--	--	--	--
9/6/07		96.14	--	5.34	0.00	90.80	<100	<81	<50	--	--	--	--	--	0.47
5/27-28/08		96.14	UNABLE TO LOCATE												
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
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
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
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
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
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
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
MONITORING WELL DECOMMISSIONED/SAMPLING DISCONTINUED															
MW-106															
2/14/92		99.71	--	8.18	0.00	91.53	--	--	--	--	--	--	--	--	--
2/18/92		99.71	--	8.20	0.00	91.51	--	--	--	--	--	--	--	--	--
3/9/92		99.71	--	8.04	0.00	91.67	--	--	--	--	--	--	--	--	--
3/13/92		99.71	--	8.18	0.00	91.53	--	--	<50	--	--	--	--	--	--
4/21/92		99.71	--	8.02	0.00	91.69	--	--	--	--	--	--	--	--	--
8/22/95		99.71	--	8.79	0.00	90.92	<250	<750	<50	--	--	--	--	--	--
11/28/95		99.71	--	7.63	0.00	92.08	--	--	--	--	--	--	--	--	--
3/12/96		99.71	--	8.04	0.00	91.67	<250	<750	<50	--	--	--	--	--	<2.0
6/26/96		99.71	--	8.61	0.00	91.10	<250	<750	<50	--	--	--	--	--	<2.0
10/9/96		99.71	--	8.65	0.00	91.06	<250	<750	<50	--	--	--	--	--	2.16
2/12/97		99.71	--	7.95	0.00	91.76	<250	<750	<50	--	--	--	--	--	<2.0
4/22/97		99.71	--	7.73	0.00	91.98	<250	<750	<50	--	--	--	--	--	<2.0
8/5/97		99.71	--	8.68	0.00	91.03	<250	<750	<50	--	--	--	--	--	<2.0
11/11/97		99.71	--	8.07	0.00	91.64	<250	<750	<50	--	--	--	--	--	<2.0
2/11/98		99.71	--	8.12	0.00	91.59	<250	<750	<50	--	--	--	--	--	<2.0
5/28/98		99.71	--	8.35	0.00	91.36	<250	<750	<50	--	--	--	--	--	4.53
8/20/98		99.71	--	8.96	0.00	90.75	<250	<750	<50	--	--	--	--	--	<1.0

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead	
MW-106 (cont)																
11/19/98		99.71	--	9.37	0.00	90.34	<250	<750	<50	--	--	--	--	--	<1.0	
3/11/99		99.71	--	7.70	0.00	92.01	<250	<50	<80	--	--	--	--	--	1.1	
5/25/99		99.71	--	8.32	0.00	91.39	<250	--	<80	--	--	--	--	--	--	
8/17/99		99.71	--	8.70	0.00	91.01	<250	<500	<80	--	--	--	--	--	<1.0	
11/19/99		99.71	--	7.88	0.00	91.83	<250	--	<80	--	--	--	--	--	<1.0	
3/9/00		99.71	--	7.74	0.00	91.97	<250	<500	<80	--	--	--	--	--	<1.0	
6/13/00		99.71	--	8.39	0.00	91.32	<250	<500	<80	--	--	--	--	--	<1.0	
9/26/00		99.71	--	8.79	0.00	90.92	<250	<500	--	--	--	--	--	--	<1.0	
12/13/00		99.71	--	8.51	0.00	91.20	<250	<500	--	--	--	--	--	--	<1.0	
2/28/01		99.71	--	8.18	0.00	91.53	<250	<500	<80	--	--	--	--	--	<2.0	
5/2/01		99.71	--	8.17	0.00	91.54	<250	<500	88	--	--	--	--	--	<1.0	
10/30/02		99.73	--	8.98	0.00	90.75	<250	<500	<80	<0.500	<0.500	<0.500	<1.00	--	<1.0	
1/23/03		99.73	MONITORED/SAMPLED ANNUALLY						--	--	--	--	--	--	--	--
4/18/03		99.73	MONITORED/SAMPLED ANNUALLY						--	--	--	--	--	--	--	--
7/11/03		99.73	MONITORED/SAMPLED ANNUALLY						--	--	--	--	--	--	--	--
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	
12/31/03		99.73	--	7.54	0.00	92.19	<50	<78	<98	<0.5	<0.5	<0.5	<1.5	--	<1.2	
5/3/04		99.73	MONITORED/SAMPLED ANNUALLY						--	--	--	--	--	--	--	--
7/20/04		99.73	MONITORED/SAMPLED ANNUALLY						--	--	--	--	--	--	--	--
10/7/04		99.71	--	8.50	0.00	91.21	<78	<97	<50	--	--	--	--	--	--	
10/20/05		99.71	--	8.70	0.00	91.01	<82	<100	<48	--	--	--	--	--	--	
9/6/07		99.71	--	8.88	0.00	90.83	<80	<100	<50	--	--	--	--	--	0.13	
5/27-28/08		99.71	INACCESSIBLE						--	--	--	--	--	--	--	--
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	
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	
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	
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	
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	
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	
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	
MONITORING WELL DECOMMISSIONED/SAMPLING DISCONTINUED																

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-107															
2/14/92		100.00	--	8.50	0.00	91.50	--	--	--	--	--	--	--	--	--
2/18/92		100.00	--	8.50	0.00	91.50	--	--	--	--	--	--	--	--	--
3/9/92		100.00	--	8.36	0.00	91.64	--	--	--	--	--	--	--	--	--
3/13/92		100.00	--	8.52	0.00	91.48	--	--	<50	--	--	--	--	--	--
4/21/92		100.00	--	8.36	0.00	91.64	--	--	--	--	--	--	--	--	--
8/22/95		100.00	--	9.06	0.00	90.94	<250	<750	<50	--	--	--	--	--	--
11/28/95		100.00	--	8.00	0.00	92.00	--	--	--	--	--	--	--	--	--
3/12/96		100.00	--	8.36	0.00	91.64	--	--	--	--	--	--	--	--	--
6/26/96		100.00	--	8.89	0.00	91.11	--	--	--	--	--	--	--	--	--
10/9/96		100.00	--	8.94	0.00	91.06	--	--	--	--	--	--	--	--	--
2/12/97		100.00	--	8.25	0.00	91.75	<250	<750	<50	--	--	--	--	--	<2.0
4/22/97		100.00	--	8.05	0.00	91.95	<250	<750	<50	--	--	--	--	--	<2.0
8/5/97		100.00	--	8.95	0.00	91.05	<250	<809	<50	--	--	--	--	--	<2.0
11/11/97		100.00	--	8.37	0.00	91.63	<250	750	<50	--	--	--	--	--	<2.0
2/11/98		100.00	--	8.44	0.00	91.56	351	750	<50	--	--	--	--	--	<2.0
5/28/98		100.00	--	8.73	0.00	91.27	<250	754	<50	--	--	--	--	--	--
8/20/98		100.00	--	9.24	0.00	90.76	<250	750	<50	--	--	--	--	--	1
11/19/98		100.00	--	9.65	0.00	90.35	<250	750	<50	--	--	--	--	--	<1.0
3/11/99		100.00	--	8.08	0.00	91.92	539	750	<80	--	--	--	--	--	<1.0
5/25/99		100.00	--	8.82	0.00	91.18	<250	<500	<80	--	--	--	--	--	--
8/17/99		100.00	--	8.10	0.00	91.90	<250	--	<80	--	--	--	--	--	<1.0
11/19/99		100.00	--	8.21	0.00	91.79	<250	<500	<80	--	--	--	--	--	<1.0
3/9/00		100.00	--	8.08	0.00	91.92	<250	--	<80	--	--	--	--	--	<1.0
6/13/00		100.00	--	8.88	0.00	91.12	<250	<500	<80	--	--	--	--	--	<1.0
9/26/00		100.00	--	9.07	0.00	90.93	<250	<500	--	--	--	--	--	--	<1.0
12/13/00		100.00	--	8.78	0.00	91.22	<250	<500	--	--	--	--	--	--	<1.0
2/28/01		100.00	--	8.63	0.00	91.37	<250	<500	<80	--	--	--	--	--	<1.0
5/2/01		100.00	--	8.63	0.00	91.37	<250	<500	88	--	--	--	--	--	<1.0
10/30/02		100.00	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
1/23/03		100.00	MONITORED/SAMPLED ANNUALLY			--	--	--	--	--	--	--	--	--	--
4/18/03		100.00	MONITORED/SAMPLED ANNUALLY			--	--	--	--	--	--	--	--	--	--
7/11/03		100.00	MONITORED/SAMPLED ANNUALLY			--	--	--	--	--	--	--	--	--	--
10/31/03		100.00	UNABLE TO LOCATE			--	--	--	--	--	--	--	--	--	--
12/31/03		100.00	--	7.92	0.00	92.08	<50	85	150	<0.5	<0.5	<0.5	<1.5	--	<1.2
5/3/04		100.00	MONITORED/SAMPLED ANNUALLY			--	--	--	--	--	--	--	--	--	--

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead	
MW-107 (cont)																
7/20/04		100.00	MONITORED/SAMPLED ANNUALLY					--	--	--	--	--	--	--	--	--
10/7/04		100.00	--	8.78	0.00	91.22	<80	<100	<50	--	--	--	--	--	--	
10/20/05		100.00	--	8.97	0.00	91.03	<81	<100	<48	--	--	--	--	--	--	
9/6/07		100.00	--	9.18	0.00	90.82	<78	<98	<50	--	--	--	--	--	0.07	
5/27-28/08		100.00	INACCESSIBLE				--	--	--	--	--	--	--	--	--	
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	
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	
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	
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	
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	
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	
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	
MONITORING WELL DECOMMISSIONED/SAMPLING DISCONTINUED																
MW-108																
2/14/92		99.79	--	8.10	0.00	91.69	--	--	--	--	--	--	--	--	--	
2/18/92		99.79	--	8.62	0.00	91.17	--	--	--	--	--	--	--	--	--	
3/9/92		99.79	--	8.49	0.00	91.30	--	--	--	--	--	--	--	--	--	
3/13/92		99.79	--	8.63	0.00	91.16	--	--	<50	--	--	--	--	--	--	
4/21/92		99.79	--	8.47	0.00	91.32	--	--	--	--	--	--	--	--	--	
8/22/95		99.79	--	9.04	0.00	90.75	<250	<750	<50	--	--	--	--	--	--	
11/28/95		99.79	--	7.98	0.00	91.81	--	--	--	--	--	--	--	--	--	
3/12/96		99.79	--	8.50	0.00	91.29	--	--	--	--	--	--	--	--	--	
6/26/96		99.79	--	8.86	0.00	90.93	--	--	--	--	--	--	--	--	--	
10/9/96		99.79	--	8.91	0.00	90.88	--	--	--	--	--	--	--	--	--	
2/12/97		99.79	--	8.41	0.00	91.38	<250	<750	<50	--	--	--	--	--	<2.0	
4/22/97		99.79	--	8.08	0.00	91.71	<250	<750	<50	--	--	--	--	--	<2.0	
8/5/97		99.79	--	8.94	0.00	90.85	<250	825	<50	--	--	--	--	--	<2.0	
11/11/97		99.79	--	8.53	0.00	91.26	<250	<750	<50	--	--	--	--	--	<2.0	
2/11/98		99.79	--	8.59	0.00	91.20	<250	873	<50	--	--	--	--	--	<2.0	
5/28/98		99.79	--	8.72	0.00	91.07	<250	<750	<50	--	--	--	--	--	4.27	
8/20/98		99.79	--	9.20	0.00	90.59	<250	<750	<50	--	--	--	--	--	<1.0	
11/19/98		99.79	--	9.60	0.00	90.19	<250	<750	<50	--	--	--	--	--	<1.0	
3/11/99		99.79	--	8.16	0.00	91.63	<250	<500	<80	--	--	--	--	--	<1.0	
5/25/99		99.79	--	8.69	0.00	91.10	<250	--	<80	--	--	--	--	--	--	
8/17/99		99.79	--	8.96	0.00	90.83	<250	<500	<80	--	--	--	--	--	<1.0	

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
MW-108 (cont)															
11/19/99		99.79	--	8.08	0.00	91.71	<250	--	<80	--	--	--	--	--	<1.0
3/9/00		99.79	--	8.16	0.00	91.63	<250	<500	<80	--	--	--	--	--	<1.0
6/13/00		99.79	--	8.69	0.00	91.10	<250	<500	<80	--	--	--	--	--	<1.0
9/26/00		99.79	--	9.04	0.00	90.75	<250	<500	--	--	--	--	--	--	<1.0
12/13/00		99.79	--	8.81	0.00	90.98	<250	<500	--	--	--	--	--	--	<1.0
2/28/01		99.79	--	8.60	0.00	91.19	<250	<500	<80	--	--	--	--	--	<1.0
5/2/01		99.79	--	8.53	0.00	91.26	<250	<500	<80	--	--	--	--	--	<1.0
10/30/02		99.79	--	9.24	0.00	90.55	<250	<500	<80	<0.500	<0.500	<0.500	<1.0	--	<1.0
1/23/03		99.79	MONITORED/SAMPLED ANNUALLY												
4/18/03		99.79	MONITORED/SAMPLED ANNUALLY												
7/11/03		99.79	MONITORED/SAMPLED ANNUALLY												
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
12/31/03		99.79	--	7.95	0.00	91.84	<50	<77	<97	<0.5	<0.5	<0.5	<1.5	--	<1.2
5/3/04		99.79	MONITORED/SAMPLED ANNUALLY												
7/20/04		99.79	MONITORED/SAMPLED ANNUALLY												
10/7/04		99.79	--	8.80	0.00	90.99	<80	<100	<50	--	--	--	--	--	--
10/20/05		99.79	--	8.89	0.00	90.90	<81	<100	<48	--	--	--	--	--	--
10/20/05(D)		99.79	--	8.89	0.00	90.90	<81	<100	<48	--	--	--	--	--	--
9/6/07		99.79	--	9.15	0.00	90.64	<80	<100	<50	--	--	--	--	--	0.12
5/27-28/08		99.79	INACCESSIBLE												
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
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
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
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
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
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
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
MONITORING WELL DECOMMISSIONED/SAMPLING DISCONTINUED															

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
TRIP BLANK															
10/30/02		--	--	--	--	--	--	--	--	--	--	--	--	--	--
1/23/03		--	--	--	--	--	--	--	<80	<0.500	<0.500	<0.500	<1.0	--	--
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	--	--
10/31/03		--	--	--	--	--	--	--	<50	<0.500	<0.500	<0.500	<1.00	--	--
12/31/03		--	--	--	--	--	<50	--	--	<0.5	<0.5	<0.5	<1.5	--	--
5/3/04 ⁶		--	--	--	--	--	--	--	--	--	--	--	--	--	--
7/20/04		--	--	--	--	--	--	--	<50	<0.500	<0.500	<0.500	<1.00	--	--
5/27-28/08		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
8/27-29/08		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
11/17-19/08		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
2/16-18/09		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
5/4-6/09		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
8/19-21/09		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
11/18-20/09		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
2/8-10/10		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
5/12-13/10		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
08/11/10		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
11/3-4/10		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
2/3-4/11		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
05/23/11		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
8/23-24/11		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
11/7-9/11		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
2/6-8/12		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
5/2-4/12		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
8/1-3/12		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
11/26-28/12		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
02/4-6/13		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
05/6-8/13		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC ² (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE ³ (ft.)	TPH-DRO ⁴	TPH-HRO ⁴	TPH-GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	D. Lead
QA (cont)															
9/9-13/13		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
11/18-22/13		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
2/4-11/14		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
6/12-14/14		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
8/18-21/14		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
11/19-20/14		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
2/17-20/14		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
5/11-15/15		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
8/10-11/15		--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
Standard Laboratory Reporting Limits:							--	--	50	0.5	0.5	0.5	1.0	0.5	0.5
MTCA Method A Cleanup Levels:							500	500	800/1,000	5	1,000	700	1,000	20	15
Current Method: ⁷							NWTPH-Dx Extended			NWTPH-Gx and USEPA 8260B					USEPA 6020

Abbreviations:

BTEX = Benzene, Toluene, Ethylbenzene, and Xylenes
(D) = Duplicate
D. Lead = Dissolved Lead
DTP = Depth to Product
DTW = Depth to Water
(ft.) = Feet
GWE = Groundwater Elevation
LFP = Low Flow Purge

LNAPL = Light Non-Aqueous Phase Liquid
LNAPLT = LNAPL Thickness
(mg/L) = Milligrams per liter
MTBE = Methyl Tertiary Butyl Ether
MTCA = Model Toxics Control Act
QA = Quality Assurance/Trip Blank
T. Lead = Total Lead
TOC = Top of Casing

TPH = Total Petroleum Hydrocarbons
TPH-DRO = TPH as Diesel-Range Organics
TPH-GRO = TPH as Gasoline-Range Organics
TPH-HRO = TPH as Heavy Oil-Range Organics
USEPA = United States Environmental Protection Agency
µg/L = Micrograms per liter
-- = Not Measured/Not Analyzed

Notes:

- Analytical results in bold font indicate concentrations exceed MTCA Method A cleanup levels.
- TOC elevations have been surveyed in feet relative to the 1988 North American Vertical Datum.
- When LNAPL is present, GWE has been corrected using the following formula: $GWE = [(TOC - DTW) + (LNAPLT \times 0.80)]$.
- TPH-DRO and TPH-HRO results with multiple values are reported as follows: with silica gel cleanup/without silica gel cleanup. TPH-DRO and TPH-HRO analyses for monitoring completed between October 2004 and May 2013 was performed with silica gel cleanup. The use of silica gel cleanup for samples collected prior to October 2004 has not been confirmed.
- Laboratory report indicates this sample was laboratory filtered.
- Laboratory indicates they did not receive a QA sample. No results were provided.
- Laboratory analytical methods for historical data may not be consistent with list of current analytical methods. When necessary, consult original laboratory reports to verify methods used.
- Insufficient groundwater to collect sample.

TABLE 2
NATURAL ATTENUATION MONITORING PARAMETERS¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington

	Upgradient Wells		Crossgradient Wells		Source Area Wells			Near Downgradient Wells		Sentinel Wells	
	B-1	B-2	MW-117	MW-119	B-3	B-4	MW-111	MW-112	MW-113	MW-103	MW-116
Laboratory Results (µg/L)											
Benzene											
9/9-13/13	<0.5	<0.5	<0.5	<0.5	0.6	<0.5	1	<0.5	<0.5	<0.5	<0.5
11/18-22/13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.9	<0.5	<0.5	<0.5	<0.5
2/4-11/14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	<0.5
6/12-14/14	<0.5	<0.5	<0.5	UTA	<0.5	<0.5	2	UTA	<0.5	UTA	UTA
8/18-21/14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	<0.5
11/19-20/14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2	<0.5	<0.5	<0.5	<0.5
2/17-20/15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	<0.5
5/11-15/15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	<0.5
8/10-11/15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	3	<0.5	<0.5	<0.5	<0.5
TPH-GRO											
9/9-13/13	<50	<50	<50	<50	1,700	1,200	5,500	<50	<50	<50	<50
11/18-22/13	<50	<50	<50	<50	190	1,200	3,300	68	<50	<50	<50
2/4-11/14	<50	<50	<50	<50	480	1,800	4,800	<50	<50	<50	<50
6/12-14/14	<50	<50	<50	UTA	260	1,200	4,200	UTA	<50	UTA	UTA
8/18-21/14	<50	<50	<50	<50	1,000	1,800	4,700	<50	<50	62	68
11/19-20/14	<50	<50	<50	<50	900	1,300	6,000	<50	<50	<50	<50
2/17-20/15	<50	<50	<50	<50	650	550	3,600	<50	<50	<50	<50
5/11-15/15	<50	<50	<50	<50	1,400	940	4,400	<50	75	<50	<50
8/10-11/15	<50	<50	<50	<50	660	600	4,500	<50	<50	<50	<50

TABLE 2
NATURAL ATTENUATION MONITORING PARAMETERS¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington

	Upgradient Wells		Crossgradient Wells		Source Area Wells			Near Downgradient Wells		Sentinel Wells	
	B-1	B-2	MW-117	MW-119	B-3	B-4	MW-111	MW-112	MW-113	MW-103	MW-116
TPH-DRO without silica gel cleanup											
9/9-13/13	<29	<29	<29	<28	2,700	250	3,600	32	<28	<29	<28
11/18-22/13	<29	<29	<29	<29	1,600	150	1,000	33	<29	<29	<29
2/4-11/14	<29	<28	<29	<29	730	170	1,000	<29	<29	<29	<29
6/12-14/14	<28	<29	<28	UTA	780	260	1,200	UTA	<29	UTA	UTA
8/18-21/14	<28	<29	<29	<28	1,000	300	1,400	<29	<30	<29	38
11/19-20/14	<29	<29	<29	<29	1,400	270	1,800	<29	<29	<29	<28
2/17-20/15	<28	<29	<29	<28	490	290	730	<30	<30	<29	<30
5/11-15/15	<28	<28	<29	<28	690	210	1,000	<28	<29	<28	<29
8/10-11/15	<29	<29	<28	<28	2,000	500	2,700	<28	<28	<28	<28
TPH-DRO with silica gel cleanup											
9/9-13/13	<29	<29	<29	<28	160	130	330	<29	<28	<29	<28
11/18-22/13	<29	<29	<29	<29	42	120	370	<29	<29	<29	<29
2/4-11/14	<29	<28	<29	<29	36	140	410	<29	<29	<29	<29
6/12-14/14	<28	<29	<28	UTA	100	120	380	UTA	<29	UTA	UTA
8/18-21/14	<28	<29	<29	<28	180	140	310	<29	<30	<29	<29
11/19-20/14	<29	<29	<29	<29	130	120	430	<29	<29	<29	<28
2/17-20/15	<28	<29	<29	<28	150	95	230	<30	<30	<29	<30
5/11-15/15	<28	<28	<29	<28	120	130	320	<28	<29	<28	<29
8/10-11/15	<29	<29	<28	<28	130	66	470	<28	<28	<28	<28

TABLE 2
NATURAL ATTENUATION MONITORING PARAMETERS¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington

	Upgradient Wells		Crossgradient Wells		Source Area Wells			Near Downgradient Wells		Sentinel Wells	
	B-1	B-2	MW-117	MW-119	B-3	B-4	MW-111	MW-112	MW-113	MW-103	MW-116
TPH-HRO without silica gel cleanup											
9/9-13/13	<67	<67	<67	<66	<66	110	89	<67	<66	<67	<66
11/18-22/13	<67	<67	<67	<68	180	<67	<66	<67	<67	<67	<67
2/4-11/14	<68	<66	<67	<68	<67	<68	<68	<68	<69	<67	<68
6/12-14/14	<66	<67	<66	UTA	100	73	83	UTA	<67	UTA	UTA
8/18-21/14	<66	<68	<68	<66	170	88	100	<68	<71	<68	<67
11/19-20/14	<68	<68	<67	<67	160	<66	320	<68	<67	<67	<66
2/17-20/15	<66	<67	<69	<66	180	470	180	<69	<70	<69	<69
5/11-15/15	<66	<66	<67	<66	<66	<66	<66	<66	<67	<66	<68
8/10-11/15	<67	<67	<66	<66	550	340	<67	<66	<66	<66	<66
TPH-HRO with silica gel cleanup											
9/9-13/13	<67	<67	<67	<66	72	<66	<66	<67	<66	<67	<66
11/18-22/13	<67	<67	<67	<68	<67	<67	<66	<67	<67	<67	<67
2/4-11/14	<68	<66	<67	<68	<67	<68	<68	<68	<69	<67	<68
6/12-14/14	<66	<67	<66	UTA	<66	<67	<67	UTA	<67	UTA	UTA
8/18-21/14	<66	<68	<68	<66	<68	<67	<67	<68	<71	<68	<67
11/19-20/14	<68	<68	<67	<67	<67	<66	<69	<68	<67	<67	<66
2/17-20/15	<66	<67	<69	<66	<66	240	<68	<69	<70	<69	<69
5/11-15/15	<66	<66	<67	<66	<66	<66	<66	<66	<67	<66	<68
8/10-11/15	<67	<67	<66	<66	<67	<66	93	<66	<66	<66	<66
Nitrate											
9/9-13/13	<250	850	760	590	<250	<250	<250	<250	<250	<250	390
11/18-22/13	<250	580	580	<250	10,500	<250	<250	<250	<250	<250	790
2/4-11/14	660	1,000	440	490	21,100	<250	<250	370	440	<250	630
6/12-14/14	370	570	540	UTA	2,900	<250	<250	UTA	<250	UTA	UTA
8/18-21/14	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250
11/19-20/14	<250	360	270	890	770	<250	<250	540	470	<250	350
2/17-20/15	2,200	2,200	<250	640	<250	<250	<250	<250	330	1,700	510
5/11-15/15	1,400	1,400	450	2,300	5,300	<250	<250	1,000	1,200	<250	420
8/10-11/15	510	610	<250	<250	<250	<250	<250	530	<250	<250	890

TABLE 2
NATURAL ATTENUATION MONITORING PARAMETERS¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington

	Upgradient Wells		Crossgradient Wells		Source Area Wells			Near Downgradient Wells		Sentinel Wells	
	B-1	B-2	MW-117	MW-119	B-3	B-4	MW-111	MW-112	MW-113	MW-103	MW-116
Sulfate											
9/9-13/13	4,600	3,300	5,400	4,200	9,000	<1,500	1,700	1,900	3,300	2,800	4,300
11/18-22/13	4,200	3,800	3,900	2,700	4,400	<1,500	<1,500	<1,500	2,100	1,700	4,100
2/4-11/14	4,400	3,400	6,500	3,500	6,900	<1,500	<1,500	2,500	2,900	2,800	3,700
6/12-14/14	3,300	3,000	5,900	UTA	7,000	<1,500	<1,500	UTA	3,700	UTA	UTA
8/18-21/14	3,500	2,100	3,500	2,500	10,500	1,600	<1,500	2,500	2,300	3,700	<1,500
11/19-20/14	7,500	2,600	4,300	2,600	14,100	2,600	<1,500	2,500	1,700	2,700	3,800
2/17-20/15	3,700	3,200	2,600	1,800	14,700	4,000	1,800	<1,500	<1,500	5,300	<1,500
5/11-15/15	3,600	3,800	7,600	4,700	7,600	3,900	1,500	3,800	3,400	4,100	7,000
8/10-11/15	4,800	4,000	7,900	3,400	9,800	2,500	9,920	3,800	3,300	3,400	5,000
Dissolved Iron											
9/9-13/13	102	<43.0	<43.0	<43.0	20,000	10,900	12,300	3,240	113	<43.0	628
11/18-22/13	45.6	<43.0	<43.0	<43.0	326	10,500	9,940	3,920	<43.0	<43.0	175
2/4-11/14	65.2	<43.0	<43.0	<43.0	2,440	11,400	9,100	1,730	<43.0	<43.0	<43.0
6/12-14/14	57.0	94.0	<43.0	UTA	8,330	10,900	11,200	UTA	<43.0	UTA	UTA
8/18-21/14	179	<33.4	144	<33.4	11,300	9,220	9,410	2,690	2,620	<33.4	1,450
11/19-20/14	454	<33.4	123	127	12,900	214	14,500	534	<33.4	<33.4	43.6
2/17-20/15	<33.4	<33.4	37.5	321	86.7	1,170	14,500	<33.4	106	161	510
5/11-15/15	<33.4	<33.4	<33.4	<33.4	6,750	10,000	12,100	2,190	<33.4	<33.4	<33.4
8/10-11/15	131	1,770	2,760	66.3	12,800	9,340	3,740	2,720	61.5	34.8	1,910
Dissolved Manganese											
9/9-13/13	104	278	2.9	50.6	6,070	2,300	4,740	2,490	76.1	1,460	29.0
11/18-22/13	314	287	3.0	11.1	4,200	2,290	4,310	2,600	1.1	178	13.2
2/4-11/14	221	34.3	2.5	38.4	3,890	2,480	4,750	1,750	4.6	111	5.4
6/12-14/14	225	75.6	2.8	UTA	4,620	2,310	5,330	UTA	11.9	UTA	UTA
8/18-21/14	319	41.7	2,170	82.6	4,600	1,990	3,820	2,000	1,960	115	4,270
11/19-20/14	369	91.7	5.6	34.4	4,590	5.2	7,080	645	1.5	80.1	3.3
2/17-20/15	9.8	14.4	2.0	24.2	2,530	1,280	6,370	11.6	8.9	1.1	40.5
5/11-15/15	9.7	11.4	<0.83	6.6	4,080	2,110	5,050	1,680.0	9.4	21	1.4
8/10-11/15	138	357	98.1	15	4,440	2,050	5,050	2,050	14.1	145	120

TABLE 2
NATURAL ATTENUATION MONITORING PARAMETERS¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington

	Upgradient Wells		Crossgradient Wells		Source Area Wells			Near Downgradient Wells		Sentinel Wells		
	B-1	B-2	MW-117	MW-119	B-3	B-4	MW-111	MW-112	MW-113	MW-103	MW-116	
Sulfide												
9/9-13/13	<54	<54	<54	<54	<54	<54	<54	<54	<54	<54	<54	<54
11/18-22/13	<54	<54	<54	<54	<54	<54	<54	<54	<54	<54	<54	<54
2/4-11/14	<54	<54	<54	<54	<54	<54	<54	<54	<54	<54	<54	<54
6/12-14/14	<54	<54	<54	UTA	<54	67	<54	UTA	<54	UTA	UTA	UTA
8/18-21/14	<54	<54	<54	<54	<54	<54	<54	<54	<54	<54	<54	<54
11/19-20/14	<54	<54	<54	<54	55	<54	<54	<54	<54	<54	<54	<54
2/17-20/15	<54	<54	<54	<54	<54	<54	<54	<54	<54	<54	<54	<54
5/11-15/15	<54	<54	<54	<54	<54	<54	<54	<54	<54	<54	<54	<54
8/10-11/15	<54	<54	<54	<54	<54	71	<54	<54	<54	<54	<54	<54
Methane												
9/9-13/13	36	15	<3.0	<3.0	360	370	3,000	310	<3.0	12	16	
11/18-22/13	140	28	<3.0	14	170	600	3,500	810	<3.0	4.0	<3.0	
2/4-11/14	5.2	<3.0	<3.0	<3.0	96	1,100	4,700	100	<3.0	6.5	<3.0	
6/12-14/14	22	<3.0	<3.0	UTA	170	430	7,000	UTA	<3.0	UTA	UTA	
8/18-21/14	28	<3.0	210	5.1	780	330	6,100	59	78	30	360	
11/19-20/14	4.8	5.2	<3.0	<3.0	220	680	3,400	4.3	<3.0	7.5	<3.0	
2/17-20/15	<3.0	<3.0	<3.0	<3.0	44	46	2,700	<3.0	<3.0	<3.0	<3.0	
5/11-15/15	<3.0	<3.0	<3.0	<3.0	440	690	5,600	270	<3.0	<3.0	<3.0	
8/10-11/15	<3.0	<3.0	<3.0	<3.0	450	570	1,700	15	<3.0	<3.0	<3.0	
Alkalinity												
9/9-13/13	109,000	96,300	29,700	95,400	238,000	131,000	202,000	127,000	45,000	116,000	38,800	
11/18-22/13	90,600	97,500	14,700	129,000	33,800	120,000	178,000	130,000	40,400	112,000	37,600	
2/4-11/14	76,900	75,300	28,900	72,800	83,200	119,000	181,000	110,000	33,200	113,000	38,000	
6/12-14/14	66,800	66,900	30,700	UTA	125,000	112,000	174,000	UTA	34,200	UTA	UTA	
8/18-21/14	91,600	82,500	98,400	89,900	90,100	115,000	165,000	92,800	92,800	97,700	149,000	
11/19-20/14	87,700	84,100	20,900	67,000	166,000	143,000	241,000	40,100	25,400	117,000	35,300	
2/17-20/15	60,100	61,700	17,900	17,800	29,600	101,000	206,000	17,300	8,600	44,400	17,700	
5/11-15/15	65,200	66,400	26,300	71,700	132,000	118,000	198,000	85,700	66,400	98,400	26,200	
8/10-11/15	71,200	90,100	59,600	98,500	161,000	126,000	169,000	97,500	43,700	113,000	50,100	

TABLE 2
NATURAL ATTENUATION MONITORING PARAMETERS¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington

	Upgradient Wells		Crossgradient Wells		Source Area Wells			Near Downgradient Wells		Sentinel Wells	
	B-1	B-2	MW-117	MW-119	B-3	B-4	MW-111	MW-112	MW-113	MW-103	MW-116
Field Parameters											
Dissolved Oxygen [DO] (mg/L)											
9/9-13/13	0.70	1.07	2.46	2.92	1.67	1.02	0.65	0.8	2.48	0.73	1.40
	0.68	1.05	3.74	2.98	0.96	0.95	0.63	0.79	2.50	0.68	1.34
	0.67	1.02	4.00	3.01	0.95	0.92	0.63	0.78	2.47	0.68	1.32
	--	0.8	4.51	--	--	--	--	--	--	--	--
11/18-22/13	0.42	0.72	4.2	0.81	0.83	0.33	0.58	0.59	2.04	1.09	1.81
	0.42	0.72	4.24	0.79	0.83	0.33	0.57	0.59	2.03	1.09	1.77
	0.42	0.71	4.27	0.78	0.82	0.32	0.55	0.58	2.04	1.06	1.76
	0.42	0.71	4.31	0.77	0.80	0.32	0.54	0.56	2.04	1.02	1.75
2/4-11/14	1.81	1.53	2.64	1.76	1.27	0.83	0.77	1.88	2.91	1.15	2.51
	1.79	1.52	2.60	1.75	1.22	0.83	0.76	1.84	2.87	1.15	2.46
	1.77	1.50	2.57	1.75	1.20	0.83	0.74	1.80	2.84	1.16	2.39
6/12-14/14	0.45	0.64	2.14	--	0.65	0.50	0.57	--	2.47	--	--
	0.46	0.67	2.20	--	0.69	0.56	0.59	--	2.55	--	--
	0.49	0.69	2.24	--	0.70	0.59	0.62	--	2.57	--	--
8/18-21/14	0.25	0.26	1.92	0.59	0.34	0.26	0.23	1.10	2.28	1.86	1.01
	0.25	0.26	2.01	0.66	--	0.26	0.25	1.20	2.33	--	1.11
	0.25	0.26	2.11	0.71	--	0.26	0.28	1.27	2.40	--	1.18
11/19-20/14	1.41	8.11	1.4	1.2	6.26	0.90	0.79	1.2	1.1	1.3	1.2
	1.38	8.13	1.4	1.2	6.11	0.88	0.77	1.3	1.1	1.2	1.3
	1.32	8.16	1.2	1.3	6.02	0.86	0.73	1.3	1.1	1.2	1.2
2/17-20/15	1.18	3.67	2.20	1.44	1.02	2.11	1.09	1.81	2.11	2.29	1.67
	1.13	3.66	2.24	1.49	1.06	2.09	1.12	1.76	2.09	2.18	1.64
	1.09	3.61	2.30	1.53	1.10	2.02	1.16	1.77	2.01	2.11	1.61
5/11-15/15	1.39	1.44	4.81	1.69	1.02	0.68	1.04	1.17	2.02	1.29	1.46
	1.36	1.41	4.83	1.72	1.00	0.69	1.01	1.20	2.00	1.31	1.49
	1.32	1.39	4.85	1.74	1.00	0.71	1.00	1.21	1.98	1.36	1.31
8/10-11/15	1.30	1.1	1.30	1.2	1.00	1.2	1.10	1.50	1.30	1.3	1.3
	1.20	1.2	1.50	1.1	1.00	1.2	1.20	1.50	1.20	1.4	1.3
	1.20	1.3	1.50	1.2	1.00	1.3	1.20	1.40	1.20	1.4	1.4

TABLE 2
NATURAL ATTENUATION MONITORING PARAMETERS¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington

	Upgradient Wells		Crossgradient Wells		Source Area Wells			Near Downgradient Wells		Sentinel Wells	
	B-1	B-2	MW-117	MW-119	B-3	B-4	MW-111	MW-112	MW-113	MW-103	MW-116
Oxidation Reduction Potential [ORP] (mV)											
9/9-13/13	99.5	126.3	156.3	90.3	-131.8	-197.0	-86.2	-15.1	260.4	85.9	97.3
	99.1	126.3	156.8	91.8	-138.9	-194.7	-82.0	15.2	258.1	87.1	96.3
	98.3	126.8	157.1	92.3	-139.5	-194.9	-82.0	-13.0	254.9	86.2	92.2
	--	130.4	159.2	--	--	--	--	--	--	--	--
11/18-22/13	59.9	110.7	110.4	126.3	-26.5	-48.4	-48.0	-91.3	124.0	100.0	111.9
	59.8	111.8	110.5	127.1	-27.1	-49.9	-47.6	-31.9	125.7	100.3	112.3
	59.5	112.4	111.2	127.9	-27.3	-50.7	-47.4	-32.0	127.2	100.7	113.2
	59.4	112.8	112.1	128.3	-28.1	-51.4	-47.2	-31.5	128.1	100.1	114.1
2/4-11/14	123.0	128.9	273.4	112.5	118.9	-57.2	-51.2	106.9	117.7	107.4	58.3
	123.4	128.9	272.1	113	119.6	-57.3	-51.3	107.1	118.6	107.7	59.8
	123.1	129.1	270.9	113.4	120.9	-57.5	-51.4	109.0	119.5	108.2	60.6
6/12-14/14	50.1	35.7	97.7	--	97.4	-87.9	-74.5	--	115.0	--	--
	49.0	37.0	99.1	--	99.0	-89.3	-76	--	117.3	--	--
	47.1	38.3	101.1	--	100.6	-91.2	-78.3	--	119.0	--	--
8/18-21/14	16.0	50.8	80.8	85.6	-67.8	-86.9	-91.2	-18.1	83.8	98.3	79.6
	15.3	50.6	82.7	88.3	--	-87.8	-89.1	-9.3	85.1	--	81.3
	14.8	50.7	84.3	89.9	--	-85.8	-86.3	-2.6	87.6	--	83.6
11/19-20/14	206.6	290.7	188	166	215.0	162.7	149.9	173	179	175	200
	204.5	288.3	187	160	217.3	161.0	148.1	180	179	180	200
	202.3	286.8	185	157	214.0	159.8	146.3	183	178	183	201
2/17-20/15	64.3	109.6	32.3	38.3	-21.9	-33.6	29.3	49.3	36.3	-11.9	51.0
	62.9	110.9	34.9	40.1	-19.3	-31.3	30.6	50.4	38.1	-9.8	52.6
	64.3	111.6	36.0	41.6	-18.0	-30.0	31.8	51.6	39.6	-7.9	53.8
5/11-15/15	9.2	9.0	18.2	19.7	24.0	-36.5	-51.4	-20.3	33.9	17.5	49.6
	9.9	10.2	19.0	20.9	24.6	-36.0	-50.7	-19.8	34.8	18.3	50.1
	10.8	11.1	20.2	21.8	24.9	-35.3	-49.9	-18.8	35.4	19.1	51.6
8/10-11/15	117	-2	35.0	44	-9.0	-35.0	-1	-17	-10.0	50	116
	121	-4	42.0	42	-9.0	-40.0	-3	-20	-10.0	53	120
	124	-5	47.0	41	-10.0	-42.0	-7	-24	-14.0	57	122

TABLE 2
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101 Mulford Road
Toledo, Washington

	Upgradient Wells		Crossgradient Wells		Source Area Wells			Near Downgradient Wells		Sentinel Wells	
	B-1	B-2	MW-117	MW-119	B-3	B-4	MW-111	MW-112	MW-113	MW-103	MW-116
pH											
9/9-13/13	6.20	6.29	6.17	6.44	6.48	6.58	6.46	6.55	6.81	6.60	6.18
	6.22	6.29	6.25	6.45	6.51	6.56	6.44	6.54	6.81	6.60	6.16
	6.22	6.30	6.27	6.45	6.51	6.56	6.46	6.53	6.83	6.61	6.17
	--	6.31	6.25	--	--	--	--	--	--	--	--
11/18-22/13	6.51	6.59	6.55	6.49	6.35	6.60	6.55	6.76	6.36	6.79	6.57
	6.48	6.58	6.52	6.48	6.36	6.61	6.55	6.77	6.33	6.76	6.37
	6.48	6.57	6.51	6.47	6.36	6.61	6.55	6.77	6.32	6.76	6.36
	6.47	6.57	6.49	6.46	6.35	6.62	6.55	6.76	6.32	6.75	6.37
2/4-11/14	6.64	6.73	6.39	6.91	5.9	6.78	6.76	6.77	6.45	6.86	6.53
	6.62	6.74	6.39	6.88	6.01	6.79	6.74	6.76	6.44	6.84	6.51
	6.61	6.74	6.38	6.87	6.02	6.79	6.74	6.74	6.43	6.84	6.49
6/12-14/14	6.61	5.94	6.09	--	5.45	6.32	6.22	--	6.10	--	--
	6.04	6.00	6.12	--	5.47	6.35	6.25	--	6.12	--	--
	6.06	6.01	6.14	--	5.49	6.37	6.28	--	6.15	--	--
8/18-21/14	6.68	6.61	6.91	6.86	6.12	6.33	6.29	6.93	6.79	6.92	6.94
	6.70	6.64	6.94	6.88	--	6.36	6.32	6.91	6.83	--	6.96
	6.73	6.63	6.97	6.91	--	6.37	6.34	6.88	6.86	--	6.97
11/19-20/14	6.67	6.94	7.08	8.95	6.01	6.44	6.42	7.58	7.30	7.66	7.10
	6.64	6.96	7.07	8.91	6.03	6.47	6.44	7.51	7.31	7.63	7.08
	6.64	6.96	7.06	8.90	6.05	6.49	6.46	7.50	7.30	7.60	7.07
2/17-20/15	6.39	6.60	6.72	6.70	6.22	6.88	7.08	6.69	6.56	6.39	6.63
	6.41	6.60	6.72	6.71	6.24	6.90	7.07	6.71	6.58	6.41	6.64
	6.44	6.60	6.73	6.71	6.26	6.91	7.04	6.73	6.58	6.41	6.66
5/11-15/15	6.64	6.62	6.56	6.67	6.02	6.67	6.65	6.77	6.77	6.75	6.89
	6.64	6.62	6.56	6.69	6.02	6.68	6.65	6.77	6.77	6.75	6.90
	6.64	6.62	6.56	6.70	6.02	6.68	6.65	6.78	6.77	6.76	6.90
8/10-11/15	6.08	7.11	6.73	7.26	7.27	6.3	6.01	7.26	7.06	6.28	7.19
	6.05	7.10	6.77	7.24	7.28	6.32	6.07	7.24	7.05	6.30	7.22
	6.04	7.09	6.80	7.22	7.29	6.35	6.09	7.23	7.05	6.33	7.22

TABLE 2
NATURAL ATTENUATION MONITORING PARAMETERS¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington

	Upgradient Wells		Crossgradient Wells		Source Area Wells			Near Downgradient Wells		Sentinel Wells	
	B-1	B-2	MW-117	MW-119	B-3	B-4	MW-111	MW-112	MW-113	MW-103	MW-116
Temperature (degrees Celsius)											
9/9-13/13	16.70	14.80	16.70	20.00	18.30	19.50	18.40	22.10	16.07	17.80	14.50
	16.70	14.80	16.80	19.90	18.90	19.50	18.40	22.00	16.05	17.80	14.60
	16.70	14.90	16.90	19.90	19.00	19.60	18.40	22.00	16.06	17.60	14.60
	--	14.90	17.09	--	--	--	--	--	--	--	--
11/18-22/13	12.62	8.79	11.81	8.10	15.30	14.50	14.61	9.70	13.08	10.17	12.29
	12.60	8.75	11.77	8.05	15.36	14.46	14.64	9.47	13.01	10.21	12.21
	12.56	8.66	11.72	8.01	15.41	14.41	14.67	9.33	13.00	10.26	12.18
	12.47	8.57	11.69	8.02	15.47	14.36	14.71	9.28	12.94	10.31	12.18
2/4-11/14	7.12	5.59	8.83	3.89	8.31	8.40	10.44	6.69	9.24	3.57	8.33
	7.20	5.66	8.90	3.96	8.26	8.32	10.52	6.77	9.32	3.46	8.22
	7.26	5.71	8.98	4.09	8.18	8.28	10.60	6.84	9.40	3.33	8.14
6/12-14/14	14.15	13.71	13.45	--	16.23	16.41	14.74	--	13.16	--	--
	14.21	13.79	13.53	--	16.27	16.50	14.82	--	13.24	--	--
	14.28	13.83	13.60	--	16.33	16.58	14.90	--	13.31	--	--
8/18-21/14	16.58	14.49	18.33	12.90	21.17	19.35	17.98	14.34	17.01	12.32	17.80
	16.53	14.56	18.40	13.01	--	19.42	18.08	14.41	17.12	--	17.88
	16.60	14.61	18.49	13.09	--	19.50	18.16	14.49	17.20	--	17.94
11/19-20/14	13.78	12.12	13.4	11.6	13.65	16.56	14.89	12.1	14.2	11.0	11.7
	13.83	12.01	13.4	11.8	13.59	16.48	14.78	12.2	14.1	11.1	11.7
	13.90	11.92	13.2	11.9	13.52	16.41	14.71	12.2	14.1	11.2	11.7
2/17-20/15	10.91	9.51	11.93	10.80	10.18	11.83	10.91	10.83	10.89	10.91	12.01
	10.84	9.49	11.88	10.83	10.24	11.90	10.84	10.74	10.81	10.83	11.83
	10.80	9.42	11.81	10.76	10.30	11.93	10.79	10.64	10.72	10.77	11.76
5/11-15/15	12.46	12.38	12.08	12.09	14.75	14.18	14.21	12.62	12.36	11.31	12.91
	12.50	12.42	12.14	12.14	14.81	14.23	14.24	12.68	12.41	11.36	12.99
	12.56	12.47	12.20	12.19	14.86	14.28	14.30	12.71	12.47	11.41	13.03
8/10-11/15	19.4	20.10	19.80	17.30	18.90	18.70	19.90	17.30	20.10	17.20	18.50
	19.5	20.00	19.90	17.20	19.00	18.80	20.10	17.10	20.10	17.30	18.70
	19.5	19.90	19.90	17.00	19.10	18.80	20.20	17.00	20.10	17.40	18.70

TABLE 2
NATURAL ATTENUATION MONITORING PARAMETERS¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington

	Upgradient Wells		Crossgradient Wells		Source Area Wells			Near Downgradient Wells		Sentinel Wells	
	B-1	B-2	MW-117	MW-119	B-3	B-4	MW-111	MW-112	MW-113	MW-103	MW-116
Conductivity (µS)											
9/9-13/13	0.232	0.238	0.163	0.244	0.687	0.288	0.454	0.804	0.130	0.273	0.114
	0.233	0.236	0.123	0.244	0.97	0.287	0.454	0.803	0.130	0.272	0.114
	0.234	0.233	0.113	0.245	0.698	0.286	0.454	0.803	0.130	0.272	0.113
	--	0.221	0.116	--	--	--	--	--	--	--	--
11/18-22/13	0.180	0.131	0.072	0.209	0.439	0.230	0.338	0.210	0.089	0.215	0.004
	0.178	0.131	0.07	0.209	0.439	0.230	0.339	0.210	0.089	0.215	0.083
	0.176	0.131	0.068	0.209	0.438	0.230	0.339	0.209	0.089	0.215	0.083
	0.175	0.130	0.065	0.209	0.438	0.231	0.339	0.209	0.089	0.215	0.083
2/4-11/14	0.192	0.143	0.113	0.102	0.239	0.199	0.322	0.202	0.054	0.160	0.075
	0.191	0.143	0.113	0.102	0.240	0.199	0.322	0.202	0.054	0.160	0.072
	0.191	0.142	0.112	0.101	0.240	0.198	0.322	0.202	0.054	0.159	0.070
6/12-14/14	0.146	0.140	0.083	--	0.276	0.260	0.394	--	0.087	--	--
	0.149	0.144	0.086	--	0.280	0.263	0.396	--	0.089	--	--
	0.150	0.146	0.088	--	0.281	0.265	0.398	--	0.091	--	--
8/18-21/14	0.227	0.191	0.290	0.214	0.425	0.278	0.396	0.194	0.292	0.091	0.192
	0.224	0.187	0.292	0.216	--	0.28	0.392	0.196	0.301	--	0.194
	0.221	0.186	0.294	0.219	--	0.281	0.394	0.198	0.302	--	0.196
11/19-20/14	0.674	0.449	0.093	0.225	0.360	0.375	0.681	0.118	0.084	0.301	0.115
	0.677	0.452	0.092	0.231	0.363	0.377	0.684	0.125	0.084	0.304	0.115
	0.678	0.452	0.092	0.236	0.364	0.377	0.688	0.129	0.084	0.310	0.116
2/17-20/15	0.302	0.223	0.244	0.188	0.183	0.272	0.320	0.277	0.255	0.249	0.226
	0.304	0.225	0.245	0.190	0.186	0.274	0.322	0.274	0.255	0.251	0.227
	0.307	0.226	0.246	0.192	0.188	0.276	0.323	0.272	0.252	0.251	0.229
5/11-15/15	0.199	0.216	0.087	0.198	0.357	0.280	0.519	0.263	0.322	0.261	0.172
	0.201	0.216	0.089	0.201	0.359	0.280	0.519	0.263	0.326	0.261	0.172
	0.201	2.18	0.089	0.201	0.359	0.280	0.519	0.267	0.326	0.262	0.174
8/10-11/15	0.180	0.310	0.189	0.242	0.325	0.312	0.399	0.269	0.410	0.245	0.335
	0.183	0.310	0.194	0.24	0.327	0.321	0.404	0.269	0.411	0.251	0.342
	0.201	0.310	0.198	0.241	0.328	0.328	0.410	0.267	0.413	0.254	0.345

TABLE 2
NATURAL ATTENUATION MONITORING PARAMETERS¹
COWLITZ BP / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington

	Upgradient Wells		Crossgradient Wells		Source Area Wells			Near Downgradient Wells		Sentinel Wells	
	B-1	B-2	MW-117	MW-119	B-3	B-4	MW-111	MW-112	MW-113	MW-103	MW-116

Abbreviations:

BTEX = Benzene, toluene, ethylbenzene, and total xylenes
(mg/L) = Milligrams per liter
(mV) = Millivolts
µg/L = Micrograms per liter
µg/S = Micrograms per siemen
MTCA = Model Toxics Control Act

TPH = Total Petroleum Hydrocarbons
TPH-DRO = TPH as Diesel-Range Organics
TPH-GRO = TPH as Gasoline-Range Organics
TPH-HRO = TPH as Heavy Oil-Range Organics
UTA = Unable to Access
-- = Not Measured/Not Analyzed

Notes:

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

**Appendix A:
Gettler-Ryan Field Data Sheets**



GETTLER-RYAN INC.



TRANSMITTAL

September 23, 2013

G-R #386773

TO: Mr. Russell Shropshire
SAIC
18912 North Creek Parkway, Suite 101
Bothell, Washington 98011

FROM: Deanna L. Harding
Project Coordinator
Gettler-Ryan Inc.
6747 Sierra Court, Suite J
Dublin, California 94568

RE: **Former Texaco Service Station
#211556/Cowlitz BP
101 Mulford Road
Toledo, Washington
UST Site#10669**

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DESCRIPTION
VIA PDF	Groundwater Monitoring and Sampling Data Package Third Quarter Event of September 9, 10, 11, 12 13, 2013

COMMENTS:

Pursuant to your request, we are providing you with copies of the above referenced data for your use.

Please provide us the updated historical data prior to the next monitoring and sampling event for our field use.

Please feel free to contact me if you have any comments/questions.

trans/211556

Standard Operating Procedure, Low-Flow Purging and Sampling

Gettler-Ryan Inc. field personnel adhere to the following Standard Operating Procedure (SOP) for the collection and handling of representative groundwater samples using the Low-Flow (Minimal-Drawdown) Purging technique. This SOP incorporates purging and sampling methods discussed in U.S. EPA, Ground Water Issue, Publication Number EPA/540/S-95/504, April 1996 by Puls, R.W. and M.J. Barcelona - "*Low-Flow (Minimal-Drawdown) Ground-Water Sampling Procedures.*"

A QED Well Wizard™ (or equivalent) bladder pump or Peristaltic Pump will be used to purge and sample selected wells as outlined in the scope-of-work. An in-line flow cell or other multi-parameter meter is used to collect water quality indicating parameters during purging.

Initial Pump Discharge Test Procedures

The Static Water Level (SWL) is measured in all wells at the site prior to the installation of the pump or tubing and initiation of the test procedures in any well. In addition, the presence or absence of separate-phase hydrocarbons (SPH) is determined using an interface probe. Product thickness, if present, is measured to the nearest 0.01 foot. The SWL measurement and SPH thickness, if any, will be recorded on the field data sheet.

The bladder pump or suction inlet tubing of the peristaltic pump is then positioned with its inlet located within the screened interval of the well. The in-line flow cell is then connected to the discharge tubing. After pump installation, the SWL is allowed to recover to its original level. The pump is then started at a discharge rate between 100 ml to 300 ml per minute with the in-line flow cell connected. The water level is monitored continuously for any change from the original measurement and the discharge rate is adjusted until an optimum discharge rate (ODR) is determined. The goal for the ODR is to produce a stable drawdown of less than 0.1 meter as allowed by site conditions; however the total drawdown from the initial SWL should not exceed 25% of the distance between pump inlet location and the top of the well screen. Once achieved, the ODR will be confirmed by volumetric discharge measurement and recorded on the field data sheet.

Purging and Water Quality Parameter Measurement

When the ODR has been determined and the SWL drawdown has been established within the acceptable range, and a minimum of one pump system volume (bladder volume and/or discharge tubing volume) has been purged, field measurements for temperature (T), pH, conductivity (Ec), and if required, oxygen reduction potential (ORP) and dissolved oxygen (DO) will be collected and documented on the field data sheet. Measurements should be taken every three to five minutes until parameters stabilize for three consecutive readings. The minimum parameter subset of T ($\pm 10\%$), pH (± 0.1 unit), and Ec (± 10 uS) are required to stabilize. Additional parameters that may be required are DO (± 0.2 mg/l) and ORP (± 20 mV).

Sample Collection

When water quality parameters have stabilized, and the SWL drawdown remains established within the acceptable range, groundwater sample collection may begin. If used, the in-line flow cell and its tubing are disconnected from the discharge tubing prior to sample collection. Water samples are collected from the discharge tubing into appropriate containers. Pre-preserved containers, supplied by analytical laboratories, are used when possible. When pre-preserved containers are not available, the laboratory is instructed to preserve the sample as appropriate. Duplicate samples are collected for the laboratory to use in maintaining quality assurance/quality control standards, as directed by the scope of work. The samples are labeled to include the job number, sample identification, collection date and time, analysis, preservation (if any), and the sample collector's initials. The water samples are placed in a cooler,

maintained at 4°C for transport to the laboratory. A laboratory supplied trip blank accompanies each sampling set. The trip blank is analyzed for some or all of the same compounds as the groundwater samples. Once collected in the field, all samples are maintained under chain of custody until delivered to the laboratory.

The chain of custody document includes the job number, type of preservation, if any, analysis requested, sample identification, date and time collected, and the sample collector's name. The chain of custody is signed and dated (including time of transfer) by each person who receives or surrenders the samples, beginning with the field personnel and ending with the laboratory personnel.

A laboratory supplied trip blank accompanies each sampling set. For sampling sets greater than 20 samples, 5% trip blanks are included. The trip blank is analyzed for some or all of the same compounds as the groundwater samples.



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 9.9 - 9.13.13 (inclusive)
 Sampler: J.P

Well ID: MM-103
 Well Diameter: (2) 4 in.
 Total Depth: 18.84 ft.
 Depth to Water: 2.55 ft.
14.29 xVF _____ = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Date Monitored: 9.9.13

Volume	3/4"= 0.02	1"= 0.04	<u>2"= 0.17</u>	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 14.29

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	_____ ft
Visual Confirmation/Description:	_____
Skimmer / Absorbant Sock (circle one)	_____
Amt Removed from Skimmer:	_____ gal
Amt Removed from Well:	_____ gal
Water Removed:	_____ gal
Product Transferred to:	_____

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: YGI

Sampling Equipment:
 Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Start Time (purge): 1123 Weather Conditions: SUN
 Sample Time/Date: 1151 / 9.11.13 Water Color: CLEAR Odor: Y (N)
 Approx. Flow Rate: 100 mlpm Sediment Description: NONE
 Did well de-water? NO If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 9.18

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µmhos/cm - µS)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>1141</u>	<u>1.8</u>	<u>6.60</u>	<u>.273</u>	<u>17.8</u>	<u>.73</u>	<u>85.9</u>	<u>9.89</u>
<u>1144</u>	<u>2.1</u>	<u>6.60</u>	<u>.272</u>	<u>17.8</u>	<u>.68</u>	<u>87.1</u>	<u>9.81</u>
<u>1147</u>	<u>2.4</u>	<u>6.61</u>	<u>.272</u>	<u>17.6</u>	<u>.68</u>	<u>86.2</u>	<u>9.18</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MM-103</u>	<u>6</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>2</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
	x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
<u>FF</u>	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	<u>2</u> x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
<u>FF</u>	<u>1</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At: 14-15
AIR BUBBLES IN LINE

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: R Add/Replaced Lock: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 9.9.13 - 9.13.13 (inclusive)
 Sampler: J.P

Well ID: MD-109
 Well Diameter: (2) 4 in.
 Total Depth: 12.94 ft.
 Depth to Water: 7.34 ft.
5.60 xVF = - = - x3 case volume = Estimated Purge Volume: - gal.

Date Monitored: 9.9.13

Volume	3/4"= 0.02	1"= 0.04	<u>2"= 0.17</u>	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 8.46

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: XOF

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	_____ ft
Visual Confirmation/Description:	_____
Skimmer / Absorbant Sock (circle one)	_____
Amt Removed from Skimmer:	_____ gal
Amt Removed from Well:	_____ gal
Water Removed:	_____ gal
Product Transferred to:	_____

Start Time (purge): 1048
 Sample Time/Date: 1116 / 9.12.13
 Approx. Flow Rate: 100 mlpm
 Did well de-water? No If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 8.11

Weather Conditions: Overcast
 Water Color: clear Odor: Y / (N)
 Sediment Description: NONE

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µmhos/cm - µS)	Temperature (°C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>1106</u>	<u>1.8</u>	<u>6.810</u>	<u>.255</u>	<u>10.00</u>	<u>2.34</u>	<u>156.7</u>	<u>7.78</u>
<u>1109</u>	<u>2.1</u>	<u>6.88</u>	<u>.260</u>	<u>10.12</u>	<u>2.32</u>	<u>158.0</u>	<u>7.90</u>
<u>1112</u>	<u>2.4</u>	<u>6.88</u>	<u>.266</u>	<u>10.20</u>	<u>1.20</u>	<u>158.3</u>	<u>8.11</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MD-109</u>	<u>6</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
	x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
	x 250ml poly	YES	NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At: 9-10'



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 9.9.13 - 9.13.13 (inclusive)
 Sampler: J.P

Well ID: MW-110
 Well Diameter: 2.4 in.
 Total Depth: 20.01 ft.
 Depth to Water: 9.03 ft.

Date Monitored: 9.9.13

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 11.22
 xVF 10.98 = - x3 case volume = Estimated Purge Volume: - gal.

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: Y6I

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: _____

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	_____ ft
Visual Confirmation/Description:	_____
Skimmer / Absorbant Sock (circle one)	_____
Amt Removed from Skimmer:	_____ gal
Amt Removed from Well:	_____ gal
Water Removed:	_____ gal
Product Transferred to:	_____

Start Time (purge): 11:57
 Sample Time/Date: 12:20 / 9.12.13
 Approx. Flow Rate: 1.00 mlpm
 Did well de-water? NO If yes, Time: _____ Volume: _____ gal.

Weather Conditions: OVERCAST
 Water Color: CLEAR Odor: Y/N
 Sediment Description: NONE
 DTW @ Sampling: 9.29

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µmhos/cm - pS)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>13:10</u>	<u>1.0</u>	<u>6.51</u>	<u>.200</u>	<u>17.07</u>	<u>.60</u>	<u>51.0</u>	<u>9.29</u>
<u>13:13</u>	<u>2.1</u>	<u>6.50</u>	<u>.200</u>	<u>17.12</u>	<u>.67</u>	<u>49.4</u>	<u>9.29</u>
<u>13:16</u>	<u>2.4</u>	<u>6.50</u>	<u>.204</u>	<u>17.15</u>	<u>.66</u>	<u>47.7</u>	<u>9.29</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-110</u>	<u>6</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
	x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
	x 250ml poly	YES	NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At: 16-17'

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: R Add/Replaced Lock: L



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556 Job Number: 386773
 Site Address: 101 Mulford Road Event Date: _____ (inclusive)
 City: Toledo, WA Sampler: J.P

Well ID: NMS-111 Date Monitored: 9.9.13
 Well Diameter: 2 1/4 in.
 Total Depth: 18.00 ft.
 Depth to Water: 7.15 ft. Check if water column is less than 0.50 ft.
10.85 xVF _____ = _____ x3 case volume = Estimated Purge Volume: _____ gal.
 Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 9.32

Volume Factor (VF)	3/4" = 0.02	1" = 0.04	2" = 0.17	3" = 0.38
	4" = 0.66	5" = 1.02	6" = 1.50	12" = 5.80

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ gal
 Amt Removed from Well: _____ gal
 Water Removed: _____ gal
 Product Transferred to: _____

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: YSI

Sampling Equipment:
 Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: _____

Start Time (purge): 1045 Weather Conditions: RAIN
 Sample Time/Date: 1115 / 9.13.13 Water Color: CLEAR Odor: (Y) N MILD
 Approx. Flow Rate: 100 mlpm Sediment Description: NONE
 Did well de-water? NO If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 7.61

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µmhos/cm - µS) ^{MS}	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>1103</u>	<u>1.8</u>	<u>6.46</u>	<u>454</u>	<u>18.4</u>	<u>.65</u>	<u>-82.2</u>	<u>7.61</u>
<u>1106</u>	<u>2.1</u>	<u>6.44</u>	<u>454</u>	<u>18.4</u>	<u>.63</u>	<u>-82.0</u>	<u>7.61</u>
<u>1109</u>	<u>2.4</u>	<u>6.46</u>	<u>454</u>	<u>18.4</u>	<u>.63</u>	<u>-81.0</u>	<u>7.61</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>NMS-111</u>	<u>6</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
<u>FF</u>	<u>2</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	<u>2</u> x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
<u>FF</u>	<u>1</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At: 13'-14'

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: 1 Add/Replaced Lock: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 9.9.13 - 9.13.13 (inclusive)
 Sampler: JP

Well ID: MW-112
 Well Diameter: (2) 4 in.
 Total Depth: 17.53 ft.
 Depth to Water: 7.71 ft.
9.02 xVF _____ = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Date Monitored: 9.9.13

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 9.67

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: YSI

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	_____ ft
Visual Confirmation/Description:	_____
Skimmer / Absorbant Sock (circle one)	_____
Amt Removed from Skimmer:	_____ gal
Amt Removed from Well:	_____ gal
Water Removed:	_____ gal
Product Transferred to:	_____

Start Time (purge): 1320
 Sample Time/Date: 1340 / 9.11.13
 Approx. Flow Rate: 1.00 mlpm
 Did well de-water? NO If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 8.11

Weather Conditions: SUN
 Water Color: CLEAR Odor: YIN
 Sediment Description: NONE

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µmhos/cm - µS)	Temperature (°C / °F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>1330</u>	<u>1.8</u>	<u>6.55</u>	<u>.264</u>	<u>22.1</u>	<u>.80</u>	<u>-15.1</u>	<u>8.11</u>
<u>1341</u>	<u>2.1</u>	<u>6.54</u>	<u>.263</u>	<u>22.0</u>	<u>.79</u>	<u>-16.2</u>	<u>8.11</u>
<u>1344</u>	<u>2.4</u>	<u>6.53</u>	<u>.263</u>	<u>22.0</u>	<u>.78</u>	<u>-13.0</u>	<u>8.11</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-112</u>	<u>6</u> x vov vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>2</u> x vov vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
<u>FF</u>	<u>1</u> x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	<u>2</u> x vov vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
<u>FF</u>	<u>1</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At: 13'-14'



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556 Job Number: 386773
 Site Address: 101 Mulford Road Event Date: _____ (inclusive)
 City: Toledo, WA Sampler: J.P

Well ID: MW-113 Date Monitored: 9-9-13
 Well Diameter: 2(4) in.
 Total Depth: 18.40 ft.
 Depth to Water: 8.56 ft. Check if water column is less than 0.50 ft.
 xVF 0.924 = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 9.96
10.92

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: YSI

Sampling Equipment:
 Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ gal
 Amt Removed from Well: _____ gal
 Water Removed: _____ gal
 Product Transferred to: _____

Start Time (purge): 0820 Weather Conditions: OVERCAST
 Sample Time/Date: 0852 / 9-12-13 Water Color: CLEAR Odor: Y (N)
 Approx. Flow Rate: 100 mlpm Sediment Description: NONE
 Did well de-water? No If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 8.90

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µmhos/cm = µS) ^{MS}	Temperature (C) / (F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>0830</u>	<u>1.8</u>	<u>6.81</u>	<u>.130</u>	<u>16.07</u>	<u>2.48</u>	<u>240.4</u>	<u>8.80</u>
<u>0841</u>	<u>2.1</u>	<u>6.81</u>	<u>.130</u>	<u>16.05</u>	<u>2.60</u>	<u>240.1</u>	<u>8.80</u>
<u>0844</u>	<u>2.4</u>	<u>6.83</u>	<u>.130</u>	<u>16.06</u>	<u>2.47</u>	<u>254.9</u>	<u>8.90</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-113</u>	<u>6</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>2</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
<u>FF</u>	<u>1</u> x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	<u>2</u> x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
<u>FF</u>	<u>1</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At: 15-16

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: R



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 9.9.13 - 9.13.13 (inclusive)
 Sampler: J.P

Well ID: MW-114
 Well Diameter: (2) 4 in.
 Total Depth: 17.64 ft.
 Depth to Water: 10.96 ft.

Date Monitored: 9.9.13

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Depth to Water Check if water column is less than 0.50 ft.
 $10.96 \times VF = \text{---} = \text{---}$ x3 case volume = Estimated Purge Volume: --- gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 9.97

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: VSI

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: _____

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	_____ ft
Visual Confirmation/Description:	_____
Skimmer / Absorbant Sock (circle one)	_____
Amt Removed from Skimmer:	_____ gal
Amt Removed from Well:	_____ gal
Water Removed:	_____ gal
Product Transferred to:	_____

Start Time (purge): days
 Sample Time/Date: 1013 / 9.12.13
 Approx. Flow Rate: 100 mlpm
 Did well de-water? No If yes, Time: _____ Volume: _____ gal.

Weather Conditions: Overcast
 Water Color: Clear Odor: Y/N
 Sediment Description: NONE
 DTW @ Sampling: 7.60

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µmhos/cm-cp)	Temperature (C/F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>1003</u>	<u>1.8</u>	<u>6.11</u>	<u>.164</u>	<u>16.7</u>	<u>1.68</u>	<u>80.0</u>	<u>7.47</u>
<u>1006</u>	<u>2.1</u>	<u>6.13</u>	<u>.156</u>	<u>16.8</u>	<u>1.75</u>	<u>89.6</u>	<u>7.57</u>
<u>1009</u>	<u>2.4</u>	<u>6.12</u>	<u>.157</u>	<u>16.8</u>	<u>1.810</u>	<u>90.8</u>	<u>7.60</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-114</u>	<u>6</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
	x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
	x 250ml poly	YES	NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At: 13-14'

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 9-9-13 - 9-13-13 (inclusive)
 Sampler: J.P

Well ID: MW-115
 Well Diameter: 4 in.
 Total Depth: 17.73 ft.
 Depth to Water: 8.69 ft.
9.64 xVF = _____ = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Date Monitored: 9-9-13

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	<u>0.66</u>	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 10.01

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: XST

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ gal
 Amt Removed from Well: _____ gal
 Water Removed: _____ gal
 Product Transferred to: _____

Start Time (purge): 1023 Weather Conditions: SUN
 Sample Time/Date: 1052 9-11-13 Water Color: CLEAR Odor: Y (N)
 Approx. Flow Rate: 100 mlpm Sediment Description: NONE
 Did well de-water? NO If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 8.20

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µmhos/cm = µS)	Temperature (°C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>1041</u>	<u>1.8</u>	<u>6.70</u>	<u>.318</u>	<u>16.5</u>	<u>.80</u>	<u>14.1</u>	<u>8.20</u>
<u>1044</u>	<u>2.1</u>	<u>6.70</u>	<u>.318</u>	<u>16.6</u>	<u>.80</u>	<u>14.0</u>	<u>8.20</u>
<u>1047</u>	<u>2.4</u>	<u>6.69</u>	<u>.319</u>	<u>16.6</u>	<u>.79</u>	<u>11.3</u>	<u>8.20</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-115</u>	<u>4</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
	x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
	x 250ml poly	YES	NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At: 13-14



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 9.9.13 - 9.13.13 (inclusive)
 Sampler: J.P.

Well ID: MW-116
 Well Diameter: 21.4 in.
 Total Depth: 17.69 ft.
 Depth to Water: 0.61 ft.
9.00 xVF = - = - x3 case volume = Estimated Purge Volume: - gal.

Date Monitored: 9.9.13

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 10.42

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: VST

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ gal
 Amt Removed from Well: _____ gal
 Water Removed: _____ gal
 Product Transferred to: _____

Start Time (purge): 1154 Weather Conditions: Overcast
 Sample Time/Date: 1223 / 9.12.13 Water Color: clear Odor: Y/N
 Approx. Flow Rate: 100 mlpm Sediment Description: None
 Did well de-water? No If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 0.91

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µmhos/cm - µS)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>1212</u>	<u>1.80</u>	<u>6.18</u>	<u>.114</u>	<u>14.5</u>	<u>1.40</u>	<u>97.3</u>	<u>0.91</u>
<u>1215</u>	<u>2.1</u>	<u>6.16</u>	<u>.114</u>	<u>14.6</u>	<u>1.34</u>	<u>96.3</u>	<u>0.91</u>
<u>1218</u>	<u>2.4</u>	<u>6.17</u>	<u>.113</u>	<u>14.6</u>	<u>1.32</u>	<u>92.2</u>	<u>0.91</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-116</u>	<u>6</u> x vov vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>2</u> x vov vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
<u>FF</u>	<u>1</u> x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	<u>2</u> x vov vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
<u>FF</u>	<u>1</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At: 19.14
SAMPLES COLLECTED ON 09-11-13 BOTTLES BROKE DURING SHIPMENT
RECOLLECTED ON 09-12-13

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 9.9.13 - 9.13.13 (inclusive)
 Sampler: J.P

Well ID: MW-117
 Well Diameter: 2.4 in.
 Total Depth: 17.81 ft.
 Depth to Water: 8.11 ft.
9.7 ϕ xVF _____ = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Date Monitored: 9.9.13

Volume	3/4"= 0.02	1"= 0.04	<u>2"= 0.17</u>	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 16.66

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: YSI

Sampling Equipment:
 Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ gal
 Amt Removed from Well: _____ gal
 Water Removed: _____ gal
 Product Transferred to: _____

Start Time (purge): 0933 Weather Conditions: OVERCAST
 Sample Time/Date: 1001 / 9.10.13 Water Color: CLEAR Odor: Y / N
 Approx. Flow Rate: 100 mlpm Sediment Description: NONE
 Did well de-water? NO If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 7.86

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (μ mhos/cm - μ S)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>0951</u>	<u>1.8</u>	<u>6.17</u>	<u>.163</u>	<u>16.7</u>	<u>2.46</u>	<u>156.3</u>	<u>7.86</u>
<u>0954</u>	<u>2.1</u>	<u>6.25</u>	<u>.123</u>	<u>16.8</u>	<u>3.74</u>	<u>156.8</u>	<u>7.86</u>
<u>0957</u>	<u>2.4</u>	<u>6.27</u>	<u>.113</u>	<u>16.9</u>	<u>4.66</u>	<u>157.1</u>	<u>7.86</u>
<u>0959</u>	<u>2.7</u>	<u>6.25</u>	<u>.116</u>	<u>17.09</u>	<u>4.51</u>	<u>159.2</u>	<u>7.86</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-117</u>	<u>6</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>1</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	<u>1</u> x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At: 13-14' J. Payne observed air bubbles IN LINE

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: R Add/Replaced Lock: R



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556 Job Number: 386773
 Site Address: 101 Mulford Road Event Date: _____ (inclusive)
 City: Toledo, WA Sampler: A.A. J.P.

Well ID: MW-118 Date Monitored: 9.9.13
 Well Diameter: (2) 4 in.
 Total Depth: 17.42 ft.
 Depth to Water: 7.28 ft. Check if water column is less than 0.50 ft.
 $\phi = 1.4$ xVF _____ = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 9.36

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: YSI

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	_____ ft
Visual Confirmation/Description:	_____
Skimmer / Absorbant Sock (circle one)	_____
Amt Removed from Skimmer:	_____ gal
Amt Removed from Well:	_____ gal
Water Removed:	_____ gal
Product Transferred to:	_____

Start Time (purge): 1157 Weather Conditions: SUN
 Sample Time/Date: 1225 / 9.9.13 Water Color: CLEAR Odor: Y I (N)
 Approx. Flow Rate: 1.60 mlpm Sediment Description: NONE
 Did well de-water? No If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 7.88

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µmhos/cm - pS)	Temperature (C F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>1215</u>	<u>1.8</u>	<u>6.28</u>	<u>.681</u>	<u>16.8</u>	<u>6.29</u>	<u>148.1</u>	<u>7.88</u>
<u>1218</u>	<u>2.1</u>	<u>6.12</u>	<u>.680</u>	<u>16.9</u>	<u>6.20</u>	<u>148.0</u>	<u>7.88</u>
<u>1221</u>	<u>2.4</u>	<u>6.12</u>	<u>.679</u>	<u>17.0</u>	<u>6.19</u>	<u>148.7</u>	<u>7.88</u>
<u>1223</u>	<u>2.7</u>	<u>6.12</u>	<u>.679</u>	<u>17.2</u>	<u>6.33</u>	<u>148.0</u>	<u>7.88</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-118</u>	<u>6</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>1</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	<u>1</u> x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At: 13-14'



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 9.9.13 - 9.13.13 (inclusive)
 Sampler: J.P

Well ID: MW-119
 Well Diameter: (2) 4 in.
 Total Depth: 16.84 ft.
 Depth to Water: 8.51 ft.
0.33 xVF = - = - x3 case volume = Estimated Purge Volume: - gal.

Date Monitored: 9.11.13

Volume	3/4"= 0.02	1"= 0.04	<u>2"= 0.17</u>	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 10.17

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: YGT

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	_____ ft
Visual Confirmation/Description:	_____
Skimmer / Absorbant Sock (circle one)	_____
Amt Removed from Skimmer:	_____ gal
Amt Removed from Well:	_____ gal
Water Removed:	_____ gal
Product Transferred to:	_____

Start Time (purge): 12:10
 Sample Time/Date: 1247 / 9.11.13
 Approx. Flow Rate: 100 mlpm
 Did well de-water? No If yes, Time: _____ Volume: _____ gal.

Weather Conditions: SUN
 Water Color: CLEAR Odor: Y/N
 Sediment Description: NONE
 DTW @ Sampling: 8.89

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µmhos/cm - µS)	Temperature (C F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>1236</u>	<u>1.8</u>	<u>6.44</u>	<u>.244</u>	<u>20.0</u>	<u>2.92</u>	<u>90.3</u>	<u>8.89</u>
<u>1239</u>	<u>2.1</u>	<u>6.45</u>	<u>.244</u>	<u>19.9</u>	<u>2.98</u>	<u>91.8</u>	<u>8.89</u>
<u>1242</u>	<u>2.4</u>	<u>6.45</u>	<u>.245</u>	<u>19.9</u>	<u>3.01</u>	<u>92.3</u>	<u>8.89</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-119</u>	<u>0</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>2</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
<u>FF</u>	<u>1</u> x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	<u>2</u> x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
<u>FF</u>	<u>1</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At: 12-13



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 9.9.13-9.13.13 (inclusive)
 Sampler: J.P.

Well ID: MM-120
 Well Diameter: (2) 4 in.
 Total Depth: 17.00 ft.
 Depth to Water: 7.36 ft.
9.70 xVF _____ = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Date Monitored: 9.13.13

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 9.30

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: Y5I

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	_____ ft
Visual Confirmation/Description:	_____
Skimmer / Absorbant Sock (circle one)	_____
Amt Removed from Skimmer:	_____ gal
Amt Removed from Well:	_____ gal
Water Removed:	_____ gal
Product Transferred to:	_____

Start Time (purge): 1323 Weather Conditions: SUN
 Sample Time/Date: 1340 / 9.9.13 Water Color: clear Odor: Y/N
 Approx. Flow Rate: 1.00 mlpm Sediment Description: None
 Did well de-water? No If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 7.89

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µmhos/cm µS)	Temperature (C F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>1341</u>	<u>1.00</u>	<u>6.55</u>	<u>.239</u>	<u>19.3</u>	<u>.70</u>	<u>89.0</u>	<u>7.89</u>
<u>1344</u>	<u>2.1</u>	<u>6.50</u>	<u>.230</u>	<u>19.0</u>	<u>.59</u>	<u>91.5</u>	<u>7.89</u>
<u>1347</u>	<u>2.4</u>	<u>6.50</u>	<u>.238</u>	<u>18.9</u>	<u>.59</u>	<u>91.0</u>	<u>7.89</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MM-120</u>	<u>6</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
	x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
	x 250ml poly	YES	NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At: 13-14



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 9.9.13 - 9.13.13 (inclusive)
 Sampler: J.P.

Well ID: B.1
 Well Diameter: 2.4 in.
 Total Depth: 19.90 ft.
 Depth to Water: 7.18 ft.
12.72 xVF = - = - x3 case volume = Estimated Purge Volume: - gal.

Date Monitored: 9.9.13

Volume	3/4" = 0.02	1" = 0.04	2" = 0.17	3" = 0.38
Factor (VF)	4" = 0.66	5" = 1.02	6" = 1.50	12" = 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 9.72

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ gal
 Amt Removed from Well: _____ gal
 Water Removed: _____ gal
 Product Transferred to: _____

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: YSI

Sampling Equipment:
 Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: _____

Start Time (purge): 0446 Weather Conditions: RAIN
 Sample Time/Date: 1015 / 9.13.13 Water Color: CLEAR Odor: Y (N)
 Approx. Flow Rate: 100 mlpm Sediment Description: NONE
 Did well de-water? NO If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 7.61

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µmhos/cm - µS)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>1004</u>	<u>1.8</u>	<u>6.20</u>	<u>.232</u>	<u>16.7</u>	<u>.70</u>	<u>99.5</u>	<u>7.61</u>
<u>1007</u>	<u>2.1</u>	<u>6.22</u>	<u>.233</u>	<u>16.7</u>	<u>.60</u>	<u>99.1</u>	<u>7.61</u>
<u>1010</u>	<u>2.4</u>	<u>6.22</u>	<u>.234</u>	<u>16.7</u>	<u>.67</u>	<u>98.3</u>	<u>7.61</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>B.1</u>	<u>10</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>2</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
<u>FF</u>	<u>1</u> x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
<u>FF</u>	<u>1</u> x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	<u>2</u> x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
<u>FF</u>	<u>1</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At: 15' - 16'

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: ll Add/Replaced Lock: ll



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 9.9.13 - 9.13.13 (inclusive)
 Sampler: J.P.

Well ID: B-2
 Well Diameter: (2) 4 in.
 Total Depth: 19.23 ft.
 Depth to Water: 8.41 ft.
10.02 xVF = - = - x3 case volume = Estimated Purge Volume: - gal.

Date Monitored: 9.9.13

Volume Factor (VF):
 3/4" = 0.02 1" = 0.04 2" = 0.17 3" = 0.38
 4" = 0.66 5" = 1.02 6" = 1.50 12" = 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 10.57

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: Y6I

Sampling Equipment:
 Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ gal
 Amt Removed from Well: _____ gal
 Water Removed: _____ gal
 Product Transferred to: _____

Start Time (purge): 0822
 Sample Time/Date: 0841 / 9.13.13
 Approx. Flow Rate: 100 mlpm
 Did well de-water? NO If yes, Time: _____ Volume: _____ gal.

Weather Conditions: RAIN
 Water Color: CLEAR Odor: Y / (N)
 Sediment Description: NONE
 DTW @ Sampling: 8.92

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µmhos/cm µS _C)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>0830</u>	<u>1.8</u>	<u>6.29</u>	<u>.238</u>	<u>14.8</u>	<u>1.87</u>	<u>126.3</u>	<u>8.92</u>
<u>0833</u>	<u>1.1</u>	<u>6.29</u>	<u>.236</u>	<u>14.8</u>	<u>1.85</u>	<u>126.3</u>	<u>8.92</u>
<u>0836</u>	<u>2.4</u>	<u>6.30</u>	<u>.233</u>	<u>14.9</u>	<u>1.82</u>	<u>126.3</u>	<u>8.92</u>
		<u>6.31</u>	<u>.221</u>	<u>14.9</u>	<u>1.82</u>	<u>126.3</u>	

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>B-2</u>	<u>6</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>2</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
<u>FF</u>	<u>1</u> x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
<u>FF</u>	<u>2</u> x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At: 14-15



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 9.9.13-9.13.13 (inclusive)
 Sampler: J.P

Well ID: B.3 Date Monitored: 9.9.13
 Well Diameter: 2.4 in.
 Total Depth: 13.79 ft.

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Depth to Water: 5.79 ft. Check if water column is less than 0.50 ft.
 xVF = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 9.23

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: YSI

Sampling Equipment:
 Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ gal
 Amt Removed from Well: _____ gal
 Water Removed: _____ gal
 Product Transferred to: _____

Start Time (purge): 1240 Weather Conditions: Rain
 Sample Time/Date: 1332 / 9.13.13 Water Color: Clear Odor: Y/N MILD
 Approx. Flow Rate: 1.6 mlpm Sediment Description: NONE
 Did well de-water? NO If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 8.68

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µmhos/cm - µS)	Temperature (C F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>1316</u>	<u>1.8</u>	<u>6.48</u>	<u>.687</u>	<u>18.3</u>	<u>1.57</u>	<u>-131.8</u>	<u>8.41</u>
<u>1319</u>	<u>2.1</u>	<u>6.51</u>	<u>.697</u>	<u>18.9</u>	<u>.96</u>	<u>-138.9</u>	<u>8.56</u>
<u>1322</u>	<u>2.4</u>	<u>6.61</u>	<u>.698</u>	<u>19.0</u>	<u>.95</u>	<u>-139.5</u>	<u>8.68</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>B.3</u>	<u>4</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	<u>NP</u>	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>2</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
<u>FF</u>	<u>1</u> x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	<u>2</u> x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
<u>FF</u>	<u>1</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At: 11.12



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 9.9.13 - 9.13.13 (inclusive)
 Sampler: J.P.

Well ID: B-4
 Well Diameter: (2) 4 in.
 Total Depth: 14.74 ft.
 Depth to Water: 7.30 ft.
7.94 xVF = - = -

Date Monitored: 9.9.13

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 9.78

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: YST

Sampling Equipment:
 Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ gal
 Amt Removed from Well: _____ gal
 Water Removed: _____ gal
 Product Transferred to: _____

Start Time (purge): 1148 Weather Conditions: RAIN
 Sample Time/Date: 1223 / 9.13.13 Water Color: CLEAR Odor: (Y) N MILD
 Approx. Flow Rate: 100 mlpm Sediment Description: NONE
 Did well de-water? No If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 7.90

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µmhos/cm - µS)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>1200</u>	<u>1.8</u>	<u>6.58</u>	<u>.282</u>	<u>19.5</u>	<u>1.02</u>	<u>-197.0</u>	<u>7.89</u>
<u>1209</u>	<u>2.1</u>	<u>6.56</u>	<u>.287</u>	<u>19.5</u>	<u>.95</u>	<u>-194.7</u>	<u>7.90</u>
<u>1212</u>	<u>2.4</u>	<u>6.50</u>	<u>.286</u>	<u>19.6</u>	<u>.92</u>	<u>-194.9</u>	<u>7.90</u>

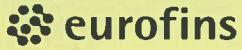
LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>B-4</u>	<u>0</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	(NP)	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
<u>FF</u>	<u>2</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
<u>FF</u>	<u>2</u> x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At: 10' = 11'

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: 1 Add/Replaced Lock: _____

Chevron Northwest Region Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # _____

For Eurofins Lancaster Laboratories use only
Group # _____ Sample # _____

Instructions on reverse side correspond with circled numbers.

1 Please forward the lab Client Information to Consultant and cc: G-R			4 Matrix		5 Analyses Requested										SCR #: _____												
Facility # SS#211556-OML G-R#386773 Site Address 101 Mulford Road, TOLEDO, WA Chevron PM MHO SAICRS Lead Consultant Russell Shropshire Consultant/Office Gettler-Ryan, Inc., 6747 Sierra Court, Suite J, Dublin, CA 94568 Consultant Project Mgr. Deanna L. Harding, (deanna@grinc.com), (925) 551-7444 x130 Consultant Phone # (425) 482-3323 x Sampler _____			<input type="checkbox"/> Sediment <input type="checkbox"/> Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Air <input type="checkbox"/> Ground <input type="checkbox"/> Surface <input type="checkbox"/> Oil		Total Number of Containers BTEX + MTBE 8021 <input type="checkbox"/> 8260 <input type="checkbox"/> Naphth <input type="checkbox"/> 8260 full scan Oxygenates NWTPH-Gx NWTPH-Dx with Silica Gel Cleanup <input checked="" type="checkbox"/> NWTPH-Dx without Silica Gel Cleanup <input checked="" type="checkbox"/> WA VPH <input type="checkbox"/> WA EPH <input type="checkbox"/> Lead Total <input type="checkbox"/> Diss. <input checked="" type="checkbox"/> Method 6020 NITRATE / SULFATE / SULFIDE DISSOLVED IRON / MANGANESE METHANE ALKALINITY										<input type="checkbox"/> Results in Dry Weight <input type="checkbox"/> J value reporting needed <input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds <input type="checkbox"/> 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run _____ oxy's on highest hit <input type="checkbox"/> Run _____ oxy's on all hits												
2 Sample Identification		3 Collected		Grab		Composite												6 Remarks									
		Date	Time			Soil	Water	Oil	Total	BTEX + MTBE	8021	8260	Naphth	Oxygenates	NWTPH-Gx	NWTPH-Dx with Silica Gel Cleanup	NWTPH-Dx without Silica Gel Cleanup	WA VPH	WA EPH	Lead	Total	Diss.	Method				
<i>R.A</i>		<i>9.10.13</i>		<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		<i>2</i>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>									Please report results for Dx with and without silica gel cleanup. Dissolved iron & manganese, as well as alkalinity samples have been field filtered <i>ALL SAMPLES WERE COLLECTED 9.10.13</i>		
<i>MW-117</i>			<i>1002</i>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		<i>16</i>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>											
<i>MW-118</i>			<i>1225</i>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		<i>9</i>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>											
<i>MW-120</i>			<i>1350</i>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		<i>9</i>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>											
7 Turnaround Time Requested (TAT) (please circle)				Relinquished by <i>[Signature]</i>				Date <i>9.10.13</i>		Time		Received by				Date		Time									
Standard <input checked="" type="radio"/> 5 day 4 day 72 hour 48 hour 24 hour				Relinquished by				Date		Time		Received by				Date		Time									
8 Data Package (circle if required)				Relinquished by Commercial Carrier:				Received by				Date		Time													
Type I - Full				EDD (circle if required) <input checked="" type="checkbox"/> EDDED CVX-RTBU-FI_05 (default)				UPS <input checked="" type="checkbox"/> FedEx _____ Other _____				Temperature Upon Receipt _____ °C				Custody Seals Intact? Yes No											
Type VI (Raw Data)				Other: _____																							

Chevron Northwest Region Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # _____ Group # _____ Sample # _____
 For Eurofins Lancaster Laboratories use only
 Instructions on reverse side correspond with circled numbers.

1 Please forward the lab results directly to the Lead Consultant and cc: G-R

Facility # **SS#211556-OML G-R#386773** WBS

Site Address **101 Mulford Road, TOLEDO, WA**

Chevron PM **MHO** SAICRS Lead Consultant **Russell Shropshire**

Consultant/Office **Gettler-Ryan, Inc., 6747 Sierra Court, Suite J, Dublin, CA 94568**

Consultant Project Mgr. **Deanna L. Harding, (deanna@grinc.com), (925) 551-7444 x140**

Consultant Phone # **(425) 482-3323 x**

Sampler **J. Payne**

2 Sample Identification

Sample ID	Collected		Grab	Composite	Soil	Water	Oil	Total Number of Containers	Analyses Requested										Remarks						
	Date	Time							BTEX + MTBE	8021	8260	Naphth	9260 full scan	Oxygenates	NWTPH-Gx	NWTPH-Dx with Silica Gel Cleanup	NWTPH-Dx without Silica Gel Cleanup	WA VPH		WA EPH	Lead Total	Diss.	Method		
QA	9.11.13		<input checked="" type="checkbox"/>					2	<input checked="" type="checkbox"/>																
MW-103		1151	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		16	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
MW-112		1360	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		16	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
MW-115		1052	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		9	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
MW-116		1052	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		9	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
MW-119		1217	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		16	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

3 Grab Composite

4 Matrix

5 Analyses Requested

6 Remarks

7 Turnaround Time Requested (TAT) (please circle)

Standard 5 day 4 day
72 hour 48 hour 24 hour

Relinquished by **[Signature]** Date **9.11.13** Time **16:00** Received by **[Signature]** Date **9.12.13** Time **0945**

8 Data Package (circle if required)

Type I - Full Type VI (Raw Data)

EDD (circle if required) **EDD** CVX-RTBU-FL_05 (default) Other: _____

Relinquished by Commercial Carrier: UPS FedEx _____ Other _____

Temperature Upon Receipt **1.3** °C Custody Seals Intact? **Yes** No

- 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

Please report results for Dx with and without silica gel cleanup. Dissolved iron & manganese, as well as alkalinity samples have been field filtered

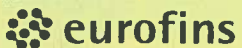
AMEND COC:

ADD DIS. LEAD TO MW-115

ADD DIS. IRON & MANGANESE TO MW-116

MWC 09-12-13

Chevron Northwest Region Analysis Request/Chain of Custody



**Lancaster
Laboratories**

Acct. # _____ Group # _____ Sample # _____

For Eurofins Lancaster Laboratories use only

Instructions on reverse side correspond with circled numbers.

1 Client Information Please forward the lab results directly to the Lead Consultant and cc: G-R

Facility # SS#211556-OML G-R#386773 WBS

Site Address 101 Mulford Road, TOLEDO, WA

Chevron PM MHO SAICRS Lead Consultant Russell Shropshire

Consultant/Office Gettler-Ryan, Inc., 6747 Sierra Court, Suite J, Dublin, CA 94568

Consultant Project Mgr. Deanna L. Harding, (deanna@grinc.com), (925) 551-7444 x180

Consultant Phone # (425) 482-3323 x

Sampler J. PANE

4 Matrix

Sediment Potable Ground Surface

Soil NPDES Air

5 Analyses Requested

Total Number of Containers

BTEX + MTBE 8021 8260 Naphth

8260 full scan

Oxygenates

NWTPH-Gx

NWTPH-Dx with Silica Gel Cleanup

NWTPH-Dx without Silica Gel Cleanup

WA VPH WA EPH

Lead Total Diss. Method 6020

NITRATE · SULFATE
DISSOLVED IRON / MANGANESE
SULFIDE · METHANE
ALKALINITY

- 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

Sample Identification	Collected		Grab	Composite	Soil	Water	Oil	Total Number of Containers	BTEX + MTBE	8021	8260	Naphth	Oxygenates	NWTPH-Gx	NWTPH-Dx with Silica Gel Cleanup	NWTPH-Dx without Silica Gel Cleanup	WA VPH	WA EPH	Lead	Total	Diss.	Method
	Date	Time																				
<u>QA</u>	<u>9-17-13</u>		<u>X</u>			<u>X</u>		<u>2</u>	<u>X</u>					<u>X</u>								
<u>MW-109</u>		<u>1116</u>	<u>X</u>			<u>X</u>		<u>9</u>	<u>X</u>					<u>X</u>	<u>X</u>	<u>X</u>			<u>X</u>			
<u>MW-110</u>		<u>1320</u>	<u>X</u>			<u>X</u>		<u>9</u>	<u>X</u>					<u>X</u>	<u>X</u>	<u>X</u>			<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>
<u>MW-113</u>		<u>0852</u>	<u>X</u>			<u>X</u>		<u>16</u>	<u>X</u>					<u>X</u>	<u>X</u>	<u>X</u>			<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>
<u>MW-114</u>		<u>1013</u>	<u>X</u>			<u>X</u>		<u>9</u>	<u>X</u>					<u>X</u>	<u>X</u>	<u>X</u>			<u>X</u>			
<u>MW-116</u>		<u>1223</u>	<u>X</u>			<u>X</u>		<u>16</u>	<u>X</u>					<u>X</u>	<u>X</u>	<u>X</u>			<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>

6 Remarks

Please report results for Dx with and without silica gel cleanup. Dissolved iron & manganese, as well as alkalinity samples have been field filtered

7 Turnaround Time Requested (TAT) (please circle)

Standard 5 day 4 day

72 hour 48 hour 24 hour

Relinquished by [Signature] Date 9-12-13 Time 1030

Received by _____ Date _____ Time _____

8 Data Package (circle if required)

Type I - Full

Type VI (Raw Data)

EDD (circle if required)

CVX-RTBU-FI_05 (default)

Other: _____

Relinquished by Commercial Carrier:

UPS FedEx _____ Other _____

Temperature Upon Receipt _____ °C

Custody Seals Intact? Yes _____ No _____

Chevron Northwest Region Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # 11260

For Eurofins Lancaster Laboratories use only
 Group # 1418939 Sample # 7198300-15
 Instructions on reverse side correspond with circled numbers.

1 Please forward the lab results to the Lead Consultant and cc: G-R Facility # <u>SS#211556-OML G-R#386773</u> WBS Site Address <u>101 Mulford Road, TOLEDO, WA</u> Chevron PM <u>MHO</u> SAICRS Lead Consultant <u>Russell Shropshire</u> Consultant/Office <u>Gettler-Ryan, Inc., 6747 Sierra Court, Suite J, Dublin, CA 94588</u> Consultant Project Mgr. <u>Deanna L. Harding, (deanna@grinc.com), (925) 551-7444 x180</u> Consultant Phone # <u>(425) 482-3323 x</u> Sampler <u>J. Payne</u>			4 Matrix <input type="checkbox"/> Sediment <input checked="" type="checkbox"/> Ground <input type="checkbox"/> Surface <input type="checkbox"/> Potable <input type="checkbox"/> Water <input type="checkbox"/> NPDES <input type="checkbox"/> Oil <input type="checkbox"/> Air			5 Analyses Requested Total Number of Containers BTEX + MTBE 8021 <input type="checkbox"/> 8260 <input checked="" type="checkbox"/> Naphth <input type="checkbox"/> 8260 full scan Oxygenates NMTPH-Gx NMTPH-Dx with Silica Gel Cleanup <input checked="" type="checkbox"/> NMTPH-Dx without Silica Gel Cleanup <input checked="" type="checkbox"/> WA VPH <input type="checkbox"/> WA EPH <input type="checkbox"/> Lead Total <input type="checkbox"/> Diss. <input checked="" type="checkbox"/> Method <u>8020</u> <u>NITRATE - SULFATE</u> <u>DISS. IRON & MANGANESE</u> <u>SULFIDE - METHANE</u> <u>ALKALINITY</u>										SCR #: _____
2 Sample Identification Collected Date Time Grab Composite <u>QA</u> <u>9.13</u> <u>X</u> <u>X</u> <u>B.1</u> <u>1015</u> <u>X</u> <u>X</u> <u>B.2</u> <u>1041</u> <u>X</u> <u>X</u> <u>B.3</u> <u>1337</u> <u>X</u> <u>X</u> <u>B.4</u> <u>1223</u> <u>X</u> <u>X</u> <u>MW.11</u> <u>1115</u> <u>X</u> <u>X</u>			6 Remarks Please report results for Dx with and without silica gel cleanup. Dissolved iron & manganese, as well as alkalinity samples have been field filtered													
7 Turnaround Time Requested (TAT) (please circle) (Standard) 5 day 4 day 72 hour 48 hour 24 hour			Relinquished by <u>[Signature]</u> Date <u>9.13.13</u> Time <u>1630</u> Relinquished by _____ Date _____ Time _____			Received by _____ Date _____ Time _____ Received by _____ Date _____ Time _____			9							
8 Data Package (circle if required) Type I - Full Type VI (Raw Data)			EDD (circle if required) <u>EDDED</u> CVX-RTBU-FI_05 (default) Other: _____			Relinquished by Commercial Carrier: UPS <input checked="" type="checkbox"/> FedEx _____ Other _____ Temperature Upon Receipt <u>14.4.2</u> °C			Received by <u>[Signature]</u> Date <u>9/14/13</u> Time <u>850</u> Custody Seals Intact? <u>(Yes)</u> No							



GETTLER-RYAN INC.



TRANSMITTAL

December 6, 2013

G-R #386773

TO: Mr. Russell Shropshire
Leidos, Inc.
18912 North Creek Parkway, Suite 101
Bothell, Washington 98011

FROM: Deanna L. Harding
Project Coordinator
Gettler-Ryan Inc.
6805 Sierra Court, Suite G
Dublin, California 94568

RE: **Former Texaco Service Station
#211556/Cowlitz BP
101 Mulford Road
Toledo, Washington
UST Site#10669**

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DESCRIPTION
VIA PDF	Groundwater Monitoring and Sampling Data Package Fourth Quarter Event of November 18, 19, 20, 21, 22, 2013

COMMENTS:

Pursuant to your request, we are providing you with copies of the above referenced data for your use.

Please provide us the updated historical data prior to the next monitoring and sampling event for our field use.

Please feel free to contact me if you have any comments/questions.

trans/211556

Standard Operating Procedure, Low-Flow Purging and Sampling

Gettler-Ryan Inc. field personnel adhere to the following Standard Operating Procedure (SOP) for the collection and handling of representative groundwater samples using the Low-Flow (Minimal-Drawdown) Purging technique. This SOP incorporates purging and sampling methods discussed in U.S. EPA, Ground Water Issue, Publication Number EPA/540/S-95/504, April 1996 by Puls, R.W. and M.J. Barcelona - "*Low-Flow (Minimal-Drawdown) Ground-Water Sampling Procedures.*"

A QED Well Wizard™ (or equivalent) bladder pump or Peristaltic Pump will be used to purge and sample selected wells as outlined in the scope-of-work. An in-line flow cell or other multi-parameter meter is used to collect water quality indicating parameters during purging.

Initial Pump Discharge Test Procedures

The Static Water Level (SWL) is measured in all wells at the site prior to the installation of the pump or tubing and initiation of the test procedures in any well. In addition, the presence or absence of separate-phase hydrocarbons (SPH) is determined using an interface probe. Product thickness, if present, is measured to the nearest 0.01 foot. The SWL measurement and SPH thickness, if any, will be recorded on the field data sheet.

The bladder pump or suction inlet tubing of the peristaltic pump is then positioned with its inlet located within the screened interval of the well. The in-line flow cell is then connected to the discharge tubing. After pump installation, the SWL is allowed to recover to its original level. The pump is then started at a discharge rate between 100 ml to 300 ml per minute with the in-line flow cell connected. The water level is monitored continuously for any change from the original measurement and the discharge rate is adjusted until an optimum discharge rate (ODR) is determined. The goal for the ODR is to produce a stable drawdown of less than 0.1 meter as allowed by site conditions; however the total drawdown from the initial SWL should not exceed 25% of the distance between pump inlet location and the top of the well screen. Once achieved, the ODR will be confirmed by volumetric discharge measurement and recorded on the field data sheet.

Purging and Water Quality Parameter Measurement

When the ODR has been determined and the SWL drawdown has been established within the acceptable range, and a minimum of one pump system volume (bladder volume and/or discharge tubing volume) has been purged, field measurements for temperature (T), pH, conductivity (Ec), and if required, oxygen reduction potential (ORP) and dissolved oxygen (DO) will be collected and documented on the field data sheet. Measurements should be taken every three to five minutes until parameters stabilize for three consecutive readings. The minimum parameter subset of T ($\pm 10\%$), pH (± 0.1 unit), and Ec (± 10 uS) are required to stabilize. Additional parameters that may be required are DO (± 0.2 mg/l) and ORP (± 20 mV).

Sample Collection

When water quality parameters have stabilized, and the SWL drawdown remains established within the acceptable range, groundwater sample collection may begin. If used, the in-line flow cell and its tubing are disconnected from the discharge tubing prior to sample collection. Water samples are collected from the discharge tubing into appropriate containers. Pre-preserved containers, supplied by analytical laboratories, are used when possible. When pre-preserved containers are not available, the laboratory is instructed to preserve the sample as appropriate. Duplicate samples are collected for the laboratory to use in maintaining quality assurance/quality control standards, as directed by the scope of work. The samples are labeled to include the job number, sample identification, collection date and time, analysis, preservation (if any), and the sample collector's initials. The water samples are placed in a cooler,

maintained at 4°C for transport to the laboratory. A laboratory supplied trip blank accompanies each sampling set. The trip blank is analyzed for some or all of the same compounds as the groundwater samples. Once collected in the field, all samples are maintained under chain of custody until delivered to the laboratory.

The chain of custody document includes the job number, type of preservation, if any, analysis requested, sample identification, date and time collected, and the sample collector's name. The chain of custody is signed and dated (including time of transfer) by each person who receives or surrenders the samples, beginning with the field personnel and ending with the laboratory personnel.

A laboratory supplied trip blank accompanies each sampling set. For sampling sets greater than 20 samples, 5% trip blanks are included. The trip blank is analyzed for some or all of the same compounds as the groundwater samples.



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 11.18/21.13 (inclusive)
 Sampler: J.P.

Well ID: 111.103
 Well Diameter: 2.14 in.
 Total Depth: 10.84 ft.
 Depth to Water: 7.62 ft.

Date Monitored: 11.18.13

Volume Factor (VF)	3/4" = 0.02	1" = 0.04	2" = 0.17	3" = 0.38
	4" = 0.66	5" = 1.02	6" = 1.50	12" = 5.80

Check if water column is less than 0.50 ft.

11.22 xVF - = - x3 case volume = Estimated Purge Volume: - gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 9.06

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: Y92 0105 556

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters x
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbent Sock (circle one)
 Amt Removed from Skimmer: _____ gal
 Amt Removed from Well: _____ gal
 Water Removed: _____ gal
 Product Transferred to: _____

Start Time (purge): 0800
 Sample Time/Date: 0921 11.20.13
 Approx. Flow Rate: 100 mlpm
 Did well de-water? NO If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 7.80

Weather Conditions: SUN
 Water Color: CLEAR Odor: Y/N
 Sediment Description: NONE

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µmhos/cm - pH)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>0910</u>	<u>1.8</u>	<u>6.79</u>	<u>.215</u>	<u>10.17</u>	<u>1.09</u>	<u>106.0</u>	<u>7.73</u>
<u>0921</u>	<u>2.1</u>	<u>6.76</u>	<u>.215</u>	<u>10.21</u>	<u>1.09</u>	<u>106.3</u>	<u>7.77</u>
<u>0924</u>	<u>2.4</u>	<u>6.76</u>	<u>.215</u>	<u>10.26</u>	<u>1.06</u>	<u>107.7</u>	<u>7.81</u>
<u>0927</u>	<u>2.7</u>	<u>6.75</u>	<u>.215</u>	<u>10.31</u>	<u>1.02</u>	<u>101.1</u>	<u>7.80</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>111.103</u>	<u>0</u> x vov vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>2</u> x vov vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
	<u>1</u> x 250ml poly	YES	<u>FF</u> HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	<u>2</u> x vov vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
	<u>1</u> x 250ml poly	YES	<u>FF</u> NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At: 11-12



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 11.10/11.13 (inclusive)
 Sampler: J.P.

Well ID: MM-109
 Well Diameter: 2.14 in.
 Total Depth: 12.94 ft.
 Depth to Water: 8.12 ft.
4.82 xVF = - = - x3 case volume = Estimated Purge Volume: - gal.

Date Monitored: 11.18.13

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	<u>2"= 0.17</u>	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 9.08

Purge Equipment:

- Disposable Bailer _____
- Stainless Steel Bailer _____
- Stack Pump _____
- Suction Pump _____
- Grundfos _____
- Peristaltic Pump x
- QED Bladder Pump _____
- Other: _____

Sampling Equipment:

- Disposable Bailer _____
- Pressure Bailer _____
- Metal Filters _____
- Peristaltic Pump x
- QED Bladder Pump _____
- Other: _____

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	_____ ft
Visual Confirmation/Description:	_____
Skimmer / Absorbant Sock (circle one)	_____
Amt Removed from Skimmer:	_____ gal
Amt Removed from Well:	_____ gal
Water Removed:	_____ gal
Product Transferred to:	_____

Start Time (purge): 0819
 Sample Time/Date: 0840 11.22.13
 Approx. Flow Rate: 1000 mlpm
 Did well de-water? NO If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 9.08

Weather Conditions: Overcast / Fog
 Water Color: Clear Odor: Y (N)
 Sediment Description: None

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (μ mhos/cm - μ S)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>0837</u>	<u>1.0</u>	<u>7.08</u>	<u>.392</u>	<u>11.19</u>	<u>1.30</u>	<u>119.0</u>	<u>8.33</u>
<u>0840</u>	<u>2.1</u>	<u>7.02</u>	<u>.392</u>	<u>11.10</u>	<u>1.22</u>	<u>118.3</u>	<u>8.33</u>
<u>0843</u>	<u>2.4</u>	<u>7.06</u>	<u>.391</u>	<u>11.01</u>	<u>1.18</u>	<u>117.0</u>	<u>8.33</u>
<u>0846</u>	<u>2.7</u>	<u>7.04</u>	<u>.390</u>	<u>10.92</u>	<u>1.11</u>	<u>116.9</u>	<u>8.33</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MM-109</u>	<u>6</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
	x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
	x 250ml poly	YES	NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At: 11.5 - 12.5



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 11-18-13 (inclusive)
 Sampler: J.P.

Well ID: NU-110
 Well Diameter: 2 1/4 in.
 Total Depth: 20.01 ft.
 Depth to Water: 8.22 ft.
11.79 xVF = - = - x3 case volume = Estimated Purge Volume: - gal.

Date Monitored: 11-18-13

Volume Factor (VF)	3/4" = 0.02	1" = 0.04	2" = 0.17	3" = 0.38
	4" = 0.66	5" = 1.02	6" = 1.50	12" = 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 10.57

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbent Sock (circle one)
 Amt Removed from Skimmer: _____ gal
 Amt Removed from Well: _____ gal
 Water Removed: _____ gal
 Product Transferred to: _____

Start Time (purge): 1307
 Sample Time/Date: 1340 / 11-20-13
 Approx. Flow Rate: 100 mlpm
 Did well de-water? No If yes, Time: _____ Volume: _____ gal.

Weather Conditions: SUN
 Water Color: CLEAR Odor: Y/N
 Sediment Description: NONE
 DTW @ Sampling: 8.33

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µmhos/cm - µS)	Temperature (C F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>1325</u>	<u>1.8</u>	<u>6.50</u>	<u>.273</u>	<u>14.17</u>	<u>.46</u>	<u>113.4</u>	<u>8.33</u>
<u>1328</u>	<u>2.1</u>	<u>6.49</u>	<u>.273</u>	<u>14.10</u>	<u>.45</u>	<u>113.6</u>	<u>8.33</u>
<u>1331</u>	<u>2.4</u>	<u>6.48</u>	<u>.272</u>	<u>14.02</u>	<u>.44</u>	<u>113.8</u>	<u>8.33</u>
<u>1334</u>	<u>2.7</u>	<u>6.48</u>	<u>.272</u>	<u>13.96</u>	<u>.43</u>	<u>113.8</u>	<u>8.33</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>NU-110</u>	<u>6</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
	x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
	x 250ml poly	YES	NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At: 14'-15'

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 11.18/22.13 (inclusive)
 Sampler: J.P

Well ID: NW-111
 Well Diameter: 2.74 in.
 Total Depth: 18.00 ft.
 Depth to Water: 6.42 ft.
11.58 xVF = - x3 case volume = Estimated Purge Volume: - gal.

Date Monitored: 11.18.13

Volume Factor (VF)	3/4" = 0.02	1" = 0.04	2" = 0.17	3" = 0.38
	4" = 0.66	5" = 1.02	6" = 1.50	12" = 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 9.73

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ gal
 Amt Removed from Well: _____ gal
 Water Removed: _____ gal
 Product Transferred to: _____

Start Time (purge): 1140
 Sample Time/Date: 1212 / 11.21.13
 Approx. Flow Rate: 100 mlpm
 Did well de-water? NO If yes, Time: _____

Weather Conditions: SON
 Water Color: CLEAR Odor: (Y) N MILD
 Sediment Description: NONE
 Volume: _____ gal. DTW @ Sampling: 6.77

Time (2400 hr.)	Volume (Liters)	pH	Conductivity ($\mu\text{mhos/cm} - \mu\text{S}$)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>1150</u>	<u>1.8</u>	<u>6.85</u>	<u>.338</u>	<u>14.61</u>	<u>.58</u>	<u>-48.0</u>	<u>6.77</u>
<u>1201</u>	<u>2.1</u>	<u>6.55</u>	<u>.339</u>	<u>14.64</u>	<u>.57</u>	<u>-47.6</u>	<u>6.77</u>
<u>1204</u>	<u>2.4</u>	<u>6.55</u>	<u>.339</u>	<u>14.67</u>	<u>.55</u>	<u>-47.4</u>	<u>6.77</u>
<u>1207</u>	<u>2.7</u>	<u>6.55</u>	<u>.339</u>	<u>14.71</u>	<u>.54</u>	<u>-47.2</u>	<u>6.77</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>NW-111</u>	<u>0</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>2</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
	<u>1</u> x 250ml poly	YES	<u>FF</u> HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	<u>2</u> x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
	<u>1</u> x 250ml poly	YES	<u>FF</u> NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At: 11.13

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 11.18/21.13 (inclusive)
 Sampler: J.P.

Well ID: MW-112
 Well Diameter: (2) 4 in.
 Total Depth: 17.53 ft.
 Depth to Water: 6.76 ft.
10.77 xVF = - = - x3 case volume = Estimated Purge Volume: - gal.

Date Monitored: 11.18.13

Volume	3/4" = 0.02	1" = 0.04	2" = 0.17	3" = 0.38
Factor (VF)	4" = 0.66	5" = 1.02	6" = 1.50	12" = 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 0.91

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters X
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: _____

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	_____ ft
Visual Confirmation/Description:	_____
Skimmer / Absorbant Sock (circle one)	_____
Amt Removed from Skimmer:	_____ gal
Amt Removed from Well:	_____ gal
Water Removed:	_____ gal
Product Transferred to:	_____

Start Time (purge): 11:21
 Sample Time/Date: 11:34 11.20.13
 Approx. Flow Rate: 100 mlpm
 Did well de-water? NO If yes, Time: _____ Volume: _____ gal.

Weather Conditions: SUN
 Water Color: CLEAR Odor: Y (N)
 Sediment Description: NONE
 DTW @ Sampling: 7.23

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µmhos/cm - µS)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>11:20</u>	<u>1.0</u>	<u>6.76</u>	<u>.210</u>	<u>9.70</u>	<u>.69</u>	<u>-31.3</u>	<u>6.90</u>
<u>11:23</u>	<u>2.1</u>	<u>6.77</u>	<u>.210</u>	<u>9.47</u>	<u>.69</u>	<u>-31.9</u>	<u>7.03</u>
<u>11:26</u>	<u>2.4</u>	<u>6.77</u>	<u>.209</u>	<u>9.33</u>	<u>.58</u>	<u>-32.0</u>	<u>7.12</u>
<u>11:29</u>	<u>2.7</u>	<u>6.76</u>	<u>.209</u>	<u>9.28</u>	<u>.66</u>	<u>-31.5</u>	<u>7.23</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-112</u>	<u>0</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>2</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
	<u>1</u> x 250ml poly	YES	<u>FF</u> HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	<u>2</u> x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
	<u>1</u> x 250ml poly	YES	<u>FF</u> NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At:



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 11.18/21.13 (inclusive)
 Sampler: J.P

Well ID: MW-113
 Well Diameter: 2 1/4 in.
 Total Depth: 10.40 ft.
 Depth to Water: 7.74 ft.
10.60 xVF _____ = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Date Monitored: 11.18.13

Volume Factor (VF)	3/4" = 0.02	1" = 0.04	2" = 0.17	3" = 0.38
	4" = 0.66	5" = 1.02	6" = 1.50	12" = 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 9.87

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____ X _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____ X _____
 Peristaltic Pump _____ X _____
 QED Bladder Pump _____
 Other: _____

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	_____ ft
Visual Confirmation/Description:	_____
Skimmer / Absorbant Sock (circle one)	_____
Amt Removed from Skimmer:	_____ gal
Amt Removed from Well:	_____ gal
Water Removed:	_____ gal
Product Transferred to:	_____

Start Time (purge): 12:00 Weather Conditions: SUN
 Sample Time/Date: 12:00/11.20.13 Water Color: CLEAR Odor: Y / N
 Approx. Flow Rate: 100 mlpm Sediment Description: NONE
 Did well de-water? No If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 7.88

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µmhos/cm - µS) <u>NO</u>	Temperature (C F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>12:24</u>	<u>1.8</u>	<u>6.36</u>	<u>.089</u>	<u>10.08</u>	<u>2.04</u>	<u>124.0</u>	<u>7.88</u>
<u>12:27</u>	<u>2.1</u>	<u>6.33</u>	<u>.089</u>	<u>10.01</u>	<u>2.03</u>	<u>125.7</u>	<u>7.88</u>
<u>12:30</u>	<u>2.4</u>	<u>6.32</u>	<u>.089</u>	<u>10.00</u>	<u>2.04</u>	<u>127.2</u>	<u>7.88</u>
<u>12:33</u>	<u>2.7</u>	<u>6.32</u>	<u>.089</u>	<u>12.94</u>	<u>2.04</u>	<u>128.1</u>	<u>7.88</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-113</u>	<u>6</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>2</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
	<u>1</u> x 250ml poly	YES	<u>FF</u> HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	<u>2</u> x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
	<u>1</u> x 250ml poly	YES	<u>FF</u> NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At: 12-13'



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
Site Address: 101 Mulford Road
City: Toledo, WA

Job Number: 386773
Event Date: 11.10/22.13 (inclusive)
Sampler: J.P.

Well ID: MMU-114
Well Diameter: 2.4 in.
Total Depth: 17.04 ft.
Depth to Water: 0.36 ft.
0.69 xVF _____ = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Date Monitored: 11.10.13

Volume Factor (VF)	3/4" = 0.02	1" = 0.04	2" = 0.17	3" = 0.38
	4" = 0.66	5" = 1.02	6" = 1.50	12" = 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 10.09

Purge Equipment:
Disposable Bailer _____
Stainless Steel Bailer _____
Stack Pump _____
Suction Pump _____
Grundfos _____
Peristaltic Pump X
QED Bladder Pump _____
Other: _____

Sampling Equipment:
Disposable Bailer _____
Pressure Bailer _____
Metal Filters _____
Peristaltic Pump X
QED Bladder Pump _____
Other: _____

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	_____ ft
Visual Confirmation/Description:	_____
Skimmer / Absorbant Sock (circle one)	_____
Amt Removed from Skimmer:	_____ gal
Amt Removed from Well:	_____ gal
Water Removed:	_____ gal
Product Transferred to:	_____

Start Time (purge): 0900 Weather Conditions: Overcast / Fog
Sample Time/Date: 0940 / 11.22.13 Water Color: Clear Odor: Y / N
Approx. Flow Rate: 100 mlpm Sediment Description: None
Did well de-water? No If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 0.93

Time (2400 hr.)	Volume (Liters)	pH	Conductivity ($\mu\text{mhos/cm} - \mu\text{S}$)	Temperature (C F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>0927</u>	<u>1.0</u>	<u>7.12</u>	<u>.410</u>	<u>10.44</u>	<u>1.70</u>	<u>101.0</u>	<u>0.66</u>
<u>0930</u>	<u>1.1</u>	<u>7.09</u>	<u>.410</u>	<u>10.52</u>	<u>1.72</u>	<u>102.6</u>	<u>0.77</u>
<u>0935</u>	<u>1.5</u>	<u>7.07</u>	<u>.411</u>	<u>10.61</u>	<u>1.77</u>	<u>103.4</u>	<u>0.89</u>
<u>0936</u>	<u>1.7</u>	<u>7.05</u>	<u>.411</u>	<u>10.69</u>	<u>1.83</u>	<u>104.9</u>	<u>0.93</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MMU-114</u>	<u>6</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
	x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
	x 250ml poly	YES	NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At:

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 11.18/21.13 (inclusive)
 Sampler: J.P

Well ID: NW-115
 Well Diameter: 2 1/4 in.
 Total Depth: 17.73 ft.
 Depth to Water: 7.45 ft.
10.28 xVF _____ = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Date Monitored: 11.18.13

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 9.60

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	_____ ft
Visual Confirmation/Description:	_____
Skimmer / Absorbant Sock (circle one)	_____
Amt Removed from Skimmer:	_____ gal
Amt Removed from Well:	_____ gal
Water Removed:	_____ gal
Product Transferred to:	_____

Start Time (purge): 10:50
 Sample Time/Date: 11:31 / 11.19.13
 Approx. Flow Rate: 100 mlpm
 Did well de-water? No If yes, Time: _____ Volume: _____ gal.

Weather Conditions: OVERCAST
 Water Color: CLEAR Odor: Y / N
 Sediment Description: CLEAR
 DTW @ Sampling: 7.58

Time (2400 hr.)	Volume (Liters)	pH	Conductivity ($\mu\text{mhos/cm} - \mu\text{S}$)	Temperature (C) (F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>11:10</u>	<u>1.8</u>	<u>6.79</u>	<u>.246</u>	<u>13.19</u>	<u>.310</u>	<u>18.5</u>	<u>7.68</u>
<u>11:19</u>	<u>2.1</u>	<u>6.79</u>	<u>.246</u>	<u>13.19</u>	<u>.36</u>	<u>17.9</u>	<u>7.68</u>
<u>11:22</u>	<u>2.4</u>	<u>6.79</u>	<u>.246</u>	<u>13.19</u>	<u>.35</u>	<u>17.1</u>	<u>7.68</u>
<u>11:25</u>	<u>2.7</u>	<u>6.79</u>	<u>.246</u>	<u>13.22</u>	<u>.35</u>	<u>16.7</u>	<u>7.68</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>NW-115</u>	<u>0</u> x vov vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	x vov vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
	x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	x vov vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
	x 250ml poly	YES	NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At: 13'-14'
Lead just turning to screen, 1 broken flange's

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 11.18/21.13 (inclusive)
 Sampler: J.P.

Well ID: MW-116
 Well Diameter: (2) 4 in.
 Total Depth: 17.69 ft.
 Depth to Water: 8.15 ft.
9.54 xVF _____ = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Date Monitored: 11.18.13

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 14.65

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	_____ ft
Visual Confirmation/Description:	_____
Skimmer / Absorbant Sock (circle one)	_____
Amt Removed from Skimmer:	_____ gal
Amt Removed from Well:	_____ gal
Water Removed:	_____ gal
Product Transferred to:	_____

Start Time (purge): 0955
 Sample Time/Date: 1051 / 11.19.13
 Approx. Flow Rate: 100 mlpm
 Did well de-water? No If yes, Time: _____ Volume: _____ gal.

Weather Conditions: Overcast
 Water Color: Clear Odor: Y/N
 Sediment Description: Grey to Clear
 DTW @ Sampling: 8.31

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µmhos/cm - 25°C)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>1013</u>	<u>1.8</u>	<u>6.57</u>	<u>115</u>	<u>12.29</u>	<u>1.81</u>	<u>111.9</u>	<u>8.31</u>
<u>1016</u>	<u>2.1</u>	<u>6.37</u>	<u>103</u>	<u>12.21</u>	<u>1.77</u>	<u>112.3</u>	<u>8.31</u>
<u>1019</u>	<u>2.4</u>	<u>6.36</u>	<u>103</u>	<u>12.18</u>	<u>1.76</u>	<u>113.2</u>	<u>8.31</u>
<u>1022</u>	<u>2.7</u>	<u>6.37</u>	<u>103</u>	<u>12.18</u>	<u>1.75</u>	<u>114.1</u>	<u>8.31</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-116</u>	<u>6</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>2</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
	<u>1</u> x 250ml poly	YES	<u>FF</u> HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	<u>2</u> x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
	<u>1</u> x 250ml poly	YES	<u>F.F.</u> NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At: 13-14'



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 11.18/21.13 (inclusive)
 Sampler: J.P.

Well ID: MW-117
 Well Diameter: (2) 4 in.
 Total Depth: 17.81 ft.
 Depth to Water: 5.99 ft.
11.82 xVF = - = - x3 case volume = Estimated Purge Volume: - gal.

Date Monitored: 11.18.13

Volume Factor (VF)	3/4" = 0.02	1" = 0.04	2" = 0.17	3" = 0.38
	4" = 0.66	5" = 1.02	6" = 1.50	12" = 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 8.35

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ gal
 Amt Removed from Well: _____ gal
 Water Removed: _____ gal
 Product Transferred to: _____

Start Time (purge): 12:00
 Sample Time/Date: 12:40 / 11.19.13
 Approx. Flow Rate: 100 mlpm
 Did well de-water? NO If yes, Time: _____ Volume: _____ gal.

Weather Conditions: SUN
 Water Color: CLEAR Odor: Y/N
 Sediment Description: CLEAR
 DTW @ Sampling: _____

Time (2400 hr.)	Volume (Liters)	pH	Conductivity ($\mu\text{mhos/cm} - \text{pS}$)	Temperature (C F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>1224</u>	<u>1.8</u>	<u>6.55</u>	<u>.872</u>	<u>11.81</u>	<u>4.20</u>	<u>110.4</u>	<u>6.12</u>
<u>1227</u>	<u>2.1</u>	<u>6.92</u>	<u>.870</u>	<u>11.77</u>	<u>4.24</u>	<u>110.5</u>	<u>6.12</u>
<u>1230</u>	<u>2.4</u>	<u>6.91</u>	<u>.868</u>	<u>11.72</u>	<u>4.27</u>	<u>111.2</u>	<u>6.12</u>
<u>1233</u>	<u>2.7</u>	<u>6.49</u>	<u>.865</u>	<u>11.69</u>	<u>4.31</u>	<u>112.1</u>	<u>6.12</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-117</u>	<u>4</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>2</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
	<u>1</u> x 250ml poly	YES	<u>F.F.</u> HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	<u>2</u> x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
	<u>1</u> x 250ml poly	YES	<u>F.F.</u> NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At:
NEW MONUMENT 12-13
of Morris x3

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: R



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 11.18/21.13 (inclusive)
 Sampler: J.P.

Well ID: MW-119
 Well Diameter: (2) 4 in.
 Total Depth: 17.42 ft.
 Depth to Water: 6.57 ft.
16.85 xVF = - = - x3 case volume = Estimated Purge Volume: - gal.

Date Monitored: 11.18.13

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	8"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 6.74

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	_____ ft
Visual Confirmation/Description:	_____
Skimmer / Absorbant Sock (circle one)	_____
Amt Removed from Skimmer:	_____ gal
Amt Removed from Well:	_____ gal
Water Removed:	_____ gal
Product Transferred to:	_____

Start Time (purge): 0800 Weather Conditions: Overcast
 Sample Time/Date: 0921 11.19.13 Water Color: Clear Odor: Y/N
 Approx. Flow Rate: 100 mlpm Sediment Description: Grey to Clear
 Did well de-water? No If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 6.77

Time (2400 hr.)	Volume (Liters)	pH	Conductivity ($\mu\text{mhos/cm}$ μS)	Temperature (C F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>0900</u>	<u>1.8</u>	<u>7.32</u>	<u>.255</u>	<u>11.15</u>	<u>.60</u>	<u>-90.4</u>	<u>6.62</u>
<u>0911</u>	<u>2.1</u>	<u>6.89</u>	<u>.080</u>	<u>11.71</u>	<u>2.73</u>	<u>-7.1</u>	<u>6.77</u>
<u>0914</u>	<u>2.4</u>	<u>6.85</u>	<u>.070</u>	<u>11.76</u>	<u>2.69</u>	<u>-7.8</u>	<u>6.77</u>
<u>0917</u>	<u>2.7</u>	<u>6.83</u>	<u>.076</u>	<u>11.81</u>	<u>2.65</u>	<u>-4.0</u>	<u>6.77</u>
<u>0919</u>	<u>3</u>	<u>6.78</u>	<u>.068</u>	<u>11.90</u>	<u>2.84</u>	<u>22.9</u>	<u>6.77</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-119</u>	<u>0</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
	x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
	x 250ml poly	YES	NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At: 12'-13'
BROKEN FLANGE x 1



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 11-18/21-13 (inclusive)
 Sampler: J.P.

Well ID: MW-119
 Well Diameter: (2) 4 in.
 Total Depth: 16.84 ft.
 Depth to Water: 7.67 ft.
9.17 xVF = - = - x3 case volume = Estimated Purge Volume: - gal.

Date Monitored: 11-18-13

Volume Factor (VF)	3/4" = 0.02	1" = 0.04	2" = 0.17	3" = 0.38
	4" = 0.66	5" = 1.02	6" = 1.50	12" = 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 9.50

Purge Equipment:

- Disposable Bailer _____
- Stainless Steel Bailer _____
- Stack Pump _____
- Suction Pump _____
- Grundfos _____
- Peristaltic Pump _____
- QED Bladder Pump _____
- Other: XSI MP6 566

Sampling Equipment:

- Disposable Bailer _____
- ~~Pressure Bailer~~ _____
- Metal Filters _____
- Peristaltic Pump _____
- QED Bladder Pump _____
- Other: _____

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	_____ ft
Visual Confirmation/Description:	_____
Skimmer / Absorbant Sock (circle one)	_____
Amt Removed from Skimmer:	_____ gal
Amt Removed from Well:	_____ gal
Water Removed:	_____ gal
Product Transferred to:	_____

Start Time (purge): 1000 Weather Conditions: SUN
 Sample Time/Date: 1040 / 11-20-13 Water Color: CLEAR Odor: Y / (N)
 Approx. Flow Rate: 100 mlpm Sediment Description: NONE
 Did well de-water? NO If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 7.83

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (μ mhos/cm µS)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>1026</u>	<u>1.8</u>	<u>6.49</u>	<u>.209</u>	<u>8.10</u>	<u>.81</u>	<u>126.3</u>	<u>7.83</u>
<u>1029</u>	<u>2.1</u>	<u>6.48</u>	<u>.209</u>	<u>8.05</u>	<u>.79</u>	<u>127.1</u>	<u>7.83</u>
<u>1032</u>	<u>2.4</u>	<u>6.47</u>	<u>.209</u>	<u>8.01</u>	<u>.78</u>	<u>127.9</u>	<u>7.83</u>
<u>1036</u>	<u>2.7</u>	<u>6.46</u>	<u>.209</u>	<u>8.02</u>	<u>.77</u>	<u>128.3</u>	<u>7.83</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-119</u>	<u>6</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>2</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
	<u>1</u> x 250ml poly	YES	FF HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	<u>2</u> x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
	<u>1</u> x 250ml poly	YES	FF NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At: 12-13 head joint tank
2 broken flanges



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 11.18/21.13 (inclusive)
 Sampler: J.P

Well ID: MW-120
 Well Diameter: (2) 4 in.
 Total Depth: 17.0 ft.
 Depth to Water: 6.61 ft.
10.45 xVF - = - x3 case volume = Estimated Purge Volume: - gal.

Date Monitored: 11.18.13

Volume Factor (VF)	3/4" = 0.02	1" = 0.04	<u>2" = 0.17</u>	3" = 0.38
	4" = 0.66	5" = 1.02	8" = 1.50	12" = 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 9.70

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	_____ ft
Visual Confirmation/Description:	_____
Skimmer / Absorbant Sock (circle one)	_____
Amt Removed from Skimmer:	_____ gal
Amt Removed from Well:	_____ gal
Water Removed:	_____ gal
Product Transferred to:	_____

Start Time (purge): 1312 Weather Conditions: SUN
 Sample Time/Date: 1343 / 11.19.13 Water Color: CLEAR Odor: (Y) N
 Approx. Flow Rate: 100 mlpm Sediment Description: NONE
 Did well de-water? No If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 6.88

Time (2400 hr.)	Volume (Liters)	pH	Conductivity ($\mu\text{mhos/cm} - \mu\text{S}$)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>1330</u>	<u>1.8</u>	<u>6.71</u>	<u>.155</u>	<u>14.60</u>	<u>.38</u>	<u>94.2</u>	<u>6.88</u>
<u>1333</u>	<u>2.1</u>	<u>6.71</u>	<u>.164</u>	<u>14.69</u>	<u>.38</u>	<u>94.1</u>	<u>6.88</u>
<u>1336</u>	<u>2.4</u>	<u>6.71</u>	<u>.164</u>	<u>14.75</u>	<u>.36</u>	<u>93.9</u>	<u>6.88</u>
<u>1339</u>	<u>2.7</u>	<u>6.70</u>	<u>.163</u>	<u>14.81</u>	<u>.36</u>	<u>94.2</u>	<u>6.88</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-120</u>	<u>4</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
	x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
	x 250ml poly	YES	NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At: 11:12



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 11.18/22.13 (inclusive)
 Sampler: JF

Well ID: B-1
 Well Diameter: (2) 4 in.
 Total Depth: 19.90 ft.
 Depth to Water: 10.64 ft.
13.26 xVF - = - x3 case volume = Estimated Purge Volume: - gal.

Date Monitored: 11.18.13

Volume Factor (VF)	3/4" = 0.02	1" = 0.04	<u>2" = 0.17</u>	3" = 0.38
	4" = 0.66	5" = 1.02	6" = 1.50	12" = 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 9.29

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: _____

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	_____ ft
Visual Confirmation/Description:	_____
Skimmer / Absorbant Sock (circle one)	_____
Amt Removed from Skimmer:	_____ gal
Amt Removed from Well:	_____ gal
Water Removed:	_____ gal
Product Transferred to:	_____

Start Time (purge): 0443
 Sample Time/Date: 1014 / 11.21.13
 Approx. Flow Rate: 100 mlpm
 Did well de-water? No If yes, Time: _____ Volume: _____ gal.

Weather Conditions: SUN
 Water Color: CLEAR Odor: Y / N
 Sediment Description: NONE BROWNISH TO CLEAR
 DTW @ Sampling: _____

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µmhos/cm µS)	Temperature (C F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>1011</u>	<u>1.8</u>	<u>6.51</u>	<u>.180</u>	<u>12.62</u>	<u>.42</u>	<u>59.9</u>	<u>6.88</u>
<u>1014</u>	<u>2.1</u>	<u>6.48</u>	<u>.178</u>	<u>12.60</u>	<u>.42</u>	<u>59.8</u>	<u>6.88</u>
<u>1017</u>	<u>2.4</u>	<u>6.48</u>	<u>.176</u>	<u>12.56</u>	<u>.42</u>	<u>59.5</u>	<u>6.88</u>
<u>1019</u>	<u>2.7</u>	<u>6.47</u>	<u>.175</u>	<u>12.47</u>	<u>.42</u>	<u>59.4</u>	<u>6.88</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>B-1</u>	<u>10</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>2</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
	<u>2</u> x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>2</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	<u>2</u> x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At: 11-13



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 11-18/22-13 (inclusive)
 Sampler: J.P.

Well ID: B-2
 Well Diameter: 2.4 in.
 Total Depth: 19.23 ft.
 Depth to Water: 7.77 ft.
11.46 xVF = - = - x3 case volume = Estimated Purge Volume: - gal.

Date Monitored: 11-18-13

Volume Factor (VF)	3/4" = 0.02	1" = 0.04	2" = 0.17	3" = 0.38
	4" = 0.66	5" = 1.02	6" = 1.50	12" = 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 10.60

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: _____

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	_____ ft
Visual Confirmation/Description:	_____
Skimmer / Absorbant Sock (circle one)	_____
Amt Removed from Skimmer:	_____ gal
Amt Removed from Well:	_____ gal
Water Removed:	_____ gal
Product Transferred to:	_____

Start Time (purge): 0805
 Sample Time/Date: 0924 / 11-21-13
 Approx. Flow Rate: 100 mlpm
 Did well de-water? No If yes, Time: _____

Weather Conditions: Sun
 Water Color: clear Odor: Y / N
 Sediment Description: NONE
 Volume: _____ gal. DTW @ Sampling: 7.91

Time (2400 hr.)	Volume (Liters)	pH	Conductivity ($\mu\text{mhos/cm} - \mu\text{S}$)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>0911</u>	<u>1.8</u>	<u>6.59</u>	<u>.131</u>	<u>8.79</u>	<u>.72</u>	<u>110.7</u>	<u>7.91</u>
<u>0914</u>	<u>2.1</u>	<u>6.58</u>	<u>.131</u>	<u>8.75</u>	<u>.72</u>	<u>111.8</u>	<u>7.91</u>
<u>0917</u>	<u>2.4</u>	<u>6.59</u>	<u>.131</u>	<u>8.66</u>	<u>.71</u>	<u>112.4</u>	<u>7.91</u>
<u>0920</u>	<u>2.7</u>	<u>6.57</u>	<u>.130</u>	<u>8.57</u>	<u>.71</u>	<u>112.8</u>	<u>7.91</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>B-2</u>	<u>6</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>2</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
	<u>1</u> x 250ml poly	YES	<u>H</u> HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	<u>1</u> x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
	<u>1</u> x 250ml poly	YES	<u>H</u> NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At: 13-14'



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 11-18-2013 (inclusive)
 Sampler: J.P.

Well ID: 3-3 Date Monitored: 11-18-13
 Well Diameter: (2) 4 in.
 Total Depth: 13.79 ft.
 Depth to Water: 6.45 ft. Check if water column is less than 0.50 ft.
7.34 xVF = - = - x3 case volume = Estimated Purge Volume: - gal.

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 7.91

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:
 Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters X
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ gal
 Amt Removed from Well: _____ gal
 Water Removed: _____ gal
 Product Transferred to: _____

Start Time (purge): 1241 Weather Conditions: SUN
 Sample Time/Date: 1314 11.21.13 Water Color: CLEAR Odor: (Y) N MILD
 Approx. Flow Rate: 1.0 mlpm Sediment Description: NONE
 Did well de-water? NO If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 6.99

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µmhos/cm) ^{NS}	Temperature (C) (F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>1249</u>	<u>1.9</u>	<u>6.35</u>	<u>.439</u>	<u>15.36</u>	<u>.83</u>	<u>-26.5</u>	<u>6.73</u>
<u>1302</u>	<u>2.1</u>	<u>6.30</u>	<u>.439</u>	<u>15.36</u>	<u>.83</u>	<u>-27.1</u>	<u>6.73</u>
<u>1305</u>	<u>2.4</u>	<u>6.80</u>	<u>.438</u>	<u>15.41</u>	<u>.82</u>	<u>-27.3</u>	<u>6.86</u>
<u>1308</u>	<u>2.7</u>	<u>6.85</u>	<u>.438</u>	<u>15.47</u>	<u>.80</u>	<u>-28.1</u>	<u>6.99</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>B-3</u>	<u>4</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>2</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
	<u>1</u> x 250ml poly	YES	<u>FP</u> HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	<u>2</u> x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
	<u>1</u> x 250ml poly	YES	<u>FP</u> NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At: 11-12

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: R



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 11.10/22.13 (inclusive)
 Sampler: J.P

Well ID: 8.4
 Well Diameter: 2.4 in.
 Total Depth: 14.74 ft.
 Depth to Water: 6.76 ft.
7.98 xVF = _____ = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Date Monitored: 11.10.13

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 8.35

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters X
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: _____

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	_____ ft
Visual Confirmation/Description:	_____
Skimmer / Absorbant Sock (circle one)	_____
Amt Removed from Skimmer:	_____ gal
Amt Removed from Well:	_____ gal
Water Removed:	_____ gal
Product Transferred to:	_____

Start Time (purge): 1040
 Sample Time/Date: 11/11/11.21.13
 Approx. Flow Rate: 100 mlpm
 Did well de-water? NO If yes, Time: _____ Volume: _____ gal.

Weather Conditions: SUN
 Water Color: CLEAR Odor: YN MILD
 Sediment Description: GREY TO CLEAR
 DTW @ Sampling: 7.10

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (pmhos/cm - pS)	Temperature (C F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>1050</u>	<u>1.0</u>	<u>6.60</u>	<u>.230</u>	<u>14.50</u>	<u>.33</u>	<u>-40.4</u>	<u>6.89</u>
<u>1101</u>	<u>2.1</u>	<u>6.61</u>	<u>.230</u>	<u>14.40</u>	<u>.33</u>	<u>-49.9</u>	<u>6.90</u>
<u>1104</u>	<u>2.4</u>	<u>6.61</u>	<u>.230</u>	<u>14.41</u>	<u>.32</u>	<u>-50.7</u>	<u>6.90</u>
<u>1107</u>	<u>2.7</u>	<u>6.62</u>	<u>.231</u>	<u>14.36</u>	<u>.32</u>	<u>-51.4</u>	<u>7.10</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>8.4</u>	<u>4</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>2</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	<u>2</u> x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At: 10-11 LEADPST TOBACO

Chevron Northwest Region Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # _____

Group # _____

Sample # _____

For Eurofins Lancaster Laboratories use only
Instructions on reverse side correspond with circled numbers.

Please forward the lab results directly to the Lead Consultant and see C.R.

1 Client Information			4 Matrix			5 Analyses Requested FF													
Facility # SS#211556-OML G-R#386773 WBS			Sediment	Ground	Surface	Potable	NPDES	Air	Total Number of Containers	<input type="checkbox"/> BTEX + MTBE <input type="checkbox"/> 8021 <input type="checkbox"/> 8260 <input type="checkbox"/> Naphth <input type="checkbox"/> 8260 full scan <input type="checkbox"/> Oxygenates <input type="checkbox"/> NWTPH-Gx <input type="checkbox"/> NWTPH-DX with Silica Gel Cleanup <input type="checkbox"/> NWTPH-DX without Silica Gel Cleanup <input type="checkbox"/> WA VPH <input type="checkbox"/> WA EPH <input type="checkbox"/> Lead <input type="checkbox"/> Total <input type="checkbox"/> Diss. <input type="checkbox"/> Method 6020									
Site Address 101 Mulford Road, TOLEDO, WA																			
Chevron PMHO LEIDOSRS Lead Consultant Russell Shropshire																			
Consultant/Office Geller-Ryan, Inc., 6747 Sierra Court, Suite J, Dublin, CA 94568																			
Consultant Project Mgr. Deanna L. Harding, (deanna@grinc.com), (925) 551-7444 x180																			
Consultant Phone # (425) 482-3323 x			Composite																
Sampler J. Payne																			

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		Collected		3 Grab	Composite	4 Matrix					Total Number of Containers	5 Analyses Requested FF										6 Remarks												
		Date	Time			Soil	Water	Oil	BTEX + MTBE	8021		8260	Naphth	8260 full scan	Oxygenates	NWTPH-Gx	NWTPH-DX with Silica Gel Cleanup	NWTPH-DX without Silica Gel Cleanup	WA VPH	WA EPH	Lead		Total	Diss.	Method	NITRATE / SULFATE	DISSOLVED IRON / MANGANESE	SULFIDE / METHANE	ALKALINITY F.F.					
Q.A	11-19-13			X			X			2	X			X																				
MW-115			1131	X			X			9	X			X	X	X		X																
MW-116			1031	X			X			16	X			X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
MW-117			1240	X			X			16	X			X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
MW-118			0921	X			X			9	X			X	X	X		X																
MW-120			1343	X			X			9	X			X	X	X		X																

7 Turnaround Time Requested (TAT) (please circle)

Standard 5 day 4 day

72 hour 48 hour 24 hour

Relinquished by [Signature]	Date 11-19-13	Time 1700	Received by	Date	Time
Relinquished by	Date	Time	Received by	Date	Time

8 Data Package (circle if required)

Type I - Full Type VI (Raw Data)

EDD (circle if required)

CVX-RTBU-FI_05 (default)

Other: _____

Relinquished by Commercial Carrier:

UPS FedEx _____ Other _____

Temperature Upon Receipt _____ °C

Custody Seals Intact? Yes No

Chevron Northwest Region Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # _____ Group # _____ Sample # _____

For Eurofins Lancaster Laboratories use only
Instructions on reverse side correspond with circled numbers.

Please forward the lab results directly to the Lead Consultant and cc: C.R.

1 Client Information				4 Matrix				5 Analyses Requested												6 Remarks										
Facility # SS#211556-OML G-R#386773 WBS				<input type="checkbox"/> Sediment <input checked="" type="checkbox"/> Ground <input type="checkbox"/> Surface <input type="checkbox"/> Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Air <input type="checkbox"/> Soil <input type="checkbox"/> Water <input type="checkbox"/> Oil Total Number of Containers _____				<input type="checkbox"/> BTEX + MTBE <input type="checkbox"/> 8021 <input type="checkbox"/> 8260 <input type="checkbox"/> Naphth <input type="checkbox"/> 8260 full scan Oxygenates _____ NWTPH-Gx _____ <input checked="" type="checkbox"/> NWTPH-Dx with Silica Gel Cleanup <input checked="" type="checkbox"/> NWTPH-Dx without Silica Gel Cleanup WA VPH <input type="checkbox"/> WA EPH <input type="checkbox"/> Lead Total <input type="checkbox"/> Diss. <input checked="" type="checkbox"/> Method _____ NITRATE / SULFATE DISSOLVED IRON / DISSOLVED MANGANESE SULFIDE / METHANE ALKALINITY												SCR #: _____										
Site Address 01 Mulford Road, TOLEDO, WA																														
Chevron PM MHO LEIDOSRS Lead Consultant Russell Shropshire																														
Consultant/Office Gettler-Ryan, Inc., 6747 Sierra Court, Suite J, Dublin, CA 94568																														
Consultant Project Mgr. Deanna L. Harding, (deanna@grinc.com), (925) 551-7444 x130																														
Consultant Phone # (425) 482-3323 x				<input type="checkbox"/> Composite <input type="checkbox"/> Grab																										
Sampler J. Payne																														
2 Sample Identification		Collected																												
		Date	Time	Grab	Composite	Soil	Water	Oil	Total Number of Containers	BTEX + MTBE	8021	8260	Naphth	Oxygenates	NWTPH-Gx	NWTPH-Dx with Silica Gel Cleanup	NWTPH-Dx without Silica Gel Cleanup	WA VPH	WA EPH	Lead	Total	Diss.	Method	NITRATE / SULFATE	DISSOLVED IRON / DISSOLVED MANGANESE	SULFIDE / METHANE	ALKALINITY			
G.A.		11-20-13		X			X		2	X					X															
NW-103			1232	X			X		16	X					X	X	X			X	X	X	X	X	X	X	X	X	X	
NW-110			1340	X			X		9	X					X	X	X			X	X	X	X	X	X	X	X	X	X	
NW-112			1134	X			X		16	X					X	X	X			X	X	X	X	X	X	X	X	X	X	
NW-113			1230	X			X		16	X					X	X	X			X	X	X	X	X	X	X	X	X	X	
NW-119			1040	X			X		16	X					X	X	X			X	X	X	X	X	X	X	X	X	X	
7 Turnaround Time Requested (TAT) (please circle) Standard <input checked="" type="radio"/> 5 day 4 day 72 hour 48 hour 24 hour				Relinquished by <i>[Signature]</i> Date 11-20-13 Time 1630				Received by _____ Date _____ Time _____				Relinquished by _____ Date _____ Time _____				Received by _____ Date _____ Time _____				9										
8 Data Package (circle if required) Type I - Full Type VI (Raw Data)				EDD (circle if required) CVX-RTBU-FI_05 (default) Other: _____				Relinquished by Commercial Carrier: UPS <input checked="" type="checkbox"/> FedEx _____ Other _____				Received by _____ Date _____ Time _____				Temperature Upon Receipt _____ °C Custody Seals Intact? Yes No														

Chevron Northwest Region Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # _____ Group # _____ Sample # _____

For Eurofins Lancaster Laboratories use only
Instructions on reverse side correspond with circled numbers.

Please forward the lab results directly to the Lead Consultant and cc - G.P.

1 Client Information				4 Matrix				5 Analyses Requested										6 Remarks									
Facility # SS#211556-OML G-R#386773 WBS Site Address 101 Mulford Road, TOLEDO, WA Chevron PM MHO LEIDOSRS Lead Consultant Russell Shropshire Consultant/Office Gettler-Ryan, Inc., 6747 Sierra Court, Suite J, Dublin, CA 94568 Consultant Project Mgr. Deanna L. Harding, (deanna@grinc.com), (925) 551-7444 x180 Consultant Phone # (425) 482-3323 x Sampler _____				Sediment <input type="checkbox"/> Ground <input checked="" type="checkbox"/> Surface <input type="checkbox"/> Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Air <input type="checkbox"/> Total Number of Containers _____				BTEX + MTBE 8021 <input type="checkbox"/> 8260 <input type="checkbox"/> Naphth <input type="checkbox"/> 8260 full scan _____ Oxygenates _____ NWTPH-Gx _____ NWTPH-Dx with Silica Gel Cleanup <input checked="" type="checkbox"/> NWTPH-Dx without Silica Gel Cleanup <input checked="" type="checkbox"/> WA VPH <input type="checkbox"/> WA EPH <input type="checkbox"/> Lead Total <input type="checkbox"/> Diss. <input checked="" type="checkbox"/> Method _____ NITRATE / SULFATE METHANE / SULFIDES ALKALINITY DISS IRON & MANGANESE										SCR #: _____ <input type="checkbox"/> Results in Dry Weight <input type="checkbox"/> J value reporting needed <input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds <input type="checkbox"/> 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run _____ oxy's on highest hit <input type="checkbox"/> Run _____ oxy's on all hits									
2 Sample Identification		3 Collected		Grab	Composite	Soil	Water	Oil	Total Number of Containers	BTEX + MTBE	8021	8260	Naphth	Oxygenates	NWTPH-Gx	NWTPH-Dx with Silica Gel Cleanup	NWTPH-Dx without Silica Gel Cleanup	WA VPH	WA EPH	Lead	Total	Diss.	Method	6 Remarks			
Date	Time																										
QA	11-21-13			X			X		2	X				X													
B.1		1014		X			X		16	X				X	X	X				X	X	X	X	X			
B.2		0924		X			X		16	X				X	X	X				X	X	X	X	X			
B.3		1314		X			X		16	X				X	X	X				X	X	X	X	X			
B.4		1111		X			X		16	X				X	X	X				X	X	X	X	X			
MW-111	↓	1212		X			X		16	X				X	X	X				X	X	X	X	X			
7 Turnaround Time Requested (TAT) (please circle) Standard <input checked="" type="radio"/> 5 day 4 day 72 hour 48 hour 24 hour				Relinquished by _____ Date 11-21-13 Time 1630 Relinquished by _____ Date _____ Time _____				Received by _____ Date _____ Time _____				Received by _____ Date _____ Time _____															
8 Data Package (circle if required) Type I - Full Type VI (Raw Data)				EDD (circle if required) CVX-RTBU-FL_05 (default) Other: _____				Relinquished by Commercial Carrier: UPS <input checked="" type="checkbox"/> FedEx _____ Other _____				Received by _____ Date _____ Time _____				Temperature Upon Receipt _____ °C Custody Seals Intact? Yes No											

Chevron California Region Analysis Request/Chain of Custody



For Lancaster Laboratories use only

Acct. #: _____ Sample #: _____ SCR#: _____

Facility #: <u>35 # 21556 - OML 6-R # 386773</u> Site Address: <u>101 MULFORD ROAD, TOLSON, WA</u> Chevron PM: <u>MARY HORNE</u> Lead Consultant: <u>LEIDOS RG</u> Consultant/Office: <u>BETTER RYAN INC 6805 SIEBERT DUBLINA</u> Consultant Prj. Mgr.: <u>DEANNA L HARDING 923 561-7444</u> Consultant Phone #: <u>425/481 3223</u> Fax #: _____ Sampler: _____ <u>J. PAYNE</u> Service Order #: _____ <input type="checkbox"/> Non SAR: _____			Matrix <input type="checkbox"/> Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Water <input type="checkbox"/> Air <input type="checkbox"/> Soil <input type="checkbox"/> Oil			Analyses Requested										Preservative Codes H = HCl T = Thiosulfate N = HNO ₃ B = NaOH S = H ₂ SO ₄ O = Other <input type="checkbox"/> J value reporting needed <input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds 8021 MTBE Confirmation <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run ___ oxy s on highest hit <input type="checkbox"/> Run ___ oxy s on all hits		
						Preservation Codes												
Sample Identification			Date Collected	Time Collected	Grab	Composite	Total Number of Containers										Comments / Remarks	
							BTEX + MTBE 8260 <input type="checkbox"/> 8021 <input type="checkbox"/>	TPH 8015 MOD GRO	TPH 8015 MOD DRO <input type="checkbox"/> Silica Gel Cleanup	8260 full scan	Oxygenates	Lead 7420 <input type="checkbox"/> 7421 <input type="checkbox"/>	NUTPH - 6x	NUTPH - Dx w/ silica	NUTPH - Dx without silica	DISSOLVED LEAD		
RA MW 109 MW 111			11/22/13 ↓	0850 0945	X X X		2 9 9	X X X					X X X	X X X	X X X	X X X		
Turnaround Time Requested (TAT) (please circle)			Relinquished by: <u>[Signature]</u>				Date	Time	Received by: _____				Date	Time				
<u>STD. TAT</u> 24 hour 72 hour 48 hour 4 day 5 day			Relinquished by: _____				Date	Time	Received by: _____				Date	Time				
Data Package Options (please circle if required)			Relinquished by: _____				Date	Time	Received by: _____				Date	Time				
QC Summary Type I — Full Type VI (Raw Data) <input type="checkbox"/> Coelt Deliverable not needed WIP (RWQCB) Disk			Relinquished by Commercial Carrier: <u>UPS</u> FedEx Other _____				Received by: _____				Date	Time						
			Temperature Upon Receipt _____ C°				Custody Seals Intact? Yes No											



GETTLER-RYAN INC.



TRANSMITTAL

February 21, 2014

G-R #386773

TO: Mr. Russell Shropshire
Leidos, Inc.
18912 North Creek Parkway, Suite 101
Bothell, Washington 98011

FROM: Deanna L. Harding
Project Coordinator
Gettler-Ryan Inc.
6805 Sierra Court, Suite G
Dublin, California 94568

RE: **Former Texaco Service Station
#211556/Cowlitz BP
101 Mulford Road
Toledo, Washington
UST Site#10669**

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DESCRIPTION
VIA PDF	Groundwater Monitoring and Sampling Data Package First Quarter Event of February 4, 5, 6, 10, & 11, 2014

COMMENTS:

Pursuant to your request, we are providing you with copies of the above referenced data for your use.

Please provide us the updated historical data prior to the next monitoring and sampling event for our field use.

Please feel free to contact me if you have any comments/questions.

trans/211556

Standard Operating Procedure, Low-Flow Purging and Sampling

Gettler-Ryan Inc. field personnel adhere to the following Standard Operating Procedure (SOP) for the collection and handling of representative groundwater samples using the Low-Flow (Minimal-Drawdown) Purging technique. This SOP incorporates purging and sampling methods discussed in U.S. EPA, Ground Water Issue, Publication Number EPA/540/S-95/504, April 1996 by Puls, R.W. and M.J. Barcelona - "*Low-Flow (Minimal-Drawdown) Ground-Water Sampling Procedures.*"

A QED Well Wizard™ (or equivalent) bladder pump or Peristaltic Pump will be used to purge and sample selected wells as outlined in the scope-of-work. An in-line flow cell or other multi-parameter meter is used to collect water quality indicating parameters during purging.

Initial Pump Discharge Test Procedures

The Static Water Level (SWL) is measured in all wells at the site prior to the installation of the pump or tubing and initiation of the test procedures in any well. In addition, the presence or absence of separate-phase hydrocarbons (SPH) is determined using an interface probe. Product thickness, if present, is measured to the nearest 0.01 foot. The SWL measurement and SPH thickness, if any, will be recorded on the field data sheet.

The bladder pump or suction inlet tubing of the peristaltic pump is then positioned with its inlet located within the screened interval of the well. The in-line flow cell is then connected to the discharge tubing. After pump installation, the SWL is allowed to recover to its original level. The pump is then started at a discharge rate between 100 ml to 300 ml per minute with the in-line flow cell connected. The water level is monitored continuously for any change from the original measurement and the discharge rate is adjusted until an optimum discharge rate (ODR) is determined. The goal for the ODR is to produce a stable drawdown of less than 0.1 meter as allowed by site conditions; however the total drawdown from the initial SWL should not exceed 25% of the distance between pump inlet location and the top of the well screen. Once achieved, the ODR will be confirmed by volumetric discharge measurement and recorded on the field data sheet.

Purging and Water Quality Parameter Measurement

When the ODR has been determined and the SWL drawdown has been established within the acceptable range, and a minimum of one pump system volume (bladder volume and/or discharge tubing volume) has been purged, field measurements for temperature (T), pH, conductivity (Ec), and if required, oxygen reduction potential (ORP) and dissolved oxygen (DO) will be collected and documented on the field data sheet. Measurements should be taken every three to five minutes until parameters stabilize for three consecutive readings. The minimum parameter subset of T ($\pm 10\%$), pH (± 0.1 unit), and Ec (± 10 uS) are required to stabilize. Additional parameters that may be required are DO (± 0.2 mg/l) and ORP (± 20 mV).

Sample Collection

When water quality parameters have stabilized, and the SWL drawdown remains established within the acceptable range, groundwater sample collection may begin. If used, the in-line flow cell and its tubing are disconnected from the discharge tubing prior to sample collection. Water samples are collected from the discharge tubing into appropriate containers. Pre-preserved containers, supplied by analytical laboratories, are used when possible. When pre-preserved containers are not available, the laboratory is instructed to preserve the sample as appropriate. Duplicate samples are collected for the laboratory to use in maintaining quality assurance/quality control standards, as directed by the scope of work. The samples are labeled to include the job number, sample identification, collection date and time, analysis, preservation (if any), and the sample collector's initials. The water samples are placed in a cooler,

maintained at 4°C for transport to the laboratory. A laboratory supplied trip blank accompanies each sampling set. The trip blank is analyzed for some or all of the same compounds as the groundwater samples. Once collected in the field, all samples are maintained under chain of custody until delivered to the laboratory.

The chain of custody document includes the job number, type of preservation, if any, analysis requested, sample identification, date and time collected, and the sample collector's name. The chain of custody is signed and dated (including time of transfer) by each person who receives or surrenders the samples, beginning with the field personnel and ending with the laboratory personnel.

A laboratory supplied trip blank accompanies each sampling set. For sampling sets greater than 20 samples, 5% trip blanks are included. The trip blank is analyzed for some or all of the same compounds as the groundwater samples.



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 2.4/5/6/7.14 (inclusive)
 Sampler: J.P.

Well ID: MW-103
 Well Diameter: (2) 4 in.
 Total Depth: 10.64 ft.
 Depth to Water: 8.30 ft.

Date Monitored: 2.4.14

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	6"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 10.41 xVF = - = - x3 case volume = Estimated Purge Volume: - gal.

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: YSI mps 660

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters X
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: TUBING

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ gal
 Amt Removed from Well: _____ gal
 Water Removed: _____ gal
 Product Transferred to: _____

Start Time (purge): 1000
 Sample Time/Date: 1031 2.6.14
 Approx. Flow Rate: 200 mlpm
 Did well de-water? NO If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 8.90
 Weather Conditions: Clear
 Water Color: Clear Odor: YIN
 Sediment Description: None

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µmhos/cm - µS)	Temperature (C F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>1010</u>	<u>3.6</u>	<u>6.86</u>	<u>.160</u>	<u>3.57</u>	<u>1.15</u>	<u>107.4</u>	<u>8.52</u>
<u>1021</u>	<u>4.2</u>	<u>6.84</u>	<u>.160</u>	<u>3.46</u>	<u>1.15</u>	<u>107.7</u>	<u>8.69</u>
<u>1024</u>	<u>4.6</u>	<u>6.84</u>	<u>.159</u>	<u>3.33</u>	<u>1.16</u>	<u>108.2</u>	<u>8.90</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-103</u>	<u>6</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>2</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	<u>2</u> x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At: 14=15



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 2.4/5/6/10/11.14 (inclusive)
 Sampler: J.P.

Well ID: MW-109
 Well Diameter: (2) 4 in.
 Total Depth: 12.69 ft.
 Depth to Water: 7.83 ft.
5.86 xVF = - = - x3 case volume = Estimated Purge Volume: - gal.

Date Monitored: 2.4.14

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	<u>2"= 0.17</u>	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 0.40

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: Y6I MP5 5510

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: TUBING

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	_____ ft
Visual Confirmation/Description:	_____
Skimmer / Absorbant Sock (circle one)	_____
Amt Removed from Skimmer:	_____ gal
Amt Removed from Well:	_____ gal
Water Removed:	_____ gal
Product Transferred to:	_____

Start Time (purge): 0930 Weather Conditions: RAIN
 Sample Time/Date: 1005 / 2-11-14 Water Color: CLEAR Odor: Y (N)
 Approx. Flow Rate: 200 mlpm Sediment Description: NONE
 Did well de-water? No If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 7.83

Time (2400 hr.)	Volume (Liters)	pH	Conductivity ^{MS} ($\mu\text{mhos/cm}$ - μS)	Temperature (C/ F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>0954</u>	<u>3.6</u>	<u>6.29</u>	<u>.567</u>	<u>11.13</u>	<u>1.97</u>	<u>158.1</u>	<u>7.88</u>
<u>0957</u>	<u>4.2</u>	<u>6.26</u>	<u>.566</u>	<u>11.20</u>	<u>1.95</u>	<u>158.1</u>	<u>7.70</u>
<u>1000</u>	<u>4.0</u>	<u>6.26</u>	<u>.565</u>	<u>11.26</u>	<u>1.91</u>	<u>158.9</u>	<u>7.83</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-109</u>	<u>10</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
	x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
	x 250ml poly	YES	NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At: 10-11



GETTLER-RYAN Inc.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 2.4/6/6/7.14 (inclusive)
 Sampler: J.P.

Well ID: NW-110
 Well Diameter: 2 1/4 in.
 Total Depth: 19.83 ft.
 Depth to Water: 8.92 ft.
10.85 xVF = - = - x3 case volume = Estimated Purge Volume: - gal.

Date Monitored: 2.4.14

Volume Factor (VF)	3/4" = 0.02	1" = 0.04	2" = 0.17	3" = 0.38
	4" = 0.66	5" = 1.02	6" = 1.50	12" = 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 11.15

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: YSE MFS 656

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: TUBING

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	_____ ft
Visual Confirmation/Description:	_____
Skimmer / Absorbant Sock (circle one)	_____
Amt Removed from Skimmer:	_____ gal
Amt Removed from Well:	_____ gal
Water Removed:	_____ gal
Product Transferred to:	_____

Start Time (purge): 0901
 Sample Time/Date: 0931 2.6.14
 Approx. Flow Rate: 200 mlpm
 Did well de-water? No If yes, Time: _____

Weather Conditions: 0'cast
 Water Color: CLEAR Odor: Y/N
 Sediment Description: NONE
 Volume: _____ gal. DTW @ Sampling: 9.61

Time (2400 hr.)	Volume (Liters)	pH	Conductivity ($\mu\text{mhos/cm} - \mu\text{S}$)	Temperature (C F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>0919</u>	<u>3.6</u>	<u>6.77</u>	<u>.265</u>	<u>6.48</u>	<u>1.61</u>	<u>116.1</u>	<u>9.13</u>
<u>0922</u>	<u>4.2</u>	<u>6.76</u>	<u>.265</u>	<u>6.53</u>	<u>1.59</u>	<u>109.6</u>	<u>9.32</u>
<u>0925</u>	<u>4.8</u>	<u>6.76</u>	<u>.266</u>	<u>6.61</u>	<u>1.56</u>	<u>108.9</u>	<u>9.61</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>NW-110</u>	<u>6</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
	x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
	x 250ml poly	YES	NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At: 15-10



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 2-4/5/10/11/14 (inclusive)
 Sampler: J.P.

Well ID: MU-111
 Well Diameter: 2 1/4 in.
 Total Depth: 17.8 ft.
 Depth to Water: 7.11 ft.
10.69 xVF = - = - x3 case volume = Estimated Purge Volume: - gal.

Date Monitored: 2.4.14

Volume Factor (VF) 3/4" = 0.82 1" = 0.04 2 1/4" = 0.66 3" = 0.38
4" = 0.66 5" = 1.02 6" = 1.50 12" = 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 9.24

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: Y6I MPB 556

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: TUBING

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ gal
 Amt Removed from Well: _____ gal
 Water Removed: _____ gal
 Product Transferred to: _____

Start Time (purge): 1147 Weather Conditions: SUN / SNOW
 Sample Time/Date: 12/10/2.5.14 Water Color: CLEAR Odor: NO
 Approx. Flow Rate: 200 mlpm Sediment Description: NONE
 Did well de-water? NO If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 7.63

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µmhos/cm - µS)	Temperature (°C / °F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>12:05</u>	<u>3.6</u>	<u>6.76</u>	<u>.322</u>	<u>10.44</u>	<u>.77</u>	<u>-51.2</u>	<u>7.81</u>
<u>12:08</u>	<u>4.2</u>	<u>6.74</u>	<u>.322</u>	<u>10.52</u>	<u>.76</u>	<u>-51.3</u>	<u>7.44</u>
<u>12:11</u>	<u>4.8</u>	<u>6.74</u>	<u>.322</u>	<u>10.60</u>	<u>.74</u>	<u>-51.4</u>	<u>7.63</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MU-111</u>	<u>6</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>2</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3 FF	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>250</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	<u>2</u> x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP FF	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At: 13' - 14'



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 2.4/3/6/7.14 (inclusive)
 Sampler: J.P.

Well ID: MW-112
 Well Diameter: (2) 4 in.
 Total Depth: 17.34 ft.
 Depth to Water: 7.67 ft.
9.67 xVF _____ = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Date Monitored: 2.4.14

Volume	3/4"= 0.02	1"= 0.04	<u>2"= 0.17</u>	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 9.67

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: 1ST MPB 550

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: TUBING

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	_____ ft
Visual Confirmation/Description:	_____
Skimmer / Absorbant Sock (circle one)	_____
Amt Removed from Skimmer:	_____ gal
Amt Removed from Well:	_____ gal
Water Removed:	_____ gal
Product Transferred to:	_____

Start Time (purge): 12:30 Weather Conditions: Snow
 Sample Time/Date: 1307/2.6.14 Water Color: clear Odor: Y/N
 Approx. Flow Rate: 200 mlpm Sediment Description: None
 Did well de-water? No If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 8.13

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µmhos/cm = pS)	Temperature (C) (F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>12:50</u>	<u>3.6</u>	<u>6.77</u>	<u>.202</u>	<u>6.69</u>	<u>1.88</u>	<u>106.9</u>	<u>7.83</u>
<u>12:59</u>	<u>4.2</u>	<u>6.76</u>	<u>.202</u>	<u>6.77</u>	<u>1.84</u>	<u>107.1</u>	<u>7.90</u>
<u>13:02</u>	<u>4.8</u>	<u>6.74</u>	<u>.202</u>	<u>6.84</u>	<u>1.80</u>	<u>109.0</u>	<u>8.13</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-112</u>	<u>6</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>2</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	<u>2</u> x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At: 13' - 14'



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 2-4/6/7-14 (inclusive)
 Sampler: J.P.

Well ID: MW-113
 Well Diameter: 214 in.
 Total Depth: 16.83 ft.
 Depth to Water: 6.56 ft.
10.27 xVF = - = - x3 case volume = Estimated Purge Volume: - gal.

Date Monitored: 2-4-14

Volume Factor (VF)	3/4" = 0.02	1" = 0.04	2" = 0.16	3" = 0.38
	4" = 0.66	5" = 1.02	6" = 1.50	12" = 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 9.61

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: VSI MP6 666

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: TUBING

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	_____ ft
Visual Confirmation/Description:	_____
Skimmer / Absorbant Sock (circle one)	_____
Amt Removed from Skimmer:	_____ gal
Amt Removed from Well:	_____ gal
Water Removed:	_____ gal
Product Transferred to:	_____

Start Time (purge): 1332 Weather Conditions: SNOW
 Sample Time/Date: 140212-6-14 Water Color: CLEAR Odor: YIN
 Approx. Flow Rate: 200 mlpm Sediment Description: NONE
 Did well de-water? No If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 7.00

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µmhos/cm = µS)	Temperature (C) (F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>1350</u>	<u>3.6</u>	<u>6.45</u>	<u>.064</u>	<u>9.24</u>	<u>2.91</u>	<u>117.7</u>	<u>6.79</u>
<u>1353</u>	<u>4.2</u>	<u>6.44</u>	<u>.064</u>	<u>9.32</u>	<u>2.87</u>	<u>118.6</u>	<u>6.90</u>
<u>1356</u>	<u>4.9</u>	<u>6.43</u>	<u>.064</u>	<u>9.40</u>	<u>2.84</u>	<u>119.5</u>	<u>7.00</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
	<u>4</u> x voa vial	YES	HCL	LANCASTER	NWTPH-GxBTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>2</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	<u>2</u> x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At: 12' - 13'



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 2.4/5/6/10/11.14 (inclusive)
 Sampler: J.P.

Well ID: WW-114
 Well Diameter: (2) 4 in.
 Total Depth: 16.83 ft.
 Depth to Water: 16.56 ft.
10.27 xVF _____ = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Date Monitored: 2.4.14

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 0.61

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: YSI mps 6510

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: TUBING

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ gal
 Amt Removed from Well: _____ gal
 Water Removed: _____ gal
 Product Transferred to: _____

Start Time (purge): 1022
 Sample Time/Date: 1041 / 2.11.14
 Approx. Flow Rate: 200 mlpm
 Did well de-water? NO If yes, Time: _____ Volume: _____ gal.

Weather Conditions: RAIN
 Water Color: CLEAR Odor: Y/N
 Sediment Description: NONE
 DTW @ Sampling: 7.13

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µmhos/cm - uS)	Temperature (C F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>1040</u>	<u>3.6</u>	<u>6.04</u>	<u>2.480</u>	<u>16.26</u>	<u>4.60</u>	<u>159.7</u>	<u>6.83</u>
<u>1043</u>	<u>4.2</u>	<u>6.02</u>	<u>2.481</u>	<u>16.32</u>	<u>4.62</u>	<u>160.2</u>	<u>6.90</u>
<u>1046</u>	<u>4.8</u>	<u>6.02</u>	<u>2.481</u>	<u>16.40</u>	<u>4.64</u>	<u>160.4</u>	<u>7.13</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>WW-114</u>	<u>6</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
	x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
	x 250ml poly	YES	NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At: 13



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 2.4/5/6/10/11.14 (inclusive)
 Sampler: J.P.

Well ID: MW-115
 Well Diameter: 2 1/4 in.
 Total Depth: 17.46 ft.
 Depth to Water: 8.65 ft.
9.41 xVF = - = - x3 case volume = Estimated Purge Volume: - gal.

Date Monitored: 2.4.14

Volume Factor (VF)	3/4" = 0.02	1" = 0.04	2" = 0.17	3" = 0.38
	4" = 0.66	5" = 1.02	6" = 1.50	12" = 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 9.93

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: Y5T mps 666

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters none
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: TURBID

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	_____ ft
Visual Confirmation/Description:	_____
Skimmer / Absorbant Sock (circle one)	_____
Amt Removed from Skimmer:	_____ gal
Amt Removed from Well:	_____ gal
Water Removed:	_____ gal
Product Transferred to:	_____

Start Time (purge): 1231 Weather Conditions: SNOW RAIN WIND
 Sample Time/Date: 1301 / 2.10.14 Water Color: CLEAR Odor: Y/N
 Approx. Flow Rate: 200 mlpm Sediment Description: NONE
 Did well de-water? No If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 8.66

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µmhos/cm - µS)	Temperature (C F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>1249</u>	<u>3.6</u>	<u>6.94</u>	<u>.239</u>	<u>10.64</u>	<u>1.59</u>	<u>57.1</u>	<u>8.21</u>
<u>1252</u>	<u>4.2</u>	<u>6.89</u>	<u>.230</u>	<u>10.72</u>	<u>1.56</u>	<u>58.3</u>	<u>8.40</u>
<u>1255</u>	<u>4.8</u>	<u>6.87</u>	<u>.236</u>	<u>10.91</u>	<u>1.49</u>	<u>59.1</u>	<u>8.66</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-115</u>	<u>6</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
	x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
	x 250ml poly	YES	NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At: 14'



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 2-4/6/10/11-14 (inclusive)
 Sampler: J.P.

Well ID: WU-116
 Well Diameter: (2) 4 in.
 Total Depth: 17.53 ft.
 Depth to Water: 9.28 ft.
9.15 xVF = - = - x3 case volume = Estimated Purge Volume: - gal.

Date Monitored: 2.4.14

Volume	3/4"= 0.02	1"= 0.04	<u>2"= 0.17</u>	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 10.13

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: Y65 M65 5610

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: TUBING

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	_____ ft
Visual Confirmation/Description:	_____
Skimmer / Absorbant Sock (circle one)	_____
Amt Removed from Skimmer:	_____ gal
Amt Removed from Well:	_____ gal
Water Removed:	_____ gal
Product Transferred to:	_____

Start Time (purge): 1132 Weather Conditions: RAIN SNOW WIND
 Sample Time/Date: 2-10-14 Water Color: CLEAR Odor: Y/N
 Approx. Flow Rate: 2.60 mlpm Sediment Description: NONE
 Did well de-water? No If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 9.64

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µmhos/cm - µS)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>1130</u>	<u>3.6</u>	<u>6.53</u>	<u>.675</u>	<u>8.33</u>	<u>2.51</u>	<u>50.3</u>	<u>0.43</u>
<u>1133</u>	<u>4.2</u>	<u>6.61</u>	<u>.678</u>	<u>8.22</u>	<u>2.46</u>	<u>59.8</u>	<u>0.61</u>
<u>1136</u>	<u>4.8</u>	<u>6.49</u>	<u>.670</u>	<u>8.14</u>	<u>2.39</u>	<u>60.6</u>	<u>0.64</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>WU-116</u>	<u>6</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>2</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3 F.F.	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	<u>2</u> x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP F.F.	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At: 14



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 2.4/6/10/11.14 (inclusive)
 Sampler: J.P.

Well ID: MW-117
 Well Diameter: (2) 4 in.
 Total Depth: 17.64 ft.
 Depth to Water: 6.85 ft.
10.79 xVF = - = - x3 case volume = Estimated Purge Volume: - gal.

Date Monitored: 2.4.14

Volume	3/4"= 0.02	1"= 0.04	<u>2"= 0.17</u>	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 9.00

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: VBI MPB 6500

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: TUBING

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	_____ ft
Visual Confirmation/Description:	_____
Skimmer / Absorbant Sock (circle one)	_____
Amt Removed from Skimmer:	_____ gal
Amt Removed from Well:	_____ gal
Water Removed:	_____ gal
Product Transferred to:	_____

Start Time (purge): 0941
 Sample Time/Date: 1012 / 2.10.14
 Approx. Flow Rate: 200 mlpm
 Did well de-water? NO If yes, Time: _____ Volume: _____ gal.

Weather Conditions: RAIN/SNOW
 Water Color: CLEAR Odor: Y (N)
 Sediment Description: NONE
 DTW @ Sampling: 7.0

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µmhos/cm - µS)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>0959</u>	<u>3.6</u>	<u>6.39</u>	<u>.113</u>	<u>8.83</u>	<u>2.64</u>	<u>273.4</u>	<u>7.03</u>
<u>1002</u>	<u>4.2</u>	<u>6.39</u>	<u>.113</u>	<u>8.90</u>	<u>2.60</u>	<u>272.1</u>	<u>7.19</u>
<u>1005</u>	<u>4.0</u>	<u>6.58</u>	<u>.112</u>	<u>8.98</u>	<u>2.57</u>	<u>270.9</u>	<u>7.01</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-117</u>	<u>6</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>2</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3 FF	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	<u>2</u> x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP FF	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At: 14'



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 2.4.14/5/6/10/11.14 (Inclusive)
 Sampler: J.P.

Well ID: MW-110
 Well Diameter: (2) 4 in.
 Total Depth: 17.22 ft.
 Depth to Water: 7.02 ft.
10.20 xVF _____ = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Date Monitored: 2.4.14

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 9.40

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: XSI MP5 556

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters u/s
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: TURBINE

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	_____ ft
Visual Confirmation/Description:	_____
Skimmer / Absorbant Sock (circle one)	_____
Amt Removed from Skimmer:	_____ gal
Amt Removed from Well:	_____ gal
Water Removed:	_____ gal
Product Transferred to:	_____

Start Time (purge): 1030
 Sample Time/Date: 1110 12.10.14
 Approx. Flow Rate: 200 mlpm
 Did well de-water? NO If yes, Time: _____ Volume: _____ gal.

Weather Conditions: RAIN SNOW WIND
 Water Color: CLEAR Odor: Y/N
 Sediment Description: NONE
 DTW @ Sampling: 7.53

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µmhos/cm - µS)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>1050</u>	<u>3.6</u>	<u>7.66</u>	<u>.289</u>	<u>8.60</u>	<u>1.90</u>	<u>-106.9</u>	<u>7.31</u>
<u>1059</u>	<u>4.2</u>	<u>7.64</u>	<u>.207</u>	<u>8.63</u>	<u>1.90</u>	<u>-107.6</u>	<u>7.44</u>
<u>1102</u>	<u>4.8</u>	<u>7.62</u>	<u>.204</u>	<u>8.81</u>	<u>1.76</u>	<u>-109.1</u>	<u>7.53</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-110</u>	<u>6</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
	x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
	x 250ml poly	YES	NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At: 14



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 2.4/5/6/7.14 (inclusive)
 Sampler: J.P.

Well ID: MW-119
 Well Diameter: (2) 4 in.
 Total Depth: 10.65 ft.
 Depth to Water: 8.47 ft.
0.18 xVF = - x3 case volume = Estimated Purge Volume: - gal.

Date Monitored: 2.4.14

Volume	3/4"= 0.02	1"= 0.04	<u>2"= 0.17</u>	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 10.10

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: YGI WPS 660

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: TUBING

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	_____ ft
Visual Confirmation/Description:	_____
Skimmer / Absorbant Sock (circle one)	_____
Amt Removed from Skimmer:	_____ gal
Amt Removed from Well:	_____ gal
Water Removed:	_____ gal
Product Transferred to:	_____

Start Time (purge): 1140 Weather Conditions: SNOW
 Sample Time/Date: 1214 12.6.14 Water Color: CLEAR Odor: Y (N)
 Approx. Flow Rate: 200 mlpm Sediment Description: NONE
 Did well de-water? NO If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 8.96

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µmhos/cm - µS)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>1202</u>	<u>3.6</u>	<u>6.91</u>	<u>.162</u>	<u>3.89</u>	<u>1.76</u>	<u>112.5</u>	<u>8.70</u>
<u>1205</u>	<u>4.2</u>	<u>6.82</u>	<u>.162</u>	<u>3.96</u>	<u>1.75</u>	<u>113.0</u>	<u>8.81</u>
<u>1208</u>	<u>4.8</u>	<u>6.87</u>	<u>.161</u>	<u>4.09</u>	<u>1.75</u>	<u>113.4</u>	<u>8.96</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-119</u>	<u>6</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>2</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	<u>2</u> x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At: 12-13



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 2.4/5/6/10/11.14 (inclusive)
 Sampler: J.P.

Well ID: MW-120
 Well Diameter: (2) 4 in.
 Total Depth: 16.87 ft.
 Depth to Water: 7.32 ft.
1.55 xVF = - - x3 case volume = Estimated Purge Volume: - gal.

Date Monitored: 2.4.14

Volume Factor (VF)	3/4" = 0.02	1" = 0.04	2" = 0.17	3" = 0.38
	4" = 0.66	5" = 1.02	6" = 1.50	12" = 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 9.23

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: YGE MPS 556

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: TURBINO

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	_____ ft
Visual Confirmation/Description:	_____
Skimmer / Absorbant Sock (circle one)	_____
Amt Removed from Skimmer:	_____ gal
Amt Removed from Well:	_____ gal
Water Removed:	_____ gal
Product Transferred to:	_____

Start Time (purge): 0803
 Sample Time/Date: 0925 / 2.4.14
 Approx. Flow Rate: 2.00 mlpm
 Did well de-water? NO If yes, Time: _____ Volume: _____ gal.

Weather Conditions: Rain/Snow
 Water Color: CLEAR Odor: Y (N)
 Sediment Description: NONE
 DTW @ Sampling: 7.80

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µmhos/cm - µS)	Temperature (C F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>0911</u>	<u>3.6</u>	<u>5.82</u>	<u>.182</u>	<u>7.44</u>	<u>1.54</u>	<u>149.4</u>	<u>7.61</u>
<u>0914</u>	<u>4.2</u>	<u>5.78</u>	<u>.182</u>	<u>7.51</u>	<u>1.50</u>	<u>149.7</u>	<u>7.66</u>
<u>0917</u>	<u>4.8</u>	<u>5.78</u>	<u>.181</u>	<u>7.59</u>	<u>1.46</u>	<u>149.9</u>	<u>7.80</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-120</u>	<u>6</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
	x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
	x 250ml poly	YES	NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At: 13'



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 2.4/5/6/10/11.14 (inclusive)
 Sampler: J.P.

Well ID: 3.1
 Well Diameter: 2.4 in.
 Total Depth: 19.78 ft.
 Depth to Water: 7.25 ft.
12.53 xVF = - x3 case volume = Estimated Purge Volume: - gal.

Date Monitored: 2.4.14

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 9.75

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: YOI MPS 656

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: TUBING

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	_____ ft
Visual Confirmation/Description:	_____
Skimmer / Absorbant Sock (circle one)	_____
Amt Removed from Skimmer:	_____ gal
Amt Removed from Well:	_____ gal
Water Removed:	_____ gal
Product Transferred to:	_____

Start Time (purge): 1003
 Sample Time/Date: 1023 / 2.5.14
 Approx. Flow Rate: 200 mlpm
 Did well de-water? NO If yes, Time: _____ Volume: _____ gal.

Weather Conditions: SUN / SNOW
 Water Color: CLEAR Odor: NO
 Sediment Description: NONE
 DTW @ Sampling: 7.44

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS/cm)	Temperature (C/F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>1021</u>	<u>3.6</u>	<u>6.64</u>	<u>.192</u>	<u>7.12</u>	<u>1.81</u>	<u>123.0</u>	<u>7.44</u>
<u>1024</u>	<u>4.2</u>	<u>6.62</u>	<u>.191</u>	<u>7.20</u>	<u>1.79</u>	<u>123.4</u>	<u>7.44</u>
<u>1027</u>	<u>4.0</u>	<u>6.61</u>	<u>.191</u>	<u>7.26</u>	<u>1.77</u>	<u>123.1</u>	<u>7.44</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>B.1</u>	<u>6</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>2</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3 F.F.	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	<u>2</u> x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP F.F.	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At: 16'

Add/Replaced Gasket: ✓ Add/Replaced Bolt: _____ Add/Replaced Plug: ✓ Add/Replaced Lock: ✓



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 2.4/5/6/10/11.14 (inclusive)
 Sampler: J.P.

Well ID: B-2
 Well Diameter: 2.4 in.
 Total Depth: 19.83 ft.
 Depth to Water: 2.47 ft.
1.56 xVF = - = - x3 case volume = Estimated Purge Volume: - gal.

Date Monitored: 2.04.14

Volume	3/4"= 0.02	1"= 0.04	<u>2"= 0.17</u>	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 1.56

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: VGI MPS 556

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: TUBING

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ gal
 Amt Removed from Well: _____ gal
 Water Removed: _____ gal
 Product Transferred to: _____

Start Time (purge): 0853
 Sample Time/Date: 0925 / 2.5.14
 Approx. Flow Rate: 1.00 mlpm
 Did well de-water? NO If yes, Time: _____ Volume: _____ gal.

Weather Conditions: SUN / SNOW
 Water Color: CLEAR Odor: Y/N
 Sediment Description: NONE
 DTW @ Sampling: 9.10

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µmhos/cm - µS)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>0911</u>	<u>3.6</u>	<u>6.73</u>	<u>.143</u>	<u>5.59</u>	<u>1.53</u>	<u>128.9</u>	<u>8.79</u>
<u>0914</u>	<u>4.2</u>	<u>6.74</u>	<u>.143</u>	<u>5.60</u>	<u>1.52</u>	<u>128.9</u>	<u>8.92</u>
<u>0917</u>	<u>4.8</u>	<u>6.74</u>	<u>.142</u>	<u>5.71</u>	<u>1.50</u>	<u>129.1</u>	<u>9.10</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>B-2</u>	<u>2</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>2</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3 F.F.	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>10</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	<u>2</u> x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP F.F.	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At: 14' - 15'



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 2.4/5/10/11.14 (inclusive)
 Sampler: J.P.

Well ID: 6.3
 Well Diameter: 2.4 in.
 Total Depth: 13.510 ft.
 Depth to Water: 9.10 ft.
5.46 xVF = - = - x3 case volume = Estimated Purge Volume: - gal.

Date Monitored: 2.4.14

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	<u>2"= 0.17</u>	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 9.19

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: Y6I MP5 556

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: TUBING

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	_____ ft
Visual Confirmation/Description:	_____
Skimmer / Absorbant Sock (circle one)	_____
Amt Removed from Skimmer:	_____ gal
Amt Removed from Well:	_____ gal
Water Removed:	_____ gal
Product Transferred to:	_____

Start Time (purge): 1240
 Sample Time/Date: 1310 / 2.5.14
 Approx. Flow Rate: 200 mlpm
 Did well de-water? NO If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 8.53

Weather Conditions: Sun / Snow
 Water Color: clear Odor: Y/N MLD
 Sediment Description: NONE

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (μ mhos/cm - μ S)	Temperature (C) (F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>1250</u>	<u>3.6</u>	<u>6.90</u>	<u>.239</u>	<u>8.91</u>	<u>1.27</u>	<u>118.9</u>	<u>8.50</u>
<u>1301</u>	<u>4.2</u>	<u>6.01</u>	<u>.240</u>	<u>8.20</u>	<u>1.22</u>	<u>119.6</u>	<u>8.41</u>
<u>1304</u>	<u>4.8</u>	<u>6.02</u>	<u>.240</u>	<u>8.18</u>	<u>1.20</u>	<u>120.9</u>	<u>8.53</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>6.3</u>	<u>6</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>2</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3 <u>FF</u>	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>250</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	<u>7</u> x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP <u>FF</u>	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At: 11-12"



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 2-4/5/6/10/11-14 (inclusive)
 Sampler: J.P.

Well ID: 3-4
 Well Diameter: (2) 4 in.
 Total Depth: 14.69 ft.
 Depth to Water: 7.36 ft.
7.33 xVF = - = - x3 case volume = Estimated Purge Volume: - gal.

Date Monitored: 2-4-14

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 9.92

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: YES MP5 5560

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters x
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: TUBING

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ gal
 Amt Removed from Well: _____ gal
 Water Removed: _____ gal
 Product Transferred to: _____

Start Time (purge): 1050
 Sample Time/Date: 1124 12-5-14
 Approx. Flow Rate: 200 mlpm
 Did well de-water? No If yes, Time: _____ Volume: _____ gal.

Weather Conditions: Sun/Cloud
 Water Color: CLEAR Odor: (N) N MILD
 Sediment Description: NONE
 DTW @ Sampling: 7.78

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µmhos/cm - pS)	Temperature (C F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
1113	3.6	6.78	.199	8.46	.83	-57.2	7.53
1116	4.2	6.79	.199	8.32	.83	-57.3	7.66
1119	4.8	6.79	.198	8.28	.83	-57.5	7.78

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
8-4	6 x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	2 x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	1 x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	2 x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
	1 x 250ml poly	YES	HNO3 FF	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	160 x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	1 x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	2 x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
	1 x 250ml poly	YES	NP FF	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At: 10-11'

Add/Replaced Gasket: Add/Replaced Bolt: _____ Add/Replaced Plug: Add/Replaced Lock:

Chevron Northwest Region Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # _____ Group # _____ Sample # _____
 For Eurofins Lancaster Laboratories use only
 Instructions on reverse side correspond with circled numbers.

1 Client Information		4 Matrix		5 Analyses Requested							
Facility # SS#211556-OML G-R#386773 WBS		<input type="checkbox"/> Sediment <input checked="" type="checkbox"/> Potable <input type="checkbox"/> Ground <input type="checkbox"/> NPDES <input type="checkbox"/> Surface <input type="checkbox"/> Air <input type="checkbox"/> Oil Total Number of Containers _____	<input type="checkbox"/> Composite <input type="checkbox"/> Soil <input checked="" type="checkbox"/> Water <input type="checkbox"/> Oil	BTEX + MTBE 8021 <input type="checkbox"/> 8260 <input checked="" type="checkbox"/> Naphth <input type="checkbox"/> 8260 full scan _____ Oxygenates _____ NWTPH-Gx _____ NWTPH-Dx with Silica Gel Cleanup <input checked="" type="checkbox"/> NWTPH-Dx without Silica Gel Cleanup <input checked="" type="checkbox"/> WA VPH <input type="checkbox"/> WA EPH <input type="checkbox"/> Lead Total <input type="checkbox"/> Diss. <input checked="" type="checkbox"/> Method <u>GD20</u> NITRATE / SULFATE DISSOLVED IRON / MANGANESE SULFIDE / METHANE ALKALINITY							
Site Address 101 Mulford Road, TOLEDO, WA											
Chevron PM MHO LEIDOSRS Lead Consultant Russell Shroder											
Consultant/Office Gettler-Ryan, Inc., 6805 Sierra Court, Suite G, Dublin, CA 94568											
Consultant Project Mgr. Deanna L. Harding, (deanna@grinc.com)											
Consultant Phone # (925) 551-7444 x180											

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 Collected		Grab	Composite	Soil	Water	Oil	Total Number of Containers	BTEX + MTBE	8260	8260 full scan	Oxygenates	NWTPH-Gx	NWTPH-Dx with Silica Gel Cleanup	NWTPH-Dx without Silica Gel Cleanup	WA VPH	WA EPH	Lead Total	Diss.	Method	GD20	NITRATE / SULFATE	DISSOLVED IRON / MANGANESE	SULFIDE / METHANE	ALKALINITY	6 Remarks		
	Date	Time																										
PA	2-5-14		X			X		X	X				X															Please report results for Dx with & without sgc. Dissolved iron, lead, and Manganese, as well as Alkalinity samples have been field filtered.
B.1		1033	X			X		16	X				X	X	X			X	X	X	X	X	X	X	X	X		
B.2		0925	X			X		16	X				X	X	X			X	X	X	X	X	X	X	X	X		
B.3		1310	X			X		16	X				X	X	X			X	X	X	X	X	X	X	X	X		
B.4		1124	X			X		16	X				X	X	X			X	X	X	X	X	X	X	X	X		
MW-111		1216	X			X		16	X				X	X	X			X	X	X	X	X	X	X	X	X		

7 Turnaround Time Requested (TAT) (please circle)

Standard 5 day 4 day
 72 hour 48 hour 24 hour

EDF/EDD

Relinquished by _____	Date 2-5-14	Time 17:00	Received by _____	Date _____	Time _____	9
Relinquished by _____	Date _____	Time _____	Received by _____	Date _____	Time _____	

8 Data Package (circle if required)

Type I - Full _____
 Type VI (Raw Data) _____

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

Relinquished by Commercial Carrier: _____

UPS FedEx _____ Other _____

Temperature Upon Receipt _____ °C

Custody Seals Intact? Yes _____ No _____

Chevron Northwest Region Analysis Request/Chain of Custody



Lancaster Laboratories

For Eurofins Lancaster Laboratories use only
 Acct. # _____ Group # _____ Sample # _____
Instructions on reverse side correspond with circled numbers.

① Client Information				④ Matrix			⑤ Analyses Requested											⑥ Remarks																		
Facility # SS#211556-OML G-R#386773		WBS		<input type="checkbox"/> Sediment <input checked="" type="checkbox"/> Ground <input type="checkbox"/> Surface <input type="checkbox"/> Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Air <input type="checkbox"/> Soil <input type="checkbox"/> Water <input type="checkbox"/> Oil <input type="checkbox"/> Composite	Total Number of Containers BTEX + MTBE 8021 <input type="checkbox"/> 8260 <input type="checkbox"/> Naphth <input type="checkbox"/> 8260 full scan Oxygenates NWTPH-Gx NWTPH-Dx with Silica Gel Cleanup <input type="checkbox"/> NWTPH-Dx without Silica Gel Cleanup <input checked="" type="checkbox"/> WA VPH <input type="checkbox"/> WA EPH <input type="checkbox"/> Lead Total <input type="checkbox"/> Diss. <input checked="" type="checkbox"/> Method 6020 NITRATE / SULFATE 300.0 DISS. IRON / MANGANESE SULFIDE / METHANE ALKALINITY			SCR #: _____ <input type="checkbox"/> Results in Dry Weight <input type="checkbox"/> J value reporting needed <input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds <input type="checkbox"/> 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run _____ oxy's on highest hit <input type="checkbox"/> Run _____ oxy's on all hits											⑥ Remarks <p style="text-align: center;">Please report results for Dx with & without sgc. Dissolved iron, lead and Manganese, as well as Alkalinity samples have been field filtered.</p> <p style="text-align: center;"><small>Please forward lab results directly to the LC and cc: G-R. The TPW sample results should be forwarded directly</small></p>																	
Site Address 101 Mulford Road, TOLEDO, WA		Chevron PM MHO LEIDOSRS																			Lead Consultant Russell Shroff		Consultant/Office Gettler-Ryan, Inc., 6805 Sierra Court, Suite G, Dublin, CA 94568		Consultant Project Mgr. Deanna L. Harding, (deanna@grinc.com)		Consultant Phone # (925) 551-7444 x180		Sampler J. PARR		Collected		Grab			
Date		Time																			Date		Time		Date		Time		Date		Time		Date		Time	
2.6.14																					2.6.14		1031													
NW-110		6931																			NW-112		1307													
NW-113		1402																			NW-119		1214													
⑦ Turnaround Time Requested (TAT) (please circle) Standard <input checked="" type="radio"/> 5 day 4 day 72 hour 48 hour 24 hour				Relinquished by <i>[Signature]</i> Date 2.6.14 Time 1700 Received by <i>[Signature]</i>			Relinquished by Date Time Received by		Relinquished by Date Time Received by		Relinquished by Date Time Received by		Relinquished by Date Time Received by		Relinquished by Date Time Received by																					
⑧ Data Package (circle if required) Type I - Full Type VI (Raw Data)				EDD (circle if required) CVX-RTBU-FI_05 (default) Other:			Relinquished by Commercial Carrier: UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> Other <input type="checkbox"/> Temperature Upon Receipt _____ °C						Received by Custody Seals Intact? Yes No																							

Chevron Northwest Region Analysis Request/Chain of Custody



Lancaster
Laboratories

For Eurofins Lancaster Laboratories use only
 Acct. # _____ Group # _____ Sample # _____
 Instructions on reverse side correspond with circled numbers.

1 Client Information					4 Matrix			5 Analyses Requested											6 Remarks							
Facility # SS#211556-OML G-R#386773		WBS			<input type="checkbox"/> Sediment <input checked="" type="checkbox"/> Ground <input type="checkbox"/> Surface <input type="checkbox"/> Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Air	Total Number of Containers	<input type="checkbox"/> BTEX + MTBE <input type="checkbox"/> 8021 <input type="checkbox"/> 8260 <input type="checkbox"/> Naphth <input type="checkbox"/> 8260 full scan	Oxygenates	<input type="checkbox"/> NWTPH-Gx <input checked="" type="checkbox"/> NWTPH-Dx with Silica Gel Cleanup <input checked="" type="checkbox"/> NWTPH-Dx without Silica Gel Cleanup	<input type="checkbox"/> WA VPH <input type="checkbox"/> WA EPH	<input type="checkbox"/> Lead <input type="checkbox"/> Total <input type="checkbox"/> Diss.	<input type="checkbox"/> Method 6020 NITRATE/SULFATE DISS. IRON/MANGANESE SULFIDE/METHANE ALKALINITY	<input type="checkbox"/> Results in Dry Weight <input type="checkbox"/> J value reporting needed <input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds <input type="checkbox"/> 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run ___ oxy's on highest hit <input type="checkbox"/> Run ___ oxy's on all hits	SCR #: _____												
Site Address 101 Mulford Road, TOLEDO, WA		Chevron PM MHO LEIDOSRS Russell Shropshire												Composite <input type="checkbox"/> Soil <input type="checkbox"/> Water <input type="checkbox"/> Oil	Grab <input type="checkbox"/>	Lead Consultant Gettler-Ryan, Inc., 6805 Sierra Court, Suite G, Dublin, CA 94568 Consultant/Office Deanna L. Harding, (deanna@grinc.com) Consultant Project Mgr. (925) 551-7444 x180 Consultant Phone # Sampler J. Pavlic										
Chevron PM MHO LEIDOSRS Russell Shropshire		Lead Consultant Gettler-Ryan, Inc., 6805 Sierra Court, Suite G, Dublin, CA 94568																								
Consultant/Office Gettler-Ryan, Inc., 6805 Sierra Court, Suite G, Dublin, CA 94568		Consultant Project Mgr. Deanna L. Harding, (deanna@grinc.com)																								
2 Sample Identification		Collected		Grab	Composite																					
Date	Time												Date	Time												
7 Turnaround Time Requested (TAT) (please circle)					Relinquished by			Date	Time	Received by		Date	Time	9												
Standard 5 day 4 day 72 hour 48 hour 24 hour								2.10.14	1700																	
8 Data Package (circle if required)					Relinquished by Commercial Carrier:			Date	Time	Received by		Date	Time													
Type I - Full Type VI (Raw Data)					UPS <input checked="" type="checkbox"/> FedEx _____ Other _____																					
EDD (circle if required) CVX-RTBU-FI_05 (default) Other: _____					Temperature Upon Receipt _____ °C			Custody Seals Intact?		Yes No																

Chevron Northwest Region Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # _____ Group # _____ Sample # _____
 For Eurofins Lancaster Laboratories use only
 Instructions on reverse side correspond with circled numbers.

1 Client Information			4 Matrix			5 Analyses Requested										6 Remarks																
Facility # SS#211556-OML G-R#386773 WBS Site Address 101 Mulford Road, TOLEDO, WA Chevron PM MHO LEIDOSRS Lead Consultant Russell Shropshire Consultant/Office Gettler-Ryan, Inc., 6805 Sierra Court, Suite G, Dublin, CA 94568 Consultant Project Mgr. Deanna L. Harding, (deanna@grinc.com) Consultant Phone # (925) 551-7444 x180 Sampler J. Payne			<input type="checkbox"/> Sediment <input checked="" type="checkbox"/> Potable Ground <input type="checkbox"/> Surface <input type="checkbox"/> NPDES <input type="checkbox"/> Air			Total Number of Containers _____ BTEX + MTBE 8021 <input type="checkbox"/> 8260 <input checked="" type="checkbox"/> Naphth <input type="checkbox"/> 8260 full scan _____ Oxygenates _____ NWTPH-Gx _____ NWTPH-Dx with Silica Gel Cleanup <input checked="" type="checkbox"/> NWTPH-Dx without Silica Gel Cleanup <input checked="" type="checkbox"/> WA VPH <input type="checkbox"/> WA EPH <input type="checkbox"/> Lead Total <input type="checkbox"/> Diss. <input checked="" type="checkbox"/> Method 6020										SCR #: _____ <input type="checkbox"/> Results in Dry Weight <input type="checkbox"/> J value reporting needed <input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds <input type="checkbox"/> 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run _____ oxy's on highest hit <input type="checkbox"/> Run _____ oxy's on all hits																
2 Sample Identification		3 Collected		Grab	Composite	Soil	Water	Oil	Total Number of Containers	BTEX + MTBE	8021	8260	Naphth	Oxygenates	NWTPH-Gx	NWTPH-Dx with Silica Gel Cleanup	NWTPH-Dx without Silica Gel Cleanup	WA VPH	WA EPH	Lead Total	Diss.	Method										
Date	Time	Date	Time																													
DA.	2.11.14	X					X		2	X					X																	
MW-109	↓ 1005	X					X		9	X					X	X	X					X										
MW-114	↓ 1051	X					X		9	X					X	X	X					X										
7 Turnaround Time Requested (TAT) (please circle) <table style="width:100%; border: none;"> <tr> <td style="border: none;"><input checked="" type="radio"/> Standard</td> <td style="border: none;">5 day</td> <td style="border: none;"><input type="radio"/> 4 day</td> </tr> <tr> <td style="border: none;"><input type="radio"/> 72 hour</td> <td style="border: none;">48 hour</td> <td style="border: none;"><input type="radio"/> 24 hour</td> </tr> </table>																							<input checked="" type="radio"/> Standard	5 day	<input type="radio"/> 4 day	<input type="radio"/> 72 hour	48 hour	<input type="radio"/> 24 hour	Relinquished by [Signature] Date 2.11.14 Time 1430 Received by [Signature] Date _____ Time _____			
<input checked="" type="radio"/> Standard	5 day	<input type="radio"/> 4 day																														
<input type="radio"/> 72 hour	48 hour	<input type="radio"/> 24 hour																														
8 Data Package (circle if required) <table style="width:100%; border: none;"> <tr> <td style="border: none;"><input checked="" type="radio"/> Type I - Full</td> <td style="border: none;"><input type="radio"/> Type VI (Raw Data)</td> <td style="border: none;"><input type="radio"/> EDD (circle if required)</td> <td style="border: none;">CVX-RTBU-FL_05 (default)</td> <td style="border: none;">Other: _____</td> <td style="border: none;">Relinquished by Commercial Carrier: UPS <input checked="" type="checkbox"/> FedEx _____ Other _____</td> <td style="border: none;">Temperature Upon Receipt _____ °C</td> <td style="border: none;">Custody Seals Intact? Yes <input type="checkbox"/> No <input type="checkbox"/></td> </tr> </table>																							<input checked="" type="radio"/> Type I - Full	<input type="radio"/> Type VI (Raw Data)	<input type="radio"/> EDD (circle if required)	CVX-RTBU-FL_05 (default)	Other: _____	Relinquished by Commercial Carrier: UPS <input checked="" type="checkbox"/> FedEx _____ Other _____	Temperature Upon Receipt _____ °C	Custody Seals Intact? Yes <input type="checkbox"/> No <input type="checkbox"/>	Relinquished by _____ Date _____ Time _____ Received by _____ Date _____ Time _____	
<input checked="" type="radio"/> Type I - Full	<input type="radio"/> Type VI (Raw Data)	<input type="radio"/> EDD (circle if required)	CVX-RTBU-FL_05 (default)	Other: _____	Relinquished by Commercial Carrier: UPS <input checked="" type="checkbox"/> FedEx _____ Other _____	Temperature Upon Receipt _____ °C	Custody Seals Intact? Yes <input type="checkbox"/> No <input type="checkbox"/>																									
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Please forward lab results directly to the LC and cc: G-R. The TPW sample results should be forwarded directly.																																



GETTLER-RYAN INC.

TRANSMITTAL

June 24, 2014
G-R #386773

TO: Mr. Russell Shropshire
Leidos, Inc.
18912 North Creek Parkway, Suite 101
Bothell, Washington 98011

FROM: Deanna L. Harding
Project Coordinator
Gettler-Ryan Inc.
6805 Sierra Court, Suite G
Dublin, California 94568

RE: **Former Texaco Service Station
#211556/Cowlitz BP
101 Mulford Road
Toledo, Washington
UST Site#10669**

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DESCRIPTION
VIA PDF	Groundwater Monitoring and Sampling Data Package Second Quarter Event of June 12, 13, 14, 2014

COMMENTS:

Pursuant to your request, we are providing you with copies of the above referenced data for your use.

Please provide us the updated historical data prior to the next monitoring and sampling event for our field use.

Please feel free to contact me if you have any comments/questions.

trans/211556

Standard Operating Procedure, Low-Flow Purging and Sampling

Gettler-Ryan Inc. field personnel adhere to the following Standard Operating Procedure (SOP) for the collection and handling of representative groundwater samples using the Low-Flow (Minimal-Drawdown) Purging technique. This SOP incorporates purging and sampling methods discussed in U.S. EPA, Ground Water Issue, Publication Number EPA/540/S-95/504, April 1996 by Puls, R.W. and M.J. Barcelona - "*Low-Flow (Minimal-Drawdown) Ground-Water Sampling Procedures.*"

A QED Well Wizard™ (or equivalent) bladder pump or Peristaltic Pump will be used to purge and sample selected wells as outlined in the scope-of-work. An in-line flow cell or other multi-parameter meter is used to collect water quality indicating parameters during purging.

Initial Pump Discharge Test Procedures

The Static Water Level (SWL) is measured in all wells at the site prior to the installation of the pump or tubing and initiation of the test procedures in any well. In addition, the presence or absence of separate-phase hydrocarbons (SPH) is determined using an interface probe. Product thickness, if present, is measured to the nearest 0.01 foot. The SWL measurement and SPH thickness, if any, will be recorded on the field data sheet.

The bladder pump or suction inlet tubing of the peristaltic pump is then positioned with its inlet located within the screened interval of the well. The in-line flow cell is then connected to the discharge tubing. After pump installation, the SWL is allowed to recover to its original level. The pump is then started at a discharge rate between 100 ml to 300 ml per minute with the in-line flow cell connected. The water level is monitored continuously for any change from the original measurement and the discharge rate is adjusted until an optimum discharge rate (ODR) is determined. The goal for the ODR is to produce a stable drawdown of less than 0.1 meter as allowed by site conditions; however the total drawdown from the initial SWL should not exceed 25% of the distance between pump inlet location and the top of the well screen. Once achieved, the ODR will be confirmed by volumetric discharge measurement and recorded on the field data sheet.

Purging and Water Quality Parameter Measurement

When the ODR has been determined and the SWL drawdown has been established within the acceptable range, and a minimum of one pump system volume (bladder volume and/or discharge tubing volume) has been purged, field measurements for temperature (T), pH, conductivity (Ec), and if required, oxygen reduction potential (ORP) and dissolved oxygen (DO) will be collected and documented on the field data sheet. Measurements should be taken every three to five minutes until parameters stabilize for three consecutive readings. The minimum parameter subset of T ($\pm 10\%$), pH (± 0.1 unit), and Ec (± 10 uS) are required to stabilize. Additional parameters that may be required are DO (± 0.2 mg/l) and ORP (± 20 mV).

Sample Collection

When water quality parameters have stabilized, and the SWL drawdown remains established within the acceptable range, groundwater sample collection may begin. If used, the in-line flow cell and its tubing are disconnected from the discharge tubing prior to sample collection. Water samples are collected from the discharge tubing into appropriate containers. Pre-preserved containers, supplied by analytical laboratories, are used when possible. When pre-preserved containers are not available, the laboratory is instructed to preserve the sample as appropriate. Duplicate samples are collected for the laboratory to use in maintaining quality assurance/quality control standards, as directed by the scope of work. The samples are labeled to include the job number, sample identification, collection date and time, analysis, preservation (if any), and the sample collector's initials. The water samples are placed in a cooler,

maintained at 4°C for transport to the laboratory. A laboratory supplied trip blank accompanies each sampling set. The trip blank is analyzed for some or all of the same compounds as the groundwater samples. Once collected in the field, all samples are maintained under chain of custody until delivered to the laboratory.

The chain of custody document includes the job number, type of preservation, if any, analysis requested, sample identification, date and time collected, and the sample collector's name. The chain of custody is signed and dated (including time of transfer) by each person who receives or surrenders the samples, beginning with the field personnel and ending with the laboratory personnel.

A laboratory supplied trip blank accompanies each sampling set. For sampling sets greater than 20 samples, 5% trip blanks are included. The trip blank is analyzed for some or all of the same compounds as the groundwater samples.



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 6.12/13/14.14 (inclusive)
 Sampler: J.P.

Well ID: NW-103
 Well Diameter: 2 1/4 in.
 Total Depth: 0.36 ft.
 Depth to Water: UTA ft.

Date Monitored: 6.12.14

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

xVF _____ = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: _____

Purge Equipment:

- Disposable Bailer _____
- Stainless Steel Bailer _____
- Stack Pump _____
- Suction Pump _____
- Grundfos _____
- Peristaltic Pump _____
- QED Bladder Pump _____
- Other: _____

Sampling Equipment:

- Disposable Bailer _____
- Pressure Bailer _____
- Metal Filters _____
- Peristaltic Pump _____
- QED Bladder Pump _____
- Other: _____

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	_____ ft
Visual Confirmation/Description:	_____
Skimmer / Absorbant Sock (circle one)	_____
Amt Removed from Skimmer:	_____ gal
Amt Removed from Well:	_____ gal
Water Removed:	_____ gal
Product Transferred to:	_____

Start Time (purge): _____
 Sample Time/Date: _____ / _____
 Approx. Flow Rate: _____ mlpm
 Did well de-water? _____ If yes, Time: _____

Weather Conditions: _____
 Water Color: _____ Odor: Y / N
 Sediment Description: _____
 Volume: _____ gal. DTW @ Sampling: _____

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µmhos/cm - µS)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
	x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
	x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
	x 250ml poly	YES	NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At: UTA - due to Vegetation overgrowth

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 6-12-14 (inclusive)
 Sampler: VIP

Well ID: MW-109
 Well Diameter: 2 1/4 in.
 Total Depth: 12.69 ft.
 Depth to Water: 7.31 ft.
5.38 xVF = - = - x3 case volume = Estimated Purge Volume: - gal.

Date Monitored: 6-12-14

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	<u>2"= 0.17</u>	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 9.30

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:
 Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ gal
 Amt Removed from Well: _____ gal
 Water Removed: _____ gal
 Product Transferred to: _____

Start Time (purge): 10:12 Weather Conditions: Rain
 Sample Time/Date: 11:00 10-13-14 Water Color: CLEAR Odor: Y 1(N)
 Approx. Flow Rate: 400 mlpm Sediment Description: _____
 Did well de-water? YES If yes, Time: 10:42 Volume: 7.2 gal DTW @ Sampling: 7.21

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µmhos/cm - µS)	Temperature (°C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>10:42</u>	<u>7.2</u>	<u>5.72</u>	<u>.452</u>	<u>14.32</u>	<u>1.66</u>	<u>94.9</u>	<u>7.21</u>
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-109</u>	<u>6</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>1</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	<u>1</u> x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At: 6.5 - 7.5
INSUF. WATER TO FILL DISSOLVED LEAD BOTTLE

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: R Add/Replaced Lock: R



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 6.12.13 | 14.14 (inclusive)
 Sampler: J.P.

Well ID: MW-110
 Well Diameter: 2 1/4 in.
 Total Depth: 19.83 ft.
 Depth to Water: 9.60 ft.
10.33 xVF = - x3 case volume = Estimated Purge Volume: - gal.

Date Monitored: 6.12.14

Volume Factor (VF)	3/4" = 0.02	1" = 0.04	2" = 0.17	3" = 0.38
	4" = 0.66	5" = 1.02	6" = 1.50	12" = 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 11.510

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump x _____
 QED Bladder Pump _____
 Other: YBI mps 556

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump x _____
 QED Bladder Pump _____
 Other: TUBING

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	_____ ft
Visual Confirmation/Description:	_____
Skimmer / Absorbant Sock (circle one)	_____
Amt Removed from Skimmer:	_____ gal
Amt Removed from Well:	_____ gal
Water Removed:	_____ gal
Product Transferred to:	_____

Start Time (purge): 0930
 Sample Time/Date: 0941 6.12.14
 Approx. Flow Rate: 2.00 mlpm
 Did well de-water? NO If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 10.11

Weather Conditions: RAIN
 Water Color: CLEAR Odor: Y (N)
 Sediment Description: NONE

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µmhos/cm - MS)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>0930</u>	<u>7.2</u>	<u>6.25</u>	<u>.274</u>	<u>13.23</u>	<u>.67</u>	<u>52.5</u>	<u>9.79</u>
<u>0941</u>	<u>8.4</u>	<u>6.26</u>	<u>.277</u>	<u>13.30</u>	<u>.66</u>	<u>54.1</u>	<u>9.96</u>
<u>0944</u>	<u>9.6</u>	<u>6.28</u>	<u>.279</u>	<u>13.30</u>	<u>.69</u>	<u>56.3</u>	<u>10.11</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-110</u>	<u>6</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
	x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
	x 250ml poly	YES	NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At: 14'-15'

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: R Add/Replaced Lock: R



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 6.12.13 | 14.14 (inclusive)
 Sampler: J.P.

Well ID: NW-111
 Well Diameter: 2 1/4 in.
 Total Depth: 17.80 ft.
 Depth to Water: 7.70 ft.

Date Monitored: 6.12.14

Volume Factor (VF)	3/4" = 0.02	1" = 0.04	2" = 0.17	3" = 0.38
	4" = 0.66	5" = 1.02	6" = 1.50	12" = 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 9.72

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: X-451 w/ 1/2" hose

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: TUBING

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ gal
 Amt Removed from Well: _____ gal
 Water Removed: _____ gal
 Product Transferred to: _____

Start Time (purge): 1022
 Sample Time/Date: 1051 / 6.12.14
 Approx. Flow Rate: 400 mlpm
 Did well de-water? NO If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 7.80

Weather Conditions: Rain
 Water Color: CLEAR Odor: (Y) / N MILD
 Sediment Description: NONE

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>1040</u>	<u>7.2</u>	<u>6.22</u>	<u>.394</u>	<u>14.74</u>	<u>.57</u>	<u>-74.5</u>	<u>7.80</u>
<u>1043</u>	<u>8.4</u>	<u>6.25</u>	<u>.396</u>	<u>14.82</u>	<u>.59</u>	<u>-76.0</u>	<u>7.80</u>
<u>1046</u>	<u>9.6</u>	<u>6.28</u>	<u>.398</u>	<u>14.90</u>	<u>.62</u>	<u>-76.3</u>	<u>7.80</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>NW-111</u>	<u>6</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
<u>FF</u>	<u>2</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
	<u>1</u> x 250ml poly	YES	<u>FF</u> HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
<u>FF</u>	<u>1</u> x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	<u>2</u> x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
<u>FF</u>	<u>1</u> x 250ml poly	YES	<u>FF</u> NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At:

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: 9" Add/Replaced Lock: R



GETTLER-RYAN Inc.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 6.12/13/14.14 (inclusive)
 Sampler: J.P.

Well ID: MMW-112
 Well Diameter: (2) 4 in.
 Total Depth: 17.54 ft.
 Depth to Water: DTA ft.

Date Monitored: 6.12.14

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

xVF _____ = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: _____

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	_____ ft
Visual Confirmation/Description:	_____
Skimmer / Absorbant Sock (circle one)	_____
Amt Removed from Skimmer:	_____ gal
Amt Removed from Well:	_____ gal
Water Removed:	_____ gal
Product Transferred to:	_____

Start Time (purge): _____ Weather Conditions: _____
 Sample Time/Date: _____ / _____ Water Color: _____ Odor: Y / N
 Approx. Flow Rate: _____ mlpm Sediment Description: _____
 Did well de-water? _____ If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: _____

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µmhos/cm - µS)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
	x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
	x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
	x 250ml poly	YES	NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At: DTA - due to overgrown

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 6.12/13/14.14 (inclusive)
 Sampler: J.P.

Well ID: MW-113
 Well Diameter: 2 1/4 in.
 Total Depth: 10.10 ft.
 Depth to Water: 9.79 ft.
9.39 xVF

Date Monitored: 6.12.14

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 10.10

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: YSE mps 556

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: FORBID

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	_____ ft
Visual Confirmation/Description:	_____
Skimmer / Absorbant Sock (circle one)	_____
Amt Removed from Skimmer:	_____ gal
Amt Removed from Well:	_____ gal
Water Removed:	_____ gal
Product Transferred to:	_____

Start Time (purge): 1240
 Sample Time/Date: 1315 10.13.14
 Approx. Flow Rate: 400 mlpm
 Did well de-water? No If yes, Time: _____ Volume: _____

Weather Conditions: RAIN
 Water Color: CLEAR Odor: Y (N)
 Sediment Description: NONE
 DTW @ Sampling: 9.13

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (μ mhos/cm - 25°)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>1304</u>	<u>7.2</u>	<u>6.10</u>	<u>087</u>	<u>13.16</u>	<u>2.47</u>	<u>115.0</u>	<u>0.91</u>
<u>1307</u>	<u>8.4</u>	<u>6.12</u>	<u>089</u>	<u>13.24</u>	<u>2.65</u>	<u>117.3</u>	<u>9.016</u>
<u>1310</u>	<u>9.6</u>	<u>6.14</u>	<u>091</u>	<u>13.31</u>	<u>2.67</u>	<u>119.0</u>	<u>9.13</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-113</u>	<u>6</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>2</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	<u>2</u> x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At: 13.5 - 14.5

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 6.12/13/14 (inclusive)
 Sampler: J.P.

Well ID: MW-114
 Well Diameter: (2) 4 in.
 Total Depth: 16.03 ft.
 Depth to Water: 6.96 ft.
9.07 xVF _____ = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Date Monitored: 6.12.14

Volume	3/4"= 0.02	1"= 0.04	<u>(2)"= 0.17</u>	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 9.93

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: 445 mps 5510

Sampling Equipment:
 Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: TUBING

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ gal
 Amt Removed from Well: _____ gal
 Water Removed: _____ gal
 Product Transferred to: _____

Start Time (purge): 0920 Weather Conditions: RAIN
 Sample Time/Date: 0950 / 6.13.14 Water Color: CLEAR Odor: Y (N)
 Approx. Flow Rate: 400 mlpm Sediment Description: NONE
 Did well de-water? NO If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 7.61

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (μ mhos/cm μ S)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>0930</u>	<u>7.2</u>	<u>6.42</u>	<u>.216</u>	<u>13.27</u>	<u>.56</u>	<u>.1</u>	<u>7.30</u>
<u>0941</u>	<u>8.4</u>	<u>6.46</u>	<u>.210</u>	<u>13.34</u>	<u>.59</u>	<u>2.3</u>	<u>7.47</u>
<u>0944</u>	<u>9.6</u>	<u>6.48</u>	<u>.220</u>	<u>13.40</u>	<u>.61</u>	<u>4.1</u>	<u>7.61</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-114</u>	<u>0</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>1</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	<u>1</u> x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At: 11.6 - 12.5



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: **Chevron #211556**
 Site Address: **101 Mulford Road**
 City: **Toledo, WA**

Job Number: **386773**
 Event Date: **6-12/13/14-14** (inclusive)
 Sampler: **J.P.**

Well ID: **MW-116**
 Well Diameter: **2 1/4** in.
 Total Depth: **17.46** ft.
 Depth to Water: **JTA** ft.

Date Monitored: **6-12-14**

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

xVF _____ = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: _____

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:
 Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ gal
 Amt Removed from Well: _____ gal
 Water Removed: _____ gal
 Product Transferred to: _____

Start Time (purge): _____ Weather Conditions: _____
 Sample Time/Date: _____ / _____ Water Color: _____ Odor: **Y / N**
 Approx. Flow Rate: _____ mlpm Sediment Description: _____
 Did well de-water? _____ If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: _____

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µmhos/cm µS)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
	x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
	x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
	x 250ml poly	YES	NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: **Depth Pump Set At: JTA - due to overgrowth**

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 6.12/13/14.14 (inclusive)
 Sampler: NT

Well ID: MMW-116
 Well Diameter: 2 1/4 in.
 Total Depth: 17.63 ft.
 Depth to Water: JTA ft.

Date Monitored: 6.12.14

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

xVF _____ = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: _____

Purge Equipment:

- Disposable Bailer _____
- Stainless Steel Bailer _____
- Stack Pump _____
- Suction Pump _____
- Grundfos _____
- Peristaltic Pump _____
- QED Bladder Pump _____
- Other: _____

Sampling Equipment:

- Disposable Bailer _____
- Pressure Bailer _____
- Metal Filters _____
- Peristaltic Pump _____
- QED Bladder Pump _____
- Other: _____

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	_____ ft
Visual Confirmation/Description:	_____
Skimmer / Absorbant Sock (circle one)	_____
Amt Removed from Skimmer:	_____ gal
Amt Removed from Well:	_____ gal
Water Removed:	_____ gal
Product Transferred to:	_____

Start Time (purge): _____
 Sample Time/Date: _____ / _____
 Approx. Flow Rate: _____ mlpm
 Did well de-water? _____ If yes, Time: _____

Weather Conditions: _____
 Water Color: _____ Odor: Y / N
 Sediment Description: _____
 Volume: _____ gal. DTW @ Sampling: _____

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µmhos/cm - µS)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
	x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
	x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
	x 250ml poly	YES	NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At: JTA - due to overgrowth

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 10-12/13/14-14 (inclusive)
 Sampler: [Signature]

Well ID: NW-117
 Well Diameter: (2) 4 in.
 Total Depth: 17.64 ft.
 Depth to Water: 7.11 ft.

Date Monitored: 10-12-14

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 9.21

Purge Equipment:

- Disposable Bailer _____
- Stainless Steel Bailer _____
- Stack Pump _____
- Suction Pump _____
- Grundfos _____
- Peristaltic Pump _____
- QED Bladder Pump _____
- Other: XLT 1005 6560

Sampling Equipment:

- Disposable Bailer _____
- Pressure Bailer _____
- Metal Filters _____
- Peristaltic Pump _____
- QED Bladder Pump _____
- Other: TUBING

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	_____ ft
Visual Confirmation/Description:	_____
Skimmer / Absorbant Sock (circle one)	_____
Amt Removed from Skimmer:	_____ gal
Amt Removed from Well:	_____ gal
Water Removed:	_____ gal
Product Transferred to:	_____

Start Time (purge): 1133
 Sample Time/Date: 1202 10-13-14
 Approx. Flow Rate: 400 mlpm
 Did well de-water? No If yes, Time: _____

Weather Conditions: Rain
 Water Color: CLEAR Odor: Y/N
 Sediment Description: NONE
 Volume: _____ gal. DTW @ Sampling: 7.51

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µmhos/cm - µS)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>1151</u>	<u>7.2</u>	<u>6.69</u>	<u>.083</u>	<u>13.45</u>	<u>0.14</u>	<u>97.7</u>	<u>7.29</u>
<u>1154</u>	<u>8.4</u>	<u>6.12</u>	<u>.0810</u>	<u>13.58</u>	<u>2.20</u>	<u>99.1</u>	<u>7.37</u>
<u>1157</u>	<u>9.6</u>	<u>6.14</u>	<u>.0800</u>	<u>13.60</u>	<u>2.24</u>	<u>101.1</u>	<u>7.51</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>NW-117</u>	<u>6</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>2</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	<u>2</u> x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At: 13.5' - 14.5'



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 6.12/13/14.14 (inclusive)
 Sampler: 04

Well ID: MM-119
 Well Diameter: (2) 4 in.
 Total Depth: 17.22 ft.
 Depth to Water: UTA ft.

Date Monitored: 6.12.14

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

xVF = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: _____

Purge Equipment:

- Disposable Bailer _____
- Stainless Steel Bailer _____
- Stack Pump _____
- Suction Pump _____
- Grundfos _____
- Peristaltic Pump _____
- QED Bladder Pump _____
- Other: _____

Sampling Equipment:

- Disposable Bailer _____
- Pressure Bailer _____
- Metal Filters _____
- Peristaltic Pump _____
- QED Bladder Pump _____
- Other: _____

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	_____ ft
Visual Confirmation/Description:	_____
Skimmer / Absorbant Sock (circle one)	_____
Amt Removed from Skimmer:	_____ gal
Amt Removed from Well:	_____ gal
Water Removed:	_____ gal
Product Transferred to:	_____

Start Time (purge): _____ Weather Conditions: _____
 Sample Time/Date: _____ / _____ Water Color: _____ Odor: Y / N
 Approx. Flow Rate: _____ mlpm Sediment Description: _____
 Did well de-water? _____ If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: _____

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µmhos/cm - µS)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
	x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
	x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
	x 250ml poly	YES	NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At: UTA - due to overgrowth

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 6.12/13/14.14 (inclusive)
 Sampler: [Signature]

Well ID: MW-119
 Well Diameter: (2) 4 in.
 Total Depth: 16.125 ft.
 Depth to Water: UTA ft.

Date Monitored: 6.12.14

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

xVF _____ = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: _____

Purge Equipment:

- Disposable Bailer _____
- Stainless Steel Bailer _____
- Stack Pump _____
- Suction Pump _____
- Grundfos _____
- Peristaltic Pump _____
- QED Bladder Pump _____
- Other: _____

Sampling Equipment:

- Disposable Bailer _____
- Pressure Bailer _____
- Metal Filters _____
- Peristaltic Pump _____
- QED Bladder Pump _____
- Other: _____

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	_____ ft
Visual Confirmation/Description:	_____
Skimmer / Absorbant Sock (circle one)	_____
Amt Removed from Skimmer:	_____ gal
Amt Removed from Well:	_____ gal
Water Removed:	_____ gal
Product Transferred to:	_____

Start Time (purge): _____ Weather Conditions: _____
 Sample Time/Date: _____ / _____ Water Color: _____ Odor: Y / N
 Approx. Flow Rate: _____ mlpm Sediment Description: _____
 Did well de-water? _____ If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: _____

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µmhos/cm - µS)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
	x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
	x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
	x 250ml poly	YES	NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At: UTA - due to overgrowth

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 6.12/13/14.14 (inclusive)
 Sampler: J.P.

Well ID: MW-124
 Well Diameter: 2.4 in.
 Total Depth: 16.07 ft.
 Depth to Water: 7.7 ft.
9.17 xVF _____ = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Date Monitored: 6.12.14

Volume	3/4"= 0.02	1"= 0.04	<u>2"= 0.17</u>	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 9.53

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: Y&I mps 8226

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: TUBING

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	_____ ft
Visual Confirmation/Description:	_____
Skimmer / Absorbant Sock (circle one)	_____
Amt Removed from Skimmer:	_____ gal
Amt Removed from Well:	_____ gal
Water Removed:	_____ gal
Product Transferred to:	_____

Start Time (purge): 0823 Weather Conditions: Rain
 Sample Time/Date: 0902 6.14.14 Water Color: clear Odor: Y 1 (N)
 Approx. Flow Rate: 400 mlpm Sediment Description: NONE
 Did well de-water? NO If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 7.88

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µmhos/cm - µS)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>0851</u>	<u>7.2</u>	<u>6.42</u>	<u>.292</u>	<u>13.56</u>	<u>1.12</u>	<u>89.3</u>	<u>7.88</u>
<u>0903</u>	<u>8.4</u>	<u>6.44</u>	<u>.292</u>	<u>13.62</u>	<u>1.16</u>	<u>91.0</u>	<u>7.88</u>
<u>0907</u>	<u>9.6</u>	<u>6.46</u>	<u>.292</u>	<u>13.70</u>	<u>1.17</u>	<u>91.8</u>	<u>7.88</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-124</u>	<u>6</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
	x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
	x 250ml poly	YES	NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At: 13.5 - 14.5



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 6.12/13/14.14 (inclusive)
 Sampler: J.P.

Well ID: B-1
 Well Diameter: (2) 4 in.
 Total Depth: 19.70 ft.
 Depth to Water: 7.87 ft.
11.91 xVF = - = - x3 case volume = Estimated Purge Volume: - gal.

Date Monitored: 6.12.14

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 10.25

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: YOS mps 5516

Sampling Equipment:
 Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: TUBING

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ gal
 Amt Removed from Well: _____ gal
 Water Removed: _____ gal
 Product Transferred to: _____

Start Time (purge): 1130
 Sample Time/Date: 1150 / 6.12.14
 Approx. Flow Rate: 400 mlpm
 Did well de-water? No If yes, Time: _____ Volume: _____ gal.

Weather Conditions: RAIN
 Water Color: clear Odor: Y/N
 Sediment Description: NONE
 DTW @ Sampling: 7.92

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µmhos/cm µS)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>1130</u>	<u>7.2</u>	<u>6.61</u>	<u>.146</u>	<u>14.15</u>	<u>.45</u>	<u>56.1</u>	<u>7.93</u>
<u>1141</u>	<u>8.4</u>	<u>6.64</u>	<u>.149</u>	<u>14.21</u>	<u>.46</u>	<u>54.9</u>	<u>7.92</u>
<u>1144</u>	<u>9.20</u>	<u>6.66</u>	<u>.154</u>	<u>14.28</u>	<u>.49</u>	<u>47.1</u>	<u>7.92</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>B-1</u>	<u>0</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>2</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
<u>FF</u>	<u>1</u> x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	<u>2</u> x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
<u>FF</u>	<u>1</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At: 16.5 - 16.5

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 6.12.14 / 14.14 (inclusive)
 Sampler: 4.0

Well ID: B.2
 Well Diameter: 2.4 in.
 Total Depth: 19.03 ft.
 Depth to Water: 2.91 ft.
10.12 xVF = - = -

Date Monitored: 6.12.14

Volume Factor (VF)	3/4" = 0.02	1" = 0.04	2" = 0.17	3" = 0.38
	4" = 0.66	5" = 1.02	8" = 1.50	12" = 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 10.93 x3 case volume = Estimated Purge Volume: - gal.

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: 1/2" nps 666

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: SWANK

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	_____ ft
Visual Confirmation/Description:	_____
Skimmer / Absorbant Sock (circle one)	_____
Amt Removed from Skimmer:	_____ gal
Amt Removed from Well:	_____ gal
Water Removed:	_____ gal
Product Transferred to:	_____

Start Time (purge): 1424
 Sample Time/Date: 1455 / 6.12.14
 Approx. Flow Rate: 400 mlpm
 Did well de-water? no If yes, Time: _____ Volume: _____ gal.

Weather Conditions: RAIN
 Water Color: CLEAR Odor: Y/N
 Sediment Description: NAF
 DTW @ Sampling: 9.23

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µmhos/cm - µS)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>1447</u>	<u>7.2</u>	<u>5.94</u>	<u>.140</u>	<u>18.71</u>	<u>.64</u>	<u>35.7</u>	<u>9.03</u>
<u>1446</u>	<u>8.4</u>	<u>6.00</u>	<u>.141</u>	<u>13.79</u>	<u>.67</u>	<u>37.6</u>	<u>9.14</u>
<u>1448</u>	<u>9.10</u>	<u>6.01</u>	<u>.140</u>	<u>13.83</u>	<u>.69</u>	<u>38.3</u>	<u>9.23</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>B.2</u>	<u>0</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>2</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	<u>1</u> x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At: 10.5 - 10.5



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 6.12/13/14.14 (inclusive)
 Sampler: J.P.

Well ID: B.3
 Well Diameter: (2) 4 in.
 Total Depth: 13.66 ft.
 Depth to Water: 9.69 ft.
4.97 xVF = - = - x3 case volume = Estimated Purge Volume: _____ gal.

Date Monitored: 6.12.14

Volume Factor (VF)	3/4" = 0.02	1" = 0.04	<u>2" = 0.17</u>	3" = 0.38
	4" = 0.66	5" = 1.02	6" = 1.50	12" = 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 9.66

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump x _____
 QED Bladder Pump _____
 Other: YBC w/ 6560

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump x _____
 QED Bladder Pump _____
 Other: TWANK

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ gal
 Amt Removed from Well: _____ gal
 Water Removed: _____ gal
 Product Transferred to: _____

Start Time (purge): 1321
 Sample Time/Date: 1350 / 6.12.14
 Approx. Flow Rate: 160 mlpm
 Did well de-water? NO If yes, Time: _____ Volume: _____ gal.

Weather Conditions: RAIN
 Water Color: CLEAR Odor: Y/N
 Sediment Description: NONE
 DTW @ Sampling: 8.98

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µmhos/cm - ^{MS} µS)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>1339</u>	<u>2.7</u>	<u>5.45</u>	<u>.276</u>	<u>16.23</u>	<u>.65</u>	<u>97.4</u>	<u>8.83</u>
<u>1342</u>	<u>3.2</u>	<u>5.47</u>	<u>.280</u>	<u>16.27</u>	<u>.69</u>	<u>99.0</u>	<u>8.89</u>
<u>1345</u>	<u>3.7</u>	<u>5.49</u>	<u>.281</u>	<u>16.33</u>	<u>.70</u>	<u>104.6</u>	<u>8.98</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>B.3</u>	<u>6</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>2</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	<u>2</u> x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At: 11.6' - 12.5'

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556 Job Number: 386773
 Site Address: 101 Mulford Road Event Date: 6.12.13/14.14 (inclusive)
 City: Toledo, WA Sampler: [Signature]

Well ID: B.4 Date Monitored: 6.12.14
 Well Diameter: (2) 4 in.
 Total Depth: 14.69 ft.
 Depth to Water: 7.94 ft. Check if water column is less than 0.50 ft.
6.75 xVF = - x3 case volume = Estimated Purge Volume: - gal.

Volume Factor (VF)	3/4" = 0.02	1" = 0.04	2" = 0.17	3" = 0.38
	4" = 0.66	5" = 1.02	6" = 1.50	12" = 5.80

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 9.29

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump x _____
 QED Bladder Pump _____
 Other: Y&E M&S 656

Sampling Equipment:
 Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump x _____
 QED Bladder Pump _____
 Other: TUBING

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ gal
 Amt Removed from Well: _____ gal
 Water Removed: _____ gal
 Product Transferred to: _____

Start Time (purge): 1224 Weather Conditions: Real
 Sample Time/Date: 1252 6.12.14 Water Color: CLEAR Odor: (Y) N MILD
 Approx. Flow Rate: 160 mlpm Sediment Description: NONE
 Did well de-water? N If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 8.33

Time (2400 hr.)	Volume (Liters)	pH	MS Conductivity ($\mu\text{mhos/cm}$ - μS)	Temperature (C F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>1242</u>	<u>2.7</u>	<u>6.32</u>	<u>.260</u>	<u>16.41</u>	<u>.50</u>	<u>-87.9</u>	<u>8.11</u>
<u>1245</u>	<u>3.2</u>	<u>6.35</u>	<u>.243</u>	<u>16.50</u>	<u>.50</u>	<u>-89.3</u>	<u>8.26</u>
<u>1248</u>	<u>3.7</u>	<u>6.37</u>	<u>.245</u>	<u>16.58</u>	<u>.59</u>	<u>-91.2</u>	<u>8.33</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>B.4</u>	<u>6</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD (6020 ICP/MS)
<u>FF</u>	<u>2</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE (EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MANGANESE (6010B)
<u>FF</u>	<u>1</u> x 500ml clear glass	YES	NaOH & ZnAc	LANCASTER	SULFIDE (SM20 4500 S2D)
	<u>2</u> x voa vial	YES	HCL	LANCASTER	METHANE (RSKOP-175)
<u>FF</u>	<u>1</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY (SM20 2320B)

COMMENTS: Depth Pump Set At: 12.5 - 13.5

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____

Chevron Northwest Region Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # 11260

For Eurofins Lancaster Laboratories use only
Group # 1481697 Sample # 7498023-35
Instructions on reverse side correspond with circled numbers.

1 Client Information		4 Matrix		5 Analyses Requested												
Facility # SS#211556-OML G-R#386773 WBS		Total Number of Containers	<input type="checkbox"/> Sediment	<input checked="" type="checkbox"/> Ground	<input type="checkbox"/> Surface											
Site Address 101 Mulford Road, TOLEDO, WA			<input type="checkbox"/> Potable	<input type="checkbox"/> NPDES	<input type="checkbox"/> Air											
Chevron PM MHO Lead Consultant Russell Shropshire																
Consultant/Office Gettler-Ryan, Inc., 6805 Sierra Court, Suite G, Dublin, CA 94568																
Consultant Project Mgr. Deanna L. Harding, (deanna@grinc.com)																
Consultant Phone # (925) 551-7444 x180																
Sampler J. PAYNE																

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 Collected		3 Grab	3 Composite	4 Matrix			5 Analyses Requested											6 Remarks									
		Date	Time			Soil	Water	Oil	BTEX + MTBE	8021	8260	Naphth	8260 full scan	Oxygenates	NWTPH-Gx	NWTPH-Dx with Silica Gel Cleanup	NWTPH-Dx without Silica Gel Cleanup	WA VPH	WA EPH		Lead	Total	Diss.	Method					
<u>QA</u>	<u>6-12-14</u>			X			X		<u>2</u>	X			X																Please report results for Dx with & without sgc. Dissolved Iron, Lead, and Manganese, as well as Alkalinity samples have been field filtered. <i>Shrended JLM 6/13/14</i>
<u>B.1</u>			<u>1150</u>	X			X		<u>16</u>	X			X	X	X			X	X	X	X	X	X	X	X	X	X		
<u>B.2</u>			<u>1435</u>	X			X		<u>16</u>	X			X	X	X			X	X	X	X	X	X	X	X	X	X		
<u>B.3</u>			<u>1360</u>	X			X		<u>16</u>	X			X	X	X			X	X	X	X	X	X	X	X	X	X		
<u>B.4</u>			<u>1252</u>	X			X		<u>16</u>	X			X	X	X			X	X	X	X	X	X	X	X	X	X		
<u>MW.110</u>			<u>0950</u>	X			X		<u>9</u>	X			X	X	X			X	X	X	X	X	X	X	X	X	X		
<u>MW.111</u>			<u>1051</u>	X			X		<u>16</u>	X			X	X	X			X	X	X	X	X	X	X	X	X	X		

7 Turnaround Time Requested (TAT) (please circle)

<input checked="" type="radio"/> Standard	5 day	4 day
<input type="radio"/> 72 hour	48 hour	EDF/EDD 24 hour

Relinquished by JSP Date 6-12-14 Time 1700

Received by _____ Date _____ Time _____

8 Data Package (circle if required)

Type I - Full Type VI (Raw Data)

EDD (circle if required) CVX-RTBU-FL_05 (default) Other: _____

Relinquished by Commercial Carrier: Received by JSP

UPS FedEx _____ Other _____

Temperature Upon Receipt 1.1-4.3 °C Custody Seals Intact? Yes No

9 Date _____ Time _____

Date 6/13/14 Time 0945

Chevron Northwest Region Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # _____

For Eurofins Lancaster Laboratories use only
 Group # _____ Sample # _____
 Instructions on reverse side correspond with circled numbers.

1 Client Information			4 Matrix			5 Analyses Requested									
Facility # SS#211556-OML G-R#386773 WBS			<input type="checkbox"/> Sediment <input checked="" type="checkbox"/> Groundwater <input type="checkbox"/> Surface <input type="checkbox"/> Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Air <input type="checkbox"/> Composite			Total Number of Containers BTEX + MTBE 8021 <input type="checkbox"/> 8260 <input checked="" type="checkbox"/> Naphth <input type="checkbox"/> 8260 full scan Oxygenates NWTPH-Gx NWTPH-Dx with Silica Gel Cleanup <input type="checkbox"/> NWTPH-Dx without Silica Gel Cleanup <input type="checkbox"/> WA VPH <input type="checkbox"/> WA EPH <input type="checkbox"/> Lead Total <input type="checkbox"/> Diss <input type="checkbox"/> Method 6020 NITRATE Diss Iron SURFIDE ALKALINITY									
Site Address 101 Mulford Road, TOLEDO, WA															
Chevron PM MHO LEIDOSRS Lead Consultant Russell Shroyer															
Consultant/Office Getter-Ryan, Inc., 6805 Sierra Court, Suite G, Dublin, CA 94568															
Consultant Project Mgr. Deanna L. Harding, (deanna@grinc.com)															
Consultant Phone # (925) 551-7444 x180															
Sampler J. PAYNE															

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	Collected		3 Grab	Composite	Soil	Water	Oil	Total Number of Containers	BTEX + MTBE	8021	8260	Naphth	Oxygenates	NWTPH-Gx	NWTPH-Dx with Silica Gel Cleanup	NWTPH-Dx without Silica Gel Cleanup	WA VPH	WA EPH	Lead	Total	Diss	Method	6020	NITRATE	Diss Iron	SURFIDE	ALKALINITY	Remarks						
	Date	Time																																
MW-109	6-13-14	1100	X			X	9	X						X	X	X			X															
MW-113		1315	X			X	16	X						X	X	X			X															
MW-114		0950	X			X	16	X						X	X	X			X															
MW-117		1202	X			X	16	X						X	X	X			X															

16 Remarks

Please report results for Dx with & without sgc. Dissolved Iron, Lead, and Manganese, as well as Alkalinity samples have been field filtered.

Please forward lab results directly to the LC and cc: G.R. The TPW sample results should be forwarded directly to Doug Lee (dlee@grinc.com).

7 Turnaround Time Requested (TAT) (please circle)

Standard 5 day 72 hour

EDF/EDD 4 day 24 hour

Relinquished by <i>[Signature]</i>	Date 6-13-14	Time 1600	Received by	Date	Time
Relinquished by	Date	Time	Received by	Date	Time

8 Data Package (circle if required)

Type I - Full Type VI (Raw Data)

EDD (circle if required)

CVX-RTBU-FL_05 (default)

Other: _____

Relinquished by Commercial Carrier:

UPS FedEx Other

Temperature Upon Receipt _____ °C

Custody Seals Intact? Yes No

Chevron Northwest Region Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # _____

For Eurofins Lancaster Laboratories use only
 Group # _____ Sample # _____
 Instructions on reverse side correspond with circled numbers.

1 Client Information			4 Matrix			5 Analyses Requested					
Facility # SS#211556-OML G-R#386773 WBS			Sediment <input type="checkbox"/> Groundwater <input checked="" type="checkbox"/> Surface <input type="checkbox"/> Soil <input type="checkbox"/> Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Air <input type="checkbox"/>	Total Number of Containers BTEX + MTBE <input type="checkbox"/> 8021 <input type="checkbox"/> 8260 <input type="checkbox"/> Naphth <input type="checkbox"/> 8260 full scan <input type="checkbox"/> Oxygenates <input type="checkbox"/> NWTPH-Gx <input type="checkbox"/> NWTPH-Dx with Silica Gel Cleanup <input checked="" type="checkbox"/> NWTPH-Dx without Silica Gel Cleanup <input checked="" type="checkbox"/> WA VPH <input type="checkbox"/> WA EPH <input type="checkbox"/> Lead <input type="checkbox"/> Total <input type="checkbox"/> Diss <input type="checkbox"/> Method <input type="checkbox"/>	SCR #: _____ <input type="checkbox"/> Results in Dry Weight <input type="checkbox"/> J value reporting needed <input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds <input type="checkbox"/> 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run ____ oxy's on highest hit <input type="checkbox"/> Run ____ oxy's on all hits						
Site Address 101 Mulford Road, TOLEDO, WA											
Chevron PM MHO LEIDOSRS Lead Consultant Russell Shroder											
Consultant/Office Gettler-Ryan, Inc., 6805 Sierra Court, Suite G, Dublin, CA 94568											
Consultant Project Mgr. Deanna L. Harding, (deanna@grinc.com)											
Consultant Phone # (925) 551-7444 x180											
Sampler _____			3 Composite								

2 Sample Identification	Collected		Grab	Composite	Soil	Water	Oil	Total Number of Containers	BTEX + MTBE	8260 full scan	Oxygenates	NWTPH-Gx	NWTPH-Dx with Silica Gel Cleanup	NWTPH-Dx without Silica Gel Cleanup	WA VPH	WA EPH	Lead	Total	Diss	Method	9	
	Date	Time																				
MW-120	6-14-14	1300	X			X		9	X			X	X	X				X				

6 Remarks

Please report results for Dx with & without sgc. Dissolved iron, Lead, and Manganese, as well as Alkalinity samples have been field filtered.

Please forward lab results directly to the LC and cc: G-R. The TPW sample results should be forwarded directly to Doug Lee (dlee@grinc.com).

7 Turnaround Time Requested (TAT) (please circle)

Standard 5 day 72 hour

EDF/EDD 4 day 24 hour

Relinquished by	Date 6-16-14	Time 1300	Received by _____	Date _____	Time _____	9
Relinquished by _____	Date _____	Time _____	Received by _____	Date _____	Time _____	

8 Data Package (circle if required)

Type I - Full Type VI (Raw Data)

EDD (circle if required)

CVX-RTBU-FL_05 (default)

Other: _____

Relinquished by Commercial Carrier: UPS FedEx Other _____

Received by _____

Date _____ Time _____

Temperature Upon Receipt _____ °C

Custody Seals Intact? Yes No



GETTLER-RYAN INC.



TRANSMITTAL

September 2, 2014
G-R #386773

TO: Mr. Russell Shropshire
Leidos, Inc.
18912 North Creek Parkway, Suite 101
Bothell, Washington 98011

FROM: Deanna L. Harding
Project Coordinator
Gettler-Ryan Inc.
6805 Sierra Court, Suite G
Dublin, California 94568

RE: **Former Texaco Service Station
#211556/Cowlitz BP
101 Mulford Road
Toledo, Washington
UST Site#10669**

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DESCRIPTION
VIA PDF	Groundwater Monitoring and Sampling Data Package Third Quarter Event of August 18, 19, 20, & 21, 2014

COMMENTS:

Pursuant to your request, we are providing you with copies of the above referenced data for your use.

Please provide us the updated historical data prior to the next monitoring and sampling event for our field use.

Please feel free to contact me if you have any comments/questions.

trans/211556

Standard Operating Procedure, Low-Flow Purging and Sampling

Gettler-Ryan Inc. field personnel adhere to the following Standard Operating Procedure (SOP) for the collection and handling of representative groundwater samples using the Low-Flow (Minimal-Drawdown) Purging technique. This SOP incorporates purging and sampling methods discussed in U.S. EPA, Ground Water Issue, Publication Number EPA/540/S-95/504, April 1996 by Puls, R.W. and M.J. Barcelona - "*Low-Flow (Minimal-Drawdown) Ground-Water Sampling Procedures.*"

A QED Well Wizard™ (or equivalent) bladder pump or Peristaltic Pump will be used to purge and sample selected wells as outlined in the scope-of-work. An in-line flow cell or other multi-parameter meter is used to collect water quality indicating parameters during purging.

Initial Pump Discharge Test Procedures

The Static Water Level (SWL) is measured in all wells at the site prior to the installation of the pump or tubing and initiation of the test procedures in any well. In addition, the presence or absence of separate-phase hydrocarbons (SPH) is determined using an interface probe. Product thickness, if present, is measured to the nearest 0.01 foot. The SWL measurement and SPH thickness, if any, will be recorded on the field data sheet.

The bladder pump or suction inlet tubing of the peristaltic pump is then positioned with its inlet located within the screened interval of the well. The in-line flow cell is then connected to the discharge tubing. After pump installation, the SWL is allowed to recover to its original level. The pump is then started at a discharge rate between 100 ml to 300 ml per minute with the in-line flow cell connected. The water level is monitored continuously for any change from the original measurement and the discharge rate is adjusted until an optimum discharge rate (ODR) is determined. The goal for the ODR is to produce a stable drawdown of less than 0.1 meter as allowed by site conditions; however the total drawdown from the initial SWL should not exceed 25% of the distance between pump inlet location and the top of the well screen. Once achieved, the ODR will be confirmed by volumetric discharge measurement and recorded on the field data sheet.

Purging and Water Quality Parameter Measurement

When the ODR has been determined and the SWL drawdown has been established within the acceptable range, and a minimum of one pump system volume (bladder volume and/or discharge tubing volume) has been purged, field measurements for temperature (T), pH, conductivity (Ec), and if required, oxygen reduction potential (ORP) and dissolved oxygen (DO) will be collected and documented on the field data sheet. Measurements should be taken every three to five minutes until parameters stabilize for three consecutive readings. The minimum parameter subset of T ($\pm 10\%$), pH (± 0.1 unit), and Ec (± 10 uS) are required to stabilize. Additional parameters that may be required are DO (± 0.2 mg/l) and ORP (± 20 mV).

Sample Collection

When water quality parameters have stabilized, and the SWL drawdown remains established within the acceptable range, groundwater sample collection may begin. If used, the in-line flow cell and its tubing are disconnected from the discharge tubing prior to sample collection. Water samples are collected from the discharge tubing into appropriate containers. Pre-preserved containers, supplied by analytical laboratories, are used when possible. When pre-preserved containers are not available, the laboratory is instructed to preserve the sample as appropriate. Duplicate samples are collected for the laboratory to use in maintaining quality assurance/quality control standards, as directed by the scope of work. The samples are labeled to include the job number, sample identification, collection date and time, analysis, preservation (if any), and the sample collector's initials. The water samples are placed in a cooler,

maintained at 4°C for transport to the laboratory. A laboratory supplied trip blank accompanies each sampling set. The trip blank is analyzed for some or all of the same compounds as the groundwater samples. Once collected in the field, all samples are maintained under chain of custody until delivered to the laboratory.

The chain of custody document includes the job number, type of preservation, if any, analysis requested, sample identification, date and time collected, and the sample collector's name. The chain of custody is signed and dated (including time of transfer) by each person who receives or surrenders the samples, beginning with the field personnel and ending with the laboratory personnel.

A laboratory supplied trip blank accompanies each sampling set. For sampling sets greater than 20 samples, 5% trip blanks are included. The trip blank is analyzed for some or all of the same compounds as the groundwater samples.



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 8.18/19/2021.14 (inclusive)
 Sampler: J.P.

Well ID: MMW-183
 Well Diameter: (2) 4 in.
 Total Depth: 0.36 ft.
 Depth to Water: 6.81 ft.
1.65 xVF = - = - x3 case volume = Estimated Purge Volume: - gal.

Date Monitored: 8.18.14

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 7.12

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: XBI mps 550

Sampling Equipment:
 Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: TUBING

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr
 Product Transferred to: _____

Start Time (purge): 0940 Weather Conditions: SUN
 Sample Time/Date: 0.21.14 Water Color: CLEAR Odor: YIN
 Approx. Flow Rate: 100 mlpm Sediment Description: NONE
 Did well de-water? YES if yes, Time: 0944 Volume: 2.0 ltrs DTW @ Sampling: 7.10

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS (MS) µmhos/cm)	Temperature (C) (F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>0944</u>	<u>2.0</u>	<u>6.92</u>	<u>091</u>	<u>12.30</u>	<u>1.86</u>	<u>98.3</u>	<u>0.30</u>
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MMW-183</u>	<u>6</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>2</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	<u>2</u> x voa vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: Well REWATERED SEVERAL TIMES

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
Site Address: 101 Mulford Road
City: Toledo, WA

Job Number: 386773
Event Date: 8-18/19/20/21-14 (inclusive)
Sampler: dlf

Well ID: MM-109
Well Diameter: 2.14 in.
Total Depth: 12.69 ft.
Depth to Water: 9.93 ft.
2.76 xVF = - = - x3 case volume = Estimated Purge Volume: - gal.

Date Monitored: 8-18-14

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 10.48

Purge Equipment:
Disposable Bailer _____
Stainless Steel Bailer _____
Stack Pump _____
Peristaltic Pump _____
QED Bladder Pump _____
Other: YES MPT 550

Sampling Equipment:
Disposable Bailer _____
Pressure Bailer _____
Metal Filters _____
Peristaltic Pump _____
QED Bladder Pump _____
Other: TUBING

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	_____ ft
Visual Confirmation/Description:	_____
Skimmer / Absorbant Sock (circle one)	_____
Amt Removed from Skimmer:	_____ ltr
Amt Removed from Well:	_____ ltr
Water Removed:	_____ ltr
Product Transferred to:	_____

Start Time (purge): 0630 Weather Conditions: SUN
Sample Time/Date: - / - / - Water Color: CLEAR Odor: Y (N)
Approx. Flow Rate: 200 mlpm Sediment Description: NONE
Did well de-water? YES If yes, Time: 0630 Volume: 2 ltrs DTW @ Sampling: X

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS/mS / µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>0630</u>	<u>2.0</u>	<u>6.99</u>	<u>690</u>	<u>19.08</u>	<u>1.33</u>	<u>77.9</u>	<u>12.60</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
	x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	x voa vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	x 250ml poly	YES	NP	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: * MM-109 did NOT RECOVER. NO SAMPLE COLLECTED

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 8.18/19/20/21.14 (inclusive)
 Sampler: J.P.

Well ID: MW-110
 Well Diameter: 2 1/4 in.
 Total Depth: 19.83 ft.
 Depth to Water: 8.53 ft.
11.30 xVF = - = - x3 case volume = Estimated Purge Volume: - gal.

Date Monitored: 8.18.14

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 10.79

Purge Equipment:
 Disposable Bailor _____
 Stainless Steel Bailor _____
 Stack Pump _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: YSI WSP 556

Sampling Equipment:
 Disposable Bailor _____
 Pressure Bailor _____
 Metal Filters _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: TUBING

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr
 Product Transferred to: _____

Start Time (purge): 1240 Weather Conditions: SUN
 Sample Time/Date: 1310, 18.20.14 Water Color: CLEAR Odor: Y (N)
 Approx. Flow Rate: 200 mlpm Sediment Description: None
 Did well de-water? No If yes, Time: _____ Volume: _____ ltrs DTW @ Sampling: 9.03

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS / (mS) µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>1240</u>	<u>3.6</u>	<u>6.76</u>	<u>.326</u>	<u>17.76</u>	<u>.31</u>	<u>63.5</u>	<u>8.77</u>
<u>1301</u>	<u>4.2</u>	<u>6.78</u>	<u>.330</u>	<u>17.83</u>	<u>.36</u>	<u>64.9</u>	<u>8.91</u>
<u>1304</u>	<u>4.8</u>	<u>6.80</u>	<u>.332</u>	<u>17.98</u>	<u>.40</u>	<u>66.1</u>	<u>9.03</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-110</u>	<u>2</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	x voa vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	x 250ml poly	YES	NP	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: 16.16

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 8-18/19/20/21-14 (inclusive)
 Sampler: J.P.

Well ID: MW-111
 Well Diameter: 2 1/4 in.
 Total Depth: 17.80 ft.
 Depth to Water: 8.07 ft.
9.73 xVF = - = - x3 case volume = Estimated Purge Volume: - gal.

Date Monitored: 8-18-14

Volume	3/4"= 0.02	1"= 0.04	<u>2"= 0.17</u>	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 16.61

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: YET W/PS 500

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: TOWING

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	_____ ft
Visual Confirmation/Description:	_____
Skimmer / Absorbant Sock (circle one)	_____
Amt Removed from Skimmer:	_____ ltr
Amt Removed from Well:	_____ ltr
Water Removed:	_____ ltr
Product Transferred to:	_____

Start Time (purge): 1120 Weather Conditions: SON
 Sample Time/Date: 1157 / 8-19-14 Water Color: CLEAR Odor: Y / N MUD
 Approx. Flow Rate: 200 mlpm Sediment Description: NONE
 Did well de-water? No If yes, Time: _____ Volume: _____ ltrs DTW @ Sampling: 8.91

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS / mS / µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>1140</u>	<u>3.6</u>	<u>6.29</u>	<u>.596</u>	<u>17.98</u>	<u>.25</u>	<u>-91.02</u>	<u>8.44</u>
<u>1149</u>	<u>4.2</u>	<u>6.32</u>	<u>.592</u>	<u>18.08</u>	<u>.25</u>	<u>-89.1</u>	<u>8.63</u>
<u>1152</u>	<u>4.8</u>	<u>6.54</u>	<u>.394</u>	<u>18.16</u>	<u>.28</u>	<u>-86.3</u>	<u>8.91</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-111</u>	<u>2</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>1</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>2</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	<u>1</u> x voa vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: 13-14'



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 8.18/19/20/21.14 (inclusive)
 Sampler: J.P.

Well ID: MW-112
 Well Diameter: (2) 4 in.
 Total Depth: 17.34 ft.
 Depth to Water: 8.63 ft.
8.71 xVF _____ = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Date Monitored: 8.18.14

Volume	3/4"= 0.02	1"= 0.04	<u>2"= 0.17</u>	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 10.37

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: x 55 wgs 556

Sampling Equipment:
 Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: TUBING

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr
 Product Transferred to: _____

Start Time (purge): 0943 Weather Conditions: SUN
 Sample Time/Date: 1012/8.21.14 Water Color: CLEAR Odor: Y/N
 Approx. Flow Rate: 200 mlpm Sediment Description: NONE
 Did well de-water? NO If yes, Time: _____ Volume: _____ ltrs DTW @ Sampling: 9.18

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS (mS) µmhos/cm)	Temperature (C) (F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>1001</u>	<u>3.6</u>	<u>6.93</u>	<u>.194</u>	<u>14.34</u>	<u>1.10</u>	<u>-18.1</u>	<u>8.89</u>
<u>1004</u>	<u>4.2</u>	<u>6.91</u>	<u>.196</u>	<u>14.41</u>	<u>1.20</u>	<u>-9.5</u>	<u>9.01</u>
<u>1007</u>	<u>4.8</u>	<u>6.88</u>	<u>.198</u>	<u>14.49</u>	<u>1.27</u>	<u>-2.6</u>	<u>9.18</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-112</u>	<u>6</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>2</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	<u>1</u> x voa vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: 13'-14'

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 8.18/19/20/21.14 (inclusive)
 Sampler: J.P.

Well ID: NW-113
 Well Diameter: 210 in.
 Total Depth: 18.18 ft.
 Depth to Water: 9.39 ft.
8.79 xVF - = -

Date Monitored: 8.18.14

Volume Factor (VF)	3/4" = 0.02	1" = 0.04	2" = 0.17	3" = 0.38
	4" = 0.66	5" = 1.02	6" = 1.50	12" = 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 11.14 gal.

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: XSE MPS 656

Sampling Equipment:
 Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: TUBING

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr
 Product Transferred to: _____

Start Time (purge): 1040 Weather Conditions: SUN
 Sample Time/Date: 1100 18.21.14 Water Color: CLEAR Odor: Y/N
 Approx. Flow Rate: 200 mlpm Sediment Description: NONE
 Did well de-water? No If yes, Time: _____ Volume: _____ ltrs DTW @ Sampling: 10.16

Time (2400 hr.)	Volume (Liters)	pH	Conductivity ($\mu\text{S}/\text{mS}$ / $\mu\text{mhos}/\text{cm}$)	Temperature (C) / (F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>1050</u>	<u>3.6</u>	<u>6.79</u>	<u>292</u>	<u>17.01</u>	<u>2.20</u>	<u>83.8</u>	<u>9.83</u>
<u>1101</u>	<u>4.2</u>	<u>6.83</u>	<u>301</u>	<u>17.17</u>	<u>2.33</u>	<u>85.1</u>	<u>10.00</u>
<u>1104</u>	<u>4.8</u>	<u>6.86</u>	<u>302</u>	<u>17.20</u>	<u>2.40</u>	<u>87.6</u>	<u>10.16</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>NW-113</u>	<u>6</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>2</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	<u>2</u> x voa vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: 14:15

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 8.18/19/20/21.14 (inclusive)
 Sampler: slp

Well ID: MW-114
 Well Diameter: (2) 4 in.
 Total Depth: 16.83 ft.
 Depth to Water: 7.57 ft.

Date Monitored: 8.18.14

Volume Factor (VF)	3/4"= 0.02 4"= 0.66	1"= 0.04 5"= 1.02	2"= 0.17 6"= 1.50	3"= 0.38 12"= 5.80
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Check if water column is less than 0.50 ft.
 Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 9.42
 xVF 9.26 = x3 case volume = Estimated Purge Volume: gal.

Purge Equipment:

Disposable Bailer
 Stainless Steel Bailer
 Stack Pump
 Peristaltic Pump x
 QED Bladder Pump
 Other: YSE WPS 6450

Sampling Equipment:

Disposable Bailer
 Pressure Bailer
 Metal Filters
 Peristaltic Pump x
 QED Bladder Pump
 Other: TUBING

Time Started:	(2400 hrs)
Time Completed:	(2400 hrs)
Depth to Product:	ft
Depth to Water:	ft
Hydrocarbon Thickness:	ft
Visual Confirmation/Description:	
Skimmer / Absorbant Sock (circle one)	
Amt Removed from Skimmer:	ltr
Amt Removed from Well:	ltr
Water Removed:	ltr
Product Transferred to:	

Start Time (purge): 1352
 Sample Time/Date: 1420 18.20.14
 Approx. Flow Rate: 200 mlpm
 Did well de-water? NO If yes, Time: Volume: ltrs DTW @ Sampling: 8.29
 Weather Conditions: SON
 Water Color: CLEAR Odor: Y/N
 Sediment Description: NONE

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS/mS / µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>1410</u>	<u>3.6</u>	<u>6.94</u>	<u>.322</u>	<u>16.90</u>	<u>2.12</u>	<u>69.7</u>	<u>7.92</u>
<u>1413</u>	<u>4.2</u>	<u>6.95</u>	<u>.326</u>	<u>17.01</u>	<u>2.30</u>	<u>71.8</u>	<u>8.11</u>
<u>1416</u>	<u>4.0</u>	<u>6.97</u>	<u>.329</u>	<u>17.10</u>	<u>2.38</u>	<u>73.1</u>	<u>8.29</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-114</u>	<u>2</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u> </u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u> </u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u> </u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	<u> </u> x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u> </u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u> </u> x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	<u> </u> x voa vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	<u> </u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: 12-13'



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 8.18.14/20.21.14 (inclusive)
 Sampler: V.P.

Well ID: MW-115
 Well Diameter: 210 in.
 Total Depth: 17.46 ft.
 Depth to Water: 8.50 ft.

Date Monitored: 8.18.14

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.
 Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 14.69
 xVF +7 = - x3 case volume = Estimated Purge Volume: - gal.

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: 76E w/p 650

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: TOBIN

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr
 Product Transferred to: _____

Start Time (purge): 1140
 Sample Time/Date: 1200 / 8.20.14
 Approx. Flow Rate: 200 mlpm
 Did well de-water? No If yes, Time: _____ Volume: _____ ltrs DTW @ Sampling: 9.22
 Weather Conditions: SON
 Water Color: CLEAR Odor: Y/N
 Sediment Description: NONE

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS / mS µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>1140</u>	<u>3.6</u>	<u>6.01</u>	<u>.302</u>	<u>16.25</u>	<u>.62</u>	<u>-1.3</u>	<u>9.03</u>
<u>1201</u>	<u>4.2</u>	<u>6.04</u>	<u>.306</u>	<u>16.30</u>	<u>.70</u>	<u>2.6</u>	<u>9.13</u>
<u>1204</u>	<u>4.8</u>	<u>6.10</u>	<u>.308</u>	<u>16.39</u>	<u>.76</u>	<u>4.1</u>	<u>9.22</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-115</u>	<u>4</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>1</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	<u>1</u> x voa vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: 13'-14'



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 8.18/19/20.14 (inclusive)
 Sampler: J.P.

Well ID: 1116
 Well Diameter: 2.14 in.
 Total Depth: 17.53 ft.
 Depth to Water: 0.93 ft.

Date Monitored: 8.18.14

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 10.57
 Check if water column is less than 0.50 ft.
 xVF - = - x3 case volume = Estimated Purge Volume: - gal.

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: YES W/PS 660

Sampling Equipment:
 Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: TUBING

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr
 Product Transferred to: _____

Start Time (purge): 12:30
 Sample Time/Date: 13:00 / 8.21.14
 Approx. Flow Rate: 200 mlpm
 Did well de-water? NO If yes, Time: _____ Volume: _____ ltrs DTW @ Sampling: 9.30
 Weather Conditions: SUN
 Water Color: CLEAR Odor: Y/N
 Sediment Description: None

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS (mS) µmhos/cm)	Temperature (C) (F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>12:40</u>	<u>3.6</u>	<u>6.94</u>	<u>.192</u>	<u>17.00</u>	<u>1.01</u>	<u>79.6</u>	<u>9.63</u>
<u>12:51</u>	<u>4.2</u>	<u>6.96</u>	<u>.194</u>	<u>17.00</u>	<u>1.11</u>	<u>81.3</u>	<u>9.18</u>
<u>12:54</u>	<u>4.0</u>	<u>6.97</u>	<u>.196</u>	<u>17.94</u>	<u>1.18</u>	<u>83.6</u>	<u>9.30</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>1116</u>	<u>6</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>2</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	<u>2</u> x voa vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: 13-14



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 8-18/19/2021-14 (inclusive)
 Sampler: J.P.

Well ID: MW-117
 Well Diameter: (2) 4 in.
 Total Depth: 17.64 ft.
 Depth to Water: 7.71 ft.

Date Monitored: 8-18-14

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	<u>2"= 0.17</u>	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 9.69
 Check if water column is less than 0.50 ft.
 xVF 9.93 = - x3 case volume = Estimated Purge Volume: - gal.

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: XPE MPS 556

Sampling Equipment:
 Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: TOBINK

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr
 Product Transferred to: _____

Start Time (purge): 114
 Sample Time/Date: 1210 / 8-21-14
 Approx. Flow Rate: 200 mlpm
 Did well de-water? No If yes, Time: _____ Volume: _____ ltrs DTW @ Sampling: 8.22
 Weather Conditions: Sun
 Water Color: CLEAR Odor: Y (N)
 Sediment Description: NONE

Time (2400 hr.)	Volume (Liters)	pH	Conductivity ($\mu\text{S}/\text{mS}$ / $\mu\text{mhos}/\text{cm}$)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>1159</u>	<u>3.6</u>	<u>6.91</u>	<u>.290</u>	<u>18.33</u>	<u>1.92</u>	<u>80.0</u>	<u>7.93</u>
<u>1202</u>	<u>4.2</u>	<u>6.94</u>	<u>.292</u>	<u>18.40</u>	<u>2.01</u>	<u>82.7</u>	<u>8.10</u>
<u>1205</u>	<u>4.8</u>	<u>6.97</u>	<u>.294</u>	<u>18.49</u>	<u>2.11</u>	<u>84.3</u>	<u>8.22</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-117</u>	<u>6</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>2</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	<u>2</u> x voa vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: 13-14



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 8.18/19/20/21.14 (inclusive)
 Sampler: V.P.

Well ID: MW-118
 Well Diameter: (2) 4 in.
 Total Depth: 17.22 ft.
 Depth to Water: 7.92 ft.

Date Monitored: 8.18.14

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 9.78
 Check if water column is less than 0.50 ft.
 xVF - = - x3 case volume = Estimated Purge Volume: - gal.

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump K
 QED Bladder Pump _____
 Other: XST NPS 646

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump K
 QED Bladder Pump _____
 Other: TUBING

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	_____ ft
Visual Confirmation/Description:	_____
Skimmer / Absorbant Sock (circle one)	_____
Amt Removed from Skimmer:	_____ ltr
Amt Removed from Well:	_____ ltr
Water Removed:	_____ ltr
Product Transferred to:	_____

Start Time (purge): 11:12
 Sample Time/Date: 11:11 8.20.14
 Approx. Flow Rate: 0.60 mlpm
 Did well de-water? No If yes, Time: _____ Volume: _____ ltrs DTW @ Sampling: 8.64
 Weather Conditions: Sun
 Water Color: clear Odor: Y/N
 Sediment Description: NONE

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS/cm)	Temperature (C/F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>11:00</u>	<u>3.6</u>	<u>6.91</u>	<u>277</u>	<u>19.66</u>	<u>1.72</u>	<u>78.3</u>	<u>8.28</u>
<u>11:03</u>	<u>4.2</u>	<u>6.94</u>	<u>280</u>	<u>19.74</u>	<u>1.80</u>	<u>80.1</u>	<u>8.42</u>
<u>11:06</u>	<u>4.8</u>	<u>6.96</u>	<u>281</u>	<u>19.83</u>	<u>1.84</u>	<u>82.3</u>	<u>8.64</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-118</u>	<u>6</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	x voa vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	x 250ml poly	YES	NP	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: 13-14

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 2-18-14/20/21-14 (inclusive)
 Sampler: J.P.

Well ID: MS-119
 Well Diameter: (3/4) in.
 Total Depth: 16.65 ft.
 Depth to Water: 9.13 ft.
7.42 xVF _____ = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Date Monitored: 2-18-14

Volume Factor (VF)	3/4"= 0.02 4"= 0.66	1"= 0.04 5"= 1.02	2"= 0.17 6"= 1.50	3"= 0.38 12"= 5.80
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Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 10.71

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: XSE MPB 5500

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: TUBING

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	_____ ft
Visual Confirmation/Description:	_____
Skimmer / Absorbant Sock (circle one)	_____
Amt Removed from Skimmer:	_____ ltr
Amt Removed from Well:	_____ ltr
Water Removed:	_____ ltr
Product Transferred to:	_____

Start Time (purge): 6:50
 Sample Time/Date: 2/20/14-21-14
 Approx. Flow Rate: 2.0 mlpm
 Did well de-water? NO If yes, Time: _____ Volume: _____ ltrs DTW @ Sampling: 9.66

Weather Conditions: SUN
 Water Color: CLEAR Odor: Y/N
 Sediment Description: NONE

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS/mhos/cm)	Temperature (C/F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>6:50</u>	<u>5.6</u>	<u>6.86</u>	<u>.214</u>	<u>12.90</u>	<u>.59</u>	<u>88.6</u>	<u>9.58</u>
<u>7:11</u>	<u>4.2</u>	<u>6.88</u>	<u>.216</u>	<u>13.01</u>	<u>.66</u>	<u>88.3</u>	<u>9.51</u>
<u>7:14</u>	<u>4.8</u>	<u>6.91</u>	<u>.219</u>	<u>13.09</u>	<u>.71</u>	<u>89.9</u>	<u>9.66</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MS-119</u>	<u>6</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>2</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	<u>1</u> x voa vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: 12-13

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 0.18.14/20.14 (inclusive)
 Sampler: J.P.

Well ID: WU-120
 Well Diameter: 2 1/4 in.
 Total Depth: 16.87 ft.
 Depth to Water: 8.13 ft.
8.74 xVF = = x3 case volume = Estimated Purge Volume: gal.

Date Monitored: 0.18.14

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 9.87

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: XSE MPS 556

Sampling Equipment:
 Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: TUBING

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr
 Product Transferred to: _____

Start Time (purge): 0948 Weather Conditions: SUN
 Sample Time/Date: 1017 0.20.14 Water Color: CLEAR Odor: Y (N)
 Approx. Flow Rate: 200 mlpm Sediment Description: NONE
 Did well de-water? No If yes, Time: _____ Volume: _____ ltrs DTW @ Sampling: 8.33

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS/cm)	Temperature (C/F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>1010</u>	<u>3.6</u>	<u>6.86</u>	<u>260</u>	<u>26.6</u>	<u>.27</u>	<u>53.3</u>	<u>8.33</u>
<u>1009</u>	<u>4.2</u>	<u>6.89</u>	<u>264</u>	<u>26.12</u>	<u>.32</u>	<u>54.9</u>	<u>8.33</u>
<u>1012</u>	<u>4.8</u>	<u>6.91</u>	<u>266</u>	<u>26.24</u>	<u>.36</u>	<u>56.1</u>	<u>8.33</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>WU-120</u>	<u>10</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	x voa vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	x 250ml poly	YES	NP	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: 12-13

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 8-18/19/20/21-14 (inclusive)
 Sampler: J.P.

Well ID: B.1
 Well Diameter: (2) 4 in.
 Total Depth: 19.78 ft.
 Depth to Water: 8.40 ft.
11.38 xVF _____ = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Date Monitored: 8.18.14

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 10.67

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: Y6I mps 556

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: TUBING

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	_____ ft
Visual Confirmation/Description:	_____
Skimmer / Absorbant Sock (circle one)	_____
Amt Removed from Skimmer:	_____ ltr
Amt Removed from Well:	_____ ltr
Water Removed:	_____ ltr
Product Transferred to:	_____

Start Time (purge): 0936
 Sample Time/Date: 1005 / 8.19.14
 Approx. Flow Rate: 200 mlpm
 Did well de-water? No If yes, Time: _____ Volume: _____

Weather Conditions: SUN
 Water Color: CLEAR Odor: Y / (N)
 Sediment Description: NONE
 ltrs DTW @ Sampling: 8.46

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS mS / µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>0954</u>	<u>3.6</u>	<u>6.68</u>	<u>.227</u>	<u>16.58</u>	<u>.25</u>	<u>16.0</u>	<u>8.46</u>
<u>0957</u>	<u>4.2</u>	<u>6.70</u>	<u>.227</u>	<u>16.55</u>	<u>.25</u>	<u>15.3</u>	<u>8.46</u>
<u>1000</u>	<u>4.8</u>	<u>6.75</u>	<u>.221</u>	<u>16.60</u>	<u>.25</u>	<u>14.8</u>	<u>8.46</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>B.1</u>	<u>6</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>2</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3 <u>FF</u>	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	<u>2</u> x voa vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP <u>FF</u>	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: 13-14



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 8-18/19/20/21-14 (inclusive)
 Sampler: J.P.

Well ID: B-2
 Well Diameter: (2) 14 in.
 Total Depth: 19.83 ft.
 Depth to Water: 9.53 ft.
9.60 xVF - = - x3 case volume = Estimated Purge Volume: - gal.

Date Monitored: 8-18-14

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 11.43

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: YOE mps 666

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: TUBING

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	_____ ft
Visual Confirmation/Description:	_____
Skimmer / Absorbant Sock (circle one)	_____
Amt Removed from Skimmer:	_____ ltr
Amt Removed from Well:	_____ ltr
Water Removed:	_____ ltr
Product Transferred to:	_____

Start Time (purge): 0845
 Sample Time/Date: 0915 8-19-14
 Approx. Flow Rate: 1.00 mlpm
 Did well de-water? No If yes, Time: _____ Volume: _____ ltrs DTW @ Sampling: 9.00

Weather Conditions: Sun
 Water Color: CLEAR Odor: Y/N
 Sediment Description: NONE

Time (2400 hr.)	Volume (Liters)	pH	Conductivity ($\mu\text{S}/\text{mS}$ / $\mu\text{mhos}/\text{cm}$)	Temperature (C) / (F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>0903</u>	<u>3.0</u>	<u>6.61</u>	<u>.191</u>	<u>14.49</u>	<u>.26</u>	<u>50.8</u>	<u>9.60</u>
<u>0906</u>	<u>4.2</u>	<u>6.64</u>	<u>.187</u>	<u>14.56</u>	<u>.26</u>	<u>50.6</u>	<u>9.60</u>
<u>0909</u>	<u>4.8</u>	<u>6.63</u>	<u>.186</u>	<u>14.61</u>	<u>.26</u>	<u>50.7</u>	<u>9.60</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>B-2</u>	<u>0</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>2</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	<u>2</u> x voa vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: 14'-15'

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 8/18 - 8/21/14 (inclusive)
 Sampler: J.P.

Well ID: B.3
 Well Diameter: (2) 4 in.
 Total Depth: 13.56 ft.
 Depth to Water: 9.23 ft.
4.33 xVF _____ = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Date Monitored: 8.18.14

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 10.09

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: XBI w/p 500

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: TUBING

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	_____ ft
Visual Confirmation/Description:	_____
Skimmer / Absorbant Sock (circle one)	_____
Amt Removed from Skimmer:	_____ ltr
Amt Removed from Well:	_____ ltr
Water Removed:	_____ ltr
Product Transferred to:	_____

Start Time (purge): 1245 Weather Conditions: Sun
 Sample Time/Date: 1330 / 8.19.14 Water Color: CLEAR Odor: (Y) MILD
 Approx. Flow Rate: 100 mlpm Sediment Description: NONE
 Did well de-water? YES If yes, Time: 1300 Volume: 4 ltrs DTW @ Sampling: 10.07

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (μ S (mS) μ mhos/cm)	Temperature (C) (F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>1330</u>	<u>4</u>	<u>6.12</u>	<u>425</u>	<u>21.17</u>	<u>.54</u>	<u>-67.8</u>	<u>13.53</u>
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>B.3</u>	<u>10</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>2</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	<u>2</u> x voa vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: 12.6 - 13.5



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 8.18/19/20/21 - 1/6/21 (inclusive)
 Sampler: J.P.

Well ID: B.4
 Well Diameter: (2) 4 in.
 Total Depth: 14.69 ft.
 Depth to Water: 0.43 ft.
0.26 xVF _____ = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Date Monitored: 8.18.14

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 9.68

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	_____ ft
Visual Confirmation/Description:	_____
Skimmer / Absorbant Sock (circle one)	_____
Amt Removed from Skimmer:	_____ ltr
Amt Removed from Well:	_____ ltr
Water Removed:	_____ ltr
Product Transferred to:	_____

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: XOF MRS 550

Sampling Equipment:
 Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: T.O. BINGO

Start Time (purge): 10:00 Weather Conditions: SUN
 Sample Time/Date: 10:50 / 8.19.14 Water Color: CLEAR Odor: (Y) / N MILD
 Approx. Flow Rate: 100 mlpm Sediment Description: NONE
 Did well de-water? No If yes, Time: _____ Volume: _____ ltrs DTW @ Sampling: 8.75

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (μ S / mS / μ mhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>10:46</u>	<u>3.6</u>	<u>6.33</u>	<u>.278</u>	<u>19.55</u>	<u>.26</u>	<u>-86.9</u>	<u>8.73</u>
<u>10:49</u>	<u>4.2</u>	<u>6.36</u>	<u>.286</u>	<u>19.42</u>	<u>.26</u>	<u>-87.8</u>	<u>8.73</u>
<u>10:50</u>	<u>4.8</u>	<u>6.37</u>	<u>.291</u>	<u>19.50</u>	<u>.26</u>	<u>-86.8</u>	<u>8.73</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>B.4</u>	<u>10</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>2</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	<u>2</u> x voa vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: 11' 12"

Chevron Northwest Region Analysis Request/Chain of Custody



Lancaster Laboratories

For Eurofins Lancaster Laboratories use only
 Acct. # _____ Group # _____ Sample # _____
 Instructions on reverse side correspond with circled numbers.

1 Client Information			4 Matrix			5 Analyses Requested																						
Facility # SS#211556-OML G-R#386773 WBS			<input type="checkbox"/> Sediment <input checked="" type="checkbox"/> Groundwater <input type="checkbox"/> Surface <input type="checkbox"/> Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Air <input type="checkbox"/> Total Number of Containers			BTEX + MTBE 8021 <input type="checkbox"/> 8260 <input checked="" type="checkbox"/> Naphth <input type="checkbox"/> 8260 full scan Oxygenates NWTPH-Gx NWTPH-Dx with Silica Gel Cleanup <input checked="" type="checkbox"/> NWTPH-Dx without Silica Gel Cleanup <input checked="" type="checkbox"/> WA VPH <input type="checkbox"/> WA EPH <input type="checkbox"/> Lead Total <input type="checkbox"/> Diss. <input checked="" type="checkbox"/> Method 6020 NITRATE / SULFATE DISSOLVED IRON & MANGANESE SULFIDE / METHANE ALKALINITY																						
Site Address 101 Mulford Road, TOLEDO, WA																												
Chevron PM MHO LEIDOSRS Lead Consultant Russell Shroder																												
Consultant/Office Gettler-Ryan, Inc., 6805 Sierra Court, Suite G, Dublin, CA 94568																												
Consultant Project Mgr. Deanna L. Harding, (deanna@grinc.com)																												
Consultant Phone # (925) 551-7444 x180																												
Sampler J. PAWE			3 Composite																									
2 Sample Identification		Collected		Grab	Soil	Water	Oil	Total Number of Containers	BTEX + MTBE 8021	8260	Naphth	Oxygenates	NWTPH-Gx	NWTPH-Dx with Silica Gel Cleanup	NWTPH-Dx without Silica Gel Cleanup	WA VPH	WA EPH	Lead Total	Diss.	Method	NITRATE / SULFATE	DISSOLVED IRON & MANGANESE	SULFIDE / METHANE	ALKALINITY	6 Remarks			
Date	Time																											
RA	8-20			X		X		2	X					X	X	X												Please report results for Dx with & without sgc. Dissolved iron, Lead, and Manganese, as well as Alkalinity samples have been field filtered. Please forward lab results directly to the LC and cc: G-R. The TPW sample results should be forwarded directly to Deanna Harding
RA	8-21	0615		X		X		16	X					X	X	X						X	X	X	X			
RA	8-20	310		X		X		9	X					X	X	X						X	X	X	X			
RA	8-21	1012		X		X		16	X					X	X	X						X	X	X	X			
RA	8-21	1110		X		X		16	X					X	X	X						X	X	X	X			
RA	8-20	1420		X		X		9	X					X	X	X						X	X	X	X			
RA	8-20	1208		X		X		9	X					X	X	X						X	X	X	X			
RA	8-21	1300		X		X		16	X					X	X	X						X	X	X	X			
RA	8-21	1210		X		X		16	X					X	X	X						X	X	X	X			
RA	8-21	1111		X		X		9	X					X	X	X						X	X	X	X			
RA	8-21	0820		X		X		16	X					X	X	X						X	X	X	X			
RA	8-20	1017		X		X		9	X					X	X	X						X						

- 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

7 Turnaround Time Requested (TAT) (please circle)			Relinquished by			Date			Time			Received by			Date			Time		
Standard	5 day	4 day	[Signature]			8-21-14			1630											
72 hour	48 hour	24 hour																EDF/EDD		
8 Data Package (circle if required)			Relinquished by Commercial Carrier:			Date			Time			Received by			Date			Time		
Type I - Full			Type VI (Raw Data)			UPS <input checked="" type="checkbox"/>			FedEx _____			Other _____			Temperature Upon Receipt _____ °C			Custody Seals Intact? Yes No		

Chevron Northwest Region Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # _____ Group # _____ Sample # _____
 For Eurofins Lancaster Laboratories use only
 Instructions on reverse side correspond with circled numbers.

1 Client Information				4 Matrix			5 Analyses Requested											6 Remarks																																					
Facility # SS#211556-OML G-R#386773		WBS		<input type="checkbox"/> Sediment <input checked="" type="checkbox"/> Ground <input type="checkbox"/> Surface <input type="checkbox"/> Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Air	<input type="checkbox"/> Soil <input type="checkbox"/> Water <input type="checkbox"/> Oil	Total Number of Containers BTEX + MTBE 8021 <input type="checkbox"/> 8260 <input type="checkbox"/> Naphth <input type="checkbox"/> 8260 full scan	Oxygenates NWTPH-Gx NWTPH-Dx with Silica Gel Cleanup <input checked="" type="checkbox"/> NWTPH-Dx without Silica Gel Cleanup <input checked="" type="checkbox"/> WA VPH <input type="checkbox"/> WA EPH <input type="checkbox"/>	Lead <input type="checkbox"/> Total <input type="checkbox"/> Diss. <input checked="" type="checkbox"/> Method 6020	NITRATE SULFATE ALKALINITY METHANE SULFIDE DISS. IRON & MANGANESE	SCR #: _____		<input type="checkbox"/> Results in Dry Weight <input type="checkbox"/> J value reporting needed <input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds <input type="checkbox"/> 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run _____ oxy's on highest hit <input type="checkbox"/> Run _____ oxy's on all hits																																											
Site Address 101 Mulford Road, TOLEDO, WA		Chevron PM MHO LEIDOSRS								Lead Consultant Russell Shroder																																													
Consultant/Office Gettler-Ryan, Inc., 6805 Sierra Court, Suite G, Dublin, CA 94568		Consultant Project Mgr. Deanna L. Harding, (deanna@grinc.com)								Consultant Phone # (925) 551-7444 x180																																													
Sampler J. PAVNE		Collected Date 8-19-14 Time 1157								Grab <input type="checkbox"/> Composite <input type="checkbox"/>																																													
Sample Identification		Date								Time				Grab		Composite		Soil		Water		Oil		Total Number of Containers		BTEX + MTBE		8021		8260		Naphth		Oxygenates		NWTPH-Gx		NWTPH-Dx with Silica Gel Cleanup		NWTPH-Dx without Silica Gel Cleanup		WA VPH		WA EPH		Lead		Total		Diss.		Method		6020	
		Q.A								B.1				B.2		B.3		B.4		X		X		X		16		16		16		16		16		X		X		X		X		X		X		X		X		X		X	
7 Turnaround Time Requested (TAT) (please circle) Standard 5 day 4 day 72 hour 48 hour EDF/EDD 24 hour				Relinquished by [Signature] Date 8-19-14 Time 1630				Relinquished by _____ Date _____ Time _____				Received by _____ Date _____ Time _____				Received by _____ Date _____ Time _____																																							
8 Data Package (circle if required) Type I - Full Type VI (Raw Data)				EDD (circle if required) CVX-RTBU-FI_05 (default) Other: _____				Relinquished by Commercial Carrier: UPS <input checked="" type="checkbox"/> FedEx _____ Other _____				Received by _____ Date _____ Time _____				Temperature Upon Receipt _____ °C Custody Seals Intact? Yes No																																							



GETTLER-RYAN INC.



TRANSMITTAL

December 3, 2014

G-R #386773

TO: Mr. Russell Shropshire
Leidos, Inc.
18912 North Creek Parkway, Suite 101
Bothell, Washington 98011

FROM: Deanna L. Harding
Project Coordinator
Gettler-Ryan Inc.
6805 Sierra Court, Suite G
Dublin, California 94568

RE: **Former Texaco Service Station
#211556/Cowlitz BP
101 Mulford Road
Toledo, Washington
UST Site#10669**

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DESCRIPTION
VIA PDF	Groundwater Monitoring and Sampling Data Package Fourth Quarter Event of November 19 & 20, 2014

COMMENTS:

Pursuant to your request, we are providing you with copies of the above referenced data for your use.

Please provide us the updated historical data prior to the next monitoring and sampling event for our field use.

Please feel free to contact me if you have any comments/questions.

trans/211556

Standard Operating Procedure, Low-Flow Purging and Sampling

Gettler-Ryan Inc. field personnel adhere to the following Standard Operating Procedure (SOP) for the collection and handling of representative groundwater samples using the Low-Flow (Minimal-Drawdown) Purging technique. This SOP incorporates purging and sampling methods discussed in U.S. EPA, Ground Water Issue, Publication Number EPA/540/S-95/504, April 1996 by Puls, R.W. and M.J. Barcelona - "*Low-Flow (Minimal-Drawdown) Ground-Water Sampling Procedures.*"

A QED Well Wizard™ (or equivalent) bladder pump or Peristaltic Pump will be used to purge and sample selected wells as outlined in the scope-of-work. An in-line flow cell or other multi-parameter meter is used to collect water quality indicating parameters during purging.

Initial Pump Discharge Test Procedures

The Static Water Level (SWL) is measured in all wells at the site prior to the installation of the pump or tubing and initiation of the test procedures in any well. In addition, the presence or absence of separate-phase hydrocarbons (SPH) is determined using an interface probe. Product thickness, if present, is measured to the nearest 0.01 foot. The SWL measurement and SPH thickness, if any, will be recorded on the field data sheet.

The bladder pump or suction inlet tubing of the peristaltic pump is then positioned with its inlet located within the screened interval of the well. The in-line flow cell is then connected to the discharge tubing. After pump installation, the SWL is allowed to recover to its original level. The pump is then started at a discharge rate between 100 ml to 300 ml per minute with the in-line flow cell connected. The water level is monitored continuously for any change from the original measurement and the discharge rate is adjusted until an optimum discharge rate (ODR) is determined. The goal for the ODR is to produce a stable drawdown of less than 0.1 meter as allowed by site conditions; however the total drawdown from the initial SWL should not exceed 25% of the distance between pump inlet location and the top of the well screen. Once achieved, the ODR will be confirmed by volumetric discharge measurement and recorded on the field data sheet.

Purging and Water Quality Parameter Measurement

When the ODR has been determined and the SWL drawdown has been established within the acceptable range, and a minimum of one pump system volume (bladder volume and/or discharge tubing volume) has been purged, field measurements for temperature (T), pH, conductivity (Ec), and if required, oxygen reduction potential (ORP) and dissolved oxygen (DO) will be collected and documented on the field data sheet. Measurements should be taken every three to five minutes until parameters stabilize for three consecutive readings. The minimum parameter subset of T ($\pm 10\%$), pH (± 0.1 unit), and Ec (± 10 uS) are required to stabilize. Additional parameters that may be required are DO (± 0.2 mg/l) and ORP (± 20 mV).

Sample Collection

When water quality parameters have stabilized, and the SWL drawdown remains established within the acceptable range, groundwater sample collection may begin. If used, the in-line flow cell and its tubing are disconnected from the discharge tubing prior to sample collection. Water samples are collected from the discharge tubing into appropriate containers. Pre-preserved containers, supplied by analytical laboratories, are used when possible. When pre-preserved containers are not available, the laboratory is instructed to preserve the sample as appropriate. Duplicate samples are collected for the laboratory to use in maintaining quality assurance/quality control standards, as directed by the scope of work. The samples are labeled to include the job number, sample identification, collection date and time, analysis, preservation (if any), and the sample collector's initials. The water samples are placed in a cooler,

maintained at 4°C for transport to the laboratory. A laboratory supplied trip blank accompanies each sampling set. The trip blank is analyzed for some or all of the same compounds as the groundwater samples. Once collected in the field, all samples are maintained under chain of custody until delivered to the laboratory.

The chain of custody document includes the job number, type of preservation, if any, analysis requested, sample identification, date and time collected, and the sample collector's name. The chain of custody is signed and dated (including time of transfer) by each person who receives or surrenders the samples, beginning with the field personnel and ending with the laboratory personnel.

A laboratory supplied trip blank accompanies each sampling set. For sampling sets greater than 20 samples, 5% trip blanks are included. The trip blank is analyzed for some or all of the same compounds as the groundwater samples.



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 11/19/14 (inclusive)
 Sampler: AW

Well ID: MW-103
 Well Diameter: 12.14 in.
 Total Depth: 18.36 ft.
 Depth to Water: 8.41 ft.
9.95 xVF _____ = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Date Monitored: 11-19-14

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 10.40

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump ✓
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters ✓
 Peristaltic Pump ✓
 QED Bladder Pump _____
 Other: _____

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	_____ ft
Visual Confirmation/Description:	_____
Skimmer / Absorbant Sock (circle one)	_____
Amt Removed from Skimmer:	_____ ltr
Amt Removed from Well:	_____ ltr
Water Removed:	_____ ltr
Product Transferred to:	_____

Start Time (purge): 0945 Weather Conditions: Cloudy
 Sample Time/Date: 1040 / 11-19-14 Water Color: Cloudy Odor: AMN / Slight
 Approx. Flow Rate: 200 mlpm Sediment Description: Cloudy
 Did well de-water? ✓ If yes, Time: _____ Volume: _____ ltrs DTW @ Sampling: 8.52

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µmhos/cm)	Temperature (°F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>1003</u>	<u>3.6</u>	<u>7.66</u>	<u>301</u>	<u>11.0</u>	<u>1.3</u>	<u>175</u>	<u>8.45</u>
<u>1006</u>	<u>4.2</u>	<u>7.63</u>	<u>304</u>	<u>11.1</u>	<u>1.2</u>	<u>180</u>	<u>8.49</u>
<u>1009</u>	<u>4.8</u>	<u>7.60</u>	<u>310</u>	<u>11.2</u>	<u>1.2</u>	<u>183</u>	<u>8.52</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESEV. TYPE	LABORATORY	ANALYSES
<u>MW-103</u>	<u>6</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>2</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	<u>2</u> x voa vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: ~ 13.5 ft.

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 11/19-11/20/14 (inclusive)
 Sampler: GM

Well ID: mw-109
 Well Diameter: 2 1/4 in.
 Total Depth: 12.69 ft.
 Depth to Water: 7.38 ft.
5.31 xVF = _____ = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Date Monitored: 11-19-14

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: _____

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: Ø ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr
 Product Transferred to: _____

Start Time (purge): 0830
 Sample Time/Date: 0915 11/20/14
 Approx. Flow Rate: 200 mlpm
 Did well de-water? NO If yes, Time: _____ Volume: _____

Weather Conditions: RAIN
 Water Color: Brown Odor: YN
 Sediment Description: silt
 Volume: _____ ltrs DTW @ Sampling: 7.54

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS/MS µmhos/cm)	Temperature (°F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>0848</u>	<u>3.6</u>	<u>6.77</u>	<u>495</u>	<u>16.2</u>	<u>1.1</u>	<u>179</u>	<u>7.52</u>
<u>0851</u>	<u>4.2</u>	<u>6.77</u>	<u>496</u>	<u>16.1</u>	<u>1.1</u>	<u>180</u>	<u>7.53</u>
<u>0854</u>	<u>4.8</u>	<u>6.79</u>	<u>496</u>	<u>16.2</u>	<u>1.0</u>	<u>181</u>	<u>7.54</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-109</u>	<u>6</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>1</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	<u>1</u> x voa vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: ≈ 10.00

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: **Chevron #211556**
 Site Address: **101 Mulford Road**
 City: **Toledo, WA**

Job Number: **386773**
 Event Date: 11.20.14 (inclusive)
 Sampler: JL

Well ID: MW-110
 Well Diameter: 2 1/4 in.
 Total Depth: 19.00 ft.
 Depth to Water: 9.00 ft.
10.75 xVF _____ = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Date Monitored: 11.20.14

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less then 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 11.20

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:
 Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr
 Product Transferred to: _____

Start Time (purge): 0900
 Sample Time/Date: 0900 11.20.14
 Approx. Flow Rate: 100 mlpm
 Did well de-water? No If yes, Time: _____ Volume: _____ ltrs DTW @ Sampling: 9.21

Weather Conditions: O'cast
 Water Color: CLEAR Odor: Y (N)
 Sediment Description: NONE

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>0910</u>	<u>3.8</u>	<u>6.76</u>	<u>628</u>	<u>12.91</u>	<u>1.53</u>	<u>290.1</u>	<u>9.21</u>
<u>0921</u>	<u>4.2</u>	<u>6.78</u>	<u>633</u>	<u>12.83</u>	<u>1.50</u>	<u>296.3</u>	<u>9.21</u>
<u>0924</u>	<u>4.8</u>	<u>6.79</u>	<u>634</u>	<u>12.77</u>	<u>1.47</u>	<u>294.1</u>	<u>9.21</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-110</u>	<u>1</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>1</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>1</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	<u>1</u> x voa vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: 16' 16"

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 11.19/20.14 (inclusive)
 Sampler: J.P.

Well ID: NW-111
 Well Diameter: 2 (4) in.
 Total Depth: 17.60 ft.
 Depth to Water: 6.47 ft.
11.33 xVF _____ = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Date Monitored: 11.19.14

Volume Factor (VF)	3/4" = 0.02	1" = 0.04	2" = 0.17	3" = 0.38
	4" = 0.66	5" = 1.02	6" = 1.50	12" = 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 6.73

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr
 Product Transferred to: _____

Start Time (purge): 10:00
 Sample Time/Date: 11.20.14
 Approx. Flow Rate: 2 gpm mlpm
 Did well de-water? No If yes, Time: _____ Volume: _____ ltrs DTW @ Sampling: 6.61

Weather Conditions: Overcast
 Water Color: Clear Odor: (Y) N MILD
 Sediment Description: None

Time (2400 hr.)	Volume (Liters)	pH	Conductivity ($\mu\text{S}/\text{mS}$) ($\mu\text{mhos}/\text{cm}$)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>10:19</u>	<u>3.6</u>	<u>6.41</u>	<u>681</u>	<u>14.89</u>	<u>.79</u>	<u>149.9</u>	<u>6.61</u>
<u>10:27</u>	<u>4.2</u>	<u>6.41</u>	<u>684</u>	<u>14.78</u>	<u>.77</u>	<u>148.1</u>	<u>6.61</u>
<u>10:26</u>	<u>4.8</u>	<u>6.46</u>	<u>680</u>	<u>14.71</u>	<u>.73</u>	<u>146.3</u>	<u>6.61</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>NW-111</u>	<u>6</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>1</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	<u>2</u> x voa vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: 13-14



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 11/19/14 (inclusive)
 Sampler: AW

Well ID: MW-112
 Well Diameter: 2 1/4 in.
 Total Depth: 17.34 ft.
 Depth to Water: 7.71 ft.
9.63 xVF _____ = _____

Date Monitored: 11-19-14

Volume Factor (VF)	3/4" = 0.02	1" = 0.04	2" = 0.17	3" = 0.38
	4" = 0.66	5" = 1.02	6" = 1.50	12" = 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 9.63

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump ✓
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:
 Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters ✓
 Peristaltic Pump ✓
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr
 Product Transferred to: _____

Start Time (purge): 1055 Weather Conditions: Cloudy
 Sample Time/Date: 1155 / 11-19-14 Water Color: Cloudy Odor: Y (N)
 Approx. Flow Rate: 200 mlpm Sediment Description: Cloudy
 Did well de-water? N If yes, Time: _____ Volume: _____ ltrs DTW @ Sampling: 7.82

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (mS / μ mhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>1113</u>	<u>3.6</u>	<u>7.58</u>	<u>118</u>	<u>12.1</u>	<u>1.2</u>	<u>173</u>	<u>7.75</u>
<u>1116</u>	<u>4.2</u>	<u>7.51</u>	<u>125</u>	<u>12.2</u>	<u>1.3</u>	<u>180</u>	<u>7.79</u>
<u>1119</u>	<u>4.8</u>	<u>7.50</u>	<u>129</u>	<u>12.2</u>	<u>1.3</u>	<u>183</u>	<u>7.82</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-112</u>	<u>6</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>2</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	<u>2</u> x voa vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: ~13.0ft

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 11/19-20/14 (inclusive)
 Sampler: GM

Well ID: MW-113
 Well Diameter: 2 1/4 in.
 Total Depth: 18.18 ft.
 Depth to Water: 8.59 ft.
9.59 xVF _____ = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Date Monitored: 11/19/14

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: _____

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:
 Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters X
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: 0 ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr
 Product Transferred to: _____

Start Time (purge): 0835 Weather Conditions: COLD
 Sample Time/Date: 0930 / 11/19/14 Water Color: CLEAR Odor: Y (N)
 Approx. Flow Rate: 200 mlpm Sediment Description: SL SILT
 Did well de-water? NO If yes, Time: _____ Volume: _____ ltrs DTW @ Sampling: 8.71

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS mS / µmhos/cm)	Temperature (C F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>0853</u>	<u>3.6</u>	<u>7.30</u>	<u>84</u>	<u>14.2</u>	<u>1.1</u>	<u>179</u>	<u>8.70</u>
<u>0856</u>	<u>4.2</u>	<u>7.31</u>	<u>84</u>	<u>14.1</u>	<u>1.1</u>	<u>179</u>	<u>8.71</u>
<u>0859</u>	<u>4.8</u>	<u>7.30</u>	<u>84</u>	<u>14.1</u>	<u>1.1</u>	<u>178</u>	<u>8.71</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-113</u>	<u>6</u> x vov vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>x</u> 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>2</u> x vov vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>x</u> 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	<u>2</u> x vov vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: ≈ 13.00

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 11/19 - 11/20/14 (inclusive)
 Sampler: BW / GM

Well ID: MW-114
 Well Diameter: 2.4 in.
 Total Depth: 16.83 ft.
 Depth to Water: 6.75 ft.
1008 xVF _____ = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Date Monitored: 11-19-14

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 8.76

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	_____ ft
Visual Confirmation/Description:	_____
Skimmer / Absorbant Sock (circle one)	_____
Amt Removed from Skimmer:	_____ ltr
Amt Removed from Well:	_____ ltr
Water Removed:	_____ ltr
Product Transferred to:	_____

Start Time (purge): 0940 Weather Conditions: Cloudy
 Sample Time/Date: 1025 / 11-20-14 Water Color: Cloudy Odor: Y
 Approx. Flow Rate: 200 mlpm Sediment Description: Cloudy
 Did well de-water? n If yes, Time: _____ Volume: _____ ltrs DTW @ Sampling: 6.83

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µmhos/cm)	Temperature (°F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>0958</u>	<u>3.6</u>	<u>6.89</u>	<u>141</u>	<u>10.4</u>	<u>1.0</u>	<u>163</u>	<u>6.78</u>
<u>1001</u>	<u>4.2</u>	<u>6.91</u>	<u>144</u>	<u>10.6</u>	<u>1.0</u>	<u>170</u>	<u>6.81</u>
<u>1004</u>	<u>4.8</u>	<u>6.91</u>	<u>150</u>	<u>10.7</u>	<u>1.1</u>	<u>171</u>	<u>6.83</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-114</u>	<u>6</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	x voa vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	x 250ml poly	YES	NP	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: ~ 120ft.



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 11/19-11/20/14 (inclusive)
 Sampler: GM

Well ID: MW-115
 Well Diameter: 2 1/4 in.
 Total Depth: 17.46 ft.
 Depth to Water: 8.07 ft.
9.39 xVF _____ = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Date Monitored: 11-19-14

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]:

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:
 Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump ✓
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: Ø ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbent Sock (circle one)
 Amt Removed from Skimmer: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr
 Product Transferred to: _____

Start Time (purge): 0725 Weather Conditions: RAIN
 Sample Time/Date: 0810 11/20/14 Water Color: CLEAR Odor: YIN
 Approx. Flow Rate: 200 mlpm Sediment Description: SLT SILT
 Did well de-water? NO If yes, Time: _____ Volume: _____ ltrs DTW @ Sampling: 8.16

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS/mS / µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>0740</u>	<u>3.6</u>	<u>6.96</u>	<u>297</u>	<u>14.5</u>	<u>1.1</u>	<u>198</u>	<u>8.16</u>
<u>0743</u>	<u>4.2</u>	<u>6.94</u>	<u>299</u>	<u>14.4</u>	<u>1.0</u>	<u>200</u>	<u>8.16</u>
<u>0746</u>	<u>4.8</u>	<u>6.93</u>	<u>298</u>	<u>14.3</u>	<u>1.0</u>	<u>201</u>	<u>8.16</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-115</u>	<u>6</u> x vov vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	x vov vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	x vov vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	x 250ml poly	YES	NP	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: ≈ 12.50

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 11/19-20/14 (inclusive)
 Sampler: Gus

Well ID: MW-116
 Well Diameter: 2.14 in.
 Total Depth: 17.53 ft.
 Depth to Water: 8.38 ft.
9.15 xVF _____ = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Date Monitored: 11/19/14

Volume Factor (VF)	3/4"= 0.02 4"= 0.66	1"= 0.04 5"= 1.02	2"= 0.17 6"= 1.50	3"= 0.38 12"= 5.80
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Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: _____

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: _____

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	<u>0</u> ft
Visual Confirmation/Description:	_____
Skimmer / Absorbant Sock (circle one)	_____
Amt Removed from Skimmer:	_____ ltr
Amt Removed from Well:	_____ ltr
Water Removed:	_____ ltr
Product Transferred to:	_____

Start Time (purge): 1100 Weather Conditions: COLD
 Sample Time/Date: 1158/11/19/14 Water Color: TAN Odor: Y/N
 Approx. Flow Rate: 200 mlpm Sediment Description: SILT
 Did well de-water? NO If yes, Time: _____ Volume: _____ ltrs DTW @ Sampling: 8.49

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (μ S mS μ mhos/cm)	Temperature (F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>1118</u>	<u>3.6</u>	<u>7.10</u>	<u>115</u>	<u>11.7</u>	<u>1.2</u>	<u>200</u>	<u>8.49</u>
<u>1121</u>	<u>4.2</u>	<u>7.03</u>	<u>115</u>	<u>11.7</u>	<u>1.3</u>	<u>200</u>	<u>8.49</u>
<u>1124</u>	<u>4.8</u>	<u>7.07</u>	<u>116</u>	<u>11.7</u>	<u>1.2</u>	<u>201</u>	<u>8.49</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-116</u>	<u>6</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>x</u> 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>2</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>x</u> 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	<u>2</u> x voa vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: \approx 13.00



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 11/19-20/14 (inclusive)
 Sampler: GM

Well ID: MW-117
 Well Diameter: (2) 4 in.
 Total Depth: 17-64 ft.
 Depth to Water: 6.91 ft.
10.73 xVF _____ = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Date Monitored: 11/19/14

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: _____

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:
 Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: 0 ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr
 Product Transferred to: _____

Start Time (purge): 0950 Weather Conditions: COULD
 Sample Time/Date: 1040 11/19/14 Water Color: CLOUDY Odor: Y/N
 Approx. Flow Rate: 200 mlpm Sediment Description: SLT
 Did well de-water? NO If yes, Time: _____ Volume: _____ ltrs DTW @ Sampling: 7.04

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS/mS / µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>1008</u>	<u>3.6</u>	<u>7.08</u>	<u>93</u>	<u>13.4</u>	<u>1.4</u>	<u>188</u>	<u>7.04</u>
<u>1011</u>	<u>4.2</u>	<u>7.07</u>	<u>92</u>	<u>13.4</u>	<u>1.4</u>	<u>187</u>	<u>7.04</u>
<u>1014</u>	<u>4.8</u>	<u>7.06</u>	<u>92</u>	<u>13.2</u>	<u>1.2</u>	<u>185</u>	<u>7.04</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-117</u>	<u>6</u> x vov vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>x</u> 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>2</u> x vov vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>x</u> 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	<u>2</u> x vov vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: \approx 12.50

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556 Job Number: 386773
 Site Address: 101 Mulford Road Event Date: 11/19 - 11/20/14 (inclusive)
 City: Toledo, WA Sampler: AW

Well ID: MW-118 Date Monitored: 11-19-14
 Well Diameter: 2 1/4 in.
 Total Depth: 17.22 ft.
 Depth to Water: 7.15 ft. Check if water column is less than 0.50 ft.
 Volume Factor (VF): 3/4"= 0.02, 1"= 0.04, 2"= 0.17, 3"= 0.38, 4"= 0.66, 5"= 1.02, 6"= 1.50, 12"= 5.80
 xVF 10.07 = x3 case volume = Estimated Purge Volume: gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 9.16

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	_____ ft
Visual Confirmation/Description:	_____
Skimmer / Absorbant Sock (circle one)	_____
Amt Removed from Skimmer:	_____ ltr
Amt Removed from Well:	_____ ltr
Water Removed:	_____ ltr
Product Transferred to:	_____

Start Time (purge): 0730 Weather Conditions: Cloudy
 Sample Time/Date: 0825 / 11-20-14 Water Color: Cloudy Odor: Y / 10
 Approx. Flow Rate: 200 mlpm Sediment Description: Cloudy
 Did well de-water? N If yes, Time: _____ Volume: _____ ltrs DTW @ Sampling: 7.22

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS / mS / umhos/cm)	Temperature (°C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>0748</u>	<u>3.6</u>	<u>7.28</u>	<u>77</u>	<u>12.5</u>	<u>1.3</u>	<u>202</u>	<u>7.18</u>
<u>0751</u>	<u>4.2</u>	<u>7.29</u>	<u>83</u>	<u>12.6</u>	<u>1.2</u>	<u>210</u>	<u>7.20</u>
<u>0755</u>	<u>4.8</u>	<u>7.31</u>	<u>85</u>	<u>12.6</u>	<u>1.2</u>	<u>213</u>	<u>7.22</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW118</u>	<u>6</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	x voa vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	x 250ml poly	YES	NP	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: ~ 13.0ft.

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556 Job Number: 386773
 Site Address: 101 Mulford Road Event Date: 11-19-14 (inclusive)
 City: Toledo, WA Sampler: AW

Well ID MW-119 Date Monitored: 11-19-14

Well Diameter 2 1/4 in.
 Total Depth 16.65 ft.
 Depth to Water 8.50 ft.

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Depth to Water 8.15 xVF .17 = 1.38 x3 case volume = Estimated Purge Volume: 4.15 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 10.13

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump ✓
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters ✓
 Peristaltic Pump ✓
 QED Bladder Pump _____
 Other: _____

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	_____ ft
Visual Confirmation/Description:	_____
Skimmer / Absorbant Sock (circle one)	_____
Amt Removed from Skimmer:	_____ ltr
Amt Removed from Well:	_____ ltr
Water Removed:	_____ ltr
Product Transferred to:	_____

Start Time (purge): 0830 Weather Conditions: Sunny
 Sample Time/Date: 0930 / 11-19-14 Water Color: Cloudy Odor: Y 10
 Approx. Flow Rate: 200 mlpm Sediment Description: Cloudy
 Did well de-water? N If yes, Time: _____ Volume: _____ ltrs DTW @ Sampling: 8.59

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µmhos/cm)	Temperature (°F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>0848</u>	<u>3.6</u>	<u>8.95</u>	<u>225</u>	<u>11.6</u>	<u>1.2</u>	<u>166</u>	<u>8.53</u>
<u>0851</u>	<u>4.2</u>	<u>8.91</u>	<u>231</u>	<u>11.8</u>	<u>1.2</u>	<u>160</u>	<u>8.56</u>
<u>0854</u>	<u>4.8</u>	<u>8.90</u>	<u>236</u>	<u>11.9</u>	<u>1.3</u>	<u>157</u>	<u>8.59</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-119</u>	<u>6</u> x vov vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>2</u> x vov vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	<u>2</u> x vov vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: ~ 14.0ft.

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 11/19 - 11/20/14 (inclusive)
 Sampler: AW

Well ID: mw-120
 Well Diameter: 2 4 in.
 Total Depth: 16.87 ft.
 Depth to Water: 7.37 ft.
9.50 xVF = _____ = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Date Monitored: 11-19-14

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 9.27

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr
 Product Transferred to: _____

Start Time (purge): 0840
 Sample Time/Date: 0930 / 11-20-14
 Approx. Flow Rate: 200 mlpm
 Did well de-water? ✓ If yes, Time: _____ Volume: _____ ltrs DTW @ Sampling: 7.44

Weather Conditions: Cloudy
 Water Color: Cloudy Odor: Y / 0
 Sediment Description: Cloudy

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS/mS µmhos/cm)	Temperature (°F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>0858</u>	<u>3.6</u>	<u>6.83</u>	<u>272</u>	<u>11.9</u>	<u>0.9</u>	<u>217</u>	<u>7.40</u>
<u>0901</u>	<u>4.2</u>	<u>6.87</u>	<u>278</u>	<u>12.0</u>	<u>1.0</u>	<u>221</u>	<u>7.41</u>
<u>0904</u>	<u>4.8</u>	<u>6.89</u>	<u>284</u>	<u>12.0</u>	<u>1.1</u>	<u>224</u>	<u>7.44</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>mw-120</u>	<u>6</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	x voa vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	x 250ml poly	YES	NP	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: ✓ 12.5 ft.

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 11.19.14 (inclusive)
 Sampler: J.P.

Well ID: 0.1
 Well Diameter: 2 1/4 in.
 Total Depth: 99.70 ft.
 Depth to Water: 7.43 ft.
12.35 xVF - = - x3 case volume = Estimated Purge Volume: - gal.

Date Monitored: 11.19.14

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	8"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 9.90

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:
 Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbent Sock (circle one)
 Amt Removed from Skimmer: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr
 Product Transferred to: _____

Start Time (purge): 0939
 Sample Time/Date: 1010/11-19-14
 Approx. Flow Rate: 100 mlpm
 Did well de-water? NO If yes, Time: _____ Volume: _____ ltrs DTW @ Sampling: 7.93
 Weather Conditions: Sun
 Water Color: CLEAR Odor: Y (N)
 Sediment Description: NONE

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS/cm)	Temperature (C/F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>0957</u>	<u>3.6</u>	<u>6.67</u>	<u>679</u>	<u>13.78</u>	<u>1.41</u>	<u>106.10</u>	<u>7.67</u>
<u>1000</u>	<u>4.2</u>	<u>6.64</u>	<u>677</u>	<u>13.80</u>	<u>1.30</u>	<u>104.5</u>	<u>7.77</u>
<u>1003</u>	<u>4.8</u>	<u>6.64</u>	<u>678</u>	<u>13.90</u>	<u>1.32</u>	<u>101.5</u>	<u>7.93</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>0.1</u>	<u>10</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>2</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3 FF	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	<u>2</u> x voa vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP FF	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: 16' 16"

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 11.19/20.14 (inclusive)
 Sampler: J.P.

Well ID: B.1
 Well Diameter: (2) 4 in.
 Total Depth: 19.63 ft.
 Depth to Water: 8.54 ft.
10.49 xVF = - = - x3 case volume = Estimated Purge Volume: - gal.

Date Monitored: 11.19.14

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less then 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 10.63

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr
 Product Transferred to: _____

Start Time (purge): 0830
 Sample Time/Date: 0905/11.19.14
 Approx. Flow Rate: 200 mlpm
 Did well de-water? No If yes, Time: _____

Weather Conditions: SUN
 Water Color: CLEAR Odor: Y/N
 Sediment Description: NONE
 Volume: _____ ltrs DTW @ Sampling: 8.73

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS/cm)	Temperature (C/F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>0864</u>	<u>3.6</u>	<u>6.94</u>	<u>.449</u>	<u>12.12</u>	<u>0.11</u>	<u>200.7</u>	<u>8.73</u>
<u>0867</u>	<u>4.2</u>	<u>6.96</u>	<u>.452</u>	<u>12.01</u>	<u>0.13</u>	<u>200.5</u>	<u>8.73</u>
<u>0869</u>	<u>4.0</u>	<u>6.96</u>	<u>.462</u>	<u>11.92</u>	<u>0.14</u>	<u>200.0</u>	<u>8.73</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>B.1</u>	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>1</u> x 250ml poly	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>2</u> x vov vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3 <u>FF</u>	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	<u>2</u> x vov vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP <u>FF</u>	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: 15' 110'



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 11.19.14 (inclusive)
 Sampler: [Signature]

Well ID: B-3
 Well Diameter: (2) 4 in.
 Total Depth: 13.60 ft.
 Depth to Water: B.17 ft.
5.39 xVF = - = - x3 case volume

Date Monitored: 11.19.14

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 9.24 Estimated Purge Volume: _____ gal.

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr
 Product Transferred to: _____

Start Time (purge): 10:00
 Sample Time/Date: 11:14 11.19.14
 Approx. Flow Rate: 200 mlpm
 Did well de-water? No If yes, Time: _____ Volume: _____ ltrs DTW @ Sampling: B.60
 Weather Conditions: SUN
 Water Color: CLEAR Odor: Y/N MILD
 Sediment Description: NONE

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS/mS)	Temperature (C/F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>11:00</u>	<u>3.6</u>	<u>6.4</u>	<u>360</u>	<u>13.65</u>	<u>6.26</u>	<u>215.0</u>	<u>8.33</u>
<u>11:11</u>	<u>4.2</u>	<u>6.43</u>	<u>363</u>	<u>13.69</u>	<u>6.11</u>	<u>217.3</u>	<u>8.49</u>
<u>11:14</u>	<u>4.8</u>	<u>6.45</u>	<u>364</u>	<u>13.62</u>	<u>6.02</u>	<u>214.0</u>	<u>8.60</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>B-3</u>	<u>10</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>2</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	<u>2</u> x voa vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: 11'-12"

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 11.19.14 (inclusive)
 Sampler: J.P.

Well ID: B-4
 Well Diameter: 2 1/4 in.
 Total Depth: 19.69 ft.
 Depth to Water: 6.77 ft.

Date Monitored: 11.19.14

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	8"= 1.50	12"= 5.80

Depth to Water 7.92 xVF - = - x3 case volume = Estimated Purge Volume: - gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 8.35

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr
 Product Transferred to: _____

Start Time (purge): 11:02
 Sample Time/Date: 11:30 / 11.19.14
 Approx. Flow Rate: 2000 mlpm
 Did well de-water? No If yes, Time: _____ Volume: _____ ltrs DTW @ Sampling: 6.93

Weather Conditions: Overcast
 Water Color: Clear Odor: (Y) / N Mild
 Sediment Description: None

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS/cm)	Temperature (C/F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>11:00</u>	<u>3.80</u>	<u>6.44</u>	<u>.375</u>	<u>16.56</u>	<u>.96</u>	<u>162.7</u>	<u>6.93</u>
<u>11:25</u>	<u>4.2</u>	<u>6.47</u>	<u>.377</u>	<u>16.40</u>	<u>.96</u>	<u>161.6</u>	<u>6.93</u>
<u>11:26</u>	<u>4.82</u>	<u>6.49</u>	<u>.377</u>	<u>16.41</u>	<u>.96</u>	<u>159.8</u>	<u>6.93</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>B-4</u>	<u>10</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>2</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	<u>1</u> x voa vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: 10-11

Chevron Northwest Region Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # _____ Group # _____ Sample # _____
 For Eurofins Lancaster Laboratories use only
 Instructions on reverse side correspond with circled numbers.

SCR #: _____

1 Client Information				4 Matrix			5 Analyses Requested																					
Facility # SS#211556-OML G-R#386773 WBS				Sediment <input type="checkbox"/> Ground <input checked="" type="checkbox"/> Surface <input type="checkbox"/> Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Air <input type="checkbox"/>	Total Number of Containers BTEX + MTBE <input type="checkbox"/> 8021 <input type="checkbox"/> 8260 <input type="checkbox"/> Naphth <input type="checkbox"/> 8260 full scan Oxygenates NWTPH-Gx NWTPH-Dx with Silica Gel Cleanup <input checked="" type="checkbox"/> NWTPH-Dx without Silica Gel Cleanup <input checked="" type="checkbox"/> WA VPH <input type="checkbox"/> WA EPH <input type="checkbox"/> Lead <input type="checkbox"/> Total <input type="checkbox"/> Diss. <input checked="" type="checkbox"/> Method 6020	NITRATE / SULFATE DISSOLVED IRON / MANGANESE SULFIDE SIMP 4500 520 METHANE / ALKALINITY																						
Site Address 101 Mulford Road, TOLEDO, WA																												
Chevron PM MHO LEIDOSRS Lead Consultant Russell Shroeder																												
Consultant/Office Gattler-Ryan, Inc., 6805 Sierra Court, Suite G, Dublin, CA 94568																												
Consultant Project Mgr. Deanna L. Harding, (deanna@grinc.com)																												
Consultant Phone # (925) 551-7444 x180																												
Sampler J. Payne, Alex Gilbert				3 Composite																								
2 Sample Identification		Collected		Grab	Composite	Soil	Water	Oil	Total Number of Containers	BTEX + MTBE	8021	8260	Naphth	Oxygenates	NWTPH-Gx	NWTPH-Dx with Silica Gel Cleanup	NWTPH-Dx without Silica Gel Cleanup	WA VPH	WA EPH	Lead	Total	Diss.	Method	6 Remarks				
Date	Time																											
S. PA		11.19.14					X		2	X				X	X	X			X	X	X	X	X	Please report results for Dx with & without sgc. Dissolved Iron, Lead, and Manganese, as well as Alkalinity samples have been field filtered. Please forward lab results directly to the LC and cc: G-R. The TPW sample results should be forwarded directly to Deanna Harding				
S. 2		0905	X				X		16	X				X	X	X			X	X	X	X	X					
S. 3		1120	X				X		16	X				X	X	X			X	X	X	X	X					
NW. 103		1040	X				X		16	X				X	X	X			X	X	X	X	X					
NW. 112		1155	X				X		16	X				X	X	X			X	X	X	X	X					
NW. 113		0930	X				X		16	X				X	X	X			X	X	X	X	X					
NW. 116		1160	X				X		16	X				X	X	X			X	X	X	X	X					
NW. 117		1040	X				X		16	X				X	X	X			X	X	X	X	X					
NW. 119		0930	X				X		16	X				X	X	X			X	X	X	X	X					

7 Turnaround Time Requested (TAT) (please circle)

Standard 5 day 4 day
 72 hour 48 hour 24 hour

EDF/EDD

Relinquished by	Date 11.19.14	Time 1430	Received by	Date	Time	9
Relinquished by	Date	Time	Received by	Date	Time	

8 Data Package (circle if required)

Type I - Full Type VI (Raw Data)

EDD (circle if required)

CVX-RTBU-FL_05 (default) Other: _____

Relinquished by Commercial Carrier:

UPS FedEx _____ Other _____

Temperature Upon Receipt _____ °C Custody Seals Intact? Yes No

Chevron Northwest Region Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # _____ Group # _____ Sample # _____
 For Eurofins Lancaster Laboratories use only
 Instructions on reverse side correspond with circled numbers.

SCR #: _____

1 Client Information			4 Matrix				5 Analyses Requested											6 Remarks														
Facility # SS#211556-OML G-R#386773 Site Address 101 Mulford Road, TOLEDO, WA Chevron PM MHO LEIDOSRS Lead Consultant Russell Shroeder Consultant/Office Gettler-Ryan, Inc., 6805 Sierra Court, Suite G, Dublin, CA 94568 Consultant Project Mgr. Deanna L. Harding, (deanna@grinc.com) Consultant Phone # (925) 551-7444 x180 Sampler J. PAINE / DICKEY / ALEX			<input type="checkbox"/> Sediment <input checked="" type="checkbox"/> Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Air <input type="checkbox"/> Surface				<input type="checkbox"/> BTEX + MTBE <input type="checkbox"/> 8021 <input type="checkbox"/> 8260 <input type="checkbox"/> Naphth <input type="checkbox"/> 8260 full scan <input type="checkbox"/> Oxygenates <input type="checkbox"/> NWTPH-Gx <input checked="" type="checkbox"/> NWTPH-Dx with Silica Gel Cleanup <input checked="" type="checkbox"/> NWTPH-Dx without Silica Gel Cleanup <input type="checkbox"/> WA VPH <input type="checkbox"/> WA EPH <input type="checkbox"/> Lead <input type="checkbox"/> Total <input type="checkbox"/> Diss. <input checked="" type="checkbox"/> Method Lab DISSOLVED IRON / MANGANESE SULFIDE / METANE ALKALINITY NITRATE / SULFATE											<input type="checkbox"/> Results in Dry Weight <input type="checkbox"/> J value reporting needed <input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds <input type="checkbox"/> 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run _____ oxy's on highest hit <input type="checkbox"/> Run _____ oxy's on all hits														
2 Sample Identification			3 Collected		Grab	Composite	Soil	Water	Oil	Total Number of Containers	BTEX + MTBE	8021	8260	Naphth	8260 full scan	Oxygenates	NWTPH-Gx	NWTPH-Dx with Silica Gel Cleanup	NWTPH-Dx without Silica Gel Cleanup	WA VPH	WA EPH	Lead	Total	Diss.	Method Lab	DISSOLVED IRON / MANGANESE	SULFIDE / METANE	ALKALINITY	NITRATE / SULFATE			
			Date	Time																												
			11-10-14	1130	X		X		2	X						X																
				1130	X		X		10	X						X	X	X				X	X	X	X	X	X	X	X	X	X	
				0915	X		X		9	X						X	X	X				X	X	X	X	X	X	X	X	X	X	
				0940	X		X		9	X						X	X	X				X	X	X	X	X	X	X	X	X	X	
				1030	X		X		10	X						X	X	X				X	X	X	X	X	X	X	X	X	X	
				1015	X		X		9	X						X	X	X				X	X	X	X	X	X	X	X	X	X	
				0810	X		X		9	X						X	X	X				X	X	X	X	X	X	X	X	X	X	
				0825	X		X		9	X						X	X	X				X	X	X	X	X	X	X	X	X	X	
				0930	X		X		9	X						X	X	X				X	X	X	X	X	X	X	X	X	X	
7 Turnaround Time Requested (TAT) (please circle)			Relinquished by				Date		Time		Received by				Date		Time															
Standard 5 day 72 hour 48 hour EDF/EDD 24 hour							11-10-14		1600																							
8 Data Package (circle if required)			Relinquished by Commercial Carrier:				Received by				Date		Time																			
Type I - Full Type VI (Raw Data)			UPS <input checked="" type="checkbox"/> FedEx _____ Other _____ Temperature Upon Receipt _____ °C				Custody Seals Intact? Yes _____ No _____																									



GETTLER-RYAN INC.

TRANSMITTAL

March 2, 2015

G-R #386773

TO: Mr. Russell Shropshire
Leidos, Inc.
18912 North Creek Parkway, Suite 101
Bothell, Washington 98011

FROM: Deanna L. Harding
Project Coordinator
Gettler-Ryan Inc.
6805 Sierra Court, Suite G
Dublin, California 94568

RE: **Former Texaco Service Station
#211556/Cowlitz BP
101 Mulford Road
Toledo, Washington
UST Site#10669**

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DESCRIPTION
VIA PDF	Groundwater Monitoring and Sampling Data Package First Quarter Event of February 17, 18, 19 & 20, 2015

COMMENTS:

Pursuant to your request, we are providing you with copies of the above referenced data for your use.

Please provide us the updated historical data prior to the next monitoring and sampling event for our field use.

Please feel free to contact me if you have any comments/questions.

trans/211556

Standard Operating Procedure, Low-Flow Purging and Sampling

Gettler-Ryan Inc. field personnel adhere to the following Standard Operating Procedure (SOP) for the collection and handling of representative groundwater samples using the Low-Flow (Minimal-Drawdown) Purging technique. This SOP incorporates purging and sampling methods discussed in U.S. EPA, Ground Water Issue, Publication Number EPA/540/S-95/504, April 1996 by Puls, R.W. and M.J. Barcelona - "*Low-Flow (Minimal-Drawdown) Ground-Water Sampling Procedures.*"

A QED Well Wizard™ (or equivalent) bladder pump or Peristaltic Pump will be used to purge and sample selected wells as outlined in the scope-of-work. An in-line flow cell or other multi-parameter meter is used to collect water quality indicating parameters during purging.

Initial Pump Discharge Test Procedures

The Static Water Level (SWL) is measured in all wells at the site prior to the installation of the pump or tubing and initiation of the test procedures in any well. In addition, the presence or absence of separate-phase hydrocarbons (SPH) is determined using an interface probe. Product thickness, if present, is measured to the nearest 0.01 foot. The SWL measurement and SPH thickness, if any, will be recorded on the field data sheet.

The bladder pump or suction inlet tubing of the peristaltic pump is then positioned with its inlet located within the screened interval of the well. The in-line flow cell is then connected to the discharge tubing. After pump installation, the SWL is allowed to recover to its original level. The pump is then started at a discharge rate between 100 ml to 300 ml per minute with the in-line flow cell connected. The water level is monitored continuously for any change from the original measurement and the discharge rate is adjusted until an optimum discharge rate (ODR) is determined. The goal for the ODR is to produce a stable drawdown of less than 0.1 meter as allowed by site conditions; however the total drawdown from the initial SWL should not exceed 25% of the distance between pump inlet location and the top of the well screen. Once achieved, the ODR will be confirmed by volumetric discharge measurement and recorded on the field data sheet.

Purging and Water Quality Parameter Measurement

When the ODR has been determined and the SWL drawdown has been established within the acceptable range, and a minimum of one pump system volume (bladder volume and/or discharge tubing volume) has been purged, field measurements for temperature (T), pH, conductivity (Ec), and if required, oxygen reduction potential (ORP) and dissolved oxygen (DO) will be collected and documented on the field data sheet. Measurements should be taken every three to five minutes until parameters stabilize for three consecutive readings. The minimum parameter subset of T ($\pm 10\%$), pH (± 0.1 unit), and Ec (± 10 uS) are required to stabilize. Additional parameters that may be required are DO (± 0.2 mg/l) and ORP (± 20 mV).

Sample Collection

When water quality parameters have stabilized, and the SWL drawdown remains established within the acceptable range, groundwater sample collection may begin. If used, the in-line flow cell and its tubing are disconnected from the discharge tubing prior to sample collection. Water samples are collected from the discharge tubing into appropriate containers. Pre-preserved containers, supplied by analytical laboratories, are used when possible. When pre-preserved containers are not available, the laboratory is instructed to preserve the sample as appropriate. Duplicate samples are collected for the laboratory to use in maintaining quality assurance/quality control standards, as directed by the scope of work. The samples are labeled to include the job number, sample identification, collection date and time, analysis, preservation (if any), and the sample collector's initials. The water samples are placed in a cooler,

maintained at 4°C for transport to the laboratory. A laboratory supplied trip blank accompanies each sampling set. The trip blank is analyzed for some or all of the same compounds as the groundwater samples. Once collected in the field, all samples are maintained under chain of custody until delivered to the laboratory.

The chain of custody document includes the job number, type of preservation, if any, analysis requested, sample identification, date and time collected, and the sample collector's name. The chain of custody is signed and dated (including time of transfer) by each person who receives or surrenders the samples, beginning with the field personnel and ending with the laboratory personnel.

A laboratory supplied trip blank accompanies each sampling set. For sampling sets greater than 20 samples, 5% trip blanks are included. The trip blank is analyzed for some or all of the same compounds as the groundwater samples.



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 2.17-7.26.15 (inclusive)
 Sampler: J.P.

Well ID: NW-103
 Well Diameter: (2) 4 in.
 Total Depth: 18.85 ft.
 Depth to Water: 7.83 ft.
10.82 xVF = - = - x3 case volume = Estimated Purge Volume: - gal.

Date Monitored: 2.17.15

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 9.98

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: YBT

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters ✓
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: TUBING

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr
 Product Transferred to: _____

Start Time (purge): 0917 Weather Conditions: O'cast
 Sample Time/Date: 0945 / 2.19.15 Water Color: clear Odor: Y (N)
 Approx. Flow Rate: 2.66 mlpm Sediment Description: NONE
 Did well de-water? No If yes, Time: _____ Volume: _____ ltrs DTW @ Sampling: 0.66

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS / MS µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>0945</u>	<u>3.10</u>	<u>10.27</u>	<u>249</u>	<u>10.91</u>	<u>2.29</u>	<u>-11.9</u>	<u>0.11</u>
<u>0950</u>	<u>4.2</u>	<u>10.41</u>	<u>251</u>	<u>10.83</u>	<u>2.10</u>	<u>-9.0</u>	<u>0.31</u>
<u>0951</u>	<u>4.8</u>	<u>10.47</u>	<u>251</u>	<u>10.77</u>	<u>2.11</u>	<u>-7.9</u>	<u>0.66</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>NW-103</u>	<u>6</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>2</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	<u>2</u> x voa vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: 14'-15'

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 2.17 - 2.18.15 (inclusive)
 Sampler: d.p

Well ID: NW-109
 Well Diameter: 2.14 in.
 Total Depth: 12.60 ft.
 Depth to Water: 6.91 ft.
6.69 xVF _____ = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Date Monitored: 2.17.15

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 5.69
0.64

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: VIS

Sampling Equipment:
 Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: TUBING

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbent Sock (circle one)
 Amt Removed from Skimmer: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr
 Product Transferred to: _____

Start Time (purge): 0003
 Sample Time/Date: 0914 / 2.18.15
 Approx. Flow Rate: 260 mlpm
 Did well de-water? No If yes, Time: _____ Volume: _____ ltrs DTW @ Sampling: 7.97

Weather Conditions: 0' cloud
 Water Color: clear Odor: Y (N)
 Sediment Description: NONE

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (μ S/cm)	Temperature (C/F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>0911</u>	<u>3.6</u>	<u>6.77</u>	<u>.302</u>	<u>10.23</u>	<u>2.63</u>	<u>20.9</u>	<u>7.83</u>
<u>0914</u>	<u>4.2</u>	<u>6.70</u>	<u>.304</u>	<u>10.10</u>	<u>2.61</u>	<u>21.5</u>	<u>8.22</u>
<u>0917</u>	<u>4.8</u>	<u>6.79</u>	<u>.305</u>	<u>10.11</u>	<u>2.70</u>	<u>22.6</u>	<u>8.60</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>NW-109</u>	<u>6</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>1</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	<u>1</u> x voa vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: LET RECHARGE - SAMPLE 11.5' - 12.5'

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 2-17-2015 (inclusive)
 Sampler: V.P.

Well ID: MW-110
 Well Diameter: 2 1/4 in.
 Total Depth: 19.01 ft.
 Depth to Water: 0.39 ft.
11.42 xVF = - = - x3 case volume = Estimated Purge Volume: - gal.

Date Monitored: 2-17-15

Volume Factor (VF)	3/4" = 0.02	1" = 0.04	2" = 0.17	3" = 0.38
	4" = 0.66	5" = 1.02	6" = 1.50	12" = 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 10.07

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr
 Product Transferred to: _____

Start Time (purge): 1110 Weather Conditions: Clear
 Sample Time/Date: 1200 12-17-15 Water Color: clear Odor: Y (N)
 Approx. Flow Rate: 100 mlpm Sediment Description: None
 Did well de-water? No If yes, Time: _____ Volume: _____ ltrs DTW @ Sampling: 0.90

Time (2400 hr.)	Volume (Liters)	pH	Conductivity ($\mu\text{S}/\text{mS}$ / $\mu\text{mhos}/\text{cm}$)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>1136</u>	<u>3.6</u>	<u>6.74</u>	<u>309</u>	<u>11.31</u>	<u>2.04</u>	<u>-26.3</u>	<u>0.63</u>
<u>1139</u>	<u>4.2</u>	<u>6.76</u>	<u>311</u>	<u>11.24</u>	<u>2.30</u>	<u>-24.9</u>	<u>0.79</u>
<u>1152</u>	<u>4.0</u>	<u>6.76</u>	<u>313</u>	<u>11.18</u>	<u>2.33</u>	<u>-22.6</u>	<u>0.90</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-110</u>	<u>4</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	x voa vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	x 250ml poly	YES	NP	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: 15-16

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 2-17-2015 (inclusive)
 Sampler: J.P.

Well ID: MW-111
 Well Diameter: 2 1/4 in.
 Total Depth: 17.77 ft.
 Depth to Water: 6.57 ft.
11.20 xVF = = x3 case volume = Estimated Purge Volume: gal.

Date Monitored: 2-17-15

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	<u>4"= 0.66</u>	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 8.81

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters ✓
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: _____

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	_____ ft
Visual Confirmation/Description:	_____
Skimmer / Absorbant Sock (circle one)	_____
Amt Removed from Skimmer:	_____ ltr
Amt Removed from Well:	_____ ltr
Water Removed:	_____ ltr
Product Transferred to:	_____

Start Time (purge): done Weather Conditions: Overcast
 Sample Time/Date: 0909 12-20-15 Water Color: clear Odor: (Y) / 10 / mild
 Approx. Flow Rate: 100 mlpm Sediment Description: none
 Did well de-water? No If yes, Time: _____ Volume: _____ ltrs DTW @ Sampling: 7.21

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS (MS) µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>0907</u>	<u>3.4</u>	<u>7.60</u>	<u>320</u>	<u>14.91</u>	<u>1.69</u>	<u>29.3</u>	<u>6.71</u>
<u>0908</u>	<u>4.2</u>	<u>7.57</u>	<u>321</u>	<u>14.64</u>	<u>1.12</u>	<u>34.6</u>	<u>6.93</u>
<u>0909</u>	<u>4.0</u>	<u>7.64</u>	<u>323</u>	<u>14.79</u>	<u>1.10</u>	<u>31.8</u>	<u>7.21</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-111</u>	<u>10</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>2</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	<u>2</u> x voa vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: 13-14'



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 2.17-26.15 (inclusive)
 Sampler: J.P

Well ID: MW-112
 Well Diameter: 2.4 in.
 Total Depth: 17.29 ft.
 Depth to Water: 7.33 ft.
9.96 xVF _____ = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Date Monitored: 2.17.15

Volume Factor (VF)	3/4" = 0.02	1" = 0.04	<u>2" = 0.17</u>	3" = 0.38
	4" = 0.66	5" = 1.02	6" = 1.50	12" = 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 9.96

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: YSC

Sampling Equipment:
 Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters ✓
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: _____

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	_____ ft
Visual Confirmation/Description:	_____
Skimmer / Absorbent Sock (circle one)	_____
Amt Removed from Skimmer:	_____ ltr
Amt Removed from Well:	_____ ltr
Water Removed:	_____ ltr
Product Transferred to:	_____

Start Time (purge): 11:24 Weather Conditions: SUN
 Sample Time/Date: 12:00 / 2.19.15 Water Color: clear Odor: Y (N)
 Approx. Flow Rate: 200 mlpm Sediment Description: None
 Did well de-water? No If yes, Time: _____ Volume: _____ ltrs DTW @ Sampling: 8.11

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS <u>mS</u> / µmhos/cm)	Temperature (C) (F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>11:24</u>	<u>3.6</u>	<u>6.69</u>	<u>.277</u>	<u>10.83</u>	<u>1.81</u>	<u>49.5</u>	<u>7.69</u>
<u>11:57</u>	<u>4.2</u>	<u>6.71</u>	<u>.274</u>	<u>10.74</u>	<u>1.76</u>	<u>50.9</u>	<u>7.80</u>
<u>12:00</u>	<u>4.8</u>	<u>6.23</u>	<u>.262</u>	<u>10.64</u>	<u>1.77</u>	<u>51.6</u>	<u>8.11</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-112</u>	<u>1</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>2</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	<u>2</u> x voa vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: 13' - 14'

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 2.17-7:30p.15 (inclusive)
 Sampler: JR

Well ID: MW-113
 Well Diameter: 2 1/4 in.
 Total Depth: 10.11 ft.
 Depth to Water: 8.01 ft.
10.10 xVF = = x3 case volume = Estimated Purge Volume: gal.

Date Monitored: 2.17.15

Volume Factor (VF) 3/4"=0.02 1"=0.04 2"=0.17 3"=0.38
4"=0.66 5"=1.02 6"=1.50 12"=5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 10.03

Purge Equipment:

Disposable Bailer
 Stainless Steel Bailer
 Stack Pump
 Peristaltic Pump x
 QED Bladder Pump
 Other:

Sampling Equipment:

Disposable Bailer
 Pressure Bailer
 Metal Filters ✓
 Peristaltic Pump x
 QED Bladder Pump
 Other:

Time Started: (2400 hrs)
 Time Completed: (2400 hrs)
 Depth to Product: ft
 Depth to Water: ft
 Hydrocarbon Thickness: ft
 Visual Confirmation/Description:
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: ltr
 Amt Removed from Well: ltr
 Water Removed: ltr
 Product Transferred to:

Start Time (purge): 12:41 Weather Conditions: Overcast
 Sample Time/Date: 1:30p 2.19.15 Water Color: Clear Odor: Y/N
 Approx. Flow Rate: 200 mlpm Sediment Description: None
 Did well de-water? No If yes, Time: Volume: ltrs DTW @ Sampling: 8.63

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS/cm)	Temperature (C/F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>12:41</u>	<u>2.10</u>	<u>6.56</u>	<u>255</u>	<u>10.89</u>	<u>2.11</u>	<u>36.3</u>	<u>8.19</u>
<u>1:30p</u>	<u>4.2</u>	<u>6.58</u>	<u>253</u>	<u>10.81</u>	<u>2.09</u>	<u>38.1</u>	<u>8.46</u>
<u>1:30p</u>	<u>4.8</u>	<u>6.58</u>	<u>252</u>	<u>10.72</u>	<u>2.01</u>	<u>39.4</u>	<u>8.63</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-113</u>	<u>2</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>2</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	<u>2</u> x voa vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: 14=15

Add/Replaced Gasket: Add/Replaced Bolt: Add/Replaced Plug: Add/Replaced Lock:



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 2.17-28.15 (inclusive)
 Sampler: J.P.

Well ID: WW-114
 Well Diameter: 214 in.
 Total Depth: 110.01 ft.
 Depth to Water: 0.31 ft.
10.70 xVF _____ = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Date Monitored: 2.17.15

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	<u>2"= 0.17</u>	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 0.41

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: YSE

Sampling Equipment:
 Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: TUBING

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr
 Product Transferred to: _____

Start Time (purge): 6:02 Weather Conditions: 0'cast
 Sample Time/Date: 2.17.15 Water Color: clear Odor: Y (N)
 Approx. Flow Rate: 2.0 mlpm Sediment Description: NONE
 Did well de-water? No If yes, Time: _____ Volume: _____ ltrs DTW @ Sampling: 6.89

Time (2400 hr.)	Volume (Liters)	pH	Conductivity ($\mu\text{S}/\text{mS}$ / $\mu\text{mhos}/\text{cm}$)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>6:02</u>	<u>3.0</u>	<u>6.83</u>	<u>410</u>	<u>11.13</u>	<u>1.83</u>	<u>-56.0</u>	<u>6.46</u>
<u>6:03</u>	<u>4.2</u>	<u>6.86</u>	<u>422</u>	<u>11.01</u>	<u>1.79</u>	<u>-55.3</u>	<u>6.73</u>
<u>6:10</u>	<u>4.0</u>	<u>6.80</u>	<u>422</u>	<u>10.93</u>	<u>1.71</u>	<u>-57.0</u>	<u>6.89</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>WW-114</u>	<u>0</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	x voa vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	x 250ml poly	YES	NP	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: 19'-12"

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 2.17-20.15 (inclusive)
 Sampler: J.P.

Well ID: MW-115
 Well Diameter: 4 in.
 Total Depth: 17.47 ft.
 Depth to Water: 7.67 ft.
9.90 xVF = - = - x3 case volume = Estimated Purge Volume: - gal.

Date Monitored: 2.17.15

Volume Factor (VF)	3/4"=0.02	1"=0.04	2"=0.17	3"=0.38
	4"=0.66	5"=1.02	6"=1.50	12"=5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 9.55

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: Y&E

Sampling Equipment:
 Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: TUBING

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr
 Product Transferred to: _____

Start Time (purge): 12:00
 Sample Time/Date: 12:49 2.18.15
 Approx. Flow Rate: 200 mlpm
 Did well de-water? NO If yes, Time: _____ Volume: _____ ltrs DTW @ Sampling: 0.19
 Weather Conditions: O'CAST
 Water Color: CLEAR Odor: Y (N)
 Sediment Description: NONE

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS (MS µmhos/cm))	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>12:46</u>	<u>3.6</u>	<u>6.90</u>	<u>.122</u>	<u>11.91</u>	<u>2.24</u>	<u>72.4</u>	<u>7.83</u>
<u>12:49</u>	<u>4.2</u>	<u>6.92</u>	<u>.122</u>	<u>11.93</u>	<u>2.19</u>	<u>72.6</u>	<u>8.01</u>
<u>12:52</u>	<u>4.8</u>	<u>6.91</u>	<u>.124</u>	<u>11.77</u>	<u>2.11</u>	<u>73.3</u>	<u>8.29</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-115</u>	<u>6</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	x voa vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	x 250ml poly	YES	NP	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: 12'-13'

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 2.17 - 2.20.15 (inclusive)
 Sampler: J.P.

Well ID: MW-116
 Well Diameter: (2) 4 in.
 Total Depth: 17.50 ft.
 Depth to Water: 8.20 ft.
9.50 xVF _____ = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Date Monitored: 2.17.15

Volume Factor (VF)	3/4" = 0.02	1" = 0.04	2" = 0.17	3" = 0.38
	4" = 0.66	5" = 1.02	6" = 1.50	12" = 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 9.90

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: YGI

Sampling Equipment:
 Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters ✓
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: TUBING

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr
 Product Transferred to: _____

Start Time (purge): 0813 Weather Conditions: O'CAST
 Sample Time/Date: 0840 2.19.15 Water Color: CLEAR Odor: Y (N)
 Approx. Flow Rate: 200 mlpm Sediment Description: NONE
 Did well de-water? No If yes, Time: _____ Volume: _____ ltrs DTW @ Sampling: 8.63

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS (MS) µmhos/cm)	Temperature (C) (F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>0851</u>	<u>3.10</u>	<u>6.63</u>	<u>226</u>	<u>10.01</u>	<u>1.67</u>	<u>51.9</u>	<u>8.29</u>
<u>0854</u>	<u>4.2</u>	<u>6.64</u>	<u>227</u>	<u>11.23</u>	<u>1.64</u>	<u>52.10</u>	<u>8.41</u>
<u>0857</u>	<u>4.8</u>	<u>6.66</u>	<u>229</u>	<u>11.70</u>	<u>1.61</u>	<u>53.8</u>	<u>8.63</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-116</u>	<u>0</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>2</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	<u>2</u> x voa vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: 13-14'

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 2.17-20.15 (inclusive)
 Sampler: J.P.

Well ID: MW-117
 Well Diameter: (2) 4 in.
 Total Depth: 17.63 ft.
 Depth to Water: 6.26 ft.
11.37 xVF = - = - x3 case volume = Estimated Purge Volume: - gal.

Date Monitored: 2.17.15

Volume Factor (VF)	3/4" = 0.02	1" = 0.04	<u>2" = 0.17</u>	3" = 0.38
	4" = 0.66	5" = 1.02	6" = 1.50	12" = 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 8.63

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:
 Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters ✓
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr
 Product Transferred to: _____

Start Time (purge): 0711 Weather Conditions: Overcast
 Sample Time/Date: 0740 / 2.19.15 Water Color: CLEAR Odor: Y (N)
 Approx. Flow Rate: 2.00 mlpm Sediment Description: NONE
 Did well de-water? No If yes, Time: _____ Volume: _____ ltrs DTW @ Sampling: 6.91

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (μS <u>ms</u> $\mu\text{mhos/cm}$)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>0729</u>	<u>3.6</u>	<u>6.72</u>	<u>.244</u>	<u>11.93</u>	<u>2.20</u>	<u>32.3</u>	<u>6.44</u>
<u>0750</u>	<u>4.2</u>	<u>6.72</u>	<u>.245</u>	<u>11.80</u>	<u>2.24</u>	<u>34.9</u>	<u>6.63</u>
<u>0755</u>	<u>4.0</u>	<u>6.73</u>	<u>.246</u>	<u>11.61</u>	<u>2.30</u>	<u>36.0</u>	<u>6.91</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW 117</u>	<u>0</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>1</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	<u>2</u> x voa vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: 12-14'

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 2.17-7:00-16 (inclusive)
 Sampler: JP

Well ID: MMU-110
 Well Diameter: (2) 4 in.
 Total Depth: 17.21 ft.
 Depth to Water: 10.24 ft.
10.67 xVF _____ = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Date Monitored: 2.17.16

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 9.67

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: YSI

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: TUBING

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr
 Product Transferred to: _____

Start Time (purge): 7:00
 Sample Time/Date: 10:15 / 2.10.16
 Approx. Flow Rate: 200 mlpm
 Did well de-water? No If yes, Time: _____ Volume: _____ ltrs DTW @ Sampling: 6.97

Weather Conditions: CAST
 Water Color: CLEAR Odor: Y (N)
 Sediment Description: NONE

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (μ S/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>10:15</u>	<u>3.0</u>	<u>6.69</u>	<u>210</u>	<u>11.69</u>	<u>2.09</u>	<u>39.6</u>	<u>6.73</u>
<u>10:18</u>	<u>4.2</u>	<u>6.72</u>	<u>219</u>	<u>11.71</u>	<u>2.12</u>	<u>41.3</u>	<u>6.81</u>
<u>10:21</u>	<u>4.8</u>	<u>6.74</u>	<u>224</u>	<u>11.71</u>	<u>2.10</u>	<u>43.0</u>	<u>6.97</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MMU-110</u>	<u>0</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>1</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	<u>1</u> x voa vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: 15-14'



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 2.17 - 2.19.15 (inclusive)
 Sampler: JR

Well ID: MMW-119
 Well Diameter: (2) 4 in.
 Total Depth: 16.69 ft.
 Depth to Water: 7.97 ft.
9.72 xVF = - = - x3 case volume = Estimated Purge Volume: - gal.

Date Monitored: 2.17.15

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	<u>2"= 0.17</u>	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 9.71

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: YSE

Sampling Equipment:
 Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters ✓
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: TORINO

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr
 Product Transferred to: _____

Start Time (purge): 1419
 Sample Time/Date: 1457 / 2.19.15
 Approx. Flow Rate: 2.00 mlpm
 Did well de-water? No If yes, Time: _____ Volume: _____ ltrs DTW @ Sampling: 9.29
 Weather Conditions: Sun
 Water Color: clear Odor: Y (N)
 Sediment Description: NONE

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS / mS µmhos/cm)	Temperature (C F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>1447</u>	<u>3.0</u>	<u>6.70</u>	<u>.180</u>	<u>10.00</u>	<u>1.44</u>	<u>38.3</u>	<u>9.23</u>
<u>1450</u>	<u>4.2</u>	<u>6.71</u>	<u>.190</u>	<u>10.23</u>	<u>1.49</u>	<u>40.1</u>	<u>9.01</u>
<u>1453</u>	<u>4.8</u>	<u>6.71</u>	<u>.192</u>	<u>10.70</u>	<u>1.53</u>	<u>41.0</u>	<u>9.09</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MMW-119</u>	<u>10</u> x vov vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>2</u> x vov vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	<u>2</u> x vov vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: 12' - 13'



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 2-17-7200-15 (inclusive)
 Sampler: J.P

Well ID: MW-120
 Well Diameter: (2) 4 in.
 Total Depth: 16.83 ft.
 Depth to Water: 16.83 ft.
10.00 xVF = = x3 case volume = Estimated Purge Volume: gal.

Date Monitored: 2.17.15

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	<u>2"= 0.17</u>	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 8.83

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: YES

Sampling Equipment:
 Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: TORING

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbent Sock (circle one)
 Amt Removed from Skimmer: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr
 Product Transferred to: _____

Start Time (purge): 10:59
 Sample Time/Date: 11:20 2.18.15
 Approx. Flow Rate: 200 mlpm
 Did well de-water? No If yes, Time: _____ Volume: _____ ltrs DTW @ Sampling: 7.40

Weather Conditions: O'cast
 Water Color: clear Odor: Y / (N)
 Sediment Description: NONE

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS/mhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>11:17</u>	<u>3.6</u>	<u>6.76</u>	<u>.190</u>	<u>11.01</u>	<u>1.69</u>	<u>33.9</u>	<u>7.63</u>
<u>11:20</u>	<u>4.2</u>	<u>6.77</u>	<u>.190</u>	<u>11.11</u>	<u>1.73</u>	<u>34.6</u>	<u>7.01</u>
<u>11:23</u>	<u>4.8</u>	<u>6.79</u>	<u>.192</u>	<u>11.19</u>	<u>1.77</u>	<u>36.1</u>	<u>7.40</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-120</u>	<u>0</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	x voa vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	x 250ml poly	YES	NP	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: 12-13

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 2.17-7.24.15 (inclusive)
 Sampler: v.p.

Well ID: B.1
 Well Diameter: (2) 4 in.
 Total Depth: 19.77 ft.
 Depth to Water: 6.79 ft.
12.98 xVF _____ = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Date Monitored: 2.17.15

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	<u>2"= 0.17</u>	3"= 0.38
	4"= 0.66	5"= 1.02	8"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 9.382

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:
 Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters ✓
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbent Sock (circle one)
 Amt Removed from Skimmer: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr
 Product Transferred to: _____

Start Time (purge): 10:30
 Sample Time/Date: 10:40 2.17.15
 Approx. Flow Rate: 2.0 mlpm
 Did well de-water? NP If yes, Time: _____ Volume: _____ ltrs DTW @ Sampling: 7.38

Weather Conditions: Clear
 Water Color: clear Odor: Y 1(N)
 Sediment Description: NONE

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS / mS µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>10:30</u>	<u>3.6</u>	<u>6.89</u>	<u>.302</u>	<u>10.91</u>	<u>1.18</u>	<u>104.3</u>	<u>10.94</u>
<u>10:35</u>	<u>4.2</u>	<u>6.91</u>	<u>.304</u>	<u>10.84</u>	<u>1.13</u>	<u>102.9</u>	<u>7.13</u>
<u>10:36</u>	<u>4.0</u>	<u>6.44</u>	<u>.307</u>	<u>10.80</u>	<u>1.09</u>	<u>104.3</u>	<u>7.08</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>B.1</u>	<u>6</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>2</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	<u>2</u> x voa vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: 15-16

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 2-17/18/19/20-15 (Inclusive)
 Sampler: J.P.

Well ID: B-2
 Well Diameter: 2 1/4 in.
 Total Depth: 19.02 ft.
 Depth to Water: 7.93 ft.
11.09 xVF _____ = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Date Monitored: 2-17-15

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 10.14

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters ✓
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: _____

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	_____ ft
Visual Confirmation/Description:	_____
Skimmer / Absorbant Sock (circle one)	_____
Amt Removed from Skimmer:	_____ ltr
Amt Removed from Well:	_____ ltr
Water Removed:	_____ ltr
Product Transferred to:	_____

Start Time (purge): 0913
 Sample Time/Date: 0940 12-17-16
 Approx. Flow Rate: 100 mlpm
 Did well de-water? No If yes, Time: _____ Volume: _____ ltrs DTW @ Sampling: 0.63

Weather Conditions: Cloudy
 Water Color: clear Odor: Y (N)
 Sediment Description: NONE

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS/cm)	Temperature (C/F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>0931</u>	<u>3.6</u>	<u>6.60</u>	<u>225</u>	<u>9.51</u>	<u>3.67</u>	<u>109.6</u>	<u>0.22</u>
<u>0934</u>	<u>4.2</u>	<u>6.60</u>	<u>225</u>	<u>9.49</u>	<u>3.60</u>	<u>110.9</u>	<u>0.42</u>
<u>0937</u>	<u>4.0</u>	<u>6.60</u>	<u>226</u>	<u>9.42</u>	<u>3.61</u>	<u>111.6</u>	<u>0.63</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>B-2</u>	<u>6</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>2</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3 <u>FF</u>	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	<u>1</u> x voa vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP <u>FF</u>	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: 10-10

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 2.17.15 (inclusive)
 Sampler: o.p

Well ID: B.3 Date Monitored: 2.17.15
 Well Diameter: 2.4 in.
 Total Depth: 13.61 ft.
 Depth to Water: 6.36 ft. Check if water column is less than 0.50 ft.
7.15 xVF - = - x3 case volume = Estimated Purge Volume: - gal.

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	<u>2"= 0.17</u>	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 7.79

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: YGT

Sampling Equipment:
 Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters /
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: TUBING

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbent Sock (circle one)
 Amt Removed from Skimmer: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr
 Product Transferred to: _____

Start Time (purge): 1041 Weather Conditions: Overcast
 Sample Time/Date: 1102 / 2.17.15 Water Color: Clear Odor: Y/N
 Approx. Flow Rate: 2.0 mlpm Sediment Description: None
 Did well de-water? No If yes, Time: _____ Volume: _____ ltrs DTW @ Sampling: 7.11

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS/cm)	Temperature (C/F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>1049</u>	<u>3.6</u>	<u>6.22</u>	<u>.105</u>	<u>10.10</u>	<u>1.02</u>	<u>-21.9</u>	<u>6.71</u>
<u>1102</u>	<u>4.2</u>	<u>6.27</u>	<u>.106</u>	<u>10.24</u>	<u>1.00</u>	<u>-19.3</u>	<u>6.90</u>
<u>1105</u>	<u>4.8</u>	<u>6.20</u>	<u>.100</u>	<u>10.30</u>	<u>1.10</u>	<u>-10.0</u>	<u>7.11</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>B.3</u>	<u>10</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>2</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	<u>2</u> x voa vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: 11'



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 2-17-2015 (inclusive)
 Sampler: J.P.

Well ID: B-4
 Well Diameter: 2.4 in.
 Total Depth: 14.106 ft.
 Depth to Water: 6.93 ft.
7.73 xVF = - = - x3 case volume = Estimated Purge Volume: - gal.

Date Monitored: 2-17-15

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	<u>2"= 0.17</u>	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 8.47

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:
 Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters ✓
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbent Sock (circle one)
 Amt Removed from Skimmer: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr
 Product Transferred to: _____

Start Time (purge): 0941 Weather Conditions: OCAST
 Sample Time/Date: 1040 / 2-17-15 Water Color: CLEAR Odor: (Y) N MILD
 Approx. Flow Rate: 200 mlpm Sediment Description: NONE
 Did well de-water? No If yes, Time: _____ Volume: _____ ltrs DTW @ Sampling: 7.85

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS / <u>MS</u> / µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>0940</u>	<u>3.0</u>	<u>6.90</u>	<u>.272</u>	<u>11.03</u>	<u>2.11</u>	<u>-53.6</u>	<u>7.19</u>
<u>1040</u>	<u>4.2</u>	<u>6.90</u>	<u>.274</u>	<u>11.90</u>	<u>2.09</u>	<u>-51.3</u>	<u>7.81</u>
<u>1040</u>	<u>4.8</u>	<u>6.91</u>	<u>.276</u>	<u>11.93</u>	<u>2.02</u>	<u>-50.4</u>	<u>7.86</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>B-4</u>	<u>6</u> x vov vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>2</u> x vov vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	<u>2</u> x vov vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: 10-11'

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____

Chevron Northwest Region Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # _____ Group # _____ Sample # _____
 For Eurofins Lancaster Laboratories use only
 Instructions on reverse side correspond with circled numbers.

1 Client Information			4 Matrix			5 Analyses Requested									
Facility # SS#211556-OML G-R#386773 WBS			<input type="checkbox"/> Sediment <input checked="" type="checkbox"/> Ground <input type="checkbox"/> Surface <input type="checkbox"/> Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Air	Total Number of Containers BTEX + MTBE 8021 <input type="checkbox"/> 8260 <input type="checkbox"/> Naphth <input type="checkbox"/> 8260 full scan Oxygenates NWTPH-Gx NWTPH-Dx with Silica Gel Cleanup <input checked="" type="checkbox"/> NWTPH-Dx without Silica Gel Cleanup <input checked="" type="checkbox"/> WA VPH <input type="checkbox"/> WA EPH <input type="checkbox"/> Lead Total <input type="checkbox"/> Diss. <input checked="" type="checkbox"/> Method NITRATE / SULFATE DISSOLVED IRON / MANGANESE SULFIDE / METHANE ALKALINITY											
Site Address 101 Mulford Road, TOLEDO, WA															
Chevron PM MHO LEIDOSRS Lead Consultant Russell Shropshire															
Consultant/Office Gettler-Ryan, Inc., 6805 Sierra Court, Suite G, Dublin, CA 94568															
Consultant Project Mgr. Deanna L. Harding, (deanna@grinc.com)															
Consultant Phone # (925) 551-7444 x180															
Sampler J. PAYNE															

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	Collected		3 Grab	Composite	Soil	Water	Oil	Total Number of Containers	BTEX + MTBE	8021	8260	Naphth	8260 full scan	Oxygenates	NWTPH-Gx	NWTPH-Dx with Silica Gel Cleanup	NWTPH-Dx without Silica Gel Cleanup	WA VPH	WA EPH	Lead Total	Diss.	Method	NITRATE / SULFATE	DISSOLVED IRON / MANGANESE	SULFIDE / METHANE	ALKALINITY					
	Date	Time																													
RA	2-19		X			X	2	X							X																
MW-103	2-19	0905	X			X	16	X							X	X	X				X	X	X	X	X	X	X	X	X	X	X
MW-109	2-18	0920	X			X	9	X							X	X	X				X	X	X	X	X	X	X	X	X	X	X
MW-112	2-19	1205	X			X	16	X							X	X	X				X	X	X	X	X	X	X	X	X	X	X
MW-113	2-19	1310	X			X	16	X							X	X	X				X	X	X	X	X	X	X	X	X	X	X
MW-114	2-18	0920	X			X	9	X							X	X	X				X	X	X	X	X	X	X	X	X	X	X
MW-115	2-18	1300	X			X	9	X							X	X	X				X	X	X	X	X	X	X	X	X	X	X
MW-116	2-19	0920	X			X	16	X							X	X	X				X	X	X	X	X	X	X	X	X	X	X
MW-117	2-19	0740	X			X	16	X							X	X	X				X	X	X	X	X	X	X	X	X	X	X
MW-118	2-18	0920	X			X	9	X							X	X	X				X	X	X	X	X	X	X	X	X	X	X
MW-119	2-19	1005	X			X	16	X							X	X	X				X	X	X	X	X	X	X	X	X	X	X
MW-120	2-18	1130	X			X	9	X							X	X	X				X	X	X	X	X	X	X	X	X	X	X

6 Remarks

7 Turnaround Time Requested (TAT) (please circle)

Standard 5 day 4 day EDF/EDD
 72 hour 48 hour 24 hour

Relinquished by: Date: 2-19-15 Time: 1700

Received by: _____ Date: _____

8 Data Package (circle if required)

Type I - Full EDD (circle if required)
 Type VI (Raw Data) CVX-RTBU-FL_05 (default)
 Other: _____

Relinquished by Commercial Carrier: _____

Received by: _____ Date: _____ Time: _____

UPS FedEx _____ Other _____

Temperature Upon Receipt _____ °C Custody Seals Intact? Yes No

Chevron Northwest Region Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # _____

For Eurofins Lancaster Laboratories use only

Group # _____ Sample # _____

Instructions on reverse side correspond with circled numbers.

1 Client Information			4 Matrix			5 Analyses Requested									
Facility # SS#211556-OML G-R#386773 WBS			<input type="checkbox"/> Sediment <input checked="" type="checkbox"/> Ground <input type="checkbox"/> Surface <input type="checkbox"/> Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Air	Total Number of Containers BTEX + MTBE 8021 <input type="checkbox"/> 8260 <input type="checkbox"/> Naphth <input type="checkbox"/> 8260 full scan Oxygenates NWTPH-Gx NWTPH-Dx with Silica Gel Cleanup <input checked="" type="checkbox"/> NWTPH-Dx without Silica Gel Cleanup <input checked="" type="checkbox"/> WA VPH <input type="checkbox"/> WA EPH <input type="checkbox"/> Lead <input type="checkbox"/> Total <input type="checkbox"/> Diss. <input checked="" type="checkbox"/> Method NITRATE / SULFATE DISSOLVED IRON / MANGANESE SULFIDE / METHANE ALKALINITY											
Site Address 101 Mufford Road, TOLEDO, WA															
Chevron PM MHO LEIDOSRS Lead Consultant Russell Shropshire															
Consultant/Office Gettler-Ryan, Inc., 6805 Sierra Court, Suite G, Dublin, CA 94568															
Consultant Project Mgr. Deanna L. Harding, (deanna@grinc.com)															
Consultant Phone # (925) 551-7444 x180 <i>J. PAYNE</i>															
Sampler _____															

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	Collected		3 Grab	Composite	Soil	Water	Oil	Total Number of Containers	BTEX + MTBE	8021	8260	Naphth	8260 full scan	Oxygenates	NWTPH-Gx	NWTPH-Dx with Silica Gel Cleanup	NWTPH-Dx without Silica Gel Cleanup	WA VPH	WA EPH	Lead	Total	Diss.	Method	NITRATE / SULFATE	DISSOLVED IRON / MANGANESE	SULFIDE / METHANE	ALKALINITY	6 Remarks					
	Date	Time																															
QA	2.17.15		X			X		2	X						X																		
B-1	↓	1040	X			X		16	X						X	X	X				X	X	X	X	X	X	X	X	X	X	X		
B-2	↓	0940	X			X		16	X						X	X	X				X	X	X	X	X	X	X	X	X	X	X		
MWD-140	↓	1100	X			X		9	X						X	X	X				X	X	X	X	X	X	X	X	X	X	X		

Please report results for Dx with & without sgc. Dissolved Iron, Lead, and Manganese, as well as Alkalinity samples have been field filtered.

*Amended COC
JMH 3/2/15*

Please forward lab results directly to the LC and cc: G-R. The TPW sample results should be forwarded directly to Deanna Harding

7 Turnaround Time Requested (TAT) (please circle)

Standard 5 day 4 day 72 hour 48 hour 24 hour

EDF/EDD

Relinquished by <i>[Signature]</i>	Date 2.17.15	Time 1500	Received by _____	Date _____	Time _____
Relinquished by _____	Date _____	Time _____	Received by _____	Date _____	Time _____

8 Data Package (circle if required)

Type I - Full Type VI (Raw Data)

EDD (circle if required)

CVX-RTBU-FL_05 (default) Other: _____

Relinquished by Commercial Carrier:

UPS FedEx _____ Other _____

Temperature Upon Receipt _____ °C

Custody Seals Intact? Yes No

Chevron Northwest Region Analysis Request/Chain of Custody



Lancaster Laboratories

For Eurofins Lancaster Laboratories use only
 Acct. # _____ Group # _____ Sample # _____
 Instructions on reverse side correspond with circled numbers.

1 Client Information				4 Matrix			5 Analyses Requested										SCR #: _____											
Facility # SS#211556-OML G-R#386773 WBS				<input type="checkbox"/> Sediment <input type="checkbox"/> Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Air <input type="checkbox"/> Soil <input type="checkbox"/> Water <input type="checkbox"/> Oil	<input type="checkbox"/> Ground <input type="checkbox"/> Surface	<input type="checkbox"/> Total Number of Containers BTEX + MTBE 8021 <input type="checkbox"/> 8260 <input checked="" type="checkbox"/> Naphth <input type="checkbox"/> 8260 full scan Oxygenates NWTPH-Gx NWTPH-Dx with Silica Gel Cleanup <input type="checkbox"/> NWTPH-Dx without Silica Gel Cleanup <input checked="" type="checkbox"/> WA VPH <input type="checkbox"/> WA EPH <input type="checkbox"/> Lead Total <input type="checkbox"/> Diss. <input checked="" type="checkbox"/> Method NITRATE / SULFATE DISSOLVED ION / MANGANESE SULFIDE / METHANE ALKALINITY	<input type="checkbox"/> Results in Dry Weight <input type="checkbox"/> J value reporting needed <input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds <input type="checkbox"/> 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run _____ oxy's on highest hit <input type="checkbox"/> Run _____ oxy's on all hits										6 Remarks											
Site Address 101 Mulford Road, TOLEDO, WA							Chevron PM MHO LEIDOSRS Lead Consultant Russell Shropshire				Consultant/Office Gettler-Ryan, Inc., 6805 Sierra Court, Suite G, Dublin, CA 94568				Consultant Project Mgr. Deanna L. Harding, (deanna@grinc.com)													
Consultant Phone # (925) 551-7444 x180							Sampler J. PAYNE				Grab				Composite													
2 Sample Identification		Collected					Grab	Composite	Soil	Water	Oil	Total Number of Containers	BTEX + MTBE 8021	8260 full scan	Oxygenates	NWTPH-Gx		NWTPH-Dx with Silica Gel Cleanup	NWTPH-Dx without Silica Gel Cleanup	WA VPH	WA EPH	Lead Total	Diss.	Method	NITRATE / SULFATE	DISSOLVED ION / MANGANESE	SULFIDE / METHANE	ALKALINITY
Date	Time																											
RA	2-20						X			X		2	X			X												
B-3		1110		X			X		16	X			X	X	X			X	X	X	X	X	X	X	X			
B-4		1010		X			X		16	X			X	X	X			X	X	X	X	X	X	X	X			
MW-111		0209		X			X		16	X			X	X	X			X	X	X	X	X	X	X	X			
7 Turnaround Time Requested (TAT) (please circle)				Relinquished by _____ Date _____ Time _____			Received by _____ Date _____ Time _____																					
Standard 5 day 4 day 72 hour 48 hour 24 hour EDF/EDD				Relinquished by _____ Date _____ Time _____			Received by _____ Date _____ Time _____																					
8 Data Package (circle if required)				Relinquished by Commercial Carrier: _____			Received by _____																					
Type I - Full				EDD (circle if required)			UPS _____ FedEx _____ Other _____																					
Type VI (Raw Data)				CVX-RTBU-FL_05 (default)			Temperature Upon Receipt _____ °C			Custody Seals Intact? Yes No																		
Other: _____																												



GETTLER-RYAN INC.

TRANSMITTAL

May 22, 2015
G-R #386773

TO: Mr. Russell Shropshire
Leidos, Inc.
18912 North Creek Parkway, Suite 101
Bothell, Washington 98011

FROM: Deanna L. Harding
Project Coordinator
Gettler-Ryan Inc.
6805 Sierra Court, Suite G
Dublin, California 94568

RE: **Former Texaco Service Station
#211556/Cowlitz BP
101 Mulford Road
Toledo, Washington
UST Site#10669**

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DESCRIPTION
VIA PDF	Groundwater Monitoring and Sampling Data Package Second Quarter Event of May 11, 12, 13, & 14, 2015

COMMENTS:

Pursuant to your request, we are providing you with copies of the above referenced data for your use.

Please provide us the updated historical data prior to the next monitoring and sampling event for our field use.

Please feel free to contact me if you have any comments/questions.

trans/211556

Standard Operating Procedure, Low-Flow Purging and Sampling

Gettler-Ryan Inc. field personnel adhere to the following Standard Operating Procedure (SOP) for the collection and handling of representative groundwater samples using the Low-Flow (Minimal-Drawdown) Purging technique. This SOP incorporates purging and sampling methods discussed in U.S. EPA, Ground Water Issue, Publication Number EPA/540/S-95/504, April 1996 by Puls, R.W. and M.J. Barcelona - "*Low-Flow (Minimal-Drawdown) Ground-Water Sampling Procedures.*"

A QED Well Wizard™ (or equivalent) bladder pump or Peristaltic Pump will be used to purge and sample selected wells as outlined in the scope-of-work. An in-line flow cell or other multi-parameter meter is used to collect water quality indicating parameters during purging.

Initial Pump Discharge Test Procedures

The Static Water Level (SWL) is measured in all wells at the site prior to the installation of the pump or tubing and initiation of the test procedures in any well. In addition, the presence or absence of separate-phase hydrocarbons (SPH) is determined using an interface probe. Product thickness, if present, is measured to the nearest 0.01 foot. The SWL measurement and SPH thickness, if any, will be recorded on the field data sheet.

The bladder pump or suction inlet tubing of the peristaltic pump is then positioned with its inlet located within the screened interval of the well. The in-line flow cell is then connected to the discharge tubing. After pump installation, the SWL is allowed to recover to its original level. The pump is then started at a discharge rate between 100 ml to 300 ml per minute with the in-line flow cell connected. The water level is monitored continuously for any change from the original measurement and the discharge rate is adjusted until an optimum discharge rate (ODR) is determined. The goal for the ODR is to produce a stable drawdown of less than 0.1 meter as allowed by site conditions; however the total drawdown from the initial SWL should not exceed 25% of the distance between pump inlet location and the top of the well screen. Once achieved, the ODR will be confirmed by volumetric discharge measurement and recorded on the field data sheet.

Purging and Water Quality Parameter Measurement

When the ODR has been determined and the SWL drawdown has been established within the acceptable range, and a minimum of one pump system volume (bladder volume and/or discharge tubing volume) has been purged, field measurements for temperature (T), pH, conductivity (Ec), and if required, oxygen reduction potential (ORP) and dissolved oxygen (DO) will be collected and documented on the field data sheet. Measurements should be taken every three to five minutes until parameters stabilize for three consecutive readings. The minimum parameter subset of T ($\pm 10\%$), pH (± 0.1 unit), and Ec (± 10 uS) are required to stabilize. Additional parameters that may be required are DO (± 0.2 mg/l) and ORP (± 20 mV).

Sample Collection

When water quality parameters have stabilized, and the SWL drawdown remains established within the acceptable range, groundwater sample collection may begin. If used, the in-line flow cell and its tubing are disconnected from the discharge tubing prior to sample collection. Water samples are collected from the discharge tubing into appropriate containers. Pre-preserved containers, supplied by analytical laboratories, are used when possible. When pre-preserved containers are not available, the laboratory is instructed to preserve the sample as appropriate. Duplicate samples are collected for the laboratory to use in maintaining quality assurance/quality control standards, as directed by the scope of work. The samples are labeled to include the job number, sample identification, collection date and time, analysis, preservation (if any), and the sample collector's initials. The water samples are placed in a cooler,

maintained at 4°C for transport to the laboratory. A laboratory supplied trip blank accompanies each sampling set. The trip blank is analyzed for some or all of the same compounds as the groundwater samples. Once collected in the field, all samples are maintained under chain of custody until delivered to the laboratory.

The chain of custody document includes the job number, type of preservation, if any, analysis requested, sample identification, date and time collected, and the sample collector's name. The chain of custody is signed and dated (including time of transfer) by each person who receives or surrenders the samples, beginning with the field personnel and ending with the laboratory personnel.

A laboratory supplied trip blank accompanies each sampling set. For sampling sets greater than 20 samples, 5% trip blanks are included. The trip blank is analyzed for some or all of the same compounds as the groundwater samples.



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 5.11-7.15 (inclusive)
 Sampler: J.P

Well ID: AW-103
 Well Diameter: (2)4 in.
 Total Depth: 10.35 ft.
 Depth to Water: 9.77 ft.
9.60

Date Monitored: 5.11.15

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	8"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

xVF - = - x3 case volume = Estimated Purge Volume: - gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 10.60

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr
 Product Transferred to: _____

Start Time (purge): 1157
 Sample Time/Date: 12:00 5.11.15
 Approx. Flow Rate: 200 mlpm
 Did well de-water? No If yes, Time: _____

Weather Conditions: RAIN
 Water Color: clear Odor: Y (N)
 Sediment Description: NONE
 Volume: - ltrs DTW @ Sampling: 8.91

Time (2400 hr.)	Volume (Liters)	pH	Conductivity ($\mu\text{S}/\text{mS}$ / $\mu\text{hos/cm}$)	Temperature (C F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>12:10</u>	<u>3.10</u>	<u>6.75</u>	<u>.261</u>	<u>11.31</u>	<u>1.29</u>	<u>17.5</u>	<u>8.91</u>
<u>12:18</u>	<u>4.2</u>	<u>6.75</u>	<u>.261</u>	<u>11.36</u>	<u>1.31</u>	<u>18.3</u>	<u>8.91</u>
<u>12:21</u>	<u>4.8</u>	<u>6.76</u>	<u>.262</u>	<u>11.41</u>	<u>1.36</u>	<u>19.1</u>	<u>8.91</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>AW-103</u>	<u>4</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>2</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3 <u>FF</u>	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	<u>2</u> x voa vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP <u>FF</u>	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: 15.5-16.5

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: R Add/Replaced Lock: V



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 6.11 - 14.15 (inclusive)
 Sampler: JP

Well ID: WW-109
 Well Diameter: (2) 4 in.
 Total Depth: 12.66 ft.
 Depth to Water: 7.29 ft.
6.37 xVF = - = -

Date Monitored: 5.11.15

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 9.30

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:
 Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr
 Product Transferred to: _____

Start Time (purge): 1455
 Sample Time/Date: 1615 / 6.12.15
 Approx. Flow Rate: 200 mlpm
 Did well de-water? No If yes, Time: _____ Volume: _____ ltrs DTW @ Sampling: 7.44
 Weather Conditions: Rain
 Water Color: Clear Odor: Y/N
 Sediment Description: None

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS / mS / µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>1518</u>	<u>3.0</u>	<u>6.81</u>	<u>.172</u>	<u>12.09</u>	<u>1.39</u>	<u>29.1</u>	<u>7.44</u>
<u>1516</u>	<u>4.2</u>	<u>6.81</u>	<u>.174</u>	<u>12.94</u>	<u>1.35</u>	<u>30.3</u>	<u>7.44</u>
<u>1519</u>	<u>4.8</u>	<u>6.81</u>	<u>.174</u>	<u>13.00</u>	<u>1.31</u>	<u>37.7</u>	<u>7.44</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>WW-109</u>	<u>1</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>1</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>1</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	<u>1</u> x voa vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: 10.6 - 11.5

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 6.11 - 14.15 (inclusive)
 Sampler: J.P.

Well ID: MW-110
 Well Diameter: 2 1/4 in.
 Total Depth: 19.81 ft.
 Depth to Water: 9.51 ft.
10.30 xVF = - = - x3 case volume = Estimated Purge Volume: - gal.

Date Monitored: 6.11.15

Volume Factor (VF)	3/4" = 0.02	1" = 0.04	2" = 0.17	3" = 0.38
	4" = 0.66	5" = 1.02	6" = 1.50	12" = 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 11.57

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump x _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump x _____
 QED Bladder Pump _____
 Other: _____

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	_____ ft
Visual Confirmation/Description:	_____
Skimmer / Absorbant Sock (circle one)	
Amt Removed from Skimmer:	_____ ltr
Amt Removed from Well:	_____ ltr
Water Removed:	_____ ltr
Product Transferred to:	_____

Start Time (purge): 0937
 Sample Time/Date: 1000 / 6.11.15
 Approx. Flow Rate: 0.50 mlpm
 Did well de-water? No If yes, Time: _____

Weather Conditions: Rain
 Water Color: Clear Odor: Y/N
 Sediment Description: None
 Volume: _____ ltrs DTW @ Sampling: 9.90

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS / mS / µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>0961</u>	<u>3.6</u>	<u>6.61</u>	<u>.402</u>	<u>13.54</u>	<u>2.43</u>	<u>16.8</u>	<u>9.63</u>
<u>0954</u>	<u>4.2</u>	<u>6.62</u>	<u>.404</u>	<u>13.39</u>	<u>2.47</u>	<u>12.3</u>	<u>9.81</u>
<u>0957</u>	<u>4.8</u>	<u>6.60</u>	<u>.401</u>	<u>13.42</u>	<u>2.50</u>	<u>10.1</u>	<u>9.90</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-110</u>	<u>2</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	x voa vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	x 250ml poly	YES	NP	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: 15-16

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: L Add/Replaced Lock: L



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 5.11 - 14.15 (inclusive)
 Sampler: J.P.

Well ID: MW-11 Date Monitored: 5.11.15
 Well Diameter: 2.14 in.
 Total Depth: 17.77 ft.
 Depth to Water: 9.07 ft. Check if water column is less than 0.50 ft.
0.75 xVF = x3 case volume = Estimated Purge Volume: gal.

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Depth to Water w/ 80% Recharge ((Height of Water Column x 0.20) + DTW): 10.77

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:
 Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr
 Product Transferred to: _____

Start Time (purge): 1337 Weather Conditions: Rain
 Sample Time/Date: 1400 16.13.15 Water Color: Clear Odor: (Y) N
 Approx. Flow Rate: 1400 mlpm Sediment Description: NONE
 Did well de-water? NO If yes, Time: _____ Volume: _____ ltrs DTW @ Sampling: 9.21

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (μ S / μ mhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>1360</u>	<u>3.0</u>	<u>6.65</u>	<u>.519</u>	<u>14.21</u>	<u>1.04</u>	<u>-51.4</u>	<u>9.21</u>
<u>1383</u>	<u>4.2</u>	<u>6.65</u>	<u>.520</u>	<u>14.24</u>	<u>1.01</u>	<u>-50.7</u>	<u>9.21</u>
<u>1360</u>	<u>4.0</u>	<u>6.60</u>	<u>.620</u>	<u>14.30</u>	<u>1.00</u>	<u>-41.9</u>	<u>9.21</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-11</u>	<u>1</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>1</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>2</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	<u>2</u> x voa vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At:
REMOVED WATER FROM WELL BOX AND CLEARED FLOODED AREA. PHOTO

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 5-11-15 (inclusive)
 Sampler: J.P.

Well ID: NW-112
 Well Diameter: (2) 4 in.
 Total Depth: 17.29 ft.
 Depth to Water: 9.19 ft.
9.10 xVF = - = - x3 case volume = Estimated Purge Volume: - gal.

Date Monitored: 5.11.15

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	<u>2"= 0.17</u>	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge ((Height of Water Column x 0.20) + DTW): 16.41

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: _____

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	_____ ft
Visual Confirmation/Description:	_____
Skimmer / Absorbant Sock (circle one)	_____
Amt Removed from Skimmer:	_____ ltr
Amt Removed from Well:	_____ ltr
Water Removed:	_____ ltr
Product Transferred to:	_____

Start Time (purge): 13:40
 Sample Time/Date: 13:40 6.11.15
 Approx. Flow Rate: 200 mlpm
 Did well de-water? No If yes, Time: _____

Weather Conditions: RAIN
 Water Color: clear Odor: Y/N
 Sediment Description: None
 Volume: _____ ltrs DTW @ Sampling: 8.41

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS/cm)	Temperature (C/F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>13:40</u>	<u>3.0</u>	<u>6.77</u>	<u>265</u>	<u>12.62</u>	<u>1.17</u>	<u>-26.3</u>	<u>8.41</u>
<u>13:41</u>	<u>4.2</u>	<u>6.77</u>	<u>265</u>	<u>12.40</u>	<u>1.20</u>	<u>-19.8</u>	<u>8.41</u>
<u>13:44</u>	<u>4.2</u>	<u>6.70</u>	<u>267</u>	<u>12.71</u>	<u>1.21</u>	<u>-18.8</u>	<u>8.41</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>NW-112</u>	<u>0</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>1</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>1</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	<u>1</u> x voa vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: 15.5 - 16.5

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: ✓ Add/Replaced Lock: ✓



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 6.11-7.15 (inclusive)
 Sampler: J.P.

Well ID: NW-113
 Well Diameter: 2 1/4 in.
 Total Depth: 18.11 ft.
 Depth to Water: 9.88 ft.
9.85 xVF = - = - x3 case volume = Estimated Purge Volume: - gal.

Date Monitored: 6.11.15

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 10.88

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: _____

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	_____ ft
Visual Confirmation/Description:	_____
Skimmer / Absorbant Sock (circle one)	_____
Amt Removed from Skimmer:	_____ ltr
Amt Removed from Well:	_____ ltr
Water Removed:	_____ ltr
Product Transferred to:	_____

Start Time (purge): 0940
 Sample Time/Date: 1001 / 6.13.15
 Approx. Flow Rate: 200 mlpm
 Did well de-water? No If yes, Time: _____ Volume: _____ ltrs DTW @ Sampling: 9.23

Weather Conditions: RAIN
 Water Color: clear Odor: Y/N
 Sediment Description: NONE

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS / mS / µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>0940</u>	<u>3.6</u>	<u>6.77</u>	<u>312</u>	<u>12.36</u>	<u>2.07</u>	<u>33.9</u>	<u>9.23</u>
<u>1001</u>	<u>4.2</u>	<u>6.77</u>	<u>320</u>	<u>12.41</u>	<u>2.06</u>	<u>34.8</u>	<u>9.23</u>
<u>1004</u>	<u>4.8</u>	<u>6.77</u>	<u>326</u>	<u>12.47</u>	<u>1.98</u>	<u>35.4</u>	<u>9.23</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>NW-113</u>	<u>6</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>2</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3 <u>FF</u>	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	<u>2</u> x voa vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP <u>FF</u>	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: 14-15



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 5.11 → 14.15 (inclusive)
 Sampler: of

Well ID: NW-114
 Well Diameter: (2) 4 in.
 Total Depth: 110.01 ft.
 Depth to Water: 6.29 ft.
9.92 xVF = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Date Monitored: 5.11.15

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 0.67

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:
 Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr
 Product Transferred to: _____

Start Time (purge): 10:01
 Sample Time/Date: 10:20 15.12.15
 Approx. Flow Rate: 200 mlpm
 Did well de-water? No If yes, Time: _____

Weather Conditions: Rain
 Water Color: Clear Odor: Y (N)
 Sediment Description: None
 Volume: _____ ltrs DTW @ Sampling: 7.03

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS / mS / µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>10:19</u>	<u>3.0</u>	<u>6.29</u>	<u>.07</u>	<u>12.41</u>	<u>1.010</u>	<u>-39.6</u>	<u>7.03</u>
<u>10:22</u>	<u>1.2</u>	<u>6.25</u>	<u>.177</u>	<u>12.48</u>	<u>1.033</u>	<u>-38.9</u>	<u>7.03</u>
<u>10:25</u>	<u>1.0</u>	<u>6.21</u>	<u>.178</u>	<u>12.64</u>	<u>1.020</u>	<u>-38.0</u>	<u>7.03</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>NW-114</u>	<u>0</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	x voa vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	x 250ml poly	YES	NP	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: 10.5-14.5

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 5.11 → 14.15 (inclusive)
 Sampler: J.P.

Well ID: MMW-115
 Well Diameter: 2 1/4 in.
 Total Depth: 17.47 ft.
 Depth to Water: 8.33 ft.
9.14 xVF

Date Monitored: 5.11.15

Volume Factor (VF)	3/4" = 0.02	1" = 0.04	2" = 0.17	3" = 0.38
	4" = 0.66	5" = 1.02	6" = 1.50	12" = 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 10.15

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:
 Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr
 Product Transferred to: _____

Start Time (purge): 13:40
 Sample Time/Date: 14:01 15.12.15
 Approx. Flow Rate: 200 mlpm
 Did well de-water? No If yes, Time: _____

Weather Conditions: Rain
 Water Color: Clear Odor: Y 1(N)
 Sediment Description: None
 Volume: _____ ltrs DTW @ Sampling: 8.54

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS / cm) (µmhos/cm)	Temperature (C F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>13:50</u>	<u>3.6</u>	<u>6.80</u>	<u>380</u>	<u>13.61</u>	<u>1.13</u>	<u>32.3</u>	<u>8.54</u>
<u>14:01</u>	<u>4.2</u>	<u>6.89</u>	<u>381</u>	<u>13.67</u>	<u>1.19</u>	<u>38.1</u>	<u>8.54</u>
<u>14:04</u>	<u>4.8</u>	<u>6.89</u>	<u>381</u>	<u>13.11</u>	<u>1.22</u>	<u>39.1</u>	<u>8.54</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MMW-115</u>	<u>10</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	x voa vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	x 250ml poly	YES	NP	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: 14.5 - 16.5

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 5.11 → 14.15 (inclusive)
 Sampler: JF

Well ID: MW-116
 Well Diameter: (2) 4 in.
 Total Depth: 17.500 ft.
 Depth to Water: 9.71 ft.
9.87 xVF = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Date Monitored: 5.11.15

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 10.40

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
Time Completed: _____ (2400 hrs)
Depth to Product: _____ ft
Depth to Water: _____ ft
Hydrocarbon Thickness: _____ ft
Visual Confirmation/Description: _____
Skimmer / Absorbant Sock (circle one)
Amt Removed from Skimmer: _____ ltr
Amt Removed from Well: _____ ltr
Water Removed: _____ ltr
Product Transferred to: _____

Start Time (purge): 0942
 Sample Time/Date: 1010 / 5.12.15
 Approx. Flow Rate: 200 mlpm
 Did well de-water? No If yes, Time: _____ Volume: _____ ltrs DTW @ Sampling: 9.13
 Weather Conditions: RAIN
 Water Color: CLEAR Odor: Y/N
 Sediment Description: NONE

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS / mS / µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>1000</u>	<u>2.0</u>	<u>6.99</u>	<u>.172</u>	<u>12.91</u>	<u>1.46</u>	<u>49.16</u>	<u>9.94</u>
<u>1003</u>	<u>4.2</u>	<u>6.90</u>	<u>.172</u>	<u>12.99</u>	<u>1.49</u>	<u>50.1</u>	<u>9.99</u>
<u>1006</u>	<u>4.8</u>	<u>6.90</u>	<u>.174</u>	<u>13.03</u>	<u>1.61</u>	<u>50.16</u>	<u>9.13</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-116</u>	<u>1</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>1</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>1</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3 <u>FF</u>	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	<u>1</u> x voa vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP <u>FF</u>	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: 15.5 — 16.5

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 5.11 - 7.14.15 (Inclusive)
 Sampler: J.P.

Well ID: MW-117
 Well Diameter: 2.4 in.
 Total Depth: 17.63 ft.
 Depth to Water: 16.90 ft.
10.73 xVF = _____ = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Date Monitored: 5.11.15

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 9.04

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:
 Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr
 Product Transferred to: _____

Start Time (purge): 6:10
 Sample Time/Date: 6:00 5.12.15
 Approx. Flow Rate: 200 mlpm
 Did well de-water? No If yes, Time: _____ Volume: _____ ltrs DTW @ Sampling: 7.11
 Weather Conditions: RAIN
 Water Color: CLEAR Odor: Y/N
 Sediment Description: None

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS (mS) / µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>6:00</u>	<u>3.10</u>	<u>6.56</u>	<u>687</u>	<u>12.14</u>	<u>4.81</u>	<u>182</u>	<u>7.11</u>
<u>6:09</u>	<u>4.2</u>	<u>6.40</u>	<u>689</u>	<u>12.14</u>	<u>4.83</u>	<u>19.0</u>	<u>7.11</u>
<u>6:12</u>	<u>4.8</u>	<u>6.56</u>	<u>689</u>	<u>12.20</u>	<u>4.85</u>	<u>20.2</u>	<u>7.11</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-117</u>	<u>0</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>1</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>2</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3 <u>FF</u>	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	<u>1</u> x voa vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP <u>FF</u>	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: 16.5 - 16.5

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: f Add/Replaced Lock: f



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 5.11 - 7.14.15 (inclusive)
 Sampler: J.P.

Well ID: W-119
 Well Diameter: (2) 4 in.
 Total Depth: 17.21 ft.
 Depth to Water: 0.93 ft.
0.22 xVF _____ = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Date Monitored: 5.11.15

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	<u>2"= 0.17</u>	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge ((Height of Water Column x 0.20) + DTW): 10.50

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:
 Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr
 Product Transferred to: _____

Start Time (purge): 11:19
 Sample Time/Date: 11:50 / 5.12.15
 Approx. Flow Rate: 2.0 mlpm
 Did well de-water? No If yes, Time: _____ Volume: _____ ltrs DTW @ Sampling: 9.22
 Weather Conditions: Clear
 Water Color: Clear Odor: Y/N
 Sediment Description: None

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS / mS / µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>11:37</u>	<u>3.0</u>	<u>6.93</u>	<u>102</u>	<u>12.09</u>	<u>2.66</u>	<u>57.6</u>	<u>9.22</u>
<u>11:40</u>	<u>4.2</u>	<u>6.93</u>	<u>103</u>	<u>12.94</u>	<u>2.69</u>	<u>58.3</u>	<u>9.22</u>
<u>11:43</u>	<u>5.0</u>	<u>6.94</u>	<u>103</u>	<u>13.01</u>	<u>2.73</u>	<u>59.1</u>	<u>9.22</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>W-119</u>	<u>6</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	x voa vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	x 250ml poly	YES	NP	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: 15.5 - 16.5

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 6.11 -> 14.15 (inclusive)
 Sampler: J.P.

Well ID: MW-119
 Well Diameter: 2.14 in.
 Total Depth: 16.69 ft.
 Depth to Water: 9.90 ft.
7.73 xVF

Date Monitored: 5.11.15

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 10.50

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:
 Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr
 Product Transferred to: _____

Start Time (purge): 1040
 Sample Time/Date: 1115 / 5-11-15
 Approx. Flow Rate: 200 mlpm
 Did well de-water? No If yes, Time: _____

Weather Conditions: RAIN
 Water Color: clear Odor: Y/N
 Sediment Description: NONE
 Volume: _____ ltrs DTW @ Sampling: 9.23

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS/cm)	Temperature (C/F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>1104</u>	<u>3.6</u>	<u>6.67</u>	<u>.190</u>	<u>12.69</u>	<u>1.69</u>	<u>19.7</u>	<u>9.23</u>
<u>1107</u>	<u>4.2</u>	<u>6.69</u>	<u>.201</u>	<u>12.14</u>	<u>1.72</u>	<u>26.9</u>	<u>9.23</u>
<u>1110</u>	<u>4.8</u>	<u>6.70</u>	<u>.201</u>	<u>12.19</u>	<u>1.74</u>	<u>21.0</u>	<u>9.23</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-119</u>	<u>6</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>2</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3 <u>FF</u>	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	<u>2</u> x voa vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP <u>FF</u>	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: 14.5 - 15.5

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: L Add/Replaced Lock: L



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 5.11 → 14.15 (inclusive)
 Sampler: JP

Well ID: WV-120
 Well Diameter: 2/4 in.
 Total Depth: 16.05 ft.
 Depth to Water: 7.71 ft.
9.12 xVF = - = -

Date Monitored: 5.11.15

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 9.53

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:
 Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr
 Product Transferred to: _____

Start Time (purge): 12:39
 Sample Time/Date: 13:00 16.12.15
 Approx. Flow Rate: 200 mlpm
 Did well de-water? No If yes, Time: _____

Weather Conditions: RAIN
 Water Color: CLEAR Odor: Y (N)
 Sediment Description: None
 Volume: _____ ltrs DTW @ Sampling: 8.03

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS/cm)	Temperature (C/F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>12:57</u>	<u>3.0</u>	<u>10.109</u>	<u>.210</u>	<u>13.09</u>	<u>.73</u>	<u>6.4</u>	<u>8.03</u>
<u>13:00</u>	<u>4.2</u>	<u>6.70</u>	<u>.220</u>	<u>13.13</u>	<u>.71</u>	<u>6.0</u>	<u>8.03</u>
<u>13:03</u>	<u>4.80</u>	<u>6.70</u>	<u>.221</u>	<u>13.17</u>	<u>.69</u>	<u>6.9</u>	<u>8.03</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>WV-120</u>	<u>8</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	x voa vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	x 250ml poly	YES	NP	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: 14.5 - 15.5

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: ✓ Add/Replaced Lock: ✓



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 5.11 -> 14.15 (inclusive)
 Sampler: J.P.

Well ID: 8.1
 Well Diameter: (2) 4 in.
 Total Depth: 19.77 ft.
 Depth to Water: 9.77 ft.
11.00 x VF = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Date Monitored: 5.11.15

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 10.97

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:
 Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr
 Product Transferred to: _____

Start Time (purge): 10:50
 Sample Time/Date: 11:30, 15-13-15
 Approx. Flow Rate: 100 mlpm
 Did well de-water? No If yes, Time: _____ Volume: _____ ltrs DTW @ Sampling: 0.91

Weather Conditions: Rain
 Water Color: NEAR Odor: Y/N
 Sediment Description: NONE

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS / mS / µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>11:16</u>	<u>3.6</u>	<u>6.64</u>	<u>.199</u>	<u>12.4/6</u>	<u>1.39</u>	<u>9.2</u>	<u>0.91</u>
<u>11:19</u>	<u>4.2</u>	<u>6.64</u>	<u>.201</u>	<u>12.5/6</u>	<u>1.36</u>	<u>9.9</u>	<u>0.91</u>
<u>11:22</u>	<u>4.8</u>	<u>6.64</u>	<u>.201</u>	<u>12.5/6</u>	<u>1.32</u>	<u>10.8</u>	<u>0.91</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>B.1</u>	<u>6</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>2</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3 <u>FF</u>	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	<u>2</u> x voa vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP <u>FF</u>	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: 15-16

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 5.11 -> 14.15 (inclusive)
 Sampler: J.P

Well ID: 8.2
 Well Diameter: 2.4 in.
 Total Depth: 19.02 ft.
 Depth to Water: 8.91 ft.
10.11 xVF = - = -

Date Monitored: 5.11.15

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 10.93

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: YS WPS 840

Sampling Equipment:
 Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump A
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr
 Product Transferred to: _____

Start Time (purge): 8:15
 Sample Time/Date: 8:25 / 5.13.15
 Approx. Flow Rate: 100 mlpm
 Did well de-water? No If yes, Time: _____ Volume: _____ ltrs DTW @ Sampling: 9.03
 Weather Conditions: Rain
 Water Color: clear Odor: Y (N)
 Sediment Description: none

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS (MS µmhos/cm))	Temperature (C F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>8:25</u>	<u>3.6</u>	<u>10.62</u>	<u>.210</u>	<u>12.38</u>	<u>1.44</u>	<u>9.0</u>	<u>9.03</u>
<u>8:30</u>	<u>4.1</u>	<u>10.62</u>	<u>.210</u>	<u>12.42</u>	<u>1.41</u>	<u>10.2</u>	<u>9.03</u>
<u>8:35</u>	<u>4.8</u>	<u>10.62</u>	<u>.210</u>	<u>12.47</u>	<u>1.39</u>	<u>11.1</u>	<u>9.03</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>8.2</u>	<u>2</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>2</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3 <u>FF</u>	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	<u>2</u> x voa vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP <u>FF</u>	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: 16.10

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 5.11 - 7.14.15 (inclusive)
 Sampler: JP

Well ID: 8.7
 Well Diameter: 2.14 in.
 Total Depth: 12.51 ft.
 Depth to Water: 0.16 ft.
6.35 xVF = - = -

Date Monitored: 6.11.15

Volume Factor (VF) 3/4"= 0.02 1"= 0.04 2"= 0.17 3"= 0.38
 4"= 0.66 5"= 1.02 6"= 1.50 12"= 5.80

Check if water column is less than 0.50 ft.

x3 case volume = Estimated Purge Volume: - gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 9.23

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbent Sock (circle one)
 Amt Removed from Skimmer: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr
 Product Transferred to: _____

Start Time (purge): 1442
 Sample Time/Date: 1510 / 6.13.15
 Approx. Flow Rate: 2.0 mlpm
 Did well de-water? No If yes, Time: _____

Weather Conditions: Rain
 Water Color: clear Odor: (Y) N nil
 Sediment Description: NAK
 Volume: _____ ltrs DTW @ Sampling: 8.23

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS/cm)	Temperature (C/F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>1500</u>	<u>2.0</u>	<u>6.02</u>	<u>.357</u>	<u>14.75</u>	<u>1.02</u>	<u>21.0</u>	<u>8.23</u>
<u>1503</u>	<u>1.2</u>	<u>6.02</u>	<u>.359</u>	<u>14.81</u>	<u>1.00</u>	<u>24.6</u>	<u>8.23</u>
<u>1506</u>	<u>1.8</u>	<u>6.02</u>	<u>.359</u>	<u>14.86</u>	<u>1.00</u>	<u>24.9</u>	<u>8.23</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>B-3</u>	<u>1</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>2</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	<u>2</u> x voa vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: 11.5 - 12.5 DEWATERED DURING SAMPLE COLLECTION. WAIT FOR RECHARGE

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 5.11-7.14.15 (inclusive)
 Sampler: J.P.

Well ID: 8.4
 Well Diameter: 2.4 in.
 Total Depth: 14.66 ft.
 Depth to Water: 7.91 ft.
6.75 xVF = - = - x3 case volume = Estimated Purge Volume: - gal.

Date Monitored: 6.11.15

Volume Factor (VF)	3/4" = 0.02	1" = 0.04	2" = 0.17	3" = 0.38
	4" = 0.66	5" = 1.02	6" = 1.50	12" = 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 9.20

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:
 Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbent Sock (circle one)
 Amt Removed from Skimmer: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr
 Product Transferred to: _____

Start Time (purge): 1242
 Sample Time/Date: 1243 / 6.13.15
 Approx. Flow Rate: 100 mlpm
 Did well de-water? NO If yes, Time: _____ Volume: _____ ltrs DTW @ Sampling: 8.13
 Weather Conditions: RAIN
 Water Color: CLEAR Odor: Y/N MILD
 Sediment Description: NONE

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS / mS / µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>1246</u>	<u>3.6</u>	<u>6.67</u>	<u>.28</u>	<u>14.18</u>	<u>.68</u>	<u>-36.5</u>	<u>8.13</u>
<u>1243</u>	<u>4.2</u>	<u>6.42</u>	<u>.28</u>	<u>14.23</u>	<u>.69</u>	<u>-36.4</u>	<u>8.13</u>
<u>1246</u>	<u>4.8</u>	<u>6.60</u>	<u>.28</u>	<u>14.28</u>	<u>.71</u>	<u>-36.3</u>	<u>8.13</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>8.4</u>	<u>4</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>1</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>1</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	<u>1</u> x voa vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: 11.5 - 12.5

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____

Chevron Northwest Region Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # _____ Group # _____ Sample # _____
 For Eurofins Lancaster Laboratories use only
 Instructions on reverse side correspond with circled numbers.

SCR #: _____

1 Client Information				4 Matrix			5 Analyses Requested										6							
Facility # SS#211556-OML G-R#386773 WBS				<input type="checkbox"/> Sediment <input checked="" type="checkbox"/> Ground <input type="checkbox"/> Surface <input type="checkbox"/> Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Air	Total Number of Containers BTEX + MTBE 8021 <input type="checkbox"/> 8260 <input checked="" type="checkbox"/> Naphth <input type="checkbox"/> 8260 full scan Oxygenates NWTPH-Gx NWTPH-Dx with Silica Gel Cleanup <input checked="" type="checkbox"/> NWTPH-Dx without Silica Gel Cleanup <input checked="" type="checkbox"/> WA VPH <input type="checkbox"/> WA EPH <input type="checkbox"/> Lead <input type="checkbox"/> Total <input type="checkbox"/> Diss. <input checked="" type="checkbox"/> Method 6800	NITRATE SULFATE DISSOLVED IRON & MANGANESE SULFIDE SMZD 4500 S20 METHANE / ALKALINITY										<input type="checkbox"/> Result in Dry Weight <input type="checkbox"/> J value reporting needed <input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds <input type="checkbox"/> 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run _____ oxy's on highest hit <input type="checkbox"/> Run _____ oxy's on all hits								
Site Address 101 Mulford Road, TOLEDO, WA																								
Chevron PM MHO LEIDOSRS Lead Consultant Russell Shropshire																								
Consultant/Office Gettler-Ryan, Inc., 6805 Sierra Court, Suite G, Dublin, CA 94568																								
Consultant Project Mgr. Deanna L. Harding, (deanna@grinc.com)																								
Consultant Phone # (925) 551-7444 x180																								
Sampler _____				3 Composite													Remarks Please report results for Dx with & without sgc. Dissolved iron, Lead, and Manganese, as well as Alkalinity samples have been field filtered. Please forward lab results directly to the LC and cc: G-R. The TPW sample results should be forwarded directly to Deanna Harding							
2 Sample Identification		Collected		Grab	Soil	Water	Oil	Total	BTEX	8260	Naphth	Oxygenates	NWTPH-Gx	NWTPH-Dx with Silica Gel Cleanup	NWTPH-Dx without Silica Gel Cleanup	WA VPH		WA EPH	Lead	Total	Diss.	Method		
Date	Time	Date	Time																					
RA		5.11.15		X		X		15	X				X	X	X				X	X	X	X	X	X
NW. 103		1130		X		X		9	X				X	X	X				X	X	X	X	X	X
NW. 110		1000		X		X		16	X				X	X	X				X	X	X	X	X	X
NW. 112		1350		X		X		16	X				X	X	X			X	X	X	X	X	X	
NW. 119		1115		X		X		16	X				X	X	X			X	X	X	X	X	X	
7 Turnaround Time Requested (TAT) (please circle)				Relinquished by <i>[Signature]</i>			Date 5.11.15 Time 1500		Received by _____				Date _____											
Standard 5 day 4 day EDF/EDD				Relinquished by _____			Date _____ Time _____		Received by _____				Date _____ Time _____											
72 hour 48 hour 24 hour				Relinquished by Commercial Carrier:			Received by _____				Date _____ Time _____													
8 Data Package (circle if required)				UPS <input checked="" type="checkbox"/> FedEx _____ Other _____			Temperature Upon Receipt _____ °C				Custody Seals Intact? Yes No													
Type I - Full				EDD (circle if required) CVX-RTBU-FL_05 (default)																				
Type VI (Raw Data)				Other: _____																				

Chevron Northwest Region Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # _____ Group # _____ Sample # _____
 For Eurofins Lancaster Laboratories use only
 Instructions on reverse side correspond with circled numbers.

1 Client Information			4 Matrix			5 Analyses Requested					
Facility # SS#211556-OML G-R#386773 WBS			<input type="checkbox"/> Sediment <input checked="" type="checkbox"/> Ground <input type="checkbox"/> Surface <input type="checkbox"/> Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Air	Total Number of Containers BTEX + MTBE 8021 <input type="checkbox"/> 8260 <input type="checkbox"/> Naphth <input type="checkbox"/> 8260 full scan Oxygenates NWTPH-Gx NWTPH-Dx with Silica Gel Cleanup <input checked="" type="checkbox"/> NWTPH-Dx without Silica Gel Cleanup <input checked="" type="checkbox"/> WA VPH <input type="checkbox"/> WA EPH <input type="checkbox"/> Lead Total <input type="checkbox"/> Diss. <input checked="" type="checkbox"/> Method 6020	NITRATE/SULFATE DISSOLVED IRON/MANGANESE SULFIDE/METHANE ALKALINITY						
Site Address 101 Mulford Road, TOLEDO, WA											
Chevron PM MHO LEIDOSRS Lead Consultant Russell Shrobbert											
Consultant/Office Gettler-Ryan, Inc., 6805 Sierra Court, Suite G, Dublin, CA 94568											
Consultant Project Mgr. Deanna L. Harding, (deanna@grinc.com)											
Consultant Phone # (925) 551-7444 x180											
Sampler _____			3 Composite								

- 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	Collected		3 Grab	Composite	Soil	Water	Oil	Total Number of Containers	BTEX + MTBE	8021	8260	Naphth	Oxygenates	NWTPH-Gx	NWTPH-Dx with Silica Gel Cleanup	NWTPH-Dx without Silica Gel Cleanup	WA VPH	WA EPH	Lead	Total	Diss.	Method	6020	NITRATE/SULFATE	DISSOLVED IRON/MANGANESE	SULFIDE/METHANE	ALKALINITY	6 Remarks			
	Date	Time																													
RA	5-12-15		X			X		0	X					X																	Please report results for Dx with & without sgc. Dissolved Iron, Lead, and Manganese, as well as Alkalinity samples have been field filtered.
NEW-109		1525	X			X		9	X					X	X	X				X											
NEW-114		1630	X			X		9	X					X	X	X				X											
NEW-115		1410	X			X		9	X					X	X	X				X											
NEW-116		1010	X			X		6	X					X	X	X				X				X	X	X	X	X			
NEW-117		0830	X			X		6	X					X	X	X				X				X	X	X	X	X			
NEW-118		1150	X			X		9	X					X	X	X				X				X	X	X	X	X			
NEW-120		1305	X			X		9	X					X	X	X				X				X	X	X	X	X			

7 Turnaround Time Requested (TAT) (please circle)			Relinquished by <i>[Signature]</i>		Date	Time	Received by		Date	
Standard	5 day	4 day			5-12-15	1700				
	72 hour	48 hour								
		EDF/EDD								
		24 hour								

8 Data Package (circle if required)		EDD (circle if required)		Relinquished by Commercial Carrier:			Received by		Date	Time
Type I - Full		CVX-RTBU-FL_05 (default)		UPS <input checked="" type="checkbox"/>	FedEx <input type="checkbox"/>	Other <input type="checkbox"/>				
Type VI (Raw Data)		Other: _____		Temperature Upon Receipt _____ °C			Custody Seals Intact?		Yes	No

Chevron Northwest Region Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # _____ Group # _____ Sample # _____
For Eurofins Lancaster Laboratories use only
 Instructions on reverse side correspond with circled numbers.

1 Client Information			4 Matrix			5 Analyses Requested						6 Remarks	
Facility # SS#211556-OML G-R#386773 WBS			<input type="checkbox"/> Sediment <input checked="" type="checkbox"/> Ground <input type="checkbox"/> Surface <input type="checkbox"/> Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Air <input type="checkbox"/> Oil Total Number of Containers _____ <input type="checkbox"/> BTEX + MTBE 8021 <input type="checkbox"/> 8260 <input type="checkbox"/> Naphth <input type="checkbox"/> 8260 full scan <input type="checkbox"/> Oxygenates <input type="checkbox"/> NWTPH-Gx <input type="checkbox"/> NWTPH-Dx with Silica Gel Cleanup <input checked="" type="checkbox"/> <input type="checkbox"/> NWTPH-Dx without Silica Gel Cleanup <input checked="" type="checkbox"/> <input type="checkbox"/> WA VPH <input type="checkbox"/> WA EPH <input type="checkbox"/> <input type="checkbox"/> Lead <input type="checkbox"/> Total <input type="checkbox"/> Diss. <input checked="" type="checkbox"/> Method 40.20			SCR #: _____ <input type="checkbox"/> Results in Dry Weight <input type="checkbox"/> J value reporting needed <input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds <input type="checkbox"/> 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run _____ oxy's on highest hit <input type="checkbox"/> Run _____ oxy's on all hits						NITRATE/SULFATE/METANE DISSOLVED IRON/MANGANESE SULFIDE SUMO 400 520 ALKALINITY	
Site Address 101 Mulford Road, TOLEDO, WA													
Chevron PM MHO LEIDOSRS Lead Consultant Russell Shroyer													
Consultant/Office Gettler-Ryan, Inc., 6805 Sierra Court, Suite G, Dublin, CA 94568													
Consultant Project Mgr. Deanna L. Harding, (deanna@grinc.com)													
Consultant Phone # (925) 551-7444 x180			3 Composite <input type="checkbox"/> Soil <input checked="" type="checkbox"/> Water <input type="checkbox"/> Oil			8260 full scan <input type="checkbox"/> Lead <input type="checkbox"/> Total <input type="checkbox"/> Diss. <input checked="" type="checkbox"/> Method 40.20						Please report results for Dx with & without sgc. Dissolved Iron, Lead, and Manganese, as well as Alkalinity samples have been field filtered. AMEND COC: PLEASE ADD BTEX & MTBE TO B-3, B-4 MW-111 & MW-113 Please forward lab results directly to the LC and cc: G-R. The TPW sample results should be forwarded directly to Deanna Harding	
Sampler J. PAVNE													
2 Sample Identification													
Collected													
Date Time Grab													
B-1 RA 5-13-15 11:30 X B-2 08:45 X B-3 12:10 X B-4 12:30 X MW-111 14:00 X MW-113 10:10 X			Total Number of Containers _____ <input type="checkbox"/> BTEX + MTBE 8021 <input type="checkbox"/> 8260 <input type="checkbox"/> Naphth <input type="checkbox"/> 8260 full scan <input type="checkbox"/> Oxygenates <input type="checkbox"/> NWTPH-Gx <input type="checkbox"/> NWTPH-Dx with Silica Gel Cleanup <input checked="" type="checkbox"/> <input type="checkbox"/> NWTPH-Dx without Silica Gel Cleanup <input checked="" type="checkbox"/> <input type="checkbox"/> WA VPH <input type="checkbox"/> WA EPH <input type="checkbox"/> <input type="checkbox"/> Lead <input type="checkbox"/> Total <input type="checkbox"/> Diss. <input checked="" type="checkbox"/> Method 40.20						Please report results for Dx with & without sgc. Dissolved Iron, Lead, and Manganese, as well as Alkalinity samples have been field filtered. AMEND COC: PLEASE ADD BTEX & MTBE TO B-3, B-4 MW-111 & MW-113 Please forward lab results directly to the LC and cc: G-R. The TPW sample results should be forwarded directly to Deanna Harding				
7 Turnaround Time Requested (TAT) (please circle)			Relinquished by [Signature]			Date 5-13-15 Time 1700			Received by _____				
Standard 5 day 72 hour 48 hour EDF/EDD 24 hour			Relinquished by _____			Date _____ Time _____			Received by _____				
8 Data Package (circle if required)			Relinquished by Commercial Carrier:			Received by [Signature]			Date 5/14/15 Time 0935				
Type I - Full			UPS <input checked="" type="checkbox"/> FedEx _____ Other _____			Temperature Upon Receipt 0.3 - 2.1 °C			Custody Seals Intact? (Yes) No				
Type VI (Raw Data)			Other: _____										

05-14-15
 JPH/NC



GETTLER-RYAN INC.



TRANSMITTAL

August 21, 2015
G-R #386773

TO: Mr. Russell Shropshire
Leidos, Inc.
18912 North Creek Parkway, Suite 101
Bothell, Washington 98011

FROM: Deanna L. Harding
Project Coordinator
Gettler-Ryan Inc.
6805 Sierra Court, Suite G
Dublin, California 94568

RE: **Former Texaco Service Station
#211556/Cowlitz BP
101 Mulford Road
Toledo, Washington
UST Site#10669**

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DESCRIPTION
VIA PDF	Groundwater Monitoring and Sampling Data Package Third Quarter Event of August 10 and 11, 2015

COMMENTS:

Pursuant to your request, we are providing you with copies of the above referenced data for your use.

Please provide us the updated historical data prior to the next monitoring and sampling event for our field use.

Please feel free to contact me if you have any comments/questions.

trans/211556

Standard Operating Procedure, Low-Flow Purging and Sampling

Gettler-Ryan Inc. field personnel adhere to the following Standard Operating Procedure (SOP) for the collection and handling of representative groundwater samples using the Low-Flow (Minimal-Drawdown) Purging technique. This SOP incorporates purging and sampling methods discussed in U.S. EPA, Ground Water Issue, Publication Number EPA/540/S-95/504, April 1996 by Puls, R.W. and M.J. Barcelona - "*Low-Flow (Minimal-Drawdown) Ground-Water Sampling Procedures.*"

A QED Well Wizard™ (or equivalent) bladder pump or Peristaltic Pump will be used to purge and sample selected wells as outlined in the scope-of-work. An in-line flow cell or other multi-parameter meter is used to collect water quality indicating parameters during purging.

Initial Pump Discharge Test Procedures

The Static Water Level (SWL) is measured in all wells at the site prior to the installation of the pump or tubing and initiation of the test procedures in any well. In addition, the presence or absence of separate-phase hydrocarbons (SPH) is determined using an interface probe. Product thickness, if present, is measured to the nearest 0.01 foot. The SWL measurement and SPH thickness, if any, will be recorded on the field data sheet.

The bladder pump or suction inlet tubing of the peristaltic pump is then positioned with its inlet located within the screened interval of the well. The in-line flow cell is then connected to the discharge tubing. After pump installation, the SWL is allowed to recover to its original level. The pump is then started at a discharge rate between 100 ml to 300 ml per minute with the in-line flow cell connected. The water level is monitored continuously for any change from the original measurement and the discharge rate is adjusted until an optimum discharge rate (ODR) is determined. The goal for the ODR is to produce a stable drawdown of less than 0.1 meter as allowed by site conditions; however the total drawdown from the initial SWL should not exceed 25% of the distance between pump inlet location and the top of the well screen. Once achieved, the ODR will be confirmed by volumetric discharge measurement and recorded on the field data sheet.

Purging and Water Quality Parameter Measurement

When the ODR has been determined and the SWL drawdown has been established within the acceptable range, and a minimum of one pump system volume (bladder volume and/or discharge tubing volume) has been purged, field measurements for temperature (T), pH, conductivity (Ec), and if required, oxygen reduction potential (ORP) and dissolved oxygen (DO) will be collected and documented on the field data sheet. Measurements should be taken every three to five minutes until parameters stabilize for three consecutive readings. The minimum parameter subset of T ($\pm 10\%$), pH (± 0.1 unit), and Ec (± 10 uS) are required to stabilize. Additional parameters that may be required are DO (± 0.2 mg/l) and ORP (± 20 mV).

Sample Collection

When water quality parameters have stabilized, and the SWL drawdown remains established within the acceptable range, groundwater sample collection may begin. If used, the in-line flow cell and its tubing are disconnected from the discharge tubing prior to sample collection. Water samples are collected from the discharge tubing into appropriate containers. Pre-preserved containers, supplied by analytical laboratories, are used when possible. When pre-preserved containers are not available, the laboratory is instructed to preserve the sample as appropriate. Duplicate samples are collected for the laboratory to use in maintaining quality assurance/quality control standards, as directed by the scope of work. The samples are labeled to include the job number, sample identification, collection date and time, analysis, preservation (if any), and the sample collector's initials. The water samples are placed in a cooler,

maintained at 4°C for transport to the laboratory. A laboratory supplied trip blank accompanies each sampling set. The trip blank is analyzed for some or all of the same compounds as the groundwater samples. Once collected in the field, all samples are maintained under chain of custody until delivered to the laboratory.

The chain of custody document includes the job number, type of preservation, if any, analysis requested, sample identification, date and time collected, and the sample collector's name. The chain of custody is signed and dated (including time of transfer) by each person who receives or surrenders the samples, beginning with the field personnel and ending with the laboratory personnel.

A laboratory supplied trip blank accompanies each sampling set. For sampling sets greater than 20 samples, 5% trip blanks are included. The trip blank is analyzed for some or all of the same compounds as the groundwater samples.



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 8/10 - 8/11/15 (inclusive)
 Sampler: AW

Well ID: MW-103
 Well Diameter: 214 in.
 Total Depth: 18.35 ft.
 Depth to Water: 9.35 ft.
9.05 xVF _____ = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Date Monitored: 8-10-15

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: _____

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump ✓
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters ✓
 Peristaltic Pump ✓
 QED Bladder Pump _____
 Other: _____

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	_____ ft
Visual Confirmation/Description:	_____
Skimmer / Absorbant Sock (circle one)	_____
Amt Removed from Skimmer:	_____ ltr
Amt Removed from Well:	_____ ltr
Water Removed:	_____ ltr
Product Transferred to:	_____

Start Time (purge): 0730
 Sample Time/Date: 0820 / 8-10-15
 Approx. Flow Rate: 200 mlpm
 Did well de-water? N If yes, Time: _____

Weather Conditions: Sunny
 Water Color: Clear Odor: Y 10
 Sediment Description: Clear
 Volume: _____ ltrs DTW @ Sampling: 9.51

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS / mS µmhos/cm)	Temperature (°C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>0748</u>	<u>3.6</u>	<u>6.28</u>	<u>245</u>	<u>17.2</u>	<u>1.3</u>	<u>50</u>	<u>9.42</u>
<u>0751</u>	<u>4.2</u>	<u>6.30</u>	<u>251</u>	<u>17.3</u>	<u>1.4</u>	<u>53</u>	<u>9.47</u>
<u>0754</u>	<u>4.8</u>	<u>6.33</u>	<u>254</u>	<u>17.4</u>	<u>1.4</u>	<u>57</u>	<u>9.51</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-103</u>	<u>6</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>2</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	<u>2</u> x voa vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: 1400 ft.

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 8/10-11/15 (inclusive)
 Sampler: GM

Well ID: MW-109
 Well Diameter: 2.4 in.
 Total Depth: 12.66 ft.
 Depth to Water: 8.62 ft.
4.04 xVF _____ = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Date Monitored: 8/10/15

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: _____

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump ✓
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:
 Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump ✓
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: 0 ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr
 Product Transferred to: _____

Start Time (purge): 0705 Weather Conditions: Sunny
 Sample Time/Date: 0745 / 8/11/15 Water Color: Cloudy Odor: Y/N
 Approx. Flow Rate: 200 mlpm Sediment Description: Silt
 Did well de-water? no If yes, Time: _____ Volume: _____ ltrs DTW @ Sampling: 8.70

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS) mS µmhos/cm	Temperature (° / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>0723</u>	<u>3.6</u>	<u>6.76</u>	<u>206</u>	<u>20.1</u>	<u>1.0</u>	<u>-15</u>	<u>8.68</u>
<u>0726</u>	<u>4.2</u>	<u>6.74</u>	<u>205</u>	<u>20.0</u>	<u>1.0</u>	<u>-16</u>	<u>8.69</u>
<u>0729</u>	<u>4.8</u>	<u>6.73</u>	<u>204</u>	<u>19.9</u>	<u>1.0</u>	<u>-19</u>	<u>8.70</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-109</u>	<u>6 x voa vial</u>	<u>YES</u>	<u>HCL</u>	<u>LANCASTER</u>	<u>NWTPH-Gx/BTEX+MTBE(8260)</u>
	<u>2 x 1 liter ambers</u>	<u>YES</u>	<u>HCL</u>	<u>LANCASTER</u>	<u>NWTPH-Dx w/sgc/NWTPH-Dx</u>
	<u>1 x 250ml poly</u>	<u>YES</u>	<u>NP</u>	<u>LANCASTER</u>	<u>DISSOLVED LEAD(6020 ICP/MS)</u>
	<u>x 500ml poly</u>	<u>YES</u>	<u>NP</u>	<u>LANCASTER</u>	<u>DISSOLVED LEAD(6020 ICP/MS)</u>
	<u>x voa vial</u>	<u>YES</u>	<u>NP</u>	<u>LANCASTER</u>	<u>NITRATE/SULFATE(EPA 300.0)</u>
	<u>x 250ml poly</u>	<u>YES</u>	<u>HNO3</u>	<u>LANCASTER</u>	<u>DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)</u>
	<u>x 500ml poly</u>	<u>YES</u>	<u>HNO3</u>	<u>LANCASTER</u>	<u>DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)</u>
	<u>x 250ml clear glass</u>	<u>YES</u>	<u>NAOH & ZnAc</u>	<u>LANCASTER</u>	<u>SULFIDE(SM20 4500 S2D)</u>
	<u>x voa vial</u>	<u>YES</u>	<u>HCL</u>	<u>LANCASTER</u>	<u>METHANE(RSKOP-175)</u>
	<u>x 250ml poly</u>	<u>YES</u>	<u>NP</u>	<u>LANCASTER</u>	<u>ALKALINITY(SM20 2320B)</u>

COMMENTS: Depth Pump Set At: ≈ 10.50 ft.

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 8/10-11/15 (inclusive)
 Sampler: G.M.

Well ID: MW-110
 Well Diameter: 214 in.
 Total Depth: 19.81 ft.
 Depth to Water: 10.23 ft.
9.58 xVF = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Date Monitored: 8/10/15

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: _____

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump ✓
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:
 Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump ✓
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: 0 ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr
 Product Transferred to: _____

Start Time (purge): 0940 Weather Conditions: Sunny
 Sample Time/Date: 1018 / 8/10/15 Water Color: CLEAR Odor: Y16
 Approx. Flow Rate: 200 mlpm Sediment Description: SLT
 Did well de-water? NO If yes, Time: _____ Volume: _____ ltrs DTW @ Sampling: 10.25

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS/mS µmhos/cm)	Temperature (°C / °F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>0958</u>	<u>3.6</u>	<u>7.36</u>	<u>271</u>	<u>18.1</u>	<u>1.1</u>	<u>65</u>	<u>10.25</u>
<u>1001</u>	<u>4.2</u>	<u>7.39</u>	<u>272</u>	<u>18.0</u>	<u>1.1</u>	<u>66</u>	<u>10.25</u>
<u>1004</u>	<u>4.8</u>	<u>7.38</u>	<u>274</u>	<u>18.0</u>	<u>1.0</u>	<u>68</u>	<u>10.25</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-10</u>	<u>6 x voa vial</u>	<u>YES</u>	<u>HCL</u>	<u>LANCASTER</u>	<u>NWTPH-Gx/BTEX+MTBE(8260)</u>
	<u>2 x 1 liter ambers</u>	<u>YES</u>	<u>HCL</u>	<u>LANCASTER</u>	<u>NWTPH-Dx w/sgc/NWTPH-Dx</u>
	<u>1 x 250ml poly</u>	<u>YES</u>	<u>NP</u>	<u>LANCASTER</u>	<u>DISSOLVED LEAD(6020 ICP/MS)</u>
	<u>1 x 500ml poly</u>	<u>YES</u>	<u>NP</u>	<u>LANCASTER</u>	<u>DISSOLVED LEAD(6020 ICP/MS)</u>
	<u>1 x voa vial</u>	<u>YES</u>	<u>NP</u>	<u>LANCASTER</u>	<u>NITRATE/SULFATE(EPA 300.0)</u>
	<u>1 x 250ml poly</u>	<u>YES</u>	<u>HNO3</u>	<u>LANCASTER</u>	<u>DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)</u>
	<u>1 x 500ml poly</u>	<u>YES</u>	<u>HNO3</u>	<u>LANCASTER</u>	<u>DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)</u>
	<u>1 x 250ml clear glass</u>	<u>YES</u>	<u>NAOH & ZnAc</u>	<u>LANCASTER</u>	<u>SULFIDE(SM20 4500 S2D)</u>
	<u>1 x voa vial</u>	<u>YES</u>	<u>HCL</u>	<u>LANCASTER</u>	<u>METHANE(RSKOP-175)</u>
	<u>1 x 250ml poly</u>	<u>YES</u>	<u>NP</u>	<u>LANCASTER</u>	<u>ALKALINITY(SM20 2320B)</u>

COMMENTS: Depth Pump Set At: ~ 15.00ft.

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 8/10-8/11/15 (inclusive)
 Sampler: AW

Well ID: MW-111
 Well Diameter: 2 1/4 in.
 Total Depth: 17.77 ft.
 Depth to Water: 8.43 ft.
9.34 xVF = _____ = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Date Monitored: 8-10-15

Volume Factor (VF)	3/4" = 0.02	1" = 0.04	2" = 0.17	3" = 0.38
	4" = 0.66	5" = 1.02	6" = 1.50	12" = 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge ((Height of Water Column x 0.20) + DTW): _____

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:
 Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbent Sock (circle one)
 Amt Removed from Skimmer: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr
 Product Transferred to: _____

Start Time (purge): 0905 Weather Conditions: Sunny
 Sample Time/Date: 1000 / 8-11-15 Water Color: Cloudy Odor: (Y) / N Moderate
 Approx. Flow Rate: 200 mlpm Sediment Description: Cloudy
 Did well de-water? N If yes, Time: _____ Volume: _____ ltrs DTW @ Sampling: 8.54

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (mS/cm)	Temperature (°F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>0923</u>	<u>3.6</u>	<u>6.01</u>	<u>399</u>	<u>19.9</u>	<u>1.1</u>	<u>-1</u>	<u>8.47</u>
<u>0926</u>	<u>4.2</u>	<u>6.07</u>	<u>404</u>	<u>20.1</u>	<u>1.2</u>	<u>-3</u>	<u>8.50</u>
<u>0929</u>	<u>4.8</u>	<u>6.09</u>	<u>410</u>	<u>20.2</u>	<u>1.2</u>	<u>-7</u>	<u>8.54</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-111</u>	<u>6</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>2</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	<u>2</u> x voa vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: ~ 13.0 ft.

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 8/10-11/15 (inclusive)
 Sampler: GM

Well ID: MW-112
 Well Diameter: 2.4 in.
 Total Depth: 17.29 ft.
 Depth to Water: 8.90 ft.
8.39 xVF = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Date Monitored: 8/10/15

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: _____

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:
 Disposable Bailer X
 Pressure Bailer _____
 Metal Filters X
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: 0 ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbent Sock (circle one)
 Amt Removed from Skimmer: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr
 Product Transferred to: _____

Start Time (purge): 0840 Weather Conditions: Sunny
 Sample Time/Date: 0925 8/10/15 Water Color: cloudy Odor: Y10
 Approx. Flow Rate: 200 mlpm Sediment Description: SL SILT
 Did well de-water? NO If yes, Time: _____ Volume: _____ ltrs DTW @ Sampling: 9.00

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (μ S) mS (μ mhos/cm)	Temperature (C) (F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>0858</u>	<u>2.6</u>	<u>7.26</u>	<u>269</u>	<u>17.3</u>	<u>1.5</u>	<u>-17</u>	<u>8.99</u>
<u>0901</u>	<u>4.2</u>	<u>7.24</u>	<u>269</u>	<u>17.1</u>	<u>1.5</u>	<u>-20</u>	<u>8.99</u>
<u>0904</u>	<u>4.8</u>	<u>7.23</u>	<u>267</u>	<u>17.0</u>	<u>1.4</u>	<u>-24</u>	<u>9.00</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-112</u>	<u>6</u> x vov vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>x</u> 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>2</u> x vov vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>x</u> 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	<u>2</u> x vov vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: \approx 13.00

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 8/10/15 (inclusive)
 Sampler: Com

Well ID: MW-113
 Well Diameter: 214 in.
 Total Depth: 18.11 ft.
 Depth to Water: 9.28 ft.
8.83 xVF = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Date Monitored: 8/10/15

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: _____

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: _____

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	<u>8</u> ft
Visual Confirmation/Description:	_____
Skimmer / Absorbent Sock (circle one)	
Amt Removed from Skimmer:	_____ ltr
Amt Removed from Well:	_____ ltr
Water Removed:	_____ ltr
Product Transferred to:	_____

Start Time (purge): 0948
 Sample Time/Date: 1037 18/10/15
 Approx. Flow Rate: 200 mlpm
 Did well de-water? NO If yes, Time: _____

Weather Conditions: SUNNY
 Water Color: CLEAR Odor: Y1(N)
 Sediment Description: SILTY
 Volume: _____ ltrs DTW @ Sampling: 9.33

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (US) mS (µmhos/cm)	Temperature (C) (F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>1006</u>	<u>3.6</u>	<u>7.06</u>	<u>410</u>	<u>20.1</u>	<u>1.3</u>	<u>-10</u>	<u>9.32</u>
<u>1009</u>	<u>4.2</u>	<u>7.05</u>	<u>411</u>	<u>20.1</u>	<u>1.2</u>	<u>-10</u>	<u>9.32</u>
<u>1012</u>	<u>4.8</u>	<u>7.05</u>	<u>413</u>	<u>20.1</u>	<u>1.2</u>	<u>-14</u>	<u>9.33</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-113</u>	<u>6</u> x vovial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>/</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>x</u> 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>2</u> x vovial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	<u>/</u> x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>x</u> 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>/</u> x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	<u>2</u> x vovial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	<u>/</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: ~17.50ft

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 8/10 - 8/11/15 (inclusive)
 Sampler: AW

Well ID: MW-114
 Well Diameter: 2.4 in.
 Total Depth: 16.81 ft.
 Depth to Water: 6.03 ft.
6.78 xVF _____ = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Date Monitored: 8-10-15

Volume Factor (VF)	3/4"= 0.02 4"= 0.66	1"= 0.04 5"= 1.02	2"= 0.17 6"= 1.50	3"= 0.38 12"= 5.80
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Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: _____

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	_____ ft
Visual Confirmation/Description:	_____
Skimmer / Absorbant Sock (circle one)	_____
Amt Removed from Skimmer:	_____ ltr
Amt Removed from Well:	_____ ltr
Water Removed:	_____ ltr
Product Transferred to:	_____

Start Time (purge): 1015
 Sample Time/Date: 1108 / 8-11-15
 Approx. Flow Rate: 200 mlpm
 Did well de-water? N If yes, Time: _____

Weather Conditions: Sunny
 Water Color: Cloudy Odor: Y/N / Slight Cloudy
 Sediment Description: _____
 Volume: _____ ltrs DTW @ Sampling: 8.17

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS/mS umhos/cm)	Temperature (D / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
1033	2.6	6.40	190	20.0	1.2	-5	8.09
1036	4.2	6.46	194	20.2	1.1	-10	8.12
1039	4.8	6.50	199	20.2	1.1	-13	8.17

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-114</u>	<u>6</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2x</u> 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>1</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	<u>1</u> x voa vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: ~ 12.50



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 8/10/15 (inclusive)
 Sampler: GM

Well ID: MW-115
 Well Diameter: 2 1/4 in.
 Total Depth: 17.47 ft.
 Depth to Water: 9.28 ft.
88.19 xVF = _____

Date Monitored: 8/10/15

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: _____ x3 case volume = Estimated Purge Volume: _____ gal.

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: _____

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	<u>0</u> ft
Visual Confirmation/Description:	_____
Skimmer / Absorbant Sock (circle one)	
Amt Removed from Skimmer:	_____ ltr
Amt Removed from Well:	_____ ltr
Water Removed:	_____ ltr
Product Transferred to:	_____

Start Time (purge): 1055 Weather Conditions: Sunny
 Sample Time/Date: 1133 / 8/10/15 Water Color: Clear Odor: Y
 Approx. Flow Rate: 200 mlpm Sediment Description: SILT
 Did well de-water? No If yes, Time: _____ Volume: _____ ltrs DTW @ Sampling: 9.41

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS / mS µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>1113</u>	<u>3.6</u>	<u>6.67</u>	<u>307</u>	<u>18.4</u>	<u>1.4</u>	<u>70</u>	<u>9.40</u>
<u>1116</u>	<u>4.2</u>	<u>6.65</u>	<u>305</u>	<u>18.5</u>	<u>1.4</u>	<u>73</u>	<u>9.41</u>
<u>1119</u>	<u>4.8</u>	<u>6.63</u>	<u>304</u>	<u>18.7</u>	<u>1.2</u>	<u>74</u>	<u>9.41</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-115</u>	<u>6</u> x vov vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>x</u> 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>x</u> vov vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	<u>x</u> 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>x</u> 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>x</u> 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	<u>x</u> vov vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	<u>x</u> 250ml poly	YES	NP	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: ~ 13.50 Ft

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 8/10-8/11/15 (inclusive)
 Sampler: AW

Well ID: MW-116
 Well Diameter: 2.4 in.
 Total Depth: 17.58 ft.
 Depth to Water: 9.17 ft.
8.41 xVF = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Date Monitored: 8-10-15

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: _____

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:
 Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters
 Peristaltic Pump
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbent Sock (circle one)
 Amt Removed from Skimmer: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr
 Product Transferred to: _____

Start Time (purge): 0835
 Sample Time/Date: 0925 / 8-10-15
 Approx. Flow Rate: 200 mlpm
 Did well de-water? N If yes, Time: _____

Weather Conditions: Sunny
 Water Color: Cloudy Odor: Y 10
 Sediment Description: Cloudy
 Volume: _____ ltrs DTW @ Sampling: 9.27

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µmhos/cm)	Temperature (°F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>0853</u>	<u>3.6</u>	<u>7.19</u>	<u>335</u>	<u>18.5</u>	<u>1.3</u>	<u>116</u>	<u>9.20</u>
<u>0856</u>	<u>4.3</u>	<u>7.22</u>	<u>342</u>	<u>18.7</u>	<u>1.3</u>	<u>120</u>	<u>9.24</u>
<u>0859</u>	<u>4.8</u>	<u>7.22</u>	<u>345</u>	<u>18.7</u>	<u>1.4</u>	<u>122</u>	<u>9.27</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-116</u>	<u>6</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>2</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	<u>2</u> x voa vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At 14.0ft

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 8/10-8/11/15 (inclusive)
 Sampler: AW

Well ID: MW-117
 Well Diameter: 2 1/4 in.
 Total Depth: 17.63 ft.
 Depth to Water: 8.10 ft.
9.53 xVF = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Date Monitored: 8-10-15

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: _____

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:
 Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbent Sock (circle one)
 Amt Removed from Skimmer: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr
 Product Transferred to: _____

Start Time (purge): 1140
 Sample Time/Date: 1230 / 8-10-15
 Approx. Flow Rate: 200 mlpm
 Did well de-water? If yes, Time: _____ Volume: _____ ltrs DTW @ Sampling: 8.20
 Weather Conditions: Sunny
 Water Color: Cloudy Odor: Y / N
 Sediment Description: Cloudy

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µmhos/cm)	Temperature (°F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>1158</u>	<u>3.6</u>	<u>6.73</u>	<u>189</u>	<u>19.8</u>	<u>1.3</u>	<u>35</u>	<u>8.14</u>
<u>1201</u>	<u>4.2</u>	<u>6.77</u>	<u>194</u>	<u>19.9</u>	<u>1.5</u>	<u>42</u>	<u>8.17</u>
<u>1204</u>	<u>4.8</u>	<u>6.80</u>	<u>198</u>	<u>19.9</u>	<u>1.5</u>	<u>47</u>	<u>8.20</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-117</u>	<u>6</u> x vov vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>2</u> x vov vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	<u>2</u> x vov vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: ~ 13.0 ft.

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 8/10 - 8/11/15 (inclusive)
 Sampler: AW

Well ID: MW-118
 Well Diameter: 2 1/4 in.
 Total Depth: 17.21 ft.
 Depth to Water: 8.21 ft.
8.94 xVF _____ = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Date Monitored: 8-10-15

Volume Factor (VF)	3/4" = 0.02	1" = 0.04	2" = 0.17	3" = 0.38
	4" = 0.66	5" = 1.02	6" = 1.50	12" = 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: _____

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	_____ ft
Visual Confirmation/Description:	_____
Skimmer / Absorbant Sock (circle one)	_____
Amt Removed from Skimmer:	_____ ltr
Amt Removed from Well:	_____ ltr
Water Removed:	_____ ltr
Product Transferred to:	_____

Start Time (purge): 0940 Weather Conditions: Sunny
 Sample Time/Date: 1020 / 8-10-15 Water Color: Cloudy Odor: Y 10
 Approx. Flow Rate: 20 mlpm Sediment Description: Cloudy
 Did well de-water? If yes, Time: _____ Volume: _____ ltrs DTW @ Sampling: 8.36

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µmhos/cm)	Temperature (°F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>0958</u>	<u>3.6</u>	<u>7.31</u>	<u>98</u>	<u>17.6</u>	<u>1.0</u>	<u>-27</u>	<u>8.30</u>
<u>1001</u>	<u>4.2</u>	<u>7.32</u>	<u>102</u>	<u>17.7</u>	<u>1.1</u>	<u>-30</u>	<u>8.32</u>
<u>1004</u>	<u>4.8</u>	<u>7.32</u>	<u>104</u>	<u>17.7</u>	<u>1.1</u>	<u>-33</u>	<u>8.36</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-118</u>	<u>6</u> x vov vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	x vov vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	x vov vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	x 250ml poly	YES	NP	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: ~13.0ft

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 8/10-11/15 (inclusive)
 Sampler: GM

Well ID: MW-119
 Well Diameter: (2) 4 in.
 Total Depth: 116.69 ft.
 Depth to Water: 9.70 ft.
6.99 xVF

Date Monitored: 8/10/15

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: _____
 x3 case volume = Estimated Purge Volume: _____ gal.

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:
 Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters x
 Peristaltic Pump x
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbent Sock (circle one)
 Amt Removed from Skimmer: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr
 Product Transferred to: _____

Start Time (purge): 0735 Weather Conditions: Sunny
 Sample Time/Date: 0823 / 8/10/15 Water Color: Cloudy Odor: YEN
 Approx. Flow Rate: 200 mlpm Sediment Description: SILT
 Did well de-water? No If yes, Time: _____ Volume: _____ ltrs DTW @ Sampling: 9.85

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS/mS / µmhos/cm)	Temperature (°F / °C)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>0753</u>	<u>3.6</u>	<u>7.26</u>	<u>242</u>	<u>17.3</u>	<u>1.2</u>	<u>44</u>	<u>9.84</u>
<u>0756</u>	<u>4.2</u>	<u>7.24</u>	<u>240</u>	<u>17.2</u>	<u>1.1</u>	<u>42</u>	<u>9.84</u>
<u>0759</u>	<u>4.8</u>	<u>7.22</u>	<u>241</u>	<u>17.0</u>	<u>1.2</u>	<u>41</u>	<u>9.85</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-119</u>	<u>6 x vva vial</u>	<u>YES</u>	<u>HCL</u>	<u>LANCASTER</u>	<u>NWTPH-Gx/BTEX+MTBE(8260)</u>
	<u>2 x 1 liter ambers</u>	<u>YES</u>	<u>HCL</u>	<u>LANCASTER</u>	<u>NWTPH-Dx w/sgc/NWTPH-Dx</u>
	<u>x 250ml poly</u>	<u>YES</u>	<u>NP</u>	<u>LANCASTER</u>	<u>DISSOLVED LEAD(6020 ICP/MS)</u>
	<u>1 x 500ml poly</u>	<u>YES</u>	<u>NP</u>	<u>LANCASTER</u>	<u>DISSOLVED LEAD(6020 ICP/MS)</u>
	<u>2 x vva vial</u>	<u>YES</u>	<u>NP</u>	<u>LANCASTER</u>	<u>NITRATE/SULFATE(EPA 300.0)</u>
	<u>x 250ml poly</u>	<u>YES</u>	<u>HNO3</u>	<u>LANCASTER</u>	<u>DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)</u>
	<u>1 x 500ml poly</u>	<u>YES</u>	<u>HNO3</u>	<u>LANCASTER</u>	<u>DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)</u>
	<u>1 x 250ml clear glass</u>	<u>YES</u>	<u>NAOH & ZnAc</u>	<u>LANCASTER</u>	<u>SULFIDE(SM20 4500 S2D)</u>
	<u>2 x vva vial</u>	<u>YES</u>	<u>HCL</u>	<u>LANCASTER</u>	<u>METHANE(RSKOP-175)</u>
	<u>1 x 250ml poly</u>	<u>YES</u>	<u>NP</u>	<u>LANCASTER</u>	<u>ALKALINITY(SM20 2320B)</u>

COMMENTS: Depth Pump Set At: 13:00

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 8/10-8/11/15 (inclusive)
 Sampler: AW

Well ID: MW-120
 Well Diameter: 2 1/4 in.
 Total Depth: 16.83 ft.
 Depth to Water: 8.53 ft.
8.30 xVF = = x3 case volume = Estimated Purge Volume: gal.

Date Monitored: 8-10-15

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]:

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump ✓
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:
 Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump ✓
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr
 Product Transferred to: _____

Start Time (purge): 1040
 Sample Time/Date: 1125 / 8-10-15
 Approx. Flow Rate: 200 mlpm
 Did well de-water? ✓ If yes, Time: _____ Volume: _____ ltrs DTW @ Sampling: 8.66

Weather Conditions: Sunny
 Water Color: Cloudy Odor: Y / N
 Sediment Description: Cloudy

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS / mS / umhos/cm)	Temperature (° / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>1058</u>	<u>3.6</u>	<u>7.09</u>	<u>244</u>	<u>18.4</u>	<u>1.2</u>	<u>74</u>	<u>8.57</u>
<u>1101</u>	<u>4.2</u>	<u>7.11</u>	<u>250</u>	<u>18.5</u>	<u>1.3</u>	<u>80</u>	<u>8.61</u>
<u>1104</u>	<u>4.8</u>	<u>7.14</u>	<u>259</u>	<u>18.5</u>	<u>1.3</u>	<u>88</u>	<u>8.66</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-120</u>	<u>6</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	x voa vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	x 250ml poly	YES	NP	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: 213.0 ft

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556 Job Number: 386773
 Site Address: 101 Mulford Road Event Date: 8/10 - 8/11/15 (inclusive)
 City: Toledo, WA Sampler: AW

Well ID: B-1 Date Monitored: 8-10-15
 Well Diameter: (2) 14 in.
 Total Depth: 19.77 ft.
 Depth to Water: 8.80 ft. Check if water column is less than 0.50 ft.
10.97 xVF = x3 case volume = Estimated Purge Volume: gal.

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]:

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbent Sock (circle one)
 Amt Removed from Skimmer: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr
 Product Transferred to: _____

Start Time (purge): 0700 Weather Conditions: Sunny
 Sample Time/Date: 0745 / 8-11-15 Water Color: Cloudy Odor: Y / N
 Approx. Flow Rate: 200 mlpm Sediment Description: Cloudy
 Did well de-water? N If yes, Time: _____ Volume: _____ ltrs DTW @ Sampling: 8.91

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS) mS µmhos/cm	Temperature (° / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>0718</u>	<u>3.6</u>	<u>6.08</u>	<u>180.2</u>	<u>19.4</u>	<u>1.3</u>	<u>117</u>	<u>8.83</u>
<u>0724</u>	<u>4.2</u>	<u>6.05</u>	<u>182.3</u>	<u>19.5</u>	<u>1.2</u>	<u>121</u>	<u>8.87</u>
<u>0724</u>	<u>4.8</u>	<u>6.04</u>	<u>182.9</u>	<u>19.5</u>	<u>1.2</u>	<u>124</u>	<u>8.91</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>B-1</u>	<u>6</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>2</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	<u>2</u> x voa vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: ~ 15.0ft.

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 8/10-11/15 (inclusive)
 Sampler: GM

Well ID: B-2
 Well Diameter: 2 1/4 in.
 Total Depth: 19.02 ft.
 Depth to Water: 10.01 ft.
9.01 xVF = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Date Monitored: 8/10/15

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: _____

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:
 Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters X
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: 6 ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbent Sock (circle one)
 Amt Removed from Skimmer: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr
 Product Transferred to: _____

Start Time (purge): 0805 Weather Conditions: SUNNY
 Sample Time/Date: 0843 / 8/10/15 Water Color: cloudy Odor: DN SLIGHT
 Approx. Flow Rate: 200 mlpm Sediment Description: SILT
 Did well de-water? NO If yes, Time: _____ Volume: _____ ltrs DTW @ Sampling: 10.10

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS) mS (µmhos/cm)	Temperature (C/F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>0823</u>	<u>3.6</u>	<u>7.11</u>	<u>310</u>	<u>20.1</u>	<u>1.1</u>	<u>-2</u>	<u>10.09</u>
<u>0826</u>	<u>4.2</u>	<u>7.10</u>	<u>310</u>	<u>20.0</u>	<u>1.2</u>	<u>-4</u>	<u>10.10</u>
<u>0829</u>	<u>4.8</u>	<u>7.09</u>	<u>310</u>	<u>19.9</u>	<u>1.3</u>	<u>-5</u>	<u>10.10</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>B-2</u>	<u>6x voa vial</u>	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2 x 1 liter ambers</u>	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>2x 250ml poly</u>	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>1 x 500ml poly</u>	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>2x voa vial</u>	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	<u>1 x 250ml poly</u>	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1 x 500ml poly</u>	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1 x 250ml clear glass</u>	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	<u>2x voa vial</u>	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	<u>1 x 250ml poly</u>	YES	NP	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: ≈ 14.50 ft.

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 8/10-11/15 (inclusive)
 Sampler: EM

Well ID: B-3
 Well Diameter: 2 1/4 in.
 Total Depth: 13.51 ft.

Date Monitored: 8/10/15

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Depth to Water: 9.59 ft. Check if water column is less than 0.50 ft.

3.92 3.95 m₃ x VF = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: _____

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters X
 Peristaltic Pump X
 QED Bladder Pump _____
 Other: _____

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	<u>0</u> ft
Visual Confirmation/Description:	_____
Skimmer / Absorbent Sock (circle one)	_____
Amt Removed from Skimmer:	_____ ltr
Amt Removed from Well:	_____ ltr
Water Removed:	_____ ltr
Product Transferred to:	_____

Start Time (purge): 0855 Weather Conditions: SUNNY
 Sample Time/Date: 0922 8/11/15 Water Color: cloudy Odor: BDN SLIGHT
 Approx. Flow Rate: 200 mlpm Sediment Description: SLT
 Did well de-water? No If yes, Time: _____ Volume: _____ ltrs DTW @ Sampling: 9.65

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS/cm)	Temperature (C/F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>0913</u>	<u>3.6</u>	<u>7.27</u>	<u>325</u>	<u>18.9</u>	<u>1.0</u>	<u>-9</u>	<u>9.65</u>
<u>0916</u>	<u>4.2</u>	<u>7.28</u>	<u>327</u>	<u>19.0</u>	<u>1.0</u>	<u>-9</u>	<u>9.65</u>
<u>0919</u>	<u>4.8</u>	<u>7.29</u>	<u>328</u>	<u>19.1</u>	<u>1.0</u>	<u>-10</u>	<u>9.65</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>B-3</u>	<u>6</u> x vov vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>x</u> 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>2</u> x vov vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>x</u> 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	<u>2</u> x vov vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: ≈ 11.50ft.

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #211556
 Site Address: 101 Mulford Road
 City: Toledo, WA

Job Number: 386773
 Event Date: 8/10-8/11/15 (inclusive)
 Sampler: AW

Well ID: B-4
 Well Diameter: 2.14 in.
 Total Depth: 14.66 ft.
 Depth to Water: 8.82 ft.
5.84 xVF = _____

Date Monitored: 8-10-15

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

x3 case volume = Estimated Purge Volume: _____ gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: ✓

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump _____
 Peristaltic Pump ✓
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:
 Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters ✓
 Peristaltic Pump ✓
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbent Sock (circle one)
 Amt Removed from Skimmer: _____ ltr
 Amt Removed from Well: _____ ltr
 Water Removed: _____ ltr
 Product Transferred to: _____

Start Time (purge): 0800
 Sample Time/Date: 0850 / 8-11-15
 Approx. Flow Rate: 200 mlpm
 Did well de-water? ✓ If yes, Time: _____ Volume: _____ ltrs DTW @ Sampling: 8.94

Weather Conditions: Sunny
 Water Color: Cloudy Odor: (Y) / N None
 Sediment Description: Cloudy

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS/mS µmhos/cm)	Temperature (°C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
<u>0818</u>	<u>3.6</u>	<u>6.30</u>	<u>312</u>	<u>18.7</u>	<u>1.2</u>	<u>-35</u>	<u>8.88</u>
<u>0821</u>	<u>4.7</u>	<u>6.32</u>	<u>321</u>	<u>18.8</u>	<u>1.2</u>	<u>-40</u>	<u>8.72</u>
<u>0824</u>	<u>4.8</u>	<u>6.35</u>	<u>328</u>	<u>18.8</u>	<u>1.3</u>	<u>-42</u>	<u>8.94</u>

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>B-4</u>	<u>6</u> x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	<u>2</u> x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>1</u> x 500ml poly	YES	NP	LANCASTER	DISSOLVED LEAD(6020 ICP/MS)
	<u>2</u> x voa vial	YES	NP	LANCASTER	NITRATE/SULFATE(EPA 300.0)
	<u>1</u> x 250ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 500ml poly	YES	HNO3	LANCASTER	DISSOLVED IRON/DISSOLVED MAGANGESE(6010B)
	<u>1</u> x 250ml clear glass	YES	NAOH & ZnAc	LANCASTER	SULFIDE(SM20 4500 S2D)
	<u>2</u> x voa vial	YES	HCL	LANCASTER	METHANE(RSKOP-175)
	<u>1</u> x 250ml poly	YES	NP	LANCASTER	ALKALINITY(SM20 2320B)

COMMENTS: Depth Pump Set At: ~ 12.0 ft.

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Plug: _____ Add/Replaced Lock: _____

Chevron Northwest Region Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # _____ Group # _____ Sample # _____
 For Eurofins Lancaster Laboratories use only
 Instructions on reverse side correspond with circled numbers.

1 Client Information		4 Matrix		5 Analyses Requested	
Facility # SS#211556-OML G-R#386773 WBS		<input type="checkbox"/> Sediment <input checked="" type="checkbox"/> Ground <input type="checkbox"/> Surface		<input type="checkbox"/> BTEX + MTBE <input type="checkbox"/> 8021 <input type="checkbox"/> 8260 <input checked="" type="checkbox"/> Naphth	
Site Address 101 Mulford Road, TOLEDO, WA		<input type="checkbox"/> Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Air		<input type="checkbox"/> Oxygenates <input type="checkbox"/> NWTPH-Gx <input checked="" type="checkbox"/> NWTPH-Dx with Silica Gel Cleanup <input checked="" type="checkbox"/> NWTPH-Dx without Silica Gel Cleanup	
Chevron PM MHO LEIDOSRS Lead Consultant Russell Shropshire		<input type="checkbox"/> Oil <input type="checkbox"/> Total Number of Containers		<input type="checkbox"/> Lead <input type="checkbox"/> Total <input type="checkbox"/> Diss.	
Consultant/Office Gettler Ryan Inc., 6805 Sierra Court, Suite G, Dublin, CA 94568		<input type="checkbox"/> Soil <input type="checkbox"/> Water		<input checked="" type="checkbox"/> Method 602 <input type="checkbox"/> Method 300.0 <input type="checkbox"/> EPA 300.0 <input type="checkbox"/> RSKDP-175 <input type="checkbox"/> DISSOLVED IRON <input type="checkbox"/> DISSOLVED MANGANESE (60103) <input type="checkbox"/> SULFIDE (SM20 4500 S2D) <input type="checkbox"/> ALKALINITY SM20 (2320B)	
Consultant Project Mgr. Deanna L. Harding, (deanna@grinc.com)		<input type="checkbox"/> Composite		<input type="checkbox"/> WA VPH <input type="checkbox"/> WA EPH	
Consultant Phone # (925) 551-7444 x180		<input type="checkbox"/> Grab <input type="checkbox"/> Composite		<input type="checkbox"/> Lead <input type="checkbox"/> Total <input type="checkbox"/> Diss.	
Sampler GM/AW		<input type="checkbox"/> Soil <input type="checkbox"/> Water <input type="checkbox"/> Oil		<input type="checkbox"/> Lead <input type="checkbox"/> Total <input type="checkbox"/> Diss.	

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	Collected		3 Grab	Composite	Soil	Water	Oil	Total Number of Containers	BTEX + MTBE	8021	8260	Naphth	8260 full scan	Oxygenates	NWTPH-Gx	NWTPH-Dx with Silica Gel Cleanup	NWTPH-Dx without Silica Gel Cleanup	WA VPH	WA EPH	Lead	Total	Diss.	Method 602	Method 300.0	EPA 300.0	RSKDP-175	DISSOLVED IRON	DISSOLVED MANGANESE (60103)	SULFIDE (SM20 4500 S2D)	ALKALINITY SM20 (2320B)	Remarks							
	Date	Time																																				
QA	8/10/15	-	X			W		16	X						X		X																					
MW-103		0820						16								X	X																					
MW-112		0925						9																														
MW-113		1037						9																														
MW-115		1133						16																														
MW-116		0925						16																														
MW-117		1730						9																														
MW-118		1020						16																														
MW-119		0823						9																														
MW-120		1125						9																														

6 Remarks

Please report results for Dx with & without sgc. Dissolved Iron, Lead, and Manganese, as well as Alkalinity samples have been field filtered.

Please forward lab results directly to the LC and cc: G-R. The TPW sample results should be forwarded directly to Deanna Harding

7 Turnaround Time Requested (TAT) (please circle)

Standard 5 day 4 day **EDF/EDD**
 72 hour 48 hour 24 hour

Relinquished by <i>[Signature]</i>	Date <u>8/10/15</u>	Time _____	Received by _____	Date _____	Time _____
Relinquished by _____	Date _____	Time _____	Received by _____	Date _____	Time _____

8 Data Package (circle if required)

Type I - Full
 Type VI (Raw Data)

EDD (circle if required)
 CVX-RTBU-FL_05 (default)
 Other: _____

Relinquished by Commercial Carrier:

UPS X FedEx _____ Other _____

Temperature Upon Receipt _____ °C Custody Seals Intact? Yes No

Chevron Northwest Region Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # _____ Group # _____ Sample # _____
 For Eurofins Lancaster Laboratories use only
 Instructions on reverse side correspond with circled numbers.

1 Client Information			4 Matrix			5 Analyses Requested						
Facility # SS#211556-OML G-R#386773 WBS			Sediment <input type="checkbox"/> Ground <input checked="" type="checkbox"/> Surface <input type="checkbox"/> Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Air <input type="checkbox"/>	Soil <input type="checkbox"/> Water <input type="checkbox"/> Oil <input type="checkbox"/>	Total Number of Containers BTEX + MTBE 8021 <input type="checkbox"/> 8260 <input checked="" type="checkbox"/> Naphth <input type="checkbox"/> 8260 full scan <input type="checkbox"/> Oxygenates <input type="checkbox"/> NWTPH-Gx <input type="checkbox"/> NWTPH-Dx with Silica Gel Cleanup <input checked="" type="checkbox"/> NWTPH-Dx without Silica Gel Cleanup <input checked="" type="checkbox"/> WA VPH <input type="checkbox"/> WA EPH <input type="checkbox"/> Lead <input type="checkbox"/> Total <input type="checkbox"/> Diss. <input checked="" type="checkbox"/> Method 6020 16910	Lead <input type="checkbox"/> Total <input type="checkbox"/> Diss. <input checked="" type="checkbox"/> Method 6020 16910 DISSOLVED IRON/DISSOLVE MANGANESE (60108) SULFIDE (SM20 400 52D) NITRATE/SULFATE (EA 700:0) METHANE (RIKOR-175) ALKALINITY SM20 (2320R)	SCR #: _____					
Site Address 101 Mulford Road, TOLEDO, WA							<input type="checkbox"/> Results in Dry Weight <input type="checkbox"/> J value reporting needed <input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds <input type="checkbox"/> 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run _____ oxy's on highest hit <input type="checkbox"/> Run _____ oxy's on all hits					
Chevron PM MHO LEIDOSRS Lead Consultant Russell Shroeder												
Consultant/Office Gettler-Ryan Inc., 6805 Sierra Court, Suite G, Dublin, CA 94568												
Consultant Project Mgr. Deanna L. Harding, (deanna@grinc.com)												
Consultant Phone # (925) 551-7444 x180												
Sampler GM/AW			3 Composite									

2 Sample Identification	Collected		Grab	Composite	Soil	Water	Oil	Total Number of Containers	BTEX + MTBE	8260 full scan	Oxygenates	NWTPH-Gx	NWTPH-Dx with Silica Gel Cleanup	NWTPH-Dx without Silica Gel Cleanup	WA VPH	WA EPH	Lead	Total	Diss.	Method	6020	16910	DISSOLVED IRON/DISSOLVE MANGANESE (60108)	SULFIDE (SM20 400 52D)	NITRATE/SULFATE (EA 700:0)	METHANE (RIKOR-175)	ALKALINITY SM20 (2320R)	Remarks					
	Date	Time																															
QA	8/11/15	-	X					2	X			X																					
MW-109		0745						9				X						X															
MW-110		1018						↓																									
MW-111		1000						16																X	X	X							
MW-114		1108						9																X	X	X							
B-1		0745						16																X	X	X							
B-2		0843						↓																									
B-3		0922						↓																									
B-4		0850						↓																									

7 Turnaround Time Requested (TAT) (please circle)			Relinquished by		Date	Time	Received by		Date	Time	9
<u>Standard</u>	5 day	4 day	Relinquished by		Date	Time	Received by		Date	Time	
72 hour	48 hour	EDF/EDD 24 hour									

8 Data Package (circle if required)		EDD (circle if required)		Relinquished by Commercial Carrier:				Received by		Date	Time
Type I - Full		CVX-RTBU-FL_05 (default)		UPS <input checked="" type="checkbox"/> FedEx _____ Other _____							
Type VI (Raw Data)		Other: _____		Temperature Upon Receipt _____ °C				Custody Seals Intact?		Yes	No

Appendix B:
Laboratory Analytical Reports

ANALYTICAL RESULTS

Prepared by:

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

Prepared for:

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

September 22, 2013

Project: 211556

Submittal Date: 09/11/2013
Group Number: 1417939
PO Number: 0015119898
Release Number: SHRILL HOPKINS
State of Sample Origin: WA

<u>Client Sample Description</u>	<u>Lancaster Labs (LL) #</u>
QA NA Water	7192960
MW-117 Grab Water	7192961
MW-117 Filtered Grab Water	7192962
MW-118 Grab Water	7192963
MW-118 Filtered Grab Water	7192964
MW-120 Grab Water	7192965
MW-120 Filtered Grab Water	7192966

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

ELECTRONIC COPY TO	SAIC	Attn: Jamalyn Green
ELECTRONIC COPY TO	SAIC	Attn: Russ Shropshire
ELECTRONIC COPY TO	Gettler-Ryan Inc.	Attn: Gettler Ryan

Respectfully Submitted,



Amek Carter
Specialist

(717) 556-7252

Sample Description: QA NA Water
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7192960
LL Group # 1417939
Account # 11260

Project Name: 211556

Collected: 09/10/2013

Chevron

Submitted: 09/11/2013 09:45

6001 Bollinger Canyon Road
L4310

Reported: 09/22/2013 13:24

San Ramon CA 94583

MRTQA

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles			SW-846 8260B	ug/l	
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles			ECY 97-602 NWTPH-Gx	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1

General Sample Comments

State of Washington Lab Certification No. C259

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	Z132632AA	09/20/2013 08:46	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z132632AA	09/20/2013 08:46	Anita M Dale	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	13260B20A	09/17/2013 20:17	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	13260B20A	09/17/2013 20:17	Marie D Beamenderfer	1

Sample Description: MW-117 Grab Water
Facility# 211556 **Job#** 386773
 101 Mulford Rd - Toledo, WA

LL Sample # WW 7192961
LL Group # 1417939
Account # 11260

Project Name: 211556

Collected: 09/10/2013 10:02 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 09/11/2013 09:45

Reported: 09/22/2013 13:24

MRT17

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B ug/l					
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx ug/l					
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Miscellaneous RSKSOP-175 modified ug/l					
07105	Methane	74-82-8	N.D.	3.0	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	29	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	67	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0 ug/l					
00368	Nitrate Nitrogen	14797-55-8	760	250	5
00228	Sulfate	14808-79-8	5,400	1,500	5
SM 2320 B-1997 ug/l as CaCO3					
12150	Total Alkalinity	n.a.	29,700	700	1
SM 4500-S2 D-2000 ug/l					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C259
 This sample was field filtered for Alkalinity.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial# Batch#	Analysis Date and Time	Analyst	Dilution Factor
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Sample Description: MW-117 Grab Water
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7192961
LL Group # 1417939
Account # 11260

Project Name: 211556

Collected: 09/10/2013 10:02 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 09/11/2013 09:45

Reported: 09/22/2013 13:24

San Ramon CA 94583

MRT17

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	Z132622AA	09/20/2013 00:19	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z132622AA	09/20/2013 00:19	Brett W Kenyon	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	13260B20A	09/18/2013 00:13	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	13260B20A	09/18/2013 00:13	Marie D Beamenderfer	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	132590004A	09/16/2013 22:53	Elizabeth J Marin	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	132550025A	09/17/2013 10:36	Glorines Suarez-Rivera	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	132550023A	09/17/2013 18:28	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	132550023A	09/13/2013 11:30	Katheryne V Sponheimer	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	132550025A	09/13/2013 11:30	Katheryne V Sponheimer	1
00368	Nitrate Nitrogen	EPA 300.0	1	13254347901A	09/11/2013 18:26	Sandra J Miller	5
00228	Sulfate	EPA 300.0	1	13254347901A	09/11/2013 18:26	Sandra J Miller	5
12150	Total Alkalinity	SM 2320 B-1997	1	13255002105A	09/13/2013 01:32	Michele L Graham	1
00230	Sulfide	SM 4500-S2 D-2000	1	13255023001A	09/12/2013 10:20	Susan E Hibner	1

Sample Description: MW-117 Filtered Grab Water
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7192962
LL Group # 1417939
Account # 11260

Project Name: 211556

Collected: 09/10/2013 10:02 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 09/11/2013 09:45

San Ramon CA 94583

Reported: 09/22/2013 13:24

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
		SW-846 6010B	ug/l	ug/l	
01754	Iron	7439-89-6	N.D.	43.0	1
07058	Manganese	7439-96-5	2.9	0.83	1
		SW-846 6020	ug/l	ug/l	
06035	Lead	7439-92-1	N.D.	0.085	1

General Sample Comments

State of Washington Lab Certification No. C259
This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	132561848006	09/16/2013 18:55	Katlin N Cataldi	1
07058	Manganese	SW-846 6010B	1	132561848006	09/16/2013 18:55	Katlin N Cataldi	1
06035	Lead	SW-846 6020	1	132566050004A	09/16/2013 07:46	Choon Y Tian	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132561848006	09/15/2013 09:00	James L Mertz	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	132566050004	09/15/2013 08:27	James L Mertz	1

Sample Description: MW-118 Grab Water
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7192963
LL Group # 1417939
Account # 11260

Project Name: 211556

Collected: 09/10/2013 12:25 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 09/11/2013 09:45

San Ramon CA 94583

Reported: 09/22/2013 13:24

MRT18

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B			ug/l	ug/l	
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx			ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	28	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	66	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	28	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	66	1
The reverse surrogate, capric acid, is present at <1%.					

General Sample Comments

State of Washington Lab Certification No. C259

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	Z132632AA	09/20/2013 09:10	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z132632AA	09/20/2013 09:10	Anita M Dale	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	13260B20A	09/18/2013 00:40	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	13260B20A	09/18/2013 00:40	Marie D Beamenderfer	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	132550025A	09/17/2013 10:59	Glorines Suarez-Rivera	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	132550023A	09/17/2013 18:48	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	132550023A	09/13/2013 11:30	Katheryne V Sponheimer	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	132550025A	09/13/2013 11:30	Katheryne V Sponheimer	1

Sample Description: MW-118 Filtered Grab Water
 Facility# 211556 Job# 386773
 101 Mulford Rd - Toledo, WA

LL Sample # WW 7192964
 LL Group # 1417939
 Account # 11260

Project Name: 211556

Collected: 09/10/2013 12:25 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 09/11/2013 09:45

Reported: 09/22/2013 13:24

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved		SW-846 6020	ug/l	ug/l	
06035	Lead	7439-92-1	N.D.	0.085	1

General Sample Comments

State of Washington Lab Certification No. C259
 This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	132566050005A	09/16/2013 12:05	Choon Y Tian	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	132566050005	09/15/2013 08:22	James L Mertz	1

Sample Description: MW-120 Grab Water
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7192965
LL Group # 1417939
Account # 11260

Project Name: 211556

Collected: 09/10/2013 13:50 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 09/11/2013 09:45

Reported: 09/22/2013 13:24

MRT20

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B			ug/l	ug/l	
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx			ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	28	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	66	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	28	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	66	1
The reverse surrogate, capric acid, is present at <1%.					

General Sample Comments

State of Washington Lab Certification No. C259

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	F132611AA	09/18/2013 08:44	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F132611AA	09/18/2013 08:44	Anita M Dale	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	13260B20A	09/18/2013 01:06	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	13260B20A	09/18/2013 01:06	Marie D Beamenderfer	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	132550025A	09/17/2013 11:22	Glorines Suarez-Rivera	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	132550023A	09/17/2013 19:07	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	132550023A	09/13/2013 11:30	Katheryne V Sponheimer	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	132550025A	09/13/2013 11:30	Katheryne V Sponheimer	1

Sample Description: MW-120 Filtered Grab Water
 Facility# 211556 Job# 386773
 101 Mulford Rd - Toledo, WA

LL Sample # WW 7192966
 LL Group # 1417939
 Account # 11260

Project Name: 211556

Collected: 09/10/2013 13:50 by JP

Chevron

6001 Bollinger Canyon Road
 L4310

Submitted: 09/11/2013 09:45

Reported: 09/22/2013 13:24

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
06035	Lead	SW-846 6020 7439-92-1	ug/l 0.15	ug/l 0.085	1

General Sample Comments

State of Washington Lab Certification No. C259
 This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	132566050005A	09/16/2013 12:15	Choon Y Tian	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	132566050005	09/15/2013 08:22	James L Mertz	1

Quality Control Summary

Client Name: Chevron
Reported: 09/22/13 at 01:24 PM

Group Number: 1417939

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

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: F132611AA	Sample number(s): 7192965							
Benzene	N.D.	0.5	ug/l	94		78-120		
Ethylbenzene	N.D.	0.5	ug/l	94		79-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	95		75-120		
Toluene	N.D.	0.5	ug/l	95		80-120		
Xylene (Total)	N.D.	0.5	ug/l	97		80-120		
Batch number: Z132622AA	Sample number(s): 7192961							
Benzene	N.D.	0.5	ug/l	88		78-120		
Ethylbenzene	N.D.	0.5	ug/l	89		79-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	87		75-120		
Toluene	N.D.	0.5	ug/l	89		80-120		
Xylene (Total)	N.D.	0.5	ug/l	89		80-120		
Batch number: Z132632AA	Sample number(s): 7192960,7192963							
Benzene	N.D.	0.5	ug/l	86		78-120		
Ethylbenzene	N.D.	0.5	ug/l	91		79-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	97		75-120		
Toluene	N.D.	0.5	ug/l	90		80-120		
Xylene (Total)	N.D.	0.5	ug/l	92		80-120		
Batch number: 13260B20A	Sample number(s): 7192960-7192961,7192963,7192965							
NWTPH-Gx water C7-C12	N.D.	50.	ug/l	98	103	75-135	5	30
Batch number: 132590004A	Sample number(s): 7192961							
Methane	N.D.	3.0	ug/l	103		80-120		
Batch number: 132550025A	Sample number(s): 7192961,7192963,7192965							
Diesel Range Organics C12-C24	N.D.	30.	ug/l	80	78	50-113	3	20
Heavy Range Organics C24-C40	N.D.	70.	ug/l					
Batch number: 132550023A	Sample number(s): 7192961,7192963,7192965							
DRO C12-C24 w/Si Gel	N.D.	30.	ug/l	71	67	32-117	7	20
HRO C24-C40 w/Si Gel	N.D.	70.	ug/l					
Batch number: 132561848006	Sample number(s): 7192962							
Iron	N.D.	43.0	ug/l	101		90-112		
Manganese	N.D.	0.83	ug/l	101		90-110		
Batch number: 132566050004A	Sample number(s): 7192962							
Lead	N.D.	0.085	ug/l	103		90-115		
Batch number: 132566050005A	Sample number(s): 7192964,7192966							
Lead	N.D.	0.085	ug/l	103		90-115		

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron Group Number: 1417939
Reported: 09/22/13 at 01:24 PM

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 13254347901A	Sample number(s): 7192961							
Nitrate Nitrogen	N.D.	50.	ug/l	102		90-110		
Sulfate	N.D.	300.	ug/l	102		90-110		
Batch number: 13255002105A	Sample number(s): 7192961							
Total Alkalinity	N.D.	700.	ug/l as CaCO3	98		90-110		
Batch number: 13255023001A	Sample number(s): 7192961							
Sulfide	N.D.	54.	ug/l	93		90-110		

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

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: F132611AA	Sample number(s): 7192965 UNSPK: 7192965								
Benzene	96	97	72-134	2	30				
Ethylbenzene	96	97	71-134	0	30				
Methyl Tertiary Butyl Ether	99	103	72-126	3	30				
Toluene	96	97	80-125	1	30				
Xylene (Total)	98	99	79-125	1	30				
Batch number: Z132622AA	Sample number(s): 7192961 UNSPK: 7192961								
Benzene	94	95	72-134	1	30				
Ethylbenzene	96	97	71-134	1	30				
Methyl Tertiary Butyl Ether	95	95	72-126	0	30				
Toluene	97	98	80-125	0	30				
Xylene (Total)	97	96	79-125	0	30				
Batch number: Z132632AA	Sample number(s): 7192960,7192963 UNSPK: 7192963								
Benzene	91	90	72-134	0	30				
Ethylbenzene	93	92	71-134	1	30				
Methyl Tertiary Butyl Ether	94	95	72-126	1	30				
Toluene	94	94	80-125	0	30				
Xylene (Total)	94	93	79-125	0	30				
Batch number: 132590004A	Sample number(s): 7192961 UNSPK: P192406								
Methane	-9186 (2)	-6949 (2)	35-157	17	20				
Batch number: 132561848006	Sample number(s): 7192962 UNSPK: P194599 BKG: P194599								
Iron	101	101	75-125	1	20	N.D.	N.D.	0 (1)	20
Manganese	99	99	75-125	0	20	16.3	16.4	1 (1)	20
Batch number: 132566050004A	Sample number(s): 7192962 UNSPK: P192464 BKG: P192464								
Lead	109	108	83-120	1	20	N.D.	N.D.	0 (1)	20
Batch number: 132566050005A	Sample number(s): 7192964,7192966 UNSPK: P193500 BKG: P193500								
Lead	105	104	83-120	1	20	0.57	0.58	1 (1)	20

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron Group Number: 1417939
Reported: 09/22/13 at 01:24 PM

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

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 13254347901A	Sample number(s): 7192961 UNSPK: 7192961 BKG: 7192961								
Nitrate Nitrogen	106		90-110			760	720	5 (1)	20
Sulfate	104		90-110			5,400	5,400	1 (1)	20
Batch number: 13255002105A	Sample number(s): 7192961 UNSPK: P192447 BKG: P192447								
Total Alkalinity	72	73	10-159	0	5	274,000	280,000	2	5
Batch number: 13255023001A	Sample number(s): 7192961 UNSPK: P192415 BKG: P192415								
Sulfide	50	69	42-131	18*	16	220	230	3 (1)	5

Surrogate Quality Control

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

Analysis Name: UST VOCs by 8260B - Water

Batch number: F132611AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7192965	99	100	101	92
Blank	98	98	100	93
LCS	98	97	99	95
MS	99	99	99	94
MSD	99	98	100	94
Limits:	80-116	77-113	80-113	78-113

Analysis Name: UST VOCs by 8260B - Water

Batch number: Z132622AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7192961	101	94	101	99
Blank	99	98	100	99
LCS	99	99	101	101
MS	100	99	100	100
MSD	99	99	100	99
Limits:	80-116	77-113	80-113	78-113

Analysis Name: UST VOCs by 8260B - Water

Batch number: Z132632AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7192960	99	96	101	99
7192963	100	97	100	98
Blank	99	98	100	98
LCS	99	100	100	100
MS	101	100	100	100

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 09/22/13 at 01:24 PM

Group Number: 1417939

Surrogate Quality Control

MSD	100	99	100	99
Limits:	80-116	77-113	80-113	78-113

Analysis Name: NWTPH-Gx water C7-C12
Batch number: 13260B20A
Trifluorotoluene-F

7192960	88
7192961	88
7192963	89
7192965	88
Blank	87
LCS	92
LCSD	94

Limits: 63-135

Analysis Name: NWTPH-Dx water w/ 10g Si Gel
Batch number: 132550023A
Orthoterphenyl

7192961	87
7192963	92
7192965	89
Blank	86
LCS	97
LCSD	92

Limits: 50-150

Analysis Name: NWTPH-Dx water
Batch number: 132550025A
Orthoterphenyl

7192961	103
7192963	99
7192965	98
Blank	100
LCS	107
LCSD	105

Limits: 50-150

Analysis Name: Volatile Headspace Hydrocarbon
Batch number: 132590004A
Propene

7192961	98
Blank	90
LCS	95
MS	66
MSD	70

Limits: 42-131

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 09/22/13 at 01:24 PM

Group Number: 1417939

Surrogate Quality Control

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Chevron Northwest Region Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # 11260 For Eurofins Lancaster Laboratories use only
 Group # 1417339 Sample # 7192960-66
Instructions on reverse side correspond with circled numbers.

1 Please forward the lab Order to the Client and cc: G-R			4 Matrix			5 Analyses Requested										SCR #: _____
Facility # <u>SS#211556-OML G-R#386773</u> Site Address <u>101 Mulford Road, TOLEDO, WA</u> Chevron PM <u>MHO</u> SAICRS Lead Consultant <u>Russell Shropshire</u> Consultant/Office <u>Gettler-Ryan, Inc., 6747 Sierra Court, Suite J, Dublin, CA 94588</u> Consultant Project Mgr. <u>Deanna L. Harding, (deanna@grinc.com), (925) 551-7444 x180</u> Consultant Phone # <u>(425) 482-3323 x</u> Sampler _____			WBS _____ Sediment <input type="checkbox"/> Ground <input type="checkbox"/> Surface <input type="checkbox"/> Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Air <input type="checkbox"/>			Total Number of Containers _____ BTEX + MTBE 8021 <input type="checkbox"/> 8260 <input type="checkbox"/> Naphth <input type="checkbox"/> 8260 full scan _____ Oxygenates _____ NWTPH-Gx _____ NWTPH-Dx with Silica Gel Cleanup <input checked="" type="checkbox"/> NWTPH-Dx without Silica Gel Cleanup <input checked="" type="checkbox"/> WA VPH <input type="checkbox"/> WA EPH <input type="checkbox"/> Lead <input type="checkbox"/> Total <input type="checkbox"/> Diss. <input checked="" type="checkbox"/> Method <u>6020</u> NITRATE / SULFATE / SULFIDE DISSOLVED IRON / MANGANESE METHANE ALKALINITY										<input type="checkbox"/> Results in Dry Weight <input type="checkbox"/> J value reporting needed <input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds <input type="checkbox"/> 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run _____ oxy's on highest hit <input type="checkbox"/> Run _____ oxy's on all hits
2 Sample Identification			3 Collected			6 Remarks										
Date _____ Time _____ Grab <input type="checkbox"/> Composite <input type="checkbox"/>			Date _____ Time _____ Grab <input type="checkbox"/> Composite <input type="checkbox"/>			Dissolved iron & manganese by 6010 per H. Chalender Please report results for Dx with and without silica gel cleanup. Dissolved iron & manganese, as well as alkalinity samples have been field filtered ALL SAMPLES WERE COLLECTED 9.10.13										
R.A. 9.10.13 MW. 117 1002 MW. 118 1225 MW. 120 1350			X X X			2 X 16 X 9 X 9 X										
7 Turnaround Time Requested (TAT) (please circle)			Relinquished by _____			Date <u>9.10.13</u>		Time _____		Received by _____		Date _____		Time _____		
Standard 5 day 4 day 72 hour 48 hour 24 hour			Relinquished by _____			Date _____		Time _____		Received by _____		Date _____		Time _____		
8 Data Package (circle if required)			Relinquished by Commercial Carrier:			Date _____		Time _____		Received by <u>Kristin Zyl</u>		Date <u>9-11-13</u>		Time <u>0945</u>		
Type I - Full Type VI (Raw Data)			EDD (circle) <u>EDD</u> CVX-RTBU-FL_05 (default) Other: _____			UPS <input checked="" type="checkbox"/> FedEx _____ Other _____		Temperature Upon Receipt <u>6.1</u> °C		Custody Seals Intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No						

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 \geq the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ).

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quantitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
N	Presumptive evidence of a compound (TICs only)
P	Concentration difference between primary and confirmation columns $>25\%$
U	Compound was not detected
X,Y,Z	Defined in case narrative

Inorganic Qualifiers

B	Value is $<$ CRDL, but \geq IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike sample not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*	Duplicate analysis not within control limits
+	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.

ANALYTICAL RESULTS

Prepared by:

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

Prepared for:

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

September 25, 2013

Project: 211556

Submittal Date: 09/12/2013
Group Number: 1418365
PO Number: 0015119898
Release Number: SHRILL HOPKINS
State of Sample Origin: WA

<u>Client Sample Description</u>	<u>Lancaster Labs (LL) #</u>
QA NA Water	7194850
MW-103 Grab Groundwater	7194851
MW-103 Filtered Grab Groundwater	7194852
MW-112 Grab Groundwater	7194853
MW-112 Filtered Grab Groundwater	7194854
MW-115 Grab Groundwater	7194855
MW-115 Filtered Grab Groundwater	7194856
MW-119 Grab Groundwater	7194859
MW-119 Filtered Grab Groundwater	7194860

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

ELECTRONIC COPY TO SAIC

Attn: Jamalyn Green

ELECTRONIC COPY TO SAIC

Attn: Russ Shropshire

ELECTRONIC COPY TO Gettler-Ryan Inc.

Attn: Gettler Ryan

ELECTRONIC COPY TO

Respectfully Submitted,



Amek Carter
Specialist

(717) 556-7252

Sample Description: QA NA Water
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7194850
LL Group # 1418365
Account # 11260

Project Name: 211556

Collected: 09/11/2013

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 09/12/2013 09:45

San Ramon CA 94583

Reported: 09/25/2013 14:36

QAMRT

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles			SW-846 8260B	ug/l	
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles			ECY 97-602 NWTPH-Gx	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1

General Sample Comments

State of Washington Lab Certification No. C259

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	Z132661AA	09/23/2013 12:02	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z132661AA	09/23/2013 12:02	Daniel H Heller	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	13261A07A	09/19/2013 13:06	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	13261A07A	09/19/2013 13:06	Marie D Beamenderfer	1

Sample Description: MW-103 Grab Groundwater
Facility# 211556 **Job#** 386773
 101 Mulford Rd - Toledo, WA

LL Sample # WW 7194851
LL Group # 1418365
Account # 11260

Project Name: 211556

Collected: 09/11/2013 11:51 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 09/12/2013 09:45

Reported: 09/25/2013 14:36

MRT03

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B ug/l					
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx ug/l					
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Miscellaneous RSKSOP-175 modified ug/l					
07105	Methane	74-82-8	12	3.0	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	29	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	67	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0 ug/l					
00368	Nitrate Nitrogen	14797-55-8	N.D.	250	5
00228	Sulfate	14808-79-8	2,800	1,500	5
SM 2320 B-1997 ug/l as CaCO3					
12150	Total Alkalinity	n.a.	116,000	700	1
SM 4500-S2 D-2000 ug/l					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C259
 This sample was field filtered for Alkalinity.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial# Batch#	Analysis Date and Time	Analyst	Dilution Factor
---------	---------------	--------	---------------	------------------------	---------	-----------------

Sample Description: MW-103 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7194851
LL Group # 1418365
Account # 11260

Project Name: 211556

Collected: 09/11/2013 11:51 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 09/12/2013 09:45

San Ramon CA 94583

Reported: 09/25/2013 14:36

MRT03

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	Z132661AA	09/23/2013 12:26	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z132661AA	09/23/2013 12:26	Daniel H Heller	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	13261A07A	09/19/2013 14:49	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	13261A07A	09/19/2013 14:49	Catherine J Schwarz	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	132620002A	09/19/2013 12:16	Elizabeth J Marin	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	132600030A	09/19/2013 12:39	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	132600031A	09/24/2013 11:49	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	132600031A	09/18/2013 10:00	Anna E Stager	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	132600030A	09/18/2013 10:00	Anna E Stager	1
00368	Nitrate Nitrogen	EPA 300.0	1	13255347602A	09/12/2013 23:07	Sandra J Miller	5
00228	Sulfate	EPA 300.0	1	13255347602A	09/13/2013 07:32	Sandra J Miller	5
12150	Total Alkalinity	SM 2320 B-1997	1	13256002104B	09/13/2013 19:41	Michele L Graham	1
00230	Sulfide	SM 4500-S2 D-2000	1	13259023001A	09/16/2013 11:40	Michele L Graham	1

Sample Description: MW-103 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7194852
LL Group # 1418365
Account # 11260

Project Name: 211556

Collected: 09/11/2013 11:51 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 09/12/2013 09:45

Reported: 09/25/2013 14:36

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
		SW-846 6010B	ug/l	ug/l	
01754	Iron	7439-89-6	N.D.	43.0	1
07058	Manganese	7439-96-5	1,460	0.83	1
		SW-846 6020	ug/l	ug/l	
06035	Lead	7439-92-1	0.11	0.085	1

General Sample Comments

State of Washington Lab Certification No. C259
This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	132601848009	09/20/2013 18:09	John P Hook	1
07058	Manganese	SW-846 6010B	1	132601848009	09/20/2013 18:09	John P Hook	1
06035	Lead	SW-846 6020	1	132606050001A	09/19/2013 17:27	Choon Y Tian	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132601848009	09/18/2013 10:56	James L Mertz	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	132606050001	09/18/2013 23:30	Annamaria Stipkovits	1

Sample Description: MW-112 Grab Groundwater
Facility# 211556 **Job#** 386773
 101 Mulford Rd - Toledo, WA

LL Sample # WW 7194853
LL Group # 1418365
Account # 11260

Project Name: 211556

Collected: 09/11/2013 13:50 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 09/12/2013 09:45

Reported: 09/25/2013 14:36

MRT12

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B ug/l					
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx ug/l					
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Miscellaneous RSKSOP-175 modified ug/l					
07105	Methane	74-82-8	310	3.0	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	32	29	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	67	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0 ug/l					
00368	Nitrate Nitrogen	14797-55-8	N.D.	250	5
00228	Sulfate	14808-79-8	1,900	1,500	5
SM 2320 B-1997 ug/l as CaCO3					
12150	Total Alkalinity	n.a.	127,000	700	1
SM 4500-S2 D-2000 ug/l					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C259
 This sample was field filtered for Alkalinity.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial# Batch#	Analysis Date and Time	Analyst	Dilution Factor
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Sample Description: MW-112 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7194853
LL Group # 1418365
Account # 11260

Project Name: 211556

Collected: 09/11/2013 13:50 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 09/12/2013 09:45

San Ramon CA 94583

Reported: 09/25/2013 14:36

MRT12

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	Z132661AA	09/23/2013 17:13	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z132661AA	09/23/2013 17:13	Daniel H Heller	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	13261A07A	09/19/2013 15:14	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	13261A07A	09/19/2013 15:14	Catherine J Schwarz	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	132620002A	09/19/2013 13:11	Elizabeth J Marin	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	132600030A	09/19/2013 12:59	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	132600031A	09/24/2013 12:09	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	132600031A	09/18/2013 10:00	Anna E Stager	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	132600030A	09/18/2013 10:00	Anna E Stager	1
00368	Nitrate Nitrogen	EPA 300.0	1	13255347602A	09/12/2013 23:56	Sandra J Miller	5
00228	Sulfate	EPA 300.0	1	13255347602A	09/13/2013 15:05	Sandra J Miller	5
12150	Total Alkalinity	SM 2320 B-1997	1	13256002104A	09/13/2013 19:52	Michele L Graham	1
00230	Sulfide	SM 4500-S2 D-2000	1	13259023001A	09/16/2013 11:40	Michele L Graham	1

Sample Description: MW-112 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7194854
LL Group # 1418365
Account # 11260

Project Name: 211556

Collected: 09/11/2013 13:50 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 09/12/2013 09:45

Reported: 09/25/2013 14:36

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
		SW-846 6010B	ug/l	ug/l	
01754	Iron	7439-89-6	3,240	43.0	1
07058	Manganese	7439-96-5	2,490	0.83	1
		SW-846 6020	ug/l	ug/l	
06035	Lead	7439-92-1	0.85	0.085	1

General Sample Comments

State of Washington Lab Certification No. C259
This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	132601848009	09/20/2013 18:31	John P Hook	1
07058	Manganese	SW-846 6010B	1	132601848009	09/20/2013 18:31	John P Hook	1
06035	Lead	SW-846 6020	1	132606050001A	09/19/2013 17:28	Choon Y Tian	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132601848009	09/18/2013 10:56	James L Mertz	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	132606050001	09/18/2013 23:30	Annamaria Stipkovits	1

Sample Description: MW-115 Grab Groundwater
Facility# 211556 **Job#** 386773
 101 Mulford Rd - Toledo, WA

LL Sample # WW 7194855
LL Group # 1418365
Account # 11260

Project Name: 211556

Collected: 09/11/2013 10:52 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 09/12/2013 09:45

Reported: 09/25/2013 14:36

MRT15

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B			ug/l	ug/l	
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx			ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	31	28	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	66	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	28	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	66	1
The reverse surrogate, capric acid, is present at <1%.					

General Sample Comments

State of Washington Lab Certification No. C259

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	Z132661AA	09/23/2013 17:37	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z132661AA	09/23/2013 17:37	Daniel H Heller	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	13261A07A	09/19/2013 15:40	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	13261A07A	09/19/2013 15:40	Catherine J Schwarz	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	132600030A	09/19/2013 13:19	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	132600031A	09/24/2013 12:28	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	132600031A	09/18/2013 10:00	Anna E Stager	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	132600030A	09/18/2013 10:00	Anna E Stager	1

Sample Description: MW-115 Filtered Grab Groundwater
 Facility# 211556 Job# 386773
 101 Mulford Rd - Toledo, WA

LL Sample # WW 7194856
 LL Group # 1418365
 Account # 11260

Project Name: 211556

Collected: 09/11/2013 10:52 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 09/12/2013 09:45

Reported: 09/25/2013 14:36

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
06035	Lead	SW-846 6020 7439-92-1	ug/l 0.89	ug/l 0.085	1

General Sample Comments

State of Washington Lab Certification No. C259
 This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	132606050001A	09/19/2013 17:30	Choon Y Tian	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	132606050001	09/18/2013 23:30	Annamaria Stipkovits	1

Sample Description: MW-119 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7194859
LL Group # 1418365
Account # 11260

Project Name: 211556

Collected: 09/11/2013 12:47 by JP

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

Submitted: 09/12/2013 09:45

Reported: 09/25/2013 14:36

MRT19

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B ug/l					
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWT PH-Gx ug/l					
08273	NWT PH-Gx water C7-C12	n.a.	N.D.	50	1
GC Miscellaneous RSKSOP-175 modified ug/l					
07105	Methane	74-82-8	N.D.	3.0	1
GC Petroleum ECY 97-602 NWT PH-Dx ug/l					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	28	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	66	1
GC Petroleum ECY 97-602 NWT PH-Dx ug/l					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	28	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	66	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0 ug/l					
00368	Nitrate Nitrogen	14797-55-8	590	250	5
00228	Sulfate	14808-79-8	4,200	1,500	5
SM 2320 B-1997 ug/l as CaCO3					
12150	Total Alkalinity	n.a.	95,400	700	1
SM 4500-S2 D-2000 ug/l					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C259
This sample was field filtered for Alkalinity.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial# Batch#	Analysis Date and Time	Analyst	Dilution Factor
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Sample Description: MW-119 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7194859
LL Group # 1418365
Account # 11260

Project Name: 211556

Collected: 09/11/2013 12:47 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 09/12/2013 09:45

Reported: 09/25/2013 14:36

San Ramon CA 94583

MRT19

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	Z132661AA	09/23/2013 18:01	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z132661AA	09/23/2013 18:01	Daniel H Heller	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	13261A07A	09/19/2013 16:06	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	13261A07A	09/19/2013 16:06	Catherine J Schwarz	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	132620032A	09/20/2013 00:28	Elizabeth J Marin	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	132600030A	09/19/2013 14:32	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	132600031A	09/24/2013 12:48	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	132600031A	09/18/2013 10:00	Anna E Stager	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	132600030A	09/18/2013 10:00	Anna E Stager	1
00368	Nitrate Nitrogen	EPA 300.0	1	13255347602A	09/13/2013 00:12	Sandra J Miller	5
00228	Sulfate	EPA 300.0	1	13255347602A	09/13/2013 15:21	Sandra J Miller	5
12150	Total Alkalinity	SM 2320 B-1997	1	13256002105A	09/13/2013 20:25	Michele L Graham	1
00230	Sulfide	SM 4500-S2 D-2000	1	13260023001A	09/17/2013 09:25	Michele L Graham	1

Sample Description: MW-119 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7194860
LL Group # 1418365
Account # 11260

Project Name: 211556

Collected: 09/11/2013 12:47 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 09/12/2013 09:45

Reported: 09/25/2013 14:36

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
		SW-846 6010B	ug/l	ug/l	
01754	Iron	7439-89-6	N.D.	43.0	1
07058	Manganese	7439-96-5	50.6	0.83	1
		SW-846 6020	ug/l	ug/l	
06035	Lead	7439-92-1	0.26	0.085	1

General Sample Comments

State of Washington Lab Certification No. C259
This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	132601848009	09/20/2013 18:34	John P Hook	1
07058	Manganese	SW-846 6010B	1	132601848009	09/20/2013 18:34	John P Hook	1
06035	Lead	SW-846 6020	1	132606050001A	09/19/2013 17:32	Choon Y Tian	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132601848009	09/18/2013 10:56	James L Mertz	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	132606050001	09/18/2013 23:30	Annamaria Stipkovits	1

Quality Control Summary

Client Name: Chevron
Reported: 09/25/13 at 02:36 PM

Group Number: 1418365

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

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: Z132661AA	Sample number(s): 7194850-7194851,7194853,7194855,7194859							
Benzene	N.D.	0.5	ug/l	87		78-120		
Ethylbenzene	N.D.	0.5	ug/l	90		79-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	91		75-120		
Toluene	N.D.	0.5	ug/l	91		80-120		
Xylene (Total)	N.D.	0.5	ug/l	91		80-120		
Batch number: 13261A07A	Sample number(s): 7194850-7194851,7194853,7194855,7194859							
NWTPH-Gx water C7-C12	N.D.	50.	ug/l	92		75-135		
Batch number: 132620002A	Sample number(s): 7194851,7194853							
Methane	N.D.	3.0	ug/l	101		80-120		
Batch number: 132620032A	Sample number(s): 7194859							
Methane	N.D.	3.0	ug/l	108		80-120		
Batch number: 132600030A	Sample number(s): 7194851,7194853,7194855,7194859							
Diesel Range Organics C12-C24	N.D.	30.	ug/l	79	85	50-113	7	20
Heavy Range Organics C24-C40	N.D.	70.	ug/l					
Batch number: 132600031A	Sample number(s): 7194851,7194853,7194855,7194859							
DRO C12-C24 w/Si Gel	N.D.	30.	ug/l	76	87	32-117	14	20
HRO C24-C40 w/Si Gel	N.D.	70.	ug/l					
Batch number: 132601848009	Sample number(s): 7194852,7194854,7194860							
Iron	N.D.	43.0	ug/l	99		90-112		
Manganese	1.6	0.83	ug/l	102		90-110		
Batch number: 132606050001A	Sample number(s): 7194852,7194854,7194856,7194860							
Lead	N.D.	0.085	ug/l	106		90-115		
Batch number: 13255347602A	Sample number(s): 7194851,7194853,7194859							
Nitrate Nitrogen	N.D.	50.	ug/l	102		90-110		
Sulfate	N.D.	300.	ug/l	102		90-110		
Batch number: 13256002104A	Sample number(s): 7194853							
Total Alkalinity	N.D.	700.	ug/l as CaCO3	98		90-110		
Batch number: 13256002104B	Sample number(s): 7194851							
Total Alkalinity	N.D.	700.	ug/l as CaCO3	98		90-110		
Batch number: 13256002105A	Sample number(s): 7194859							

*- 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: 1418365
Reported: 09/25/13 at 02:36 PM

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDI</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Total Alkalinity	N.D.	700.	ug/l as CaCO3	99		90-110		
Batch number: 13259023001A Sulfide	Sample number(s): 7194851,7194853 N.D.	54.	ug/l	99		90-110		
Batch number: 13260023001A Sulfide	Sample number(s): 7194859 N.D.	54.	ug/l	91		90-110		

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

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: Z132661AA	Sample number(s): 7194850-7194851,7194853,7194855,7194859 UNSPK: 7194851								
Benzene	76	88	72-134	14	30				
Ethylbenzene	80	95	71-134	17	30				
Methyl Tertiary Butyl Ether	79	93	72-126	16	30				
Toluene	80	95	80-125	17	30				
Xylene (Total)	81	97	79-125	18	30				
Batch number: 13261A07A NWTPH-Gx water C7-C12	Sample number(s): 7194850-7194851,7194853,7194855,7194859 UNSPK: P198551								
	99	103	75-135	4	30				
Batch number: 132620002A Methane	Sample number(s): 7194851,7194853 UNSPK: 7194851								
	68	60	35-157	10	20				
Batch number: 132620032A Methane	Sample number(s): 7194859 UNSPK: P199193								
	-3706 (2)	-3394 (2)	35-157	8	20				
Batch number: 132601848009 Iron	Sample number(s): 7194852,7194854,7194860 UNSPK: 7194852 BKG: 7194852								
	104	103	75-125	1	20	N.D.	N.D.	0 (1)	20
Manganese	87	90	75-125	1	20	1,460	1,400	4	20
Batch number: 132606050001A Lead	Sample number(s): 7194852,7194854,7194856,7194860 UNSPK: P195309 BKG: P195309								
	119	108	83-120	7	20	4.6	4.8	2 (1)	20
Batch number: 13255347602A Nitrate Nitrogen	Sample number(s): 7194851,7194853,7194859 UNSPK: 7194851 BKG: 7194851								
	105		90-110			N.D.	N.D.	0 (1)	20
Sulfate	104		90-110			2,800	2,600	8 (1)	20
Batch number: 13256002104A Total Alkalinity	Sample number(s): 7194853 UNSPK: P194474 BKG: P194474								
	99		10-159			880	N.D.	200* (1)	5
Batch number: 13256002104B Total Alkalinity	Sample number(s): 7194851 UNSPK: P194474 BKG: 7194851								
	99		10-159			116,000	117,000	1	5
Batch number: 13256002105A Total Alkalinity	Sample number(s): 7194859 UNSPK: 7194859 BKG: 7194859								
	94		10-159			95,400	96,400	1	5

*- 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: 1418365
Reported: 09/25/13 at 02:36 PM

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: 13259023001A Sulfide	77	77	42-131	0	16	N.D.	N.D.	0 (1)	5
Batch number: 13260023001A Sulfide	71	70	42-131	1	16	N.D.	N.D.	0 (1)	5

Surrogate Quality Control

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

Analysis Name: UST VOCs by 8260B - Water
Batch number: Z132661AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7194850	98	100	100	96
7194851	98	98	99	95
7194853	98	97	100	96
7194855	97	98	100	94
7194859	97	99	101	95
Blank	98	97	99	95
LCS	98	101	99	97
MS	98	100	99	96
MSD	97	98	100	98
Limits:	80-116	77-113	80-113	78-113

Analysis Name: NWT PH-Gx water C7-C12
Batch number: 13261A07A

	Trifluorotoluene-F
7194850	94
7194851	82
7194853	91
7194855	87
7194859	86
Blank	90
LCS	94
MS	94
MSD	94
Limits:	63-135

Analysis Name: NWT PH-Dx water
Batch number: 132600030A

	Orthoterphenyl
7194851	102
7194853	106

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 09/25/13 at 02:36 PM

Group Number: 1418365

Surrogate Quality Control

7194855	104
7194859	103
Blank	102
LCS	109
LCSD	113

Limits: 50-150

Analysis Name: NWTPH-Dx water w/ 10g Si Gel
Batch number: 132600031A
Orthoterphenyl

7194851	96
7194853	99
7194855	99
7194859	97
Blank	95
LCS	108
LCSD	120

Limits: 50-150

Analysis Name: Volatile Headspace Hydrocarbon
Batch number: 132620002A
Propene

7194851	55
7194853	62
Blank	90
LCS	91
MS	56
MSD	51

Limits: 42-131

Analysis Name: Volatile Headspace Hydrocarbon
Batch number: 132620032A
Propene

7194859	90
Blank	91
LCS	103
MS	79
MSD	92

Limits: 42-131

*- 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



Lancaster Laboratories **AMENDED**

Acc. # 11260

For Eurofins Lancaster Laboratories use only
 Group # 1418365 Sample # 7194850-60
 Instructions on reverse side correspond with circled numbers.

SCR #: _____

1 Please forward the lab results to the client and Consultant and cc: G-R			4 Matrix			6 Analyses Requested												<input type="checkbox"/> Results in Dry Weight <input type="checkbox"/> J value reporting needed <input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds <input type="checkbox"/> 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run _____ oxy's on highest hit <input type="checkbox"/> Run _____ oxy's on all hits MW-116 will be reported separately.
Facility # SS#211558-OML G-R#388773 Site Address 101 Mulford Road, TOLEDO, WA Chevron PM MHO SAICRS Lead Consultant Russell Shropshire Consultant/Office Gettler-Ryan, Inc., 6747 Sierra Court, Suite J, Dublin, CA 94588 Consultant Project Mgr. Deanna L. Harding, (deanna@grlnc.com), (925) 551-7444 x140 Consultant Phone # (425) 482-3323 x			Sediment <input type="checkbox"/> Potable <input type="checkbox"/> Ground <input checked="" type="checkbox"/> Surface <input type="checkbox"/> Water <input type="checkbox"/> NPDES <input type="checkbox"/> Air <input type="checkbox"/> Oil <input type="checkbox"/>			Total Number of Containers: _____ BTEX + MTBE 8021 <input type="checkbox"/> 8260 <input type="checkbox"/> Naphth <input type="checkbox"/> 8260 full scan _____ Oxygenates _____ NWTPH-Gx _____ NWTPH-Dx with Silica Gel Cleanup <input checked="" type="checkbox"/> NWTPH-Dx without Silica Gel Cleanup <input checked="" type="checkbox"/> WA VPH <input type="checkbox"/> WA EPH <input type="checkbox"/> Lead Total <input type="checkbox"/> Diss. <input checked="" type="checkbox"/> Method 6520 NITRATE SULFATE DISS. IRON / MANGANESE 6010B SULFIDE / METHANE ALKALINITY												
2 Sample Identification			3 Composite			7 Turnaround Time Requested (TAT) (please circle)												8 Remarks group 9/13/13 Please report results for Dx with and without silica gel cleanup. Dissolved iron & manganese, as well as alkalinity samples have been field filtered AMEND COC: ADD DIS. LEAD TO MW-115 ADD DIS. IRON & MANGANESE TO MW-116 MWC 09-12-13
Collected Date Time Grab Composite OA 9-11-13 X MW-103 1151 X MW-112 1360 X MW-115 1852 X MW-116 1852 X MW-119 1247 X			Soil <input type="checkbox"/> Water <input type="checkbox"/> Oil <input type="checkbox"/> Potable <input type="checkbox"/> Ground <input checked="" type="checkbox"/> Surface <input type="checkbox"/> NPDES <input type="checkbox"/> Air <input type="checkbox"/>			Standard 5 day 4 day 72 hour 48 hour 24 hour												
8 Data Package (circle if required)			9			10												
Type I - Full Type VI (Raw Data)			EDD (circle if required) FIELD CVX-RTBU-FL_05 (default) Other: _____			Relinquished by _____ Date 9-11-13 Time 10:45 Received by _____ Date _____ Time _____ Relinquished by _____ Date _____ Time _____ Received by _____ Date _____ Time _____ Relinquished by Commercial Carrier: UPS <input checked="" type="checkbox"/> FedEx _____ Other _____ Temperature Upon Receipt 1.3 °C Custody Seals Intact? (Yes) No												

Chevron Northwest Region Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # 11260

For Eurofins Lancaster Laboratories use only
 Group # 1418365 Sample # 7194850-60
Instructions on reverse side correspond with circled numbers.

1 Please forward the lab results directly to the Lead Consultant and cc: G-R <small>Client Information</small>			4 Matrix			5 Analyses Requested												SCR #: _____								
Facility # <u>SS#211556-OML G-R#386773</u> WBS Site Address <u>101 Mulford Road, TOLEDO, WA</u> Chevron PM <u>MHO</u> <u>SAICRS</u> Lead Consultant <u>Russell Shropshire</u> Consultant/Office <u>Gettler-Ryan, Inc., 6747 Sierra Court, Suite J, Dublin, CA 94568</u> Consultant Project Mgr. <u>Deanna L. Harding, (deanna@grinc.com), (925) 551-7444 x140</u> Consultant Phone # <u>(425) 482-3323 x</u> Sampler _____			Sediment <input type="checkbox"/> <input checked="" type="checkbox"/> Ground <input type="checkbox"/> <input checked="" type="checkbox"/> Surface <input type="checkbox"/> Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Air <input type="checkbox"/>			Total Number of Containers BTEX + MTBE 8021 <input type="checkbox"/> 8260 <input checked="" type="checkbox"/> Naphth <input type="checkbox"/> 8260 full scan _____ Oxygenates _____ NWTPH-Gx _____ NWTPH-Dx with Silica Gel Cleanup <input checked="" type="checkbox"/> NWTPH-Dx without Silica Gel Cleanup <input checked="" type="checkbox"/> WA VPH <input type="checkbox"/> WA EPH <input type="checkbox"/> Lead Total <input type="checkbox"/> Diss. <input checked="" type="checkbox"/> Method <u>6020</u> NITRATE SULFATE DISS. IRON / MANGANESE SULFIDE / METHANE ALKALINITY												<input type="checkbox"/> Results in Dry Weight <input type="checkbox"/> J value reporting needed <input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds <input type="checkbox"/> 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run _____ oxy's on highest hit <input type="checkbox"/> Run _____ oxy's on all hits								
2 Sample Identification		3 Collected		Grab	Composite	Soil	Water	Oil	Total Number of Containers	BTEX + MTBE	8260	NWTPH-Gx	NWTPH-Dx with Silica Gel Cleanup	NWTPH-Dx without Silica Gel Cleanup	WA VPH	WA EPH	Lead	Total	Diss.	Method	NITRATE	SULFATE	DISS. IRON / MANGANESE	SULFIDE / METHANE	ALKALINITY	6 Remarks
Date	Time	Grab	Composite																							
<u>QA</u>	<u>9.11.13</u>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		<u>2</u>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>													Please report results for Dx with and without silica gel cleanup. Dissolved iron & manganese, as well as alkalinity samples have been field filtered
<u>MW-103</u>		<u>1151</u>		<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		<u>16</u>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
<u>MW-112</u>		<u>1350</u>		<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		<u>16</u>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
<u>MW-115</u>		<u>1052</u>		<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		<u>9</u>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
<u>MW-116</u>		<u>1057</u>		<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		<u>9</u>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
<u>MW-119</u>		<u>1247</u>		<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		<u>16</u>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		

7 Turnaround Time Requested (TAT) (please circle)

Standard 5 day 4 day
 72 hour 48 hour 24 hour

Relinquished by [Signature] Date 9.11.13 Time 1600 Received by _____ Date _____ Time _____

Relinquished by _____ Date _____ Time _____ Received by _____ Date _____ Time _____

8 Data Package (circle if required)

Type I - Full Type VI (Raw Data)

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

Relinquished by Commercial Carrier: _____ Received by [Signature] Date 9-12-13 Time 0945

UPS FedEx _____ Other _____
 Temperature Upon Receipt 1.3 °C Custody Seals Intact? Yes No

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 \geq 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 \geq 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.

ANALYTICAL RESULTS

Prepared by:

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

Prepared for:

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

September 25, 2013

Project: 211556

Submittal Date: 09/13/2013

Group Number: 1418631

PO Number: 0015119898

Release Number: SHRILL HOPKINS

State of Sample Origin: WA

<u>Client Sample Description</u>	<u>Lancaster Labs (LL) #</u>
QA NA Water	7196411
MW-109 Grab Groundwater	7196412
MW-109 Filtered Grab Groundwater	7196413
MW-110 Grab Groundwater	7196414
MW-110 Filtered Grab Groundwater	7196415
MW-113 Grab Groundwater	7196416
MW-113 Filtered Grab Groundwater	7196417
MW-114 Grab Groundwater	7196418
MW-114 Filtered Grab Groundwater	7196419
MW-116 Grab Groundwater	7196420
MW-116 Filtered Grab Groundwater	7196421

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

ELECTRONIC SAIC

Attn: Jamalyn Green

COPY TO

ELECTRONIC SAIC

Attn: Russ Shropshire

COPY TO

ELECTRONIC Gettler-Ryan Inc.

Attn: Gettler Ryan

COPY TO

Respectfully Submitted,



Amek Carter
Specialist

(717) 556-7252

Sample Description: QA NA Water
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7196411
LL Group # 1418631
Account # 11260

Project Name: 211556

Collected: 09/12/2013

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 09/13/2013 09:20

San Ramon CA 94583

Reported: 09/25/2013 16:07

MTQA-

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles			SW-846 8260B	ug/l	
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles			ECY 97-602 NWTPH-Gx	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1

General Sample Comments

State of Washington Lab Certification No. C259

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	D132661AA	09/23/2013 22:33	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D132661AA	09/23/2013 22:33	Brett W Kenyon	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	13261B20A	09/19/2013 15:15	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	13261B20A	09/19/2013 15:15	Marie D Beamenderfer	1

Sample Description: MW-109 Grab Groundwater
Facility# 211556 **Job#** 386773
 101 Mulford Rd - Toledo, WA

LL Sample # WW 7196412
LL Group # 1418631
Account # 11260

Project Name: 211556

Collected: 09/12/2013 11:16 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 09/13/2013 09:20

Reported: 09/25/2013 16:07

MRT09

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B			ug/l	ug/l	
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx			ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	31	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	72	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	31	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	72	1
The reverse surrogate, capric acid, is present at <1%.					

General Sample Comments

State of Washington Lab Certification No. C259

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	D132661AA	09/23/2013 23:19	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D132661AA	09/23/2013 23:19	Brett W Kenyon	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	13261B20A	09/19/2013 17:22	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	13261B20A	09/19/2013 17:22	Marie D Beamenderfer	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	132600030A	09/19/2013 17:42	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	132600031A	09/24/2013 13:08	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	132600031A	09/18/2013 10:00	Anna E Stager	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	132600030A	09/18/2013 10:00	Anna E Stager	1

Sample Description: MW-109 Filtered Grab Groundwater
 Facility# 211556 Job# 386773
 101 Mulford Rd - Toledo, WA

LL Sample # WW 7196413
 LL Group # 1418631
 Account # 11260

Project Name: 211556

Collected: 09/12/2013 11:16 by JP

Chevron

6001 Bollinger Canyon Road
 L4310

Submitted: 09/13/2013 09:20

Reported: 09/25/2013 16:07

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
06035	Lead	SW-846 6020 7439-92-1	ug/l 0.62	ug/l 0.085	1

General Sample Comments

State of Washington Lab Certification No. C259
 This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	132606050005A	09/19/2013 05:21	Choon Y Tian	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	132606050005	09/18/2013 10:10	James L Mertz	1

Sample Description: MW-110 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7196414
LL Group # 1418631
Account # 11260

Project Name: 211556

Collected: 09/12/2013 13:20 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 09/13/2013 09:20

Reported: 09/25/2013 16:07

MRT10

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B			ug/l	ug/l	
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx			ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	28	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	66	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	28	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	66	1
The reverse surrogate, capric acid, is present at <1%.					

General Sample Comments

State of Washington Lab Certification No. C259

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	D132661AA	09/24/2013 00:27	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D132661AA	09/24/2013 00:27	Brett W Kenyon	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	13263B94A	09/21/2013 13:38	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	13263B94A	09/21/2013 13:38	Marie D Beamenderfer	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	132600030A	09/19/2013 16:28	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	132600031A	09/24/2013 13:28	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	132600031A	09/18/2013 10:00	Anna E Stager	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	132600030A	09/18/2013 10:00	Anna E Stager	1

Sample Description: MW-110 Filtered Grab Groundwater
 Facility# 211556 Job# 386773
 101 Mulford Rd - Toledo, WA

LL Sample # WW 7196415
 LL Group # 1418631
 Account # 11260

Project Name: 211556

Collected: 09/12/2013 13:20 by JP

Chevron

6001 Bollinger Canyon Road
 L4310

Submitted: 09/13/2013 09:20

Reported: 09/25/2013 16:07

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
06035	Lead	SW-846 6020 7439-92-1	ug/l 0.39	ug/l 0.085	1

General Sample Comments

State of Washington Lab Certification No. C259
 This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	132606050005A	09/19/2013 05:30	Choon Y Tian	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	132606050005	09/18/2013 10:10	James L Mertz	1

Sample Description: MW-113 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7196416
LL Group # 1418631
Account # 11260

Project Name: 211556

Collected: 09/12/2013 08:52 by JP

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

Submitted: 09/13/2013 09:20

Reported: 09/25/2013 16:07

MRT13

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B ug/l					
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx ug/l					
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Miscellaneous RSKSOP-175 modified ug/l					
07105	Methane	74-82-8	N.D.	3.0	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	28	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	66	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	28	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	66	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0 ug/l					
00368	Nitrate Nitrogen	14797-55-8	N.D.	250	5
00228	Sulfate	14808-79-8	3,300	1,500	5
SM 2320 B-1997 ug/l as CaCO3					
12150	Total Alkalinity	n.a.	45,000	700	1
SM 4500-S2 D-2000 ug/l					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C259
This sample was field filtered for Alkalinity.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial# Batch#	Analysis Date and Time	Analyst	Dilution Factor
---------	---------------	--------	---------------	------------------------	---------	-----------------

Sample Description: MW-113 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7196416
LL Group # 1418631
Account # 11260

Project Name: 211556

Collected: 09/12/2013 08:52 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 09/13/2013 09:20

Reported: 09/25/2013 16:07

San Ramon CA 94583

MRT13

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	D132661AA	09/24/2013 00:49	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D132661AA	09/24/2013 00:49	Brett W Kenyon	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	13262A07A	09/20/2013 14:07	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	13262A07A	09/20/2013 14:07	Marie D Beamenderfer	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	132620032A	09/20/2013 00:47	Elizabeth J Marin	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	132600030A	09/19/2013 16:48	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	132600031A	09/24/2013 13:48	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	132600031A	09/18/2013 10:00	Anna E Stager	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	132600030A	09/18/2013 10:00	Anna E Stager	1
00368	Nitrate Nitrogen	EPA 300.0	1	13256347601A	09/13/2013 21:32	Sandra J Miller	5
00228	Sulfate	EPA 300.0	1	13256347601A	09/13/2013 21:32	Sandra J Miller	5
12150	Total Alkalinity	SM 2320 B-1997	1	13260005101A	09/17/2013 09:16	Susan A Engle	1
00230	Sulfide	SM 4500-S2 D-2000	1	13260023002A	09/17/2013 09:25	Michele L Graham	1

Sample Description: MW-113 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7196417
LL Group # 1418631
Account # 11260

Project Name: 211556

Collected: 09/12/2013 08:52 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 09/13/2013 09:20

Reported: 09/25/2013 16:07

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
		SW-846 6010B	ug/l	ug/l	
01754	Iron	7439-89-6	113	43.0	1
07058	Manganese	7439-96-5	76.1	0.83	1
		SW-846 6020	ug/l	ug/l	
06035	Lead	7439-92-1	0.12	0.085	1

General Sample Comments

State of Washington Lab Certification No. C259
This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	132601848010	09/22/2013 04:55	Tara L Snyder	1
07058	Manganese	SW-846 6010B	1	132601848010	09/22/2013 04:55	Tara L Snyder	1
06035	Lead	SW-846 6020	1	132606050005A	09/19/2013 05:32	Choon Y Tian	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132601848010	09/18/2013 11:00	James L Mertz	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	132606050005	09/18/2013 10:10	James L Mertz	1

Sample Description: MW-114 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7196418
LL Group # 1418631
Account # 11260

Project Name: 211556

Collected: 09/12/2013 10:13 by JP

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

Submitted: 09/13/2013 09:20

Reported: 09/25/2013 16:07

MRT14

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B			ug/l	ug/l	
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx			ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	60	29	1
08271	Heavy Range Organics C24-C40	n.a.	260	67	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1
The reverse surrogate, capric acid, is present at <1%.					

General Sample Comments

State of Washington Lab Certification No. C259

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	D132661AA	09/24/2013 01:35	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D132661AA	09/24/2013 01:35	Brett W Kenyon	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	13262A07A	09/20/2013 14:33	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	13262A07A	09/20/2013 14:33	Marie D Beamenderfer	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	132600030A	09/19/2013 18:22	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	132600031A	09/24/2013 14:27	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	132600031A	09/18/2013 10:00	Anna E Stager	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	132600030A	09/18/2013 10:00	Anna E Stager	1

Sample Description: MW-114 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7196419
LL Group # 1418631
Account # 11260

Project Name: 211556

Collected: 09/12/2013 10:13 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 09/13/2013 09:20

Reported: 09/25/2013 16:07

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
06035	Lead	SW-846 6020 7439-92-1	ug/l 2.3	ug/l 0.085	1

General Sample Comments

State of Washington Lab Certification No. C259
 This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	132606050005A	09/19/2013 05:33	Choon Y Tian	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	132606050005	09/18/2013 10:10	James L Mertz	1

Sample Description: MW-116 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7196420
LL Group # 1418631
Account # 11260

Project Name: 211556

Collected: 09/12/2013 12:23 by JP

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

Submitted: 09/13/2013 09:20

Reported: 09/25/2013 16:07

16MRT

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B ug/l					
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx ug/l					
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Miscellaneous RSKSOP-175 modified ug/l					
07105	Methane	74-82-8	16	3.0	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	28	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	66	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	28	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	66	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0 ug/l					
00368	Nitrate Nitrogen	14797-55-8	390	250	5
00228	Sulfate	14808-79-8	4,300	1,500	5
SM 2320 B-1997 ug/l as CaCO3					
12150	Total Alkalinity	n.a.	38,800	700	1
SM 4500-S2 D-2000 ug/l					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C259
This sample was field filtered for Alkalinity.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial# Batch#	Analysis Date and Time	Analyst	Dilution Factor
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Sample Description: MW-116 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7196420
LL Group # 1418631
Account # 11260

Project Name: 211556

Collected: 09/12/2013 12:23 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 09/13/2013 09:20

Reported: 09/25/2013 16:07

San Ramon CA 94583

16MRT

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	D132661AA	09/24/2013 01:58	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D132661AA	09/24/2013 01:58	Brett W Kenyon	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	13262A07A	09/20/2013 16:42	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	13262A07A	09/20/2013 16:42	Marie D Beamenderfer	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	132620032A	09/20/2013 01:05	Elizabeth J Marin	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	132600030A	09/19/2013 17:22	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	132600031A	09/24/2013 14:07	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	132600031A	09/18/2013 10:00	Anna E Stager	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	132600030A	09/18/2013 10:00	Anna E Stager	1
00368	Nitrate Nitrogen	EPA 300.0	1	13256347601A	09/13/2013 22:21	Sandra J Miller	5
00228	Sulfate	EPA 300.0	1	13256347601A	09/13/2013 22:21	Sandra J Miller	5
12150	Total Alkalinity	SM 2320 B-1997	1	13260005101A	09/17/2013 09:21	Susan A Engle	1
00230	Sulfide	SM 4500-S2 D-2000	1	13260023002A	09/17/2013 09:25	Michele L Graham	1

Sample Description: MW-116 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7196421
LL Group # 1418631
Account # 11260

Project Name: 211556

Collected: 09/12/2013 12:23 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 09/13/2013 09:20

Reported: 09/25/2013 16:07

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
		SW-846 6010B	ug/l	ug/l	
01754	Iron	7439-89-6	628	43.0	1
07058	Manganese	7439-96-5	29.0	0.83	1
		SW-846 6020	ug/l	ug/l	
06035	Lead	7439-92-1	N.D.	0.085	1

General Sample Comments

State of Washington Lab Certification No. C259
This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	132601848010	09/22/2013 05:43	Tara L Snyder	1
07058	Manganese	SW-846 6010B	1	132601848010	09/22/2013 05:43	Tara L Snyder	1
06035	Lead	SW-846 6020	1	132606050005A	09/19/2013 05:35	Choon Y Tian	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132601848010	09/18/2013 11:00	James L Mertz	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	132606050005	09/18/2013 10:10	James L Mertz	1

Quality Control Summary

Client Name: Chevron
Reported: 09/25/13 at 04:07 PM

Group Number: 1418631

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

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: D132661AA	Sample number(s): 7196411-7196412, 7196414, 7196416, 7196418, 7196420							
Benzene	N.D.	0.5	ug/l	91		78-120		
Ethylbenzene	N.D.	0.5	ug/l	89		79-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	92		75-120		
Toluene	N.D.	0.5	ug/l	92		80-120		
Xylene (Total)	N.D.	0.5	ug/l	91		80-120		
Batch number: 13261B20A	Sample number(s): 7196411-7196412							
NWTPH-Gx water C7-C12	N.D.	50.	ug/l	103	103	75-135	1	30
Batch number: 13262A07A	Sample number(s): 7196416, 7196418, 7196420							
NWTPH-Gx water C7-C12	N.D.	50.	ug/l	96		75-135		
Batch number: 13263B94A	Sample number(s): 7196414							
NWTPH-Gx water C7-C12	N.D.	50.	ug/l	108		75-135		
Batch number: 132620032A	Sample number(s): 7196416, 7196420							
Methane	N.D.	3.0	ug/l	108		80-120		
Batch number: 132600030A	Sample number(s): 7196412, 7196414, 7196416, 7196418, 7196420							
Diesel Range Organics C12-C24	N.D.	30.	ug/l	79	85	50-113	7	20
Heavy Range Organics C24-C40	N.D.	70.	ug/l					
Batch number: 132600031A	Sample number(s): 7196412, 7196414, 7196416, 7196418, 7196420							
DRO C12-C24 w/Si Gel	N.D.	30.	ug/l	76	87	32-117	14	20
HRO C24-C40 w/Si Gel	N.D.	70.	ug/l					
Batch number: 132601848010	Sample number(s): 7196417, 7196421							
Iron	N.D.	43.0	ug/l	102		90-112		
Manganese	1.6	0.83	ug/l	101		90-110		
Batch number: 132606050005A	Sample number(s): 7196413, 7196415, 7196417, 7196419, 7196421							
Lead	N.D.	0.085	ug/l	104		90-115		
Batch number: 13256347601A	Sample number(s): 7196416, 7196420							
Nitrate Nitrogen	N.D.	50.	ug/l	103		90-110		
Sulfate	N.D.	300.	ug/l	105		90-110		
Batch number: 13260005101A	Sample number(s): 7196416, 7196420							
Total Alkalinity	N.D.	700.	ug/l as CaCO3	98		90-110		
Batch number: 13260023002A	Sample number(s): 7196416, 7196420							
Sulfide	N.D.	54.	ug/l	90		90-110		

*- 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: 1418631
Reported: 09/25/13 at 04:07 PM

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
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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

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: D132661AA	Sample number(s): 7196411-7196412,7196414,7196416,7196418,7196420 UNSPK: 7196412								
Benzene	104	106	72-134	2	30				
Ethylbenzene	104	104	71-134	0	30				
Methyl Tertiary Butyl Ether	101	101	72-126	0	30				
Toluene	106	108	80-125	2	30				
Xylene (Total)	105	107	79-125	1	30				
Batch number: 13262A07A	Sample number(s): 7196416,7196418,7196420 UNSPK: P197109								
NWTPH-Gx water C7-C12	101	106	75-135	5	30				
Batch number: 13263B94A	Sample number(s): 7196414 UNSPK: P199193								
NWTPH-Gx water C7-C12	96	95	75-135	1	30				
Batch number: 132620032A	Sample number(s): 7196416,7196420 UNSPK: P199193								
Methane	-3706	-3394	35-157	8	20				
	(2)	(2)							
Batch number: 132601848010	Sample number(s): 7196417,7196421 UNSPK: 7196417 BKG: 7196417								
Iron	101	103	75-125	1	20	113	117	4 (1)	20
Manganese	98	100	75-125	2	20	76.1	78.6	3	20
Batch number: 132606050005A	Sample number(s): 7196413,7196415,7196417,7196419,7196421 UNSPK: P198085 BKG: P198085								
Lead	104	103	83-120	1	20	0.34	0.37	7 (1)	20
Batch number: 13256347601A	Sample number(s): 7196416,7196420 UNSPK: 7196416 BKG: 7196416								
Nitrate Nitrogen	103		90-110			N.D.	N.D.	0 (1)	20
Sulfate	106		90-110			3,300	3,200	5 (1)	20
Batch number: 13260005101A	Sample number(s): 7196416,7196420 UNSPK: P196728 BKG: P196728								
Total Alkalinity	93		10-159			145,000	147,000	2	5
Batch number: 13260023002A	Sample number(s): 7196416,7196420 UNSPK: P197759 BKG: P197759								
Sulfide	67	78	42-131	11	16	92	85	8* (1)	5

Surrogate Quality Control

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

Analysis Name: UST VOCs by 8260B - Water
Batch number: D132661AA

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 09/25/13 at 04:07 PM

Group Number: 1418631

Surrogate Quality Control

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7196411	101	100	99	98
7196412	101	99	98	99
7196414	99	95	99	99
7196416	100	99	99	99
7196418	101	100	99	99
7196420	100	100	99	99
Blank	99	97	100	99
LCS	100	101	100	99
MS	99	103	100	100
MSD	99	102	100	100
Limits:	80-116	77-113	80-113	78-113

Analysis Name: NWT PH-Gx water C7-C12
Batch number: 13261B20A
Trifluorotoluene-F

7196411	88
7196412	85
Blank	87
LCS	93
LCSD	94
Limits:	63-135

Analysis Name: NWT PH-Gx water C7-C12
Batch number: 13262A07A
Trifluorotoluene-F

7196416	90
7196418	90
7196420	87
Blank	92
LCS	101
MS	96
MSD	97
Limits:	63-135

Analysis Name: NWT PH-Gx water C7-C12
Batch number: 13263B94A
Trifluorotoluene-F

7196414	87
Blank	85
LCS	81
MS	81
MSD	80
Limits:	63-135

Analysis Name: NWT PH-Dx water
Batch number: 132600030A
Orthoterphenyl

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 09/25/13 at 04:07 PM

Group Number: 1418631

Surrogate Quality Control

7196412	102
7196414	100
7196416	100
7196418	93
7196420	95
Blank	102
LCS	109
LCSD	113

Limits: 50-150

Analysis Name: NWTPH-Dx water w/ 10g Si Gel
Batch number: 132600031A
Orthoterphenyl

7196412	95
7196414	99
7196416	107
7196418	91
7196420	99
Blank	95
LCS	108
LCSD	120

Limits: 50-150

Analysis Name: Volatile Headspace Hydrocarbon
Batch number: 132620032A
Propene

7196416	72
7196420	80
Blank	91
LCS	103
MS	79
MSD	92

Limits: 42-131

*- 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



Lancaster Laboratories

Acct. # 11260

For Eurofins Lancaster Laboratories use only
 Group # 1418631 Sample # 7196411-21
 Instructions on reverse side correspond with circled numbers.

1 Please forward the lab chain of custody to the Lead Consultant and cc: G-R			4 Matrix			5 Analyses Requested										SCR #: _____	
Facility # <u>SS#211556-OML G-R#386773</u> WBS Site Address <u>101 Mulford Road, TOLEDO, WA</u> Chevron PM <u>MHO</u> SAICRS Lead Consultant <u>Russell Shropshire</u> Consultant/Office <u>Gettler-Ryan, Inc., 6747 Sierra Court, Suite J, Dublin, CA 94568</u> Consultant Project Mgr. <u>Deanna L. Harding, (deanna@grinc.com), (925) 551-7444 x180</u> Consultant Phone # <u>(425) 482-3323 x</u> Sampler <u>J. Paine</u>			<input type="checkbox"/> Sediment <input checked="" type="checkbox"/> Potable <input checked="" type="checkbox"/> Ground <input type="checkbox"/> NPDES <input type="checkbox"/> Surface <input type="checkbox"/> Oil <input type="checkbox"/> Air			Total Number of Containers BTEX + MTBE 8021 <input type="checkbox"/> 8260 <input type="checkbox"/> Naphth <input type="checkbox"/> 8260 full scan Oxygenates NWTPH-Gx NWTPH-Dx with Silica Gel Cleanup <input checked="" type="checkbox"/> NWTPH-Dx without Silica Gel Cleanup <input checked="" type="checkbox"/> WA VPH <input type="checkbox"/> WA EPH <input type="checkbox"/> Lead Total <input type="checkbox"/> Diss. <input checked="" type="checkbox"/> Method <u>6020</u> <u>NITRATE - SULFATE</u> <u>DISSOLVED IRON / MANGANESE</u> <u>SULFIDE - METHANE</u> <u>ALKALINITY</u>										<input type="checkbox"/> Results in Dry Weight <input type="checkbox"/> J value reporting needed <input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds <input type="checkbox"/> 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run ____ oxy's on highest hit <input type="checkbox"/> Run ____ oxy's on all hits	
2 Sample Identification			3			6 Remarks											
Collected Date Time Grab Composite <u>9.12.13</u> <u>1116</u> <u>X</u> <u>X</u> <u>MW. 109</u> <u>1116</u> <u>X</u> <u>X</u> <u>MW. 110</u> <u>1320</u> <u>X</u> <u>X</u> <u>MW. 113</u> <u>1052</u> <u>X</u> <u>X</u> <u>MW. 114</u> <u>1013</u> <u>X</u> <u>X</u> <u>MW. 116</u> <u>1223</u> <u>X</u> <u>X</u>			Soil <input type="checkbox"/> Water <input checked="" type="checkbox"/> Oil <input type="checkbox"/> Total Number of Containers 2 9 16 9 16			Please report results for Dx with and without silica gel cleanup. Dissolved iron & manganese, as well as alkalinity samples have been field filtered											
7 Turnaround Time Requested (TAT) (please circle)			Relinquished by <u>[Signature]</u>			Date <u>9.12.13</u>		Time <u>1030</u>		Received by _____			Date _____		Time _____		
Standard <input checked="" type="radio"/> 5 day 4 day 72 hour 48 hour 24 hour			Relinquished by _____			Date _____		Time _____		Received by _____			Date _____		Time _____		
8 Data Package (circle if required)			Relinquished by Commercial Carrier: <u>UPS</u> <input checked="" type="checkbox"/> <u>FedEx</u> <input type="checkbox"/> <u>Other</u> <input type="checkbox"/>			Temperature Upon Receipt <u>1.2</u> °C			Received by <u>[Signature]</u>			Date <u>9-13-13</u>		Time <u>0920</u>			
Type I - Full <input type="checkbox"/> Type VI (Raw Data) <input type="checkbox"/>			EDD (circle if required) <u>EDDED</u> CVX-RTBU-FL_05 (default) Other: _____			Custody Seals Intact? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No											

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 \geq 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 \geq 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.

ANALYTICAL RESULTS

Prepared by:

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

Prepared for:

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

September 26, 2013

Project: 211556

Submittal Date: 09/14/2013
Group Number: 1418939
PO Number: 0015119898
Release Number: SHRILL HOPKINS
State of Sample Origin: WA

<u>Client Sample Description</u>	<u>Lancaster Labs (LL) #</u>
QA NA Water	7198300
B-1 Grab Groundwater	7198301
B-1 Filtered Grab Groundwater	7198302
B-1 Filtered Grab Groundwater	7198303
B-2 Grab Groundwater	7198304
B-2 Filtered Grab Groundwater	7198305
B-2 Filtered Grab Groundwater	7198306
B-3 Grab Groundwater	7198307
B-3 Filtered Grab Groundwater	7198308
B-3 Filtered Grab Groundwater	7198309
B-4 Grab Groundwater	7198310
B-4 Filtered Grab Groundwater	7198311
B-4 Filtered Grab Groundwater	7198312
MW-111 Grab Groundwater	7198313
MW-111 Filtered Grab Groundwater	7198314
MW-111 Filtered Grab Groundwater	7198315

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

ELECTRONIC COPY TO	SAIC	Attn: Jamalyn Green
ELECTRONIC COPY TO	SAIC	Attn: Russ Shropshire
ELECTRONIC COPY TO	Gettler-Ryan Inc.	Attn: Gettler Ryan

Respectfully Submitted,



Amek Carter
Specialist

(717) 556-7252

Sample Description: QA NA Water
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7198300
LL Group # 1418939
Account # 11260

Project Name: 211556

Collected: 09/13/2013

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 09/14/2013 08:50

San Ramon CA 94583

Reported: 09/26/2013 15:20

MRTQ-

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles			SW-846 8260B	ug/l	
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles			ECY 97-602 NWTPH-Gx	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1

General Sample Comments

State of Washington Lab Certification No. C259

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	D132662AA	09/23/2013 22:22	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D132662AA	09/23/2013 22:22	Brett W Kenyon	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	13262A07A	09/20/2013 13:16	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	13262A07A	09/20/2013 13:16	Marie D Beamenderfer	1

Sample Description: B-1 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7198301
LL Group # 1418939
Account # 11260

Project Name: 211556

Collected: 09/13/2013 10:15 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 09/14/2013 08:50

San Ramon CA 94583

Reported: 09/26/2013 15:20

MRTB1

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B ug/l					
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx ug/l					
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Miscellaneous RSKSOP-175 modified ug/l					
07105	Methane	74-82-8	36	3.0	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	29	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	67	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0 ug/l					
00368	Nitrate Nitrogen	14797-55-8	N.D.	250	5
00228	Sulfate	14808-79-8	4,600	1,500	5
SM 2320 B-1997 ug/l as CaCO3					
12150	Total Alkalinity	n.a.	109,000	700	1
SM 4500-S2 D-2000 ug/l					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C259
 This sample was field filtered for Alkalinity.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial# Batch#	Analysis Date and Time	Analyst	Dilution Factor
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Sample Description: B-1 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7198301
LL Group # 1418939
Account # 11260

Project Name: 211556

Collected: 09/13/2013 10:15 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 09/14/2013 08:50

Reported: 09/26/2013 15:20

San Ramon CA 94583

MRTB1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	D132662AA	09/24/2013 00:15	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D132662AA	09/24/2013 00:15	Brett W Kenyon	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	13262A07A	09/20/2013 22:42	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	13262A07A	09/20/2013 22:42	Marie D Beamenderfer	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	132620032A	09/20/2013 01:23	Elizabeth J Marin	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	132620025A	09/26/2013 12:01	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	132620024A	09/24/2013 17:42	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	132620024A	09/20/2013 09:45	Anna E Stager	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	132620025A	09/20/2013 09:45	Anna E Stager	1
00368	Nitrate Nitrogen	EPA 300.0	1	13257655601A	09/14/2013 14:35	Sandra J Miller	5
00228	Sulfate	EPA 300.0	1	13257655601A	09/14/2013 14:35	Sandra J Miller	5
12150	Total Alkalinity	SM 2320 B-1997	1	13260006104A	09/17/2013 14:45	Susan A Engle	1
00230	Sulfide	SM 4500-S2 D-2000	1	13261023002A	09/18/2013 14:40	Susan E Hibner	1

Sample Description: B-1 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7198302
LL Group # 1418939
Account # 11260

Project Name: 211556

Collected: 09/13/2013 10:15 by JP

Chevron

6001 Bollinger Canyon Road

Submitted: 09/14/2013 08:50

L4310

Reported: 09/26/2013 15:20

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved			SW-846 6010B	ug/l	
01754	Iron	7439-89-6	102	43.0	1
07058	Manganese	7439-96-5	404	0.83	1

General Sample Comments

State of Washington Lab Certification No. C259
 This sample was field filtered for dissolved iron and manganese.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	132611848004	09/21/2013 02:12	John W Yanzuk II	1
07058	Manganese	SW-846 6010B	1	132611848004	09/21/2013 02:12	John W Yanzuk II	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132611848004	09/19/2013 09:22	James L Mertz	1

Sample Description: B-1 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7198303
LL Group # 1418939
Account # 11260

Project Name: 211556

Collected: 09/13/2013 10:15 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 09/14/2013 08:50

Reported: 09/26/2013 15:20

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved		SW-846 6020	ug/l	ug/l	
06035	Lead	7439-92-1	N.D.	0.085	1

General Sample Comments

State of Washington Lab Certification No. C259
 This sample was filtered in the lab for dissolved lead.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	132626050001A	09/21/2013 01:59	Choon Y Tian	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	132626050001	09/20/2013 05:05	James L Mertz	1

Sample Description: B-2 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7198304
LL Group # 1418939
Account # 11260

Project Name: 211556

Collected: 09/13/2013 08:41 by JP

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

Submitted: 09/14/2013 08:50

Reported: 09/26/2013 15:20

MRTB2

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B ug/l					
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx ug/l					
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Miscellaneous RSKSOP-175 modified ug/l					
07105	Methane	74-82-8	15	3.0	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	29	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	67	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0 ug/l					
00368	Nitrate Nitrogen	14797-55-8	850	250	5
00228	Sulfate	14808-79-8	3,300	1,500	5
SM 2320 B-1997 ug/l as CaCO3					
12150	Total Alkalinity	n.a.	96,300	700	1
SM 4500-S2 D-2000 ug/l					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C259
This sample was field filtered for Alkalinity.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial# Batch#	Analysis Date and Time	Analyst	Dilution Factor
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Sample Description: B-2 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7198304
LL Group # 1418939
Account # 11260

Project Name: 211556

Collected: 09/13/2013 08:41 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 09/14/2013 08:50

Reported: 09/26/2013 15:20

San Ramon CA 94583

MRTB2

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	D132662AA	09/24/2013 00:38	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D132662AA	09/24/2013 00:38	Brett W Kenyon	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	13263B94A	09/21/2013 14:03	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	13263B94A	09/21/2013 14:03	Marie D Beamenderfer	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	132620032A	09/20/2013 01:42	Elizabeth J Marin	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	132620025A	09/26/2013 12:21	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	132620024A	09/24/2013 18:02	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	132620024A	09/20/2013 09:45	Anna E Stager	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	132620025A	09/20/2013 09:45	Anna E Stager	1
00368	Nitrate Nitrogen	EPA 300.0	1	13257655601A	09/14/2013 15:24	Sandra J Miller	5
00228	Sulfate	EPA 300.0	1	13257655601A	09/14/2013 15:24	Sandra J Miller	5
12150	Total Alkalinity	SM 2320 B-1997	1	13260006104A	09/17/2013 14:50	Susan A Engle	1
00230	Sulfide	SM 4500-S2 D-2000	1	13261023002A	09/18/2013 14:40	Susan E Hibner	1

Sample Description: B-2 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7198305
LL Group # 1418939
Account # 11260

Project Name: 211556

Collected: 09/13/2013 08:41 by JP

Chevron

6001 Bollinger Canyon Road

Submitted: 09/14/2013 08:50

L4310

Reported: 09/26/2013 15:20

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
		SW-846 6010B	ug/l	ug/l	
01754	Iron	7439-89-6	N.D.	43.0	1
07058	Manganese	7439-96-5	278	0.83	1

General Sample Comments

State of Washington Lab Certification No. C259
 This sample was field filtered for dissolved iron and manganese.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	132611848004	09/21/2013 02:15	John W Yanzuk II	1
07058	Manganese	SW-846 6010B	1	132611848004	09/21/2013 02:15	John W Yanzuk II	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132611848004	09/19/2013 09:22	James L Mertz	1

Sample Description: B-2 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7198306
LL Group # 1418939
Account # 11260

Project Name: 211556

Collected: 09/13/2013 08:41 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 09/14/2013 08:50

Reported: 09/26/2013 15:20

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved		SW-846 6020	ug/l	ug/l	
06035	Lead	7439-92-1	N.D.	0.085	1

General Sample Comments

State of Washington Lab Certification No. C259
 This sample was filtered in the lab for dissolved lead.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	132626050001A	09/21/2013 02:01	Choon Y Tian	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	132626050001	09/20/2013 05:05	James L Mertz	1

Sample Description: B-3 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7198307
LL Group # 1418939
Account # 11260

Project Name: 211556

Collected: 09/13/2013 13:32 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 09/14/2013 08:50

San Ramon CA 94583

Reported: 09/26/2013 15:20

MRTB3

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B ug/l					
10943	Benzene	71-43-2	0.6	0.5	1
10943	Ethylbenzene	100-41-4	37	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	0.9	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx ug/l					
08273	NWTPH-Gx water C7-C12	n.a.	1,700	50	1
GC Miscellaneous RSKSOP-175 modified ug/l					
07105	Methane	74-82-8	360	3.0	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	2,700	28	1
08271	Heavy Range Organics C24-C40	n.a.	72	66	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	160	28	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	66	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0 ug/l					
00368	Nitrate Nitrogen	14797-55-8	N.D.	250	5
00228	Sulfate	14808-79-8	9,000	1,500	5
SM 2320 B-1997 ug/l as CaCO3					
12150	Total Alkalinity	n.a.	238,000	700	1
SM 4500-S2 D-2000 ug/l					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C259
 This sample was field filtered for Alkalinity.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial# Batch#	Analysis Date and Time	Analyst	Dilution Factor
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Sample Description: B-3 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7198307
LL Group # 1418939
Account # 11260

Project Name: 211556

Collected: 09/13/2013 13:32 by JP

Chevron

6001 Bollinger Canyon Road

Submitted: 09/14/2013 08:50

L4310

Reported: 09/26/2013 15:20

San Ramon CA 94583

MRTB3

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time		Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	D132662AA	09/24/2013	01:01	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D132662AA	09/24/2013	01:01	Brett W Kenyon	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	13263B94A	09/21/2013	14:29	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	13263B94A	09/21/2013	14:29	Marie D Beamenderfer	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	132620032A	09/20/2013	02:00	Elizabeth J Marin	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	132620025A	09/26/2013	13:02	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	132620024A	09/24/2013	18:21	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	132620024A	09/20/2013	09:45	Anna E Stager	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	132620025A	09/20/2013	09:45	Anna E Stager	1
00368	Nitrate Nitrogen	EPA 300.0	1	13257655601A	09/14/2013	15:40	Sandra J Miller	5
00228	Sulfate	EPA 300.0	1	13257655601A	09/14/2013	15:40	Sandra J Miller	5
12150	Total Alkalinity	SM 2320 B-1997	1	13260006104A	09/17/2013	14:56	Susan A Engle	1
00230	Sulfide	SM 4500-S2 D-2000	1	13261023002A	09/18/2013	14:40	Susan E Hibner	1

Sample Description: B-3 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7198308
LL Group # 1418939
Account # 11260

Project Name: 211556

Collected: 09/13/2013 13:32 by JP

Chevron

6001 Bollinger Canyon Road

Submitted: 09/14/2013 08:50

L4310

Reported: 09/26/2013 15:20

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved			SW-846 6010B	ug/l	
01754	Iron	7439-89-6	20,000	43.0	1
07058	Manganese	7439-96-5	6,070	0.83	1

General Sample Comments

State of Washington Lab Certification No. C259
 This sample was field filtered for dissolved iron and manganese.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	132611848004	09/21/2013 02:19	John W Yanzuk II	1
07058	Manganese	SW-846 6010B	1	132611848004	09/21/2013 02:19	John W Yanzuk II	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132611848004	09/19/2013 09:22	James L Mertz	1

Sample Description: B-3 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7198309
LL Group # 1418939
Account # 11260

Project Name: 211556

Collected: 09/13/2013 13:32 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 09/14/2013 08:50

Reported: 09/26/2013 15:20

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved		SW-846 6020	ug/l	ug/l	
06035	Lead	7439-92-1	16.0	0.085	1

General Sample Comments

State of Washington Lab Certification No. C259
 This sample was filtered in the lab for dissolved lead.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	132626050001A	09/21/2013 02:04	Choon Y Tian	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	132626050001	09/20/2013 05:05	James L Mertz	1

Sample Description: B-4 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7198310
LL Group # 1418939
Account # 11260

Project Name: 211556

Collected: 09/13/2013 12:23 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 09/14/2013 08:50

San Ramon CA 94583

Reported: 09/26/2013 15:20

MRTB4

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B ug/l					
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	3	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	0.5	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx ug/l					
08273	NWTPH-Gx water C7-C12	n.a.	1,200	50	1
GC Miscellaneous RSKSOP-175 modified ug/l					
07105	Methane	74-82-8	370	3.0	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	250	28	1
08271	Heavy Range Organics C24-C40	n.a.	110	66	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	130	28	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	66	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0 ug/l					
00368	Nitrate Nitrogen	14797-55-8	N.D.	250	5
00228	Sulfate	14808-79-8	N.D.	1,500	5
SM 2320 B-1997 ug/l as CaCO3					
12150	Total Alkalinity	n.a.	131,000	700	1
SM 4500-S2 D-2000 ug/l					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C259
This sample was field filtered for Alkalinity.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial# Batch#	Analysis Date and Time	Analyst	Dilution Factor
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Sample Description: B-4 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7198310
LL Group # 1418939
Account # 11260

Project Name: 211556

Collected: 09/13/2013 12:23 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 09/14/2013 08:50

Reported: 09/26/2013 15:20

San Ramon CA 94583

MRTB4

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time		Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	D132662AA	09/24/2013	01:23	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D132662AA	09/24/2013	01:23	Brett W Kenyon	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	13263B94A	09/21/2013	14:54	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	13263B94A	09/21/2013	14:54	Marie D Beamenderfer	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	132620032A	09/20/2013	02:18	Elizabeth J Marin	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	132620025A	09/26/2013	13:42	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	132620024A	09/24/2013	18:41	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	132620024A	09/20/2013	09:45	Anna E Stager	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	132620025A	09/20/2013	09:45	Anna E Stager	1
00368	Nitrate Nitrogen	EPA 300.0	1	13257655601A	09/14/2013	15:56	Sandra J Miller	5
00228	Sulfate	EPA 300.0	1	13257655601A	09/14/2013	15:56	Sandra J Miller	5
12150	Total Alkalinity	SM 2320 B-1997	1	13260006104A	09/17/2013	15:21	Susan A Engle	1
00230	Sulfide	SM 4500-S2 D-2000	1	13261023002A	09/18/2013	14:40	Susan E Hibner	1

Sample Description: B-4 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7198311
LL Group # 1418939
Account # 11260

Project Name: 211556

Collected: 09/13/2013 12:23 by JP

Chevron

6001 Bollinger Canyon Road

Submitted: 09/14/2013 08:50

L4310

Reported: 09/26/2013 15:20

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved			SW-846 6010B	ug/l	
01754	Iron	7439-89-6	10,900	43.0	1
07058	Manganese	7439-96-5	2,300	0.83	1

General Sample Comments

State of Washington Lab Certification No. C259
 This sample was field filtered for dissolved iron and manganese.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	132611848004	09/21/2013 02:23	John W Yanzuk II	1
07058	Manganese	SW-846 6010B	1	132611848004	09/21/2013 02:23	John W Yanzuk II	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132611848004	09/19/2013 09:22	James L Mertz	1

Sample Description: B-4 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7198312
LL Group # 1418939
Account # 11260

Project Name: 211556

Collected: 09/13/2013 12:23 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 09/14/2013 08:50

Reported: 09/26/2013 15:20

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
06035	Lead	SW-846 6020 7439-92-1	ug/l 1.6	ug/l 0.085	1

General Sample Comments

State of Washington Lab Certification No. C259
 This sample was filtered in the lab for dissolved lead.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	132626050001A	09/21/2013 02:05	Choon Y Tian	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	132626050001	09/20/2013 05:05	James L Mertz	1

Sample Description: MW-111 Grab Groundwater
Facility# 211556 **Job#** 386773
 101 Mulford Rd - Toledo, WA

LL Sample # WW 7198313
LL Group # 1418939
Account # 11260

Project Name: 211556

Collected: 09/13/2013 11:15 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 09/14/2013 08:50

Reported: 09/26/2013 15:20

MRT01

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B			ug/l	ug/l	
10943	Benzene	71-43-2	1	0.5	1
10943	Ethylbenzene	100-41-4	110	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	39	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx			ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	5,500	50	1
GC Miscellaneous RSKSOP-175 modified			ug/l	ug/l	
07105	Methane	74-82-8	3,000	60	20
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	3,600	28	1
08271	Heavy Range Organics C24-C40	n.a.	89	66	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	330	28	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	66	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0			ug/l	ug/l	
00368	Nitrate Nitrogen	14797-55-8	N.D.	250	5
00228	Sulfate	14808-79-8	1,700	1,500	5
SM 2320 B-1997			ug/l as CaCO3	ug/l as CaCO3	
12150	Total Alkalinity	n.a.	202,000	700	1
SM 4500-S2 D-2000			ug/l	ug/l	
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C259
 This sample was field filtered for Alkalinity.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial# Batch#	Analysis Date and Time	Analyst	Dilution Factor
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Sample Description: MW-111 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7198313
LL Group # 1418939
Account # 11260

Project Name: 211556

Collected: 09/13/2013 11:15 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 09/14/2013 08:50

Reported: 09/26/2013 15:20

San Ramon CA 94583

MRT01

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	D132662AA	09/24/2013 01:46	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D132662AA	09/24/2013 01:46	Brett W Kenyon	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	13263B94A	09/21/2013 15:19	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	13263B94A	09/21/2013 15:19	Marie D Beamenderfer	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	132620032A	09/20/2013 15:43	Elizabeth J Marin	20
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	132620025A	09/26/2013 13:22	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	132620024A	09/24/2013 19:01	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	132620024A	09/20/2013 09:45	Anna E Stager	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	132620025A	09/20/2013 09:45	Anna E Stager	1
00368	Nitrate Nitrogen	EPA 300.0	1	13257655601A	09/14/2013 16:12	Sandra J Miller	5
00228	Sulfate	EPA 300.0	1	13257655601A	09/14/2013 16:12	Sandra J Miller	5
12150	Total Alkalinity	SM 2320 B-1997	1	13260006104A	09/17/2013 15:26	Susan A Engle	1
00230	Sulfide	SM 4500-S2 D-2000	1	13261023002A	09/18/2013 14:40	Susan E Hibner	1

Sample Description: MW-111 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7198314
LL Group # 1418939
Account # 11260

Project Name: 211556

Collected: 09/13/2013 11:15 by JP

Chevron

6001 Bollinger Canyon Road

Submitted: 09/14/2013 08:50

L4310

Reported: 09/26/2013 15:20

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved			SW-846 6010B	ug/l	
01754	Iron	7439-89-6	12,300	43.0	1
07058	Manganese	7439-96-5	4,740	0.83	1

General Sample Comments

State of Washington Lab Certification No. C259
 This sample was field filtered for dissolved iron and manganese.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	132611848001	09/19/2013 19:14	Katlin N Cataldi	1
07058	Manganese	SW-846 6010B	1	132611848001	09/19/2013 19:14	Katlin N Cataldi	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132611848001	09/19/2013 09:40	James L Mertz	1

Sample Description: MW-111 Filtered Grab Groundwater
 Facility# 211556 Job# 386773
 101 Mulford Rd - Toledo, WA

LL Sample # WW 7198315
 LL Group # 1418939
 Account # 11260

Project Name: 211556

Collected: 09/13/2013 11:15 by JP

Chevron

6001 Bollinger Canyon Road
 L4310

Submitted: 09/14/2013 08:50

Reported: 09/26/2013 15:20

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
06035	Lead	SW-846 6020 7439-92-1	ug/l 59.4	ug/l 0.085	1

General Sample Comments

State of Washington Lab Certification No. C259
 This sample was filtered in the lab for dissolved lead.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	132626050001A	09/21/2013 02:07	Choon Y Tian	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	132626050001	09/20/2013 05:05	James L Mertz	1

Quality Control Summary

Client Name: Chevron
Reported: 09/26/13 at 03:20 PM

Group Number: 1418939

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

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: D132662AA	Sample number(s): 7198300-7198301,7198304,7198307,7198310,7198313							
Benzene	N.D.	0.5	ug/l	93		78-120		
Ethylbenzene	N.D.	0.5	ug/l	93		79-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	93		75-120		
Toluene	N.D.	0.5	ug/l	95		80-120		
Xylene (Total)	N.D.	0.5	ug/l	94		80-120		
Batch number: 13262A07A	Sample number(s): 7198300-7198301							
NWTPH-Gx water C7-C12	N.D.	50.	ug/l	96		75-135		
Batch number: 13263B94A	Sample number(s): 7198304,7198307,7198310,7198313							
NWTPH-Gx water C7-C12	N.D.	50.	ug/l	108		75-135		
Batch number: 132620032A	Sample number(s): 7198301,7198304,7198307,7198310,7198313							
Methane	N.D.	3.0	ug/l	108		80-120		
Batch number: 132620025A	Sample number(s): 7198301,7198304,7198307,7198310,7198313							
Diesel Range Organics C12-C24	N.D.	30.	ug/l	80	88	50-113	10	20
Heavy Range Organics C24-C40	N.D.	70.	ug/l					
Batch number: 132620024A	Sample number(s): 7198301,7198304,7198307,7198310,7198313							
DRO C12-C24 w/Si Gel	N.D.	30.	ug/l	54	66	32-117	21*	20
HRO C24-C40 w/Si Gel	N.D.	70.	ug/l					
Batch number: 132611848001	Sample number(s): 7198314							
Iron	68.2	43.0	ug/l	103		90-112		
Manganese	N.D.	0.83	ug/l	102		90-110		
Batch number: 132611848004	Sample number(s): 7198302,7198305,7198308,7198311							
Iron	N.D.	43.0	ug/l	100		90-112		
Manganese	N.D.	0.83	ug/l	101		90-110		
Batch number: 132626050001A	Sample number(s): 7198303,7198306,7198309,7198312,7198315							
Lead	N.D.	0.085	ug/l	102		90-115		
Batch number: 13257655601A	Sample number(s): 7198301,7198304,7198307,7198310,7198313							
Nitrate Nitrogen	N.D.	50.	ug/l	99		90-110		
Sulfate	N.D.	300.	ug/l	99		90-110		
Batch number: 13260006104A	Sample number(s): 7198301,7198304,7198307,7198310,7198313							
Total Alkalinity	N.D.	700.	ug/l as CaCO3	97		90-110		
Batch number: 13261023002A	Sample number(s): 7198301,7198304,7198307,7198310,7198313							

*- 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: 1418939
Reported: 09/26/13 at 03:20 PM

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Sulfide	N.D.	54.	ug/l	92		90-110		

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

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: D132662AA	Sample number(s): 7198300-7198301,7198304,7198307,7198310,7198313 UNSPK: P199193								
Benzene	104	104	72-134	1	30				
Ethylbenzene	102	101	71-134	1	30				
Methyl Tertiary Butyl Ether	91	98	72-126	7	30				
Toluene	104	104	80-125	1	30				
Xylene (Total)	103	103	79-125	1	30				
Batch number: 13262A07A	Sample number(s): 7198300-7198301 UNSPK: P197109								
NWTPH-Gx water C7-C12	101	106	75-135	5	30				
Batch number: 13263B94A	Sample number(s): 7198304,7198307,7198310,7198313 UNSPK: P199193								
NWTPH-Gx water C7-C12	96	95	75-135	1	30				
Batch number: 132620032A	Sample number(s): 7198301,7198304,7198307,7198310,7198313 UNSPK: P199193								
Methane	-3706 (2)	-3394 (2)	35-157	8	20				
Batch number: 132611848001	Sample number(s): 7198314 UNSPK: P200857 BKG: P200857								
Iron	123	122	75-125	0	20	1,830	1,980	8	20
Manganese	101	101	75-125	0	20	29.7	30.7	3	20
Batch number: 132611848004	Sample number(s): 7198302,7198305,7198308,7198311 UNSPK: P197126 BKG: P197126								
Iron	101	104	75-125	1	20	1,230	1,240	0	20
Manganese	121 (2)	134 (2)	75-125	1	20	4,380	4,460	2	20
Batch number: 132626050001A	Sample number(s): 7198303,7198306,7198309,7198312,7198315 UNSPK: P202468 BKG: P202468								
Lead	109	106	83-120	2	20	13.0	13.4	3	20
Batch number: 13257655601A	Sample number(s): 7198301,7198304,7198307,7198310,7198313 UNSPK: 7198301 BKG: 7198301								
Nitrate Nitrogen	98		90-110			N.D.	N.D.	0 (1)	20
Sulfate	98		90-110			4,600	4,700	3 (1)	20
Batch number: 13260006104A	Sample number(s): 7198301,7198304,7198307,7198310,7198313 UNSPK: P198371 BKG: P198371								
Total Alkalinity	95		10-159			163,000	165,000	1	5
Batch number: 13261023002A	Sample number(s): 7198301,7198304,7198307,7198310,7198313 UNSPK: P200931 BKG: P200931								
Sulfide	85	85	42-131	1	16	140	120	14* (1)	5

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 09/26/13 at 03:20 PM

Group Number: 1418939

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: UST VOCs by 8260B - Water
Batch number: D132662AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7198300	99	98	99	99
7198301	99	96	99	98
7198304	98	96	99	99
7198307	99	97	99	102
7198310	100	99	100	102
7198313	100	98	99	101
Blank	100	95	101	101
LCS	99	103	101	100
MS	100	98	100	99
MSD	100	102	99	99
Limits:	80-116	77-113	80-113	78-113

Analysis Name: NWT PH-Gx water C7-C12
Batch number: 13262A07A
Trifluorotoluene-F

7198300	91
7198301	86
Blank	92
LCS	101
MS	96
MSD	97
Limits:	63-135

Analysis Name: NWT PH-Gx water C7-C12
Batch number: 13263B94A
Trifluorotoluene-F

7198304	74
7198307	100
7198310	91
7198313	97
Blank	85
LCS	81
MS	81
MSD	80
Limits:	63-135

Analysis Name: NWT PH-Dx water w/ 10g Si Gel
Batch number: 132620024A
Orthoterphenyl

7198301	89
7198304	83

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 09/26/13 at 03:20 PM

Group Number: 1418939

Surrogate Quality Control

7198307 76
7198310 90
7198313 78
Blank 79
LCS 76
LCSD 93

Limits: 50-150

Analysis Name: NWT PH-Dx water
Batch number: 132620025A
Orthoterphenyl

7198301 101
7198304 108
7198307 120
7198310 104
7198313 138
Blank 109
LCS 105
LCSD 114

Limits: 50-150

Analysis Name: Volatile Headspace Hydrocarbon
Batch number: 132620032A
Propene

7198301 83
7198304 83
7198307 76
7198310 84
7198313 104
Blank 91
LCS 103
MS 79
MSD 92

Limits: 42-131

*- 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



Lancaster Laboratories

Acct. # 11260 For Eurofins Lancaster Laboratories use only
 Group # 1418939 Sample # 7198300-15
Instructions on reverse side correspond with circled numbers.

1 Please forward the lab analysis to the Lead Consultant and cc: G-R			4 Matrix			5 Analyses Requested									
Facility # <u>SS#211556-OML G-R#386773</u> Site Address <u>101 Mulford Road, TOLEDO, WA</u> Chevron PM <u>MHO</u> SAICRS Lead Consultant <u>Russell Shropshire</u> Consultant/Office <u>Gettler-Ryan, Inc., 6747 Sierra Court, Suite J, Dublin, CA 94588</u> Consultant Project Mgr. <u>Deanna L. Harding, (deanna@grinc.com), (925) 551-7444 x180</u> Consultant Phone # <u>(425) 482-3323 x</u> Sampler <u>J. PAYNE</u>			<input type="checkbox"/> Sediment <input checked="" type="checkbox"/> Ground <input type="checkbox"/> Surface <input type="checkbox"/> Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Air Total Number of Containers <u>2</u> BTEX + MTBE 8021 <input type="checkbox"/> 8260 <input checked="" type="checkbox"/> Naphth <input type="checkbox"/> 8260 full scan <input type="checkbox"/> Oxygenates <input type="checkbox"/> NWTPH-Gx <input type="checkbox"/> NWTPH-Dx with Silica Gel Cleanup <input checked="" type="checkbox"/> NWTPH-Dx without Silica Gel Cleanup <input checked="" type="checkbox"/> WA VPH <input type="checkbox"/> WA EPH <input type="checkbox"/> Lead Total <input type="checkbox"/> Diss. <input checked="" type="checkbox"/> Method <u>8020</u> NITRATE · SULFATE DISS. IRON & MANGANESE SULFIDE · METHANE ALKALINITY			SCR #: _____ <input type="checkbox"/> Results in Dry Weight <input type="checkbox"/> J value reporting needed <input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds <input type="checkbox"/> 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run _____ oxy's on highest hit <input type="checkbox"/> Run _____ oxy's on all hits									
2 Sample Identification			3			6 Remarks									
Collected Date Time Grab Composite <u>9.13 1615 X</u> <u>9.13 1641 X</u> <u>9.13 1332 X</u> <u>9.13 1123 X</u> <u>9.13 1115 X</u>			Soil <input type="checkbox"/> Water <input checked="" type="checkbox"/> Oil <input type="checkbox"/>			Please report results for Dx with and without silica gel cleanup. Dissolved iron & manganese, as well as alkalinity samples have been field filtered									

7 Turnaround Time Requested (TAT) (please circle)			Relinquished by <u>[Signature]</u>		Date <u>9.13.13</u>		Time <u>1630</u>		Received by <u>[Signature]</u>		Date		Time	
Standard <input checked="" type="radio"/> 5 day 4 day 72 hour 48 hour 24 hour			Relinquished by		Date		Time		Received by		Date		Time	
8 Data Package (circle if required)			Relinquished by Commercial Carrier:		Date		Time		Received by		Date		Time	
Type I - Full Type VI (Raw Data)			EDD (circle if required) <u>EDD</u> CVX-RTBU-FL_05 (default) Other: _____		UPS <input checked="" type="checkbox"/> FedEx _____ Other _____		Temperature Upon Receipt: <u>4-4.2</u> °C		Received by <u>[Signature]</u> Custody Seals Intact? <input checked="" type="radio"/> Yes <input type="radio"/> No		Date <u>9/14/13</u>		Time <u>850</u>	

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 \geq the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ).

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

- A** TIC is a possible aldol-condensation product
- B** Analyte was also detected in the blank
- C** Pesticide result confirmed by GC/MS
- D** Compound quantitated on a diluted sample
- E** Concentration exceeds the calibration range of the instrument
- N** Presumptive evidence of a compound (TICs only)
- P** Concentration difference between primary and confirmation columns $>25\%$
- U** Compound was not detected
- X,Y,Z** Defined in case narrative

Inorganic Qualifiers

- B** Value is $<$ CRDL, but \geq IDL
- E** Estimated due to interference
- M** Duplicate injection precision not met
- N** Spike sample not within control limits
- S** Method of standard additions (MSA) used for calculation
- U** Compound was not detected
- W** Post digestion spike out of control limits
- *** Duplicate analysis not within control limits
- +** 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.

ANALYTICAL RESULTS

Prepared by:

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

Prepared for:

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

December 10, 2013

Project: 211556

Submittal Date: 11/26/2013
Group Number: 1436827
PO Number: 0015119898
Release Number: SHRILL HOPKINS
State of Sample Origin: WA

<u>Client Sample Description</u>	<u>Lancaster Labs (LL) #</u>
QA NA Water	7293155
MW-109 Grab Water	7293156
MW-109 Filtered Grab Water	7293157
MW-114 Grab Water	7293158
MW-114 Filtered Grab Water	7293159

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

ELECTRONIC COPY TO	Gettler-Ryan Inc.	Attn: Gettler Ryan
ELECTRONIC COPY TO	SAIC	Attn: Jamalyn Green
ELECTRONIC COPY TO	SAIC	Attn: Russ Shropshire

Respectfully Submitted,



Amek Carter
Specialist

(717) 556-7252

Sample Description: QA NA Water
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7293155
LL Group # 1436827
Account # 11260

Project Name: 211556

Collected: 11/22/2013

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 11/26/2013 09:15

San Ramon CA 94583

Reported: 12/10/2013 08:05

MTQA-

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles			SW-846 8260B	ug/l	
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles			ECY 97-602 NWTPH-Gx	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	F133384AA	12/04/2013 18:59	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F133384AA	12/04/2013 18:59	Brett W Kenyon	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	13336A07A	12/02/2013 12:56	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	13336A07A	12/02/2013 12:56	Marie D Beamenderfer	1

Sample Description: MW-109 Grab Water
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7293156
LL Group # 1436827
Account # 11260

Project Name: 211556

Collected: 11/22/2013 08:50 by JP

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

Submitted: 11/26/2013 09:15

Reported: 12/10/2013 08:05

109MT

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B			ug/l	ug/l	
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx			ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	68	29	1
08271	Heavy Range Organics C24-C40	n.a.	170	67	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1
The reverse surrogate, capric acid, is present at <1%.					

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	F133384AA	12/04/2013 19:21	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F133384AA	12/04/2013 19:21	Brett W Kenyon	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	13336A07A	12/02/2013 17:09	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	13336A07A	12/02/2013 17:09	Marie D Beamenderfer	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	133370025A	12/06/2013 16:01	Nicholas R Rossi	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	133370024A	12/06/2013 14:53	Nicholas R Rossi	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	133370024A	12/04/2013 12:30	Kelli M Barto	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	133370025A	12/04/2013 12:30	Kelli M Barto	1

Sample Description: MW-109 Filtered Grab Water
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7293157
LL Group # 1436827
Account # 11260

Project Name: 211556

Collected: 11/22/2013 08:50 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 11/26/2013 09:15

San Ramon CA 94583

Reported: 12/10/2013 08:05

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
06035	Metals Dissolved Lead	SW-846 6020 7439-92-1	ug/l N.D.	ug/l 0.085	1

General Sample Comments

State of Washington Lab Certification No. C457
This sample was lab filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	133386050005A	12/06/2013 11:55	Deborah A Krady	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	133386050005	12/05/2013 11:27	James L Mertz	1

Sample Description: MW-114 Grab Water
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7293158
LL Group # 1436827
Account # 11260

Project Name: 211556

Collected: 11/22/2013 09:40 by JP

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

Submitted: 11/26/2013 09:15

Reported: 12/10/2013 08:05

114MT

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B			ug/l	ug/l	
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx			ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	99	29	1
08271	Heavy Range Organics C24-C40	n.a.	340	68	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	200	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	68	1
The reverse surrogate, capric acid, is present at <1%.					

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	F133384AA	12/04/2013 20:27	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F133384AA	12/04/2013 20:27	Brett W Kenyon	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	13336A07A	12/02/2013 17:33	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	13336A07A	12/02/2013 17:33	Marie D Beamenderfer	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	133370025A	12/06/2013 16:26	Nicholas R Rossi	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	133370024A	12/06/2013 15:15	Nicholas R Rossi	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	133370024A	12/04/2013 12:30	Kelli M Barto	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	133370025A	12/04/2013 12:30	Kelli M Barto	1

Sample Description: MW-114 Filtered Grab Water
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7293159
LL Group # 1436827
Account # 11260

Project Name: 211556

Collected: 11/22/2013 09:40 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 11/26/2013 09:15

San Ramon CA 94583

Reported: 12/10/2013 08:05

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved		SW-846 6020	ug/l	ug/l	
06035	Lead	7439-92-1	0.10	0.085	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was lab filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	133386050005A	12/09/2013 20:57	John P Hook	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	133386050005	12/05/2013 11:27	James L Mertz	1

Quality Control Summary

Client Name: Chevron
Reported: 12/10/13 at 08:05 AM

Group Number: 1436827

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

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: F133384AA	Sample number(s): 7293155-7293156,7293158							
Benzene	N.D.	0.5	ug/l	95		78-120		
Ethylbenzene	N.D.	0.5	ug/l	93		79-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	96		75-120		
Toluene	N.D.	0.5	ug/l	92		80-120		
Xylene (Total)	N.D.	0.5	ug/l	94		80-120		
Batch number: 13336A07A	Sample number(s): 7293155-7293156,7293158							
NWTPH-Gx water C7-C12	N.D.	50.	ug/l	107		75-135		
Batch number: 133370025A	Sample number(s): 7293156,7293158							
Diesel Range Organics C12-C24	N.D.	30.	ug/l	75	75	50-113	0	20
Heavy Range Organics C24-C40	N.D.	70.	ug/l					
Batch number: 133370024A	Sample number(s): 7293156,7293158							
DRO C12-C24 w/Si Gel	N.D.	30.	ug/l	68	71	32-117	5	20
HRO C24-C40 w/Si Gel	N.D.	70.	ug/l					
Batch number: 133386050005A	Sample number(s): 7293157,7293159							
Lead	N.D.	0.085	ug/l	102		90-110		

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

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: F133384AA	Sample number(s): 7293155-7293156,7293158 UNSPK: 7293156								
Benzene	100	103	72-134	3	30				
Ethylbenzene	104	103	71-134	1	30				
Methyl Tertiary Butyl Ether	101	101	72-126	0	30				
Toluene	102	102	80-125	0	30				
Xylene (Total)	104	103	79-125	1	30				
Batch number: 13336A07A	Sample number(s): 7293155-7293156,7293158 UNSPK: P292979								
NWTPH-Gx water C7-C12	114	111	75-135	2	30				
Batch number: 133386050005A	Sample number(s): 7293157,7293159 UNSPK: P293711 BKG: P293711								
Lead	104	105	89-120	0	20	6.4	6.3	3	20

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 12/10/13 at 08:05 AM

Group Number: 1436827

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: UST VOCs by 8260B - Water
Batch number: F133384AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7293155	100	99	100	96
7293156	98	95	98	97
7293158	99	101	99	98
Blank	99	100	99	96
LCS	100	103	99	98
MS	100	105	100	101
MSD	101	102	100	99
Limits:	80-116	77-113	80-113	78-113

Analysis Name: NWTPH-Gx water C7-C12
Batch number: 13336A07A
Trifluorotoluene-F

7293155	101
7293156	85
7293158	99
Blank	96
LCS	113
MS	99
MSD	99
Limits:	63-135

Analysis Name: NWTPH-Dx water w/ 10g Si Gel
Batch number: 133370024A
Orthoterphenyl

7293156	84
7293158	77
Blank	86
LCS	87
LCSD	91
Limits:	50-150

Analysis Name: NWTPH-Dx water
Batch number: 133370025A
Orthoterphenyl

7293156	93
7293158	92
Blank	94
LCS	99
LCSD	100

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 12/10/13 at 08:05 AM

Group Number: 1436827

Surrogate Quality Control

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 California Region Analysis Request/Chain of Custody



For Lancaster Laboratories use only
 Acct. #: 11260 Sample #: 7293155-60 SCR#: _____

Grp # 1436827

Facility #: <u>SS # 211066 - OML U-R # 306773</u> Site Address: <u>101 MULFORD ROAD, TOLEDO, WA</u> Chevron PM: <u>MARK HORNE</u> Lead Consultant: <u>LEIDOS RG</u> Consultant/Office: <u>BETTER RYAN INC 6805 SIEVEGAT DUBLINA</u> Consultant Prj. Mgr.: <u>DEANNA L HARDING 923 561-7444</u> Consultant Phone #: <u>416/401 3323</u> Fax #: _____ Sampler: _____ <u>J. PAYNE</u> Service Order #: _____ <input type="checkbox"/> Non SAR: _____				Matrix <input type="checkbox"/> Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Water <input type="checkbox"/> Oil <input type="checkbox"/> Air			Analyses Requested										Preservative Codes H = HCl T = Thiosulfate N = HNO ₃ B = NaOH S = H ₂ SO ₄ O = Other <input type="checkbox"/> J value reporting needed <input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds 8021 MTBE Confirmation <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run ___ oxy s on highest hit <input type="checkbox"/> Run ___ oxy s on all hits										
				Preservation Codes																							
				Total Number of Containers																							
				BTEX + MTBE 8260 <input checked="" type="checkbox"/> 8021 <input type="checkbox"/> TPH 8015 MOD GRO <input type="checkbox"/> TPH 8015 MOD DRO <input type="checkbox"/> Silica Gel Cleanup <input type="checkbox"/> 8260 full scan <input type="checkbox"/> Oxygenates <input type="checkbox"/> Lead 7420 <input type="checkbox"/> 7421 <input type="checkbox"/> <u>NI/TPH - 6x</u> <u>NI/TPH - 10x w/ silica</u> <u>NI/TPH - 10x without silica</u> <u>DISSOLVED LEAD</u>																							
Sample Identification				Date Collected		Time Collected		Grab	Composite	Soil	Water	Oil	Air	Total Number of Containers	BTEX + MTBE 8260	TPH 8015 MOD GRO	TPH 8015 MOD DRO	8260 full scan	Oxygenates	Lead 7420	Lead 7421	NI/TPH - 6x	NI/TPH - 10x w/ silica	NI/TPH - 10x without silica	DISSOLVED LEAD	Comments / Remarks	
				<u>11-22-13</u>		<u>0850</u>		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<u>Dx SAMPLES TO BE RUN WITH & WITHOUT SILICA GEL</u>	
Turnaround Time Requested (TAT) (please circle) <input checked="" type="radio"/> STD. TAT 72 hour 48 hour 24 hour 4 day 5 day				Relinquished by: <u>[Signature]</u> Date: <u>11-25-13</u> Time: <u>1300</u>			Received by: _____ Date: _____ Time: _____		Relinquished by: _____ Date: _____ Time: _____	Received by: _____ Date: _____ Time: _____	Relinquished by: _____ Date: _____ Time: _____	Received by: _____ Date: _____ Time: _____	Relinquished by Commercial Carrier: <input checked="" type="radio"/> UPS FedEx Other _____	Received by: _____ Date: <u>11/26/13</u> Time: <u>915</u>		Temperature Upon Receipt: <u>0.8-2.2 °C</u>	Custody Seals Intact? <input checked="" type="radio"/> Yes <input type="radio"/> No										

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 \geq the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ).

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

- A** TIC is a possible aldol-condensation product
- B** Analyte was also detected in the blank
- C** Pesticide result confirmed by GC/MS
- D** Compound quantitated on a diluted sample
- E** Concentration exceeds the calibration range of the instrument
- N** Presumptive evidence of a compound (TICs only)
- P** Concentration difference between primary and confirmation columns $>25\%$
- U** Compound was not detected
- X,Y,Z** Defined in case narrative

Inorganic Qualifiers

- B** Value is $<$ CRDL, but \geq IDL
- E** Estimated due to interference
- M** Duplicate injection precision not met
- N** Spike sample not within control limits
- S** Method of standard additions (MSA) used for calculation
- U** Compound was not detected
- W** Post digestion spike out of control limits
- *** Duplicate analysis not within control limits
- +** 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.

ANALYTICAL RESULTS

Prepared by:

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

Prepared for:

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

December 09, 2013

Project: 211556

Submittal Date: 11/22/2013
Group Number: 1436001
PO Number: 0015119898
Release Number: SHRILL HOPKINS
State of Sample Origin: WA

<u>Client Sample Description</u>	<u>Lancaster Labs (LL) #</u>
QA NA Water	7288838
B-1 Grab Groundwater	7288839
B-1 Filtered Grab Groundwater	7288840
B-1 Filtered Grab Groundwater	7288841
B-2 Grab Groundwater	7288842
B-2 Filtered Grab Groundwater	7288843
B-3 Grab Groundwater	7288844
B-3 Filtered Grab Groundwater	7288845
B-3 Filtered Grab Groundwater	7288846
B-4 Grab Groundwater	7288847
B-4 Filtered Grab Groundwater	7288848
B-4 Filtered Grab Groundwater	7288849
MW-111 Grab Groundwater	7288850
MW-111 Filtered Grab Groundwater	7288851
MW-111 Filtered Grab Groundwater	7288852

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

ELECTRONIC COPY TO	Gettler-Ryan Inc.	Attn: Gettler Ryan
ELECTRONIC COPY TO	SAIC	Attn: Jamalyn Green
ELECTRONIC COPY TO	SAIC	Attn: Russ Shropshire

Respectfully Submitted,



Amek Carter
Specialist

(717) 556-7252

Sample Description: QA NA Water
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7288838
LL Group # 1436001
Account # 11260

Project Name: 211556

Collected: 11/21/2013

Chevron

Submitted: 11/22/2013 09:00

6001 Bollinger Canyon Road

Reported: 12/09/2013 14:04

L4310

San Ramon CA 94583

MT-QA

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles			SW-846 8260B	ug/l	
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles			ECY 97-602 NWTPH-Gx	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	Z133361AA	12/02/2013 17:53	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z133361AA	12/02/2013 17:53	Brett W Kenyon	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	13326B07A	11/25/2013 13:16	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	13326B07A	11/25/2013 13:16	Catherine J Schwarz	1

Sample Description: B-1 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7288839
LL Group # 1436001
Account # 11260

Project Name: 211556

Collected: 11/21/2013 10:14 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 11/22/2013 09:00

Reported: 12/09/2013 14:04

MRTB1

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B ug/l					
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx ug/l					
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Miscellaneous RSKSOP-175 modified ug/l					
07105	Methane	74-82-8	140	3.0	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	29	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	67	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0 ug/l					
00368	Nitrate Nitrogen	14797-55-8	N.D.	250	5
00228	Sulfate	14808-79-8	4,200	1,500	5
SM 2320 B-1997 ug/l as CaCO3					
12150	Total Alkalinity	n.a.	90,600	700	1
SM 4500-S2 D-2000 ug/l					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	Z133361AA	12/02/2013 18:17	Brett W Kenyon	1

Sample Description: B-1 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7288839
LL Group # 1436001
Account # 11260

Project Name: 211556

Collected: 11/21/2013 10:14 by JP

Chevron

6001 Bollinger Canyon Road

Submitted: 11/22/2013 09:00

L4310

Reported: 12/09/2013 14:04

San Ramon CA 94583

MRTB1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z133361AA	12/02/2013 18:17	Brett W Kenyon	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	13326B07A	11/25/2013 14:57	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	13326B07A	11/25/2013 14:57	Catherine J Schwarz	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	133370032A	12/04/2013 02:59	Elizabeth J Marin	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	133310027A	12/03/2013 14:39	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	133310028A	12/03/2013 00:35	Michele D Hamilton	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	133310028A	11/29/2013 19:00	Elaine F Stoltzfus	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	133310027A	11/29/2013 19:00	Elaine F Stoltzfus	1
00368	Nitrate Nitrogen	EPA 300.0	1	13326987131A	11/22/2013 21:30	Clinton M Wilson	5
00228	Sulfate	EPA 300.0	1	13326987131A	11/22/2013 21:30	Clinton M Wilson	5
12150	Total Alkalinity	SM 2320 B-1997	2	13338003101A	12/04/2013 18:25	Michele L Graham	1
00230	Sulfide	SM 4500-S2 D-2000	1	13329023002A	11/25/2013 12:00	Susan E Hibner	1

Sample Description: B-1 Filtered Grab Groundwater
 Facility# 211556 Job# 386773
 101 Mulford Rd - Toledo, WA

LL Sample # WW 7288840
 LL Group # 1436001
 Account # 11260

Project Name: 211556

Collected: 11/21/2013 10:14 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 11/22/2013 09:00

Reported: 12/09/2013 14:04

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved		SW-846 6020	ug/l	ug/l	
06035	Lead	7439-92-1	N.D.	0.085	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was filtered in the lab for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	133376050007A	12/05/2013 14:38	Parker D Lindstrom	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	133376050007	12/04/2013 12:26	James L Mertz	1

Sample Description: B-1 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 728841
LL Group # 1436001
Account # 11260

Project Name: 211556

Collected: 11/21/2013 10:14 by JP

Chevron

6001 Bollinger Canyon Road

Submitted: 11/22/2013 09:00

L4310

Reported: 12/09/2013 14:04

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved			ug/l	ug/l	
01754	Iron	7439-89-6	45.6	43.0	1
07058	Manganese	7439-96-5	314	0.83	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	133381848003	12/05/2013 20:55	Maria A Orrs	1
07058	Manganese	SW-846 6010B	1	133381848003	12/05/2013 20:55	Maria A Orrs	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	133381848003	12/05/2013 10:16	James L Mertz	1

Sample Description: B-2 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7288842
LL Group # 1436001
Account # 11260

Project Name: 211556

Collected: 11/21/2013 09:24 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 11/22/2013 09:00

Reported: 12/09/2013 14:04

MRTB2

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B ug/l					
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx ug/l					
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Miscellaneous RSKSOP-175 modified ug/l					
07105	Methane	74-82-8	28	3.0	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	29	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	67	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0 ug/l					
00368	Nitrate Nitrogen	14797-55-8	580	250	5
00228	Sulfate	14808-79-8	3,800	1,500	5
SM 2320 B-1997 ug/l as CaCO3					
12150	Total Alkalinity	n.a.	97,500	700	1
SM 4500-S2 D-2000 ug/l					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	Z133372AA	12/03/2013 18:57	Brett W Kenyon	1

Sample Description: B-2 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7288842
LL Group # 1436001
Account # 11260

Project Name: 211556

Collected: 11/21/2013 09:24 by JP

Chevron

6001 Bollinger Canyon Road

Submitted: 11/22/2013 09:00

L4310

Reported: 12/09/2013 14:04

San Ramon CA 94583

MRTB2

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z133372AA	12/03/2013 18:57	Brett W Kenyon	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	13326B07A	11/25/2013 15:22	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	13326B07A	11/25/2013 15:22	Catherine J Schwarz	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	133370032A	12/04/2013 03:17	Elizabeth J Marin	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	133310027A	12/03/2013 15:02	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	133310028A	12/03/2013 00:58	Michele D Hamilton	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	133310028A	11/29/2013 19:00	Elaine F Stoltzfus	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	133310027A	11/29/2013 19:00	Elaine F Stoltzfus	1
00368	Nitrate Nitrogen	EPA 300.0	1	13326987131A	11/22/2013 22:55	Clinton M Wilson	5
00228	Sulfate	EPA 300.0	1	13326987131A	11/22/2013 22:55	Clinton M Wilson	5
12150	Total Alkalinity	SM 2320 B-1997	1	13329005102A	11/25/2013 21:19	Michele L Graham	1
00230	Sulfide	SM 4500-S2 D-2000	1	13329023002A	11/25/2013 12:00	Susan E Hibner	1

Sample Description: B-2 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 728843
LL Group # 1436001
Account # 11260

Project Name: 211556

Collected: 11/21/2013 09:24 by JP

Chevron

6001 Bollinger Canyon Road

Submitted: 11/22/2013 09:00

L4310

Reported: 12/09/2013 14:04

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
		SW-846 6010B	ug/l	ug/l	
01754	Iron	7439-89-6	N.D.	43.0	1
07058	Manganese	7439-96-5	287	0.83	1
		SW-846 6020	ug/l	ug/l	
06035	Lead	7439-92-1	N.D.	0.085	1

General Sample Comments

State of Washington Lab Certification No. C457
This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	133381848003	12/05/2013 21:06	Maria A Orrs	1
07058	Manganese	SW-846 6010B	1	133381848003	12/05/2013 21:06	Maria A Orrs	1
06035	Lead	SW-846 6020	1	133386050003A	12/05/2013 22:36	John P Hook	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	133381848003	12/05/2013 10:16	James L Mertz	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	133386050003	12/05/2013 11:05	James L Mertz	1

Sample Description: B-3 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7288844
LL Group # 1436001
Account # 11260

Project Name: 211556

Collected: 11/21/2013 13:14 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 11/22/2013 09:00

San Ramon CA 94583

Reported: 12/09/2013 14:04

MRTB3

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B ug/l					
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx ug/l					
08273	NWTPH-Gx water C7-C12	n.a.	190	50	1
GC Miscellaneous RSKSOP-175 modified ug/l					
07105	Methane	74-82-8	170	3.0	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	1,600	29	1
08271	Heavy Range Organics C24-C40	n.a.	180	67	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	42	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0 ug/l					
00368	Nitrate Nitrogen	14797-55-8	10,500	250	5
00228	Sulfate	14808-79-8	4,400	1,500	5
SM 2320 B-1997 ug/l as CaCO3					
12150	Total Alkalinity	n.a.	33,800	700	1
SM 4500-S2 D-2000 ug/l					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	Z133372AA	12/03/2013 20:09	Brett W Kenyon	1

Sample Description: B-3 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 728844
LL Group # 1436001
Account # 11260

Project Name: 211556

Collected: 11/21/2013 13:14 by JP

Chevron

6001 Bollinger Canyon Road
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Submitted: 11/22/2013 09:00

Reported: 12/09/2013 14:04

San Ramon CA 94583

MRTB3

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z133372AA	12/03/2013 20:09	Brett W Kenyon	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	13326B07A	11/25/2013 15:47	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	13326B07A	11/25/2013 15:47	Catherine J Schwarz	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	133370032A	12/04/2013 03:34	Elizabeth J Marin	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	133370025A	12/06/2013 15:15	Nicholas R Rossi	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	133370024A	12/06/2013 13:45	Nicholas R Rossi	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	133370024A	12/04/2013 12:30	Kelli M Barto	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	133370025A	12/04/2013 12:30	Kelli M Barto	1
00368	Nitrate Nitrogen	EPA 300.0	1	13326987131A	11/22/2013 23:11	Clinton M Wilson	5
00228	Sulfate	EPA 300.0	1	13326987131A	11/22/2013 23:11	Clinton M Wilson	5
12150	Total Alkalinity	SM 2320 B-1997	1	13329005102A	11/25/2013 21:29	Michele L Graham	1
00230	Sulfide	SM 4500-S2 D-2000	1	13329023002A	11/25/2013 12:00	Susan E Hibner	1

Sample Description: B-3 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7288845
LL Group # 1436001
Account # 11260

Project Name: 211556

Collected: 11/21/2013 13:14 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 11/22/2013 09:00

Reported: 12/09/2013 14:04

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
06035	Lead	SW-846 6020 7439-92-1	ug/l 11.2	ug/l 0.085	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was filtered in the lab for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	133386050003A	12/05/2013 22:38	John P Hook	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	133386050003	12/05/2013 11:05	James L Mertz	1

Sample Description: B-3 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 728846
LL Group # 1436001
Account # 11260

Project Name: 211556

Collected: 11/21/2013 13:14 by JP

Chevron

6001 Bollinger Canyon Road

Submitted: 11/22/2013 09:00

L4310

Reported: 12/09/2013 14:04

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved			SW-846 6010B	ug/l	
01754	Iron	7439-89-6	326	43.0	1
07058	Manganese	7439-96-5	4,200	0.83	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	133381848003	12/05/2013 21:10	Maria A Orrs	1
07058	Manganese	SW-846 6010B	1	133381848003	12/05/2013 21:10	Maria A Orrs	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	133381848003	12/05/2013 10:16	James L Mertz	1

Sample Description: B-4 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 728847
LL Group # 1436001
Account # 11260

Project Name: 211556

Collected: 11/21/2013 11:11 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 11/22/2013 09:00

Reported: 12/09/2013 14:04

MRTB4

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B ug/l					
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	3	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx ug/l					
08273	NWTPH-Gx water C7-C12	n.a.	1,200	50	1
GC Miscellaneous RSKSOP-175 modified ug/l					
07105	Methane	74-82-8	600	15	5
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	150	29	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	67	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	120	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0 ug/l					
00368	Nitrate Nitrogen	14797-55-8	N.D.	250	5
00228	Sulfate	14808-79-8	N.D.	1,500	5
SM 2320 B-1997 ug/l as CaCO3					
12150	Total Alkalinity	n.a.	120,000	700	1
SM 4500-S2 D-2000 ug/l					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	F133381AA	12/04/2013 14:46	Anita M Dale	1

Sample Description: B-4 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 728847
LL Group # 1436001
Account # 11260

Project Name: 211556

Collected: 11/21/2013 11:11 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 11/22/2013 09:00

Reported: 12/09/2013 14:04

San Ramon CA 94583

MRTB4

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F133381AA	12/04/2013 14:46	Anita M Dale	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	13326B07A	11/25/2013 16:12	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	13326B07A	11/25/2013 16:12	Catherine J Schwarz	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	133370032A	12/04/2013 12:42	Elizabeth J Marin	5
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	133370025A	12/06/2013 14:30	Nicholas R Rossi	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	133370024A	12/06/2013 14:07	Nicholas R Rossi	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	133370024A	12/04/2013 12:30	Kelli M Barto	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	133370025A	12/04/2013 12:30	Kelli M Barto	1
00368	Nitrate Nitrogen	EPA 300.0	1	13326987131A	11/22/2013 23:28	Clinton M Wilson	5
00228	Sulfate	EPA 300.0	1	13326987131A	11/22/2013 23:28	Clinton M Wilson	5
12150	Total Alkalinity	SM 2320 B-1997	2	13338003102A	12/04/2013 20:25	Michele L Graham	1
00230	Sulfide	SM 4500-S2 D-2000	1	13329023002A	11/25/2013 12:00	Susan E Hibner	1

Sample Description: B-4 Filtered Grab Groundwater
 Facility# 211556 Job# 386773
 101 Mulford Rd - Toledo, WA

LL Sample # WW 7288848
 LL Group # 1436001
 Account # 11260

Project Name: 211556

Collected: 11/21/2013 11:11 by JP

Chevron

6001 Bollinger Canyon Road
 L4310

Submitted: 11/22/2013 09:00

Reported: 12/09/2013 14:04

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
06035	Lead	SW-846 6020 7439-92-1	ug/l 1.9	ug/l 0.085	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was filtered in the lab for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	133386050003A	12/05/2013 22:43	John P Hook	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	133386050003	12/05/2013 11:05	James L Mertz	1

Sample Description: B-4 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 728849
LL Group # 1436001
Account # 11260

Project Name: 211556

Collected: 11/21/2013 11:11 by JP

Chevron

6001 Bollinger Canyon Road

Submitted: 11/22/2013 09:00

L4310

Reported: 12/09/2013 14:04

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved			SW-846 6010B	ug/l	
01754	Iron	7439-89-6	10,500	43.0	1
07058	Manganese	7439-96-5	2,290	0.83	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	133381848003	12/05/2013 21:14	Maria A Orrs	1
07058	Manganese	SW-846 6010B	1	133381848003	12/05/2013 21:14	Maria A Orrs	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	133381848003	12/05/2013 10:16	James L Mertz	1

Sample Description: MW-111 Grab Groundwater
Facility# 211556 **Job#** 386773
 101 Mulford Rd - Toledo, WA

LL Sample # WW 7288850
LL Group # 1436001
Account # 11260

Project Name: 211556

Collected: 11/21/2013 12:12 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 11/22/2013 09:00

Reported: 12/09/2013 14:04

MRT11

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B ug/l					
10943	Benzene	71-43-2	0.9	0.5	1
10943	Ethylbenzene	100-41-4	77	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	13	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx ug/l					
08273	NWTPH-Gx water C7-C12	n.a.	3,300	50	1
GC Miscellaneous RSKSOP-175 modified ug/l					
07105	Methane	74-82-8	3,500	60	20
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	1,000	28	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	66	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	370	28	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	66	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0 ug/l					
00368	Nitrate Nitrogen	14797-55-8	N.D.	250	5
00228	Sulfate	14808-79-8	N.D.	1,500	5
SM 2320 B-1997 ug/l as CaCO3					
12150	Total Alkalinity	n.a.	178,000	700	1
SM 4500-S2 D-2000 ug/l					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	F133381AA	12/04/2013 15:08	Anita M Dale	1

Sample Description: MW-111 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7288850
LL Group # 1436001
Account # 11260

Project Name: 211556

Collected: 11/21/2013 12:12 by JP

Chevron

6001 Bollinger Canyon Road

Submitted: 11/22/2013 09:00

L4310

Reported: 12/09/2013 14:04

San Ramon CA 94583

MRT11

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F133381AA	12/04/2013 15:08	Anita M Dale	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	13326B07A	11/25/2013 20:24	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	13326B07A	11/25/2013 20:24	Catherine J Schwarz	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	133370032A	12/04/2013 13:00	Elizabeth J Marin	20
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	133370025A	12/06/2013 14:53	Nicholas R Rossi	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	133370024A	12/06/2013 14:30	Nicholas R Rossi	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	133370024A	12/04/2013 12:30	Kelli M Barto	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	133370025A	12/04/2013 12:30	Kelli M Barto	1
00368	Nitrate Nitrogen	EPA 300.0	1	13326987131A	11/22/2013 23:45	Clinton M Wilson	5
00228	Sulfate	EPA 300.0	1	13326987131A	11/22/2013 23:45	Clinton M Wilson	5
12150	Total Alkalinity	SM 2320 B-1997	2	13338003102A	12/04/2013 20:38	Michele L Graham	1
00230	Sulfide	SM 4500-S2 D-2000	1	13329023002A	11/25/2013 12:00	Susan E Hibner	1

Sample Description: MW-111 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 728851
LL Group # 1436001
Account # 11260

Project Name: 211556

Collected: 11/21/2013 12:12 by JP

Chevron

6001 Bollinger Canyon Road

Submitted: 11/22/2013 09:00

L4310

Reported: 12/09/2013 14:04

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
06035	Lead	SW-846 6020 7439-92-1	ug/l 17.8	ug/l 0.085	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was filtered in the lab for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	133386050003A	12/05/2013 22:45	John P Hook	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	133386050003	12/05/2013 11:05	James L Mertz	1

Sample Description: MW-111 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 728852
LL Group # 1436001
Account # 11260

Project Name: 211556

Collected: 11/21/2013 12:12 by JP

Chevron

6001 Bollinger Canyon Road

Submitted: 11/22/2013 09:00

L4310

Reported: 12/09/2013 14:04

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved			SW-846 6010B	ug/l	
01754	Iron	7439-89-6	9,940	43.0	1
07058	Manganese	7439-96-5	4,310	0.83	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	133381848003	12/05/2013 21:17	Maria A Orrs	1
07058	Manganese	SW-846 6010B	1	133381848003	12/05/2013 21:17	Maria A Orrs	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	133381848003	12/05/2013 10:16	James L Mertz	1

Quality Control Summary

Client Name: Chevron
Reported: 12/09/13 at 02:04 PM

Group Number: 1436001

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

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: F133381AA	Sample number(s): 7288847,7288850							
Benzene	N.D.	0.5	ug/l	98		78-120		
Ethylbenzene	N.D.	0.5	ug/l	96		79-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	93		75-120		
Toluene	N.D.	0.5	ug/l	95		80-120		
Xylene (Total)	N.D.	0.5	ug/l	97		80-120		
Batch number: Z133361AA	Sample number(s): 7288838-7288839							
Benzene	N.D.	0.5	ug/l	94		78-120		
Ethylbenzene	N.D.	0.5	ug/l	91		79-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	89		75-120		
Toluene	N.D.	0.5	ug/l	96		80-120		
Xylene (Total)	N.D.	0.5	ug/l	96		80-120		
Batch number: Z133372AA	Sample number(s): 7288842,7288844							
Benzene	N.D.	0.5	ug/l	101		78-120		
Ethylbenzene	N.D.	0.5	ug/l	99		79-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	96		75-120		
Toluene	N.D.	0.5	ug/l	104		80-120		
Xylene (Total)	N.D.	0.5	ug/l	105		80-120		
Batch number: 13326B07A	Sample number(s): 7288838-7288839,7288842,7288844,7288847,7288850							
NWTPH-Gx water C7-C12	N.D.	50.	ug/l	100	100	75-135	0	30
Batch number: 133370032A	Sample number(s): 7288839,7288842,7288844,7288847,7288850							
Methane	N.D.	3.0	ug/l	101		80-120		
Batch number: 133310027A	Sample number(s): 7288839,7288842							
Diesel Range Organics C12-C24	N.D.	30.	ug/l	78	73	50-113	6	20
Heavy Range Organics C24-C40	N.D.	70.	ug/l					
Batch number: 133370025A	Sample number(s): 7288844,7288847,7288850							
Diesel Range Organics C12-C24	N.D.	30.	ug/l	75	75	50-113	0	20
Heavy Range Organics C24-C40	N.D.	70.	ug/l					
Batch number: 133310028A	Sample number(s): 7288839,7288842							
DRO C12-C24 w/Si Gel	N.D.	30.	ug/l	76	76	32-117	0	20
HRO C24-C40 w/Si Gel	N.D.	70.	ug/l					
Batch number: 133370024A	Sample number(s): 7288844,7288847,7288850							
DRO C12-C24 w/Si Gel	N.D.	30.	ug/l	68	71	32-117	5	20
HRO C24-C40 w/Si Gel	N.D.	70.	ug/l					
Batch number: 133376050007A	Sample number(s): 7288840							

*- 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: 1436001
Reported: 12/09/13 at 02:04 PM

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Lead	N.D.	0.085	ug/l	103		90-110		
Batch number: 133381848003	Sample number(s): 7288841,7288843,7288846,7288849,7288852							
Iron	N.D.	43.0	ug/l	104		90-112		
Manganese	N.D.	0.83	ug/l	100		90-110		
Batch number: 133386050003A	Sample number(s): 7288843,7288845,7288848,7288851							
Lead	N.D.	0.085	ug/l	98		90-110		
Batch number: 13326987131A	Sample number(s): 7288839,7288842,7288844,7288847,7288850							
Nitrate Nitrogen	N.D.	50.	ug/l	100		90-110		
Sulfate	N.D.	300.	ug/l	101		90-110		
Batch number: 13329005102A	Sample number(s): 7288842,7288844							
Total Alkalinity	N.D.	700.	ug/l as CaCO3	97		90-110		
Batch number: 13329023002A	Sample number(s): 7288839,7288842,7288844,7288847,7288850							
Sulfide	N.D.	54.	ug/l	95		90-110		
Batch number: 13338003101A	Sample number(s): 7288839							
Total Alkalinity	N.D.	700.	ug/l as CaCO3	96		90-110		
Batch number: 13338003102A	Sample number(s): 7288847,7288850							
Total Alkalinity	N.D.	700.	ug/l as CaCO3	95		90-110		

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

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: F133381AA	Sample number(s): 7288847,7288850 UNSPK: P289074								
Benzene	102	104	72-134	2	30				
Ethylbenzene	102	102	71-134	0	30				
Methyl Tertiary Butyl Ether	92	94	72-126	1	30				
Toluene	103	103	80-125	0	30				
Xylene (Total)	104	103	79-125	1	30				
Batch number: Z133361AA	Sample number(s): 7288838-7288839 UNSPK: 7288839								
Benzene	108	102	72-134	6	30				
Ethylbenzene	105	100	71-134	5	30				
Methyl Tertiary Butyl Ether	93	87	72-126	6	30				
Toluene	110	105	80-125	5	30				
Xylene (Total)	109	105	79-125	4	30				
Batch number: Z133372AA	Sample number(s): 7288842,7288844 UNSPK: 7288842								
Benzene	113	104	72-134	8	30				
Ethylbenzene	114	103	71-134	10	30				
Methyl Tertiary Butyl Ether	98	90	72-126	9	30				

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron Group Number: 1436001
Reported: 12/09/13 at 02:04 PM

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

<u>Analysis Name</u>	<u>MS</u> <u>%REC</u>	<u>MSD</u> <u>%REC</u>	<u>MS/MSD</u> <u>Limits</u>	<u>RPD</u> <u>RPD</u>	<u>BKG</u> <u>MAX</u> <u>Conc</u>	<u>DUP</u> <u>Conc</u>	<u>DUP</u> <u>RPD</u>	<u>Dup RPD</u> <u>Max</u>
Toluene	119	109	80-125	9	30			
Xylene (Total)	118	107	79-125	10	30			
Batch number: 133370032A	Sample number(s): 7288839,7288842,7288844,7288847,7288850 UNSPK: P288890							
Methane	-406	-1776	35-157	13	20			
	(2)	(2)						
Batch number: 133376050007A	Sample number(s): 7288840 UNSPK: P288626 BKG: P288626							
Lead	103	103	89-120	0	20	N.D.	N.D.	0 (1) 20
Batch number: 133381848003	Sample number(s): 7288841,7288843,7288846,7288849,7288852 UNSPK: P289074 BKG: P289074							
Iron	131 (2)	144 (2)	75-125	2	20	4,450	4,700	5 20
Manganese	100	99	75-125	1	20	52.0	53.3	2 20
Batch number: 133386050003A	Sample number(s): 7288843,7288845,7288848,7288851 UNSPK: P288595 BKG: P288595							
Lead	102	105	89-120	3	20	0.18	0.18	2 (1) 20
Batch number: 13326987131A	Sample number(s): 7288839,7288842,7288844,7288847,7288850 UNSPK: 7288839 BKG: 7288839							
Nitrate Nitrogen	102		90-110			N.D.	N.D.	0 (1) 20
Sulfate	99		90-110			4,200	4,100	3 (1) 20
Batch number: 13329005102A	Sample number(s): 7288842,7288844 UNSPK: P287850 BKG: P287850							
Total Alkalinity	98	99	10-159	1	5	9,800	10,600	8* (1) 5
Batch number: 13329023002A	Sample number(s): 7288839,7288842,7288844,7288847,7288850 UNSPK: P288516 BKG: P288516							
Sulfide	85	83	42-131	1	16	460	430	8* (1) 5
Batch number: 13338003101A	Sample number(s): 7288839 UNSPK: P288890 BKG: P288890							
Total Alkalinity	94	92	10-159	1	5	56,900	56,400	1 5
Batch number: 13338003102A	Sample number(s): 7288847,7288850 UNSPK: P298854 BKG: P298854							
Total Alkalinity	93		10-159			259,000	264,000	2 5

Surrogate Quality Control

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

Analysis Name: UST VOCs by 8260B - Water
Batch number: F133381AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7288847	102	102	100	101
7288850	100	98	100	103
Blank	99	95	99	96
LCS	100	100	99	99

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 12/09/13 at 02:04 PM

Group Number: 1436001

Surrogate Quality Control

MS	98	99	100	100
MSD	99	100	98	97
Limits:	80-116	77-113	80-113	78-113

Analysis Name: UST VOCs by 8260B - Water
Batch number: Z133361AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7288838	100	102	100	92
7288839	99	100	100	92
Blank	99	101	101	93
LCS	97	103	100	97
MS	97	99	100	97
MSD	97	99	100	97

Limits:	80-116	77-113	80-113	78-113
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Analysis Name: UST VOCs by 8260B - Water
Batch number: Z133372AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7288842	99	99	100	92
7288844	98	99	102	97
Blank	100	100	101	92
LCS	97	101	101	97
MS	98	102	102	97
MSD	98	102	101	98

Limits:	80-116	77-113	80-113	78-113
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Analysis Name: NWTPh-Gx water C7-C12
Batch number: 13326B07A
Trifluorotoluene-F

7288838	96
7288839	90
7288842	89
7288844	94
7288847	130
7288850	133
Blank	95
LCS	108
LCSD	105

Limits:	63-135
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Analysis Name: NWTPh-Dx water
Batch number: 133310027A
Orthoterphenyl

7288839	101
7288842	101
Blank	96
LCS	105
LCSD	96

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
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Quality Control Summary

Client Name: Chevron
Reported: 12/09/13 at 02:04 PM

Group Number: 1436001

Surrogate Quality Control

Limits: 50-150

Analysis Name: NWTPH-Dx water w/ 10g Si Gel
Batch number: 133310028A
Orthoterphenyl

7288839	86
7288842	93
Blank	98
LCS	101
LCSD	99

Limits: 50-150

Analysis Name: NWTPH-Dx water w/ 10g Si Gel
Batch number: 133370024A
Orthoterphenyl

7288844	86
7288847	76
7288850	92
Blank	86
LCS	87
LCSD	91

Limits: 50-150

Analysis Name: NWTPH-Dx water
Batch number: 133370025A
Orthoterphenyl

7288844	111
7288847	86
7288850	97
Blank	94
LCS	99
LCSD	100

Limits: 50-150

Analysis Name: Volatile Headspace Hydrocarbon
Batch number: 133370032A
Propene

7288839	81
7288842	83
7288844	79
7288847	83
7288850	97
Blank	98
LCS	96
MS	81
MSD	87

Limits: 42-131

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
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Quality Control Summary

Client Name: Chevron
Reported: 12/09/13 at 02:04 PM

Group Number: 1436001

Surrogate Quality Control

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Chevron Northwest Region Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # 11260

For Eurofins Lancaster Laboratories use only
 Group # 1436001 Sample # 7288838-52
 Instructions on reverse side correspond with circled numbers.

1 Client Information				4 Matrix				5 Analyses Requested												6 Remarks	
Facility # <u>SS#211556-OML G-R#386773</u> WBS Site Address <u>101 Mulford Road, TOLEDO, WA</u> Chevron PM <u>MHO</u> LEIDOSRS Lead Consultant <u>Russell Shropshire</u> Consultant/Office <u>Gettler-Ryan, Inc., 6747 Sierra Court, Suite J, Dublin, CA 94568</u> Consultant Project Mgr. <u>Deanna L. Harding, (deanna@grinc.com), (925) 551-7444 x180</u> Consultant Phone # <u>(425) 482-3323 x</u> Sampler <u>J Payne</u>				<input type="checkbox"/> Sediment <input checked="" type="checkbox"/> Ground <input type="checkbox"/> Surface <input type="checkbox"/> Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Air <input type="checkbox"/> Soil <input type="checkbox"/> Composite				Total Number of Containers BTEX + MTBE 8021 <input type="checkbox"/> 8260 <input type="checkbox"/> Naphth <input type="checkbox"/> 8260 full scan Oxygenates NWTPH-Gx NWTPH-Dx with Silica Gel Cleanup <input checked="" type="checkbox"/> NWTPH-Dx without Silica Gel Cleanup <input checked="" type="checkbox"/> WA VPH <input type="checkbox"/> WA EPH <input type="checkbox"/> Lead Total <input type="checkbox"/> Diss. <input checked="" type="checkbox"/> Method NITRATE / SULFATE METHANE / SULFIDES ALKALINITY DISS IRON & MANGANESE												SCR #: _____ <input type="checkbox"/> Results in Dry Weight <input type="checkbox"/> J value reporting needed <input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds <input type="checkbox"/> 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run _____ oxy's on highest hit <input type="checkbox"/> Run _____ oxy's on all hits	
2 Sample Identification		Collected		3													6				
		Date	Time	Grab																	
<u>QA</u>		<u>11-21-13</u>		<input checked="" type="checkbox"/>													Please report results for Dx with and without silica gel cleanup. Dissolved iron & manganese, as well as Alkalinity samples have been field filtered.				
<u>B-1</u>			<u>1014</u>	<input checked="" type="checkbox"/>																	
<u>B-2</u>			<u>0924</u>	<input checked="" type="checkbox"/>																	
<u>B-3</u>			<u>1314</u>	<input checked="" type="checkbox"/>																	
<u>B-4</u>			<u>1111</u>	<input checked="" type="checkbox"/>																	
<u>MW-111</u>			<u>1212</u>	<input checked="" type="checkbox"/>																	
7 Turnaround Time Requested (TAT) (please circle) Standard <input checked="" type="radio"/> 5 day 72 hour <input type="radio"/> 48 hour 4 day <input type="radio"/> 24 hour				Relinquished by <u>[Signature]</u> Date <u>11-21-13</u> Time <u>1630</u>				Received by _____ Date _____ Time _____				Relinquished by _____ Date _____ Time _____				Received by _____ Date _____ Time _____					
8 Data Package (circle if required) Type I - Full Type VI (Raw Data)				EDD (circle if required) <u>EDF/EDD</u> CVX-RTBU-FL_05 (default) Other: _____				Relinquished by Commercial Carrier: UPS <input checked="" type="checkbox"/> FedEx _____ Other _____ Temperature Upon Receipt <u>1.5-3.0</u>				Received by <u>[Signature]</u> Date <u>11/22/13</u> Time <u>0900</u> Custody Seals Intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No									

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 \geq the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ).

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

- A** TIC is a possible aldol-condensation product
- B** Analyte was also detected in the blank
- C** Pesticide result confirmed by GC/MS
- D** Compound quantitated on a diluted sample
- E** Concentration exceeds the calibration range of the instrument
- N** Presumptive evidence of a compound (TICs only)
- P** Concentration difference between primary and confirmation columns $>25\%$
- U** Compound was not detected
- X,Y,Z** Defined in case narrative

Inorganic Qualifiers

- B** Value is $<$ CRDL, but \geq IDL
- E** Estimated due to interference
- M** Duplicate injection precision not met
- N** Spike sample not within control limits
- S** Method of standard additions (MSA) used for calculation
- U** Compound was not detected
- W** Post digestion spike out of control limits
- *** Duplicate analysis not within control limits
- +** 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.

ANALYTICAL RESULTS

Prepared by:

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

Prepared for:

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

December 04, 2013

Project: 211556

Submittal Date: 11/21/2013
Group Number: 1435589
PO Number: 0015119898
Release Number: SHRILL HOPKINS
State of Sample Origin: WA

<u>Client Sample Description</u>	<u>Lancaster Labs (LL) #</u>
QA NA Water	7286242
MW-103 Grab Groundwater	7286243
MW-103 Filtered Grab Groundwater	7286244
MW-103 Filtered Grab Groundwater	7286245
MW-110 Grab Groundwater	7286246
MW-110 Filtered Grab Groundwater	7286247
MW-112 Grab Groundwater	7286248
MW-112 Filtered Grab Groundwater	7286249
MW-112 Filtered Grab Groundwater	7286250
MW-113 Grab Groundwater	7286251
MW-113 Filtered Grab Groundwater	7286252
MW-113 Filtered Grab Groundwater	7286253
MW-119 Grab Groundwater	7286254
MW-119 Filtered Grab Groundwater	7286255
MW-119 Filtered Grab Groundwater	7286256

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

ELECTRONIC COPY TO	Gettler-Ryan Inc.	Attn: Gettler Ryan
ELECTRONIC COPY TO	SAIC	Attn: Jamalyn Green
ELECTRONIC COPY TO	SAIC	Attn: Russ Shropshire

Respectfully Submitted,



Amek Carter
Specialist

(717) 556-7252

Sample Description: QA NA Water
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7286242
LL Group # 1435589
Account # 11260

Project Name: 211556

Collected: 11/20/2013

Chevron

6001 Bollinger Canyon Road

Submitted: 11/21/2013 09:05

L4310

Reported: 12/04/2013 15:20

San Ramon CA 94583

QAMRT

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles			SW-846 8260B	ug/l	
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles			ECY 97-602 NWTPH-Gx	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	D133352AA	12/01/2013 17:34	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D133352AA	12/01/2013 17:34	Daniel H Heller	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	13326A07A	11/23/2013 12:53	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	13326A07A	11/23/2013 12:53	Catherine J Schwarz	1

Sample Description: MW-103 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7286243
LL Group # 1435589
Account # 11260

Project Name: 211556

Collected: 11/20/2013 09:32 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 11/21/2013 09:05

San Ramon CA 94583

Reported: 12/04/2013 15:20

MRT03

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B ug/l					
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx ug/l					
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Miscellaneous RSKSOP-175 modified ug/l					
07105	Methane	74-82-8	4.0	3.0	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	29	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	67	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0 ug/l					
00368	Nitrate Nitrogen	14797-55-8	N.D.	250	5
00228	Sulfate	14808-79-8	1,700	1,500	5
SM 2320 B-1997 ug/l as CaCO3					
12150	Total Alkalinity	n.a.	112,000	700	1
SM 4500-S2 D-2000 ug/l					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	D133352AA	12/01/2013 22:31	Daniel H Heller	1

Sample Description: MW-103 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7286243
LL Group # 1435589
Account # 11260

Project Name: 211556

Collected: 11/20/2013 09:32 by JP

Chevron

6001 Bollinger Canyon Road

Submitted: 11/21/2013 09:05

L4310

Reported: 12/04/2013 15:20

San Ramon CA 94583

MRT03

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D133352AA	12/01/2013 22:31	Daniel H Heller	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	13326A07A	11/23/2013 21:25	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	13326A07A	11/23/2013 21:25	Catherine J Schwarz	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	133330001A	11/29/2013 20:57	Nicholas R Rossi	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	133310027A	12/03/2013 11:56	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	133310028A	12/02/2013 22:42	Michele D Hamilton	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	133310028A	11/29/2013 19:00	Elaine F Stoltzfus	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	133310027A	11/29/2013 19:00	Elaine F Stoltzfus	1
00368	Nitrate Nitrogen	EPA 300.0	1	13325987901A	11/21/2013 16:02	Sandra J Miller	5
00228	Sulfate	EPA 300.0	1	13325987901A	11/21/2013 16:02	Sandra J Miller	5
12150	Total Alkalinity	SM 2320 B-1997	1	13326004203B	11/22/2013 21:09	Michele L Graham	1
00230	Sulfide	SM 4500-S2 D-2000	1	13325023003A	11/21/2013 15:55	Susan E Hibner	1

Sample Description: MW-103 Filtered Grab Groundwater
 Facility# 211556 Job# 386773
 101 Mulford Rd - Toledo, WA

LL Sample # WW 7286244
 LL Group # 1435589
 Account # 11260

Project Name: 211556

Collected: 11/20/2013 09:32 by JP

Chevron

6001 Bollinger Canyon Road
 L4310

Submitted: 11/21/2013 09:05

San Ramon CA 94583

Reported: 12/04/2013 15:20

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
06035	Lead	SW-846 6020 7439-92-1	ug/l 0.21	ug/l 0.085	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was filtered in the lab for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	133316050005A	12/04/2013 02:24	John P Hook	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	133316050005	12/02/2013 11:50	James L Mertz	1

Sample Description: MW-103 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7286245
LL Group # 1435589
Account # 11260

Project Name: 211556

Collected: 11/20/2013 09:32 by JP

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Submitted: 11/21/2013 09:05

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Reported: 12/04/2013 15:20

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
		SW-846 6010B	ug/l	ug/l	
01754	Iron	7439-89-6	N.D.	43.0	1
07058	Manganese	7439-96-5	178	0.83	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	133261848003	11/26/2013 10:12	Joanne M Gates	1
07058	Manganese	SW-846 6010B	1	133261848003	11/26/2013 10:12	Joanne M Gates	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	133261848003	11/25/2013 10:55	Denise K Conners	1

Sample Description: MW-110 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7286246
LL Group # 1435589
Account # 11260

Project Name: 211556

Collected: 11/20/2013 13:40 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 11/21/2013 09:05

San Ramon CA 94583

Reported: 12/04/2013 15:20

MRT10

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B			ug/l	ug/l	
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx			ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	29	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	67	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1
The reverse surrogate, capric acid, is present at <1%.					

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	D133352AA	12/01/2013 22:54	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D133352AA	12/01/2013 22:54	Daniel H Heller	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	13326A07A	11/23/2013 21:50	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	13326A07A	11/23/2013 21:50	Catherine J Schwarz	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	133310027A	12/03/2013 12:18	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	133310028A	12/02/2013 23:05	Michele D Hamilton	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	133310028A	11/29/2013 19:00	Elaine F Stoltzfus	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	133310027A	11/29/2013 19:00	Elaine F Stoltzfus	1

Sample Description: MW-110 Filtered Grab Groundwater
 Facility# 211556 Job# 386773
 101 Mulford Rd - Toledo, WA

LL Sample # WW 7286247
 LL Group # 1435589
 Account # 11260

Project Name: 211556

Collected: 11/20/2013 13:40 by JP

Chevron

6001 Bollinger Canyon Road

Submitted: 11/21/2013 09:05

L4310

Reported: 12/04/2013 15:20

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved		SW-846 6020	ug/l	ug/l	
06035	Lead	7439-92-1	0.33	0.085	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was filtered in the lab for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	133316050005A	12/04/2013 02:26	John P Hook	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	133316050005	12/02/2013 11:50	James L Mertz	1

Sample Description: MW-112 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7286248
LL Group # 1435589
Account # 11260

Project Name: 211556

Collected: 11/20/2013 11:34 by JP

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

Submitted: 11/21/2013 09:05

Reported: 12/04/2013 15:20

MRT12

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B					
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx					
08273	NWTPH-Gx water C7-C12	n.a.	68	50	1
GC Miscellaneous RSKSOP-175 modified					
07105	Methane	74-82-8	810	15	5
GC Petroleum ECY 97-602 NWTPH-Dx					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	33	29	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	67	1
GC Petroleum ECY 97-602 NWTPH-Dx					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0					
00368	Nitrate Nitrogen	14797-55-8	N.D.	250	5
00228	Sulfate	14808-79-8	N.D.	1,500	5
SM 2320 B-1997					
12150	Total Alkalinity	n.a.	130,000	700	1
SM 4500-S2 D-2000					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	D133352AA	12/01/2013 23:17	Daniel H Heller	1

Sample Description: MW-112 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7286248
LL Group # 1435589
Account # 11260

Project Name: 211556

Collected: 11/20/2013 11:34 by JP

Chevron

6001 Bollinger Canyon Road

Submitted: 11/21/2013 09:05

L4310

Reported: 12/04/2013 15:20

San Ramon CA 94583

MRT12

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D133352AA	12/01/2013 23:17	Daniel H Heller	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	13326A07A	11/23/2013 22:15	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	13326A07A	11/23/2013 22:15	Catherine J Schwarz	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	133330001A	11/30/2013 11:59	Nicholas R Rossi	5
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	133310027A	12/03/2013 12:41	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	133310028A	12/02/2013 23:28	Michele D Hamilton	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	133310028A	11/29/2013 19:00	Elaine F Stoltzfus	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	133310027A	11/29/2013 19:00	Elaine F Stoltzfus	1
00368	Nitrate Nitrogen	EPA 300.0	1	13325987901A	11/21/2013 17:23	Sandra J Miller	5
00228	Sulfate	EPA 300.0	1	13325987901A	11/21/2013 17:23	Sandra J Miller	5
12150	Total Alkalinity	SM 2320 B-1997	1	13326004203A	11/22/2013 20:00	Michele L Graham	1
00230	Sulfide	SM 4500-S2 D-2000	1	13325023003A	11/21/2013 15:55	Susan E Hibner	1

Sample Description: MW-112 Filtered Grab Groundwater
 Facility# 211556 Job# 386773
 101 Mulford Rd - Toledo, WA

LL Sample # WW 7286249
 LL Group # 1435589
 Account # 11260

Project Name: 211556

Collected: 11/20/2013 11:34 by JP

Chevron

6001 Bollinger Canyon Road
 L4310

Submitted: 11/21/2013 09:05

San Ramon CA 94583

Reported: 12/04/2013 15:20

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
06035	Lead	SW-846 6020 7439-92-1	ug/l 0.58	ug/l 0.085	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was filtered in the lab for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	133316050005A	12/04/2013 02:28	John P Hook	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	133316050005	12/02/2013 11:50	James L Mertz	1

Sample Description: MW-112 Filtered Grab Groundwater
 Facility# 211556 Job# 386773
 101 Mulford Rd - Toledo, WA

LL Sample # WW 7286250
 LL Group # 1435589
 Account # 11260

Project Name: 211556

Collected: 11/20/2013 11:34 by JP

Chevron

6001 Bollinger Canyon Road

Submitted: 11/21/2013 09:05

L4310

Reported: 12/04/2013 15:20

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved			ug/l	ug/l	
01754	Iron	7439-89-6	3,920	43.0	1
07058	Manganese	7439-96-5	2,600	0.83	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	133261848002	11/26/2013 15:21	Eric L Eby	1
07058	Manganese	SW-846 6010B	1	133261848002	11/26/2013 15:21	Eric L Eby	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	133261848002	11/25/2013 10:35	Denise K Conners	1

Sample Description: MW-113 Grab Groundwater
Facility# 211556 **Job#** 386773
 101 Mulford Rd - Toledo, WA

LL Sample # WW 7286251
LL Group # 1435589
Account # 11260

Project Name: 211556

Collected: 11/20/2013 12:36 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 11/21/2013 09:05

Reported: 12/04/2013 15:20

MRT13

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B					
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx					
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Miscellaneous RSKSOP-175 modified					
07105	Methane	74-82-8	N.D.	3.0	1
GC Petroleum ECY 97-602 NWTPH-Dx					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	29	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	67	1
GC Petroleum ECY 97-602 NWTPH-Dx					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0					
00368	Nitrate Nitrogen	14797-55-8	N.D.	250	5
00228	Sulfate	14808-79-8	2,100	1,500	5
SM 2320 B-1997					
12150	Total Alkalinity	n.a.	40,400	700	1
SM 4500-S2 D-2000					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	D133352AA	12/01/2013 23:40	Daniel H Heller	1

Sample Description: MW-113 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7286251
LL Group # 1435589
Account # 11260

Project Name: 211556

Collected: 11/20/2013 12:36 by JP

Chevron

6001 Bollinger Canyon Road

Submitted: 11/21/2013 09:05

L4310

Reported: 12/04/2013 15:20

San Ramon CA 94583

MRT13

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D133352AA	12/01/2013 23:40	Daniel H Heller	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	13329A07A	11/26/2013 10:52	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	13329A07A	11/26/2013 10:52	Catherine J Schwarz	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	133330001A	11/29/2013 21:33	Nicholas R Rossi	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	133310027A	12/03/2013 13:04	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	133310028A	12/02/2013 23:50	Michele D Hamilton	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	133310028A	11/29/2013 19:00	Elaine F Stoltzfus	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	133310027A	11/29/2013 19:00	Elaine F Stoltzfus	1
00368	Nitrate Nitrogen	EPA 300.0	1	13325987901A	11/21/2013 17:39	Sandra J Miller	5
00228	Sulfate	EPA 300.0	1	13325987901A	11/21/2013 17:39	Sandra J Miller	5
12150	Total Alkalinity	SM 2320 B-1997	1	13326004203A	11/22/2013 19:48	Michele L Graham	1
00230	Sulfide	SM 4500-S2 D-2000	1	13329023001A	11/25/2013 08:50	Susan E Hibner	1

Sample Description: MW-113 Filtered Grab Groundwater
 Facility# 211556 Job# 386773
 101 Mulford Rd - Toledo, WA

LL Sample # WW 7286252
 LL Group # 1435589
 Account # 11260

Project Name: 211556

Collected: 11/20/2013 12:36 by JP

Chevron

6001 Bollinger Canyon Road
 L4310

Submitted: 11/21/2013 09:05

San Ramon CA 94583

Reported: 12/04/2013 15:20

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
06035	Lead	SW-846 6020 7439-92-1	ug/l 0.11	ug/l 0.085	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was filtered in the lab for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	133316050005A	12/04/2013 02:41	John P Hook	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	133316050005	12/02/2013 11:50	James L Mertz	1

Sample Description: MW-113 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7286253
LL Group # 1435589
Account # 11260

Project Name: 211556

Collected: 11/20/2013 12:36 by JP

Chevron

6001 Bollinger Canyon Road

Submitted: 11/21/2013 09:05

L4310

Reported: 12/04/2013 15:20

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
		SW-846 6010B	ug/l	ug/l	
01754	Iron	7439-89-6	N.D.	43.0	1
07058	Manganese	7439-96-5	1.1	0.83	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	133261848002	11/26/2013 15:25	Eric L Eby	1
07058	Manganese	SW-846 6010B	1	133261848002	11/26/2013 15:25	Eric L Eby	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	133261848002	11/25/2013 10:35	Denise K Conners	1

Sample Description: MW-119 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7286254
LL Group # 1435589
Account # 11260

Project Name: 211556

Collected: 11/20/2013 10:40 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 11/21/2013 09:05

San Ramon CA 94583

Reported: 12/04/2013 15:20

MRT19

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B					
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx					
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Miscellaneous RSKSOP-175 modified					
07105	Methane	74-82-8	14	3.0	1
GC Petroleum ECY 97-602 NWTPH-Dx					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	29	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	68	1
GC Petroleum ECY 97-602 NWTPH-Dx					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	68	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0					
00368	Nitrate Nitrogen	14797-55-8	N.D.	250	5
00228	Sulfate	14808-79-8	2,700	1,500	5
SM 2320 B-1997					
12150	Total Alkalinity	n.a.	129,000	700	1
SM 4500-S2 D-2000					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	D133352AA	12/02/2013 00:03	Daniel H Heller	1

Sample Description: MW-119 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7286254
LL Group # 1435589
Account # 11260

Project Name: 211556

Collected: 11/20/2013 10:40 by JP

Chevron

6001 Bollinger Canyon Road

Submitted: 11/21/2013 09:05

L4310

Reported: 12/04/2013 15:20

San Ramon CA 94583

MRT19

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D133352AA	12/02/2013 00:03	Daniel H Heller	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	13329A07A	11/26/2013 11:17	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	13329A07A	11/26/2013 11:17	Catherine J Schwarz	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	133330001A	11/29/2013 21:50	Nicholas R Rossi	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	133310027A	12/03/2013 14:08	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	133310028A	12/03/2013 00:13	Michele D Hamilton	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	133310028A	11/29/2013 19:00	Elaine F Stoltzfus	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	133310027A	11/29/2013 19:00	Elaine F Stoltzfus	1
00368	Nitrate Nitrogen	EPA 300.0	1	13325987901A	11/21/2013 17:55	Sandra J Miller	5
00228	Sulfate	EPA 300.0	1	13325987901A	11/21/2013 17:55	Sandra J Miller	5
12150	Total Alkalinity	SM 2320 B-1997	1	13326004203A	11/22/2013 20:14	Michele L Graham	1
00230	Sulfide	SM 4500-S2 D-2000	1	13329023001A	11/25/2013 08:50	Susan E Hibner	1

Sample Description: MW-119 Filtered Grab Groundwater
 Facility# 211556 Job# 386773
 101 Mulford Rd - Toledo, WA

LL Sample # WW 7286255
 LL Group # 1435589
 Account # 11260

Project Name: 211556

Collected: 11/20/2013 10:40 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 11/21/2013 09:05

Reported: 12/04/2013 15:20

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
06035	Lead	SW-846 6020 7439-92-1	ug/l 0.80	ug/l 0.085	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was filtered in the lab for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	133316050005A	12/04/2013 02:43	John P Hook	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	133316050005	12/02/2013 11:50	James L Mertz	1

Sample Description: MW-119 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7286256
LL Group # 1435589
Account # 11260

Project Name: 211556

Collected: 11/20/2013 10:40 by JP

Chevron

6001 Bollinger Canyon Road

Submitted: 11/21/2013 09:05

L4310

Reported: 12/04/2013 15:20

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
		SW-846 6010B	ug/l	ug/l	
01754	Iron	7439-89-6	N.D.	43.0	1
07058	Manganese	7439-96-5	11.1	0.83	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	133261848002	11/26/2013 15:29	Eric L Eby	1
07058	Manganese	SW-846 6010B	1	133261848002	11/26/2013 15:29	Eric L Eby	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	133261848002	11/25/2013 10:35	Denise K Conners	1

Quality Control Summary

Client Name: Chevron
Reported: 12/04/13 at 03:20 PM

Group Number: 1435589

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

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: D133352AA	Sample number(s): 7286242-7286243, 7286246, 7286248, 7286251, 7286254							
Benzene	N.D.	0.5	ug/l	104		78-120		
Ethylbenzene	N.D.	0.5	ug/l	93		79-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	110		75-120		
Toluene	N.D.	0.5	ug/l	97		80-120		
Xylene (Total)	N.D.	0.5	ug/l	96		80-120		
Batch number: 13326A07A	Sample number(s): 7286242-7286243, 7286246, 7286248							
NWTPH-Gx water C7-C12	N.D.	50.	ug/l	95	99	75-135	5	30
Batch number: 13329A07A	Sample number(s): 7286251, 7286254							
NWTPH-Gx water C7-C12	N.D.	50.	ug/l	93		75-135		
Batch number: 133330001A	Sample number(s): 7286243, 7286248, 7286251, 7286254							
Methane	N.D.	3.0	ug/l	100		80-120		
Batch number: 133310027A	Sample number(s): 7286243, 7286246, 7286248, 7286251, 7286254							
Diesel Range Organics C12-C24	N.D.	30.	ug/l	78	73	50-113	6	20
Heavy Range Organics C24-C40	N.D.	70.	ug/l					
Batch number: 133310028A	Sample number(s): 7286243, 7286246, 7286248, 7286251, 7286254							
DRO C12-C24 w/Si Gel	N.D.	30.	ug/l	76	76	32-117	0	20
HRO C24-C40 w/Si Gel	N.D.	70.	ug/l					
Batch number: 133261848002	Sample number(s): 7286250, 7286253, 7286256							
Iron	N.D.	43.0	ug/l	98		90-112		
Manganese	N.D.	0.83	ug/l	99		90-110		
Batch number: 133261848003	Sample number(s): 7286245							
Iron	N.D.	43.0	ug/l	94		90-112		
Manganese	N.D.	0.83	ug/l	102		90-110		
Batch number: 133316050005A	Sample number(s): 7286244, 7286247, 7286249, 7286252, 7286255							
Lead	N.D.	0.085	ug/l	104		90-110		
Batch number: 13325987901A	Sample number(s): 7286243, 7286248, 7286251, 7286254							
Nitrate Nitrogen	N.D.	50.	ug/l	100		90-110		
Sulfate	N.D.	300.	ug/l	100		90-110		
Batch number: 13325023003A	Sample number(s): 7286243, 7286248							
Sulfide	N.D.	54.	ug/l	99		90-110		
Batch number: 13326004203A	Sample number(s): 7286248, 7286251, 7286254							
Total Alkalinity	1,300	700.	ug/l as	100		90-110		

*- 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: 1435589
Reported: 12/04/13 at 03:20 PM

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 13326004203B Total Alkalinity	1,300	700.	7286243 ug/l as CaCO3	100		90-110		
Batch number: 13329023001A Sulfide	N.D.	54.	7286251,7286254 ug/l	99		90-110		

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

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: D133352AA	Sample number(s): 7286242-7286243,7286246,7286248,7286251,7286254 UNSPK: P289107								
Benzene	121	108	72-134	11	30				
Ethylbenzene	110	97	71-134	12	30				
Methyl Tertiary Butyl Ether	123	110	72-126	11	30				
Toluene	112	101	80-125	11	30				
Xylene (Total)	112	99	79-125	12	30				
Batch number: 13329A07A NWTPH-Gx water C7-C12	Sample number(s): 7286251,7286254 UNSPK: P290271								
	107	107	75-135	0	30				
Batch number: 133330001A Methane	Sample number(s): 7286243,7286248,7286251,7286254 UNSPK: P284547								
	-3004 (2)	-2045 (2)	35-157	23*	20				
Batch number: 133261848002 Iron	Sample number(s): 7286250,7286253,7286256 UNSPK: P283786 BKG: P283786								
	100	99	75-125	2	20	92.0	81.4	12 (1)	20
Manganese	96	95	75-125	0	20	492	478	3	20
Batch number: 133261848003 Iron	Sample number(s): 7286245 UNSPK: P283961 BKG: P283961								
	151 (2)	125 (2)	75-125	5	20	4,030	3,970	1	20
Manganese	100	101	75-125	1	20	113	111	2	20
Batch number: 133316050005A Lead	Sample number(s): 7286244,7286247,7286249,7286252,7286255 UNSPK: P285128 BKG: P285128								
	106	104	89-120	1	20	0.090	N.D.	200* (1)	20
Batch number: 13325987901A Nitrate Nitrogen	Sample number(s): 7286243,7286248,7286251,7286254 UNSPK: 7286243 BKG: 7286243								
	100		90-110			N.D.	N.D.	0 (1)	20
Sulfate	100		90-110			1,700	1,700	3 (1)	20
Batch number: 13325023003A Sulfide	Sample number(s): 7286243,7286248 UNSPK: P285668 BKG: P285668								
	103	96	42-131	5	16	110	110	4 (1)	5
Batch number: 13326004203A Total Alkalinity	Sample number(s): 7286248,7286251,7286254 UNSPK: P287595 BKG: P287595								
	98		10-159			81,900	81,500	0	5
Batch number: 13326004203B	Sample number(s): 7286243 UNSPK: P287595 BKG: 7286243								

*- 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: 1435589
Reported: 12/04/13 at 03:20 PM

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

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Total Alkalinity	98		10-159			112,000	113,000	0	5
Batch number: 13329023001A	Sample number(s): 7286251, 7286254 UNSPK: P287936 BKG: P287936								
Sulfide	89	95	42-131	6	16	N.D.	N.D.	0 (1)	5

Surrogate Quality Control

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

Analysis Name: UST VOCs by 8260B - Water

Batch number: D133352AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7286242	99	94	94	98
7286243	97	94	94	98
7286246	96	92	93	98
7286248	97	94	94	98
7286251	98	96	93	97
7286254	97	94	92	97
Blank	99	96	94	99
LCS	97	92	94	99
MS	96	99	94	100
MSD	96	97	93	100
Limits:	80-116	77-113	80-113	78-113

Analysis Name: NWTPH-Gx water C7-C12

Batch number: 13326A07A

	Trifluorotoluene-F
7286242	97
7286243	95
7286246	93
7286248	102
Blank	98
LCS	104
LCSD	105
Limits:	63-135

Analysis Name: NWTPH-Gx water C7-C12

Batch number: 13329A07A

	Trifluorotoluene-F
7286251	88
7286254	91
Blank	93
LCS	104

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 12/04/13 at 03:20 PM

Group Number: 1435589

Surrogate Quality Control

MS 114
MSD 115

Limits: 63-135

Analysis Name: NWTPH-Dx water
Batch number: 133310027A
Orthoterphenyl

7286243 97
7286246 107
7286248 96
7286251 100
7286254 90
Blank 96
LCS 105
LCSD 96

Limits: 50-150

Analysis Name: NWTPH-Dx water w/ 10g Si Gel
Batch number: 133310028A
Orthoterphenyl

7286243 95
7286246 99
7286248 99
7286251 86
7286254 88
Blank 98
LCS 101
LCSD 99

Limits: 50-150

Analysis Name: Volatile Headspace Hydrocarbon
Batch number: 133330001A
Propene

7286243 72
7286248 89
7286251 76
7286254 74
Blank 90
LCS 90
MS 68
MSD 64

Limits: 42-131

*- 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



Lancaster Laboratories

Acct. # 11260

For Eurofins Lancaster Laboratories use only
 Group # 1435589 Sample # 12862421-56
 Instructions on reverse side correspond with circled numbers.

1 Please forward the lab results directly to the Lead Consultant and cc. G-R Client Information				4 Matrix			5 Analyses Requested												6 Remarks												
Facility # <u>SS#211556-OML G-R#386773</u> WBS Site Address <u>101 Mulford Road, TOLEDO, WA</u> Chevron PM <u>MHO</u> LEIDOSRS Lead Consultant <u>Russell Shropshire</u> Consultant/Office <u>Gettler-Ryan, Inc., 6747 Sierra Court, Suite J, Dublin, CA 94568</u> Consultant Project Mgr. <u>Deanna L. Harding, (deanna@grinc.com), (925) 551-7444 x180</u> Consultant Phone # <u>(425) 482-3323 x</u> Sampler <u>J. Payne</u>				<input type="checkbox"/> Sediment <input checked="" type="checkbox"/> Ground <input type="checkbox"/> Surface <input type="checkbox"/> Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Air			Total Number of Containers BTEX + MTBE 8021 <input type="checkbox"/> 8260 <input type="checkbox"/> Naphth <input type="checkbox"/> 8260 full scan Oxygenates NWTPH-Gx NWTPH-Dx with Silica Gel Cleanup <input checked="" type="checkbox"/> NWTPH-Dx without Silica Gel Cleanup <input checked="" type="checkbox"/> WA VPH <input type="checkbox"/> WA EPH <input type="checkbox"/> Lead Total <input type="checkbox"/> Diss. <input checked="" type="checkbox"/> Method NITRATE / SULFATE DISSOLVED IRON / DISSOLVED MANGANESE SULFIDE / METHANE ALKALINITY												SCR #: _____ <input type="checkbox"/> Results in Dry Weight <input type="checkbox"/> J value reporting needed <input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds <input type="checkbox"/> 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run _____ oxy's on highest hit <input type="checkbox"/> Run _____ oxy's on all hits												
2 Sample Identification		3 Collected																	6												
		Date	Time	Grab	Composite	Soil	Water	Oil	Total Number of Containers	BTEX + MTBE	8021	8260	Naphth	Oxygenates	NWTPH-Gx	NWTPH-Dx with Silica Gel Cleanup	NWTPH-Dx without Silica Gel Cleanup	WA VPH	WA EPH	Lead	Total	Diss.	Method	NITRATE / SULFATE	DISSOLVED IRON / DISSOLVED MANGANESE	SULFIDE / METHANE	ALKALINITY	Please report results for Dx with and without silica gel cleanup. Dissolved iron & manganese, as well as alkalinity samples have been field filtered.			
<u>G.A.</u>		<u>11-20-13</u>		<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		<u>2</u>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>														
<u>MW-103</u>			<u>1232</u>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		<u>16</u>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	
<u>MW-110</u>			<u>1340</u>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		<u>9</u>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	
<u>MW-112</u>			<u>1134</u>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		<u>16</u>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	
<u>MW-113</u>			<u>1230</u>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		<u>16</u>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	
<u>MW-119</u>			<u>1040</u>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		<u>16</u>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
7 Turnaround Time Requested (TAT) (please circle)				Relinquished by <u>[Signature]</u> Date <u>11-20-13</u> Time <u>1630</u>				Received by _____ Date _____ Time _____				Relinquished by _____ Date _____ Time _____				Received by <u>[Signature]</u> Date _____ Time _____															
Standard <input checked="" type="checkbox"/> 5 day 4 day 72 hour 48 hour 24 hour				Relinquished by Commercial Carrier:				Received by _____ Date _____ Time _____				Temperature Upon Receipt <u>0.7-2.1 °C</u>				Custody Seals Intact? <u>(Yes)</u> No															
8 Data Package (circle if required)				EDD (circle if required) <u>EDDED</u>				Relinquished by Commercial Carrier:				Received by <u>[Signature]</u> Date <u>11-21-13</u> Time <u>0905</u>				Type I - Full CVX-RTBU-FL_05 (default) Type VI (Raw Data) Other: _____				UPS <input checked="" type="checkbox"/> FedEx _____ Other _____											

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 \geq the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ).

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

- A** TIC is a possible aldol-condensation product
- B** Analyte was also detected in the blank
- C** Pesticide result confirmed by GC/MS
- D** Compound quantitated on a diluted sample
- E** Concentration exceeds the calibration range of the instrument
- N** Presumptive evidence of a compound (TICs only)
- P** Concentration difference between primary and confirmation columns $>25\%$
- U** Compound was not detected
- X,Y,Z** Defined in case narrative

Inorganic Qualifiers

- B** Value is $<$ CRDL, but \geq IDL
- E** Estimated due to interference
- M** Duplicate injection precision not met
- N** Spike sample not within control limits
- S** Method of standard additions (MSA) used for calculation
- U** Compound was not detected
- W** Post digestion spike out of control limits
- *** Duplicate analysis not within control limits
- +** 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.

ANALYTICAL RESULTS

Prepared by:

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

Prepared for:

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

December 04, 2013

Project: 211556

Submittal Date: 11/20/2013

Group Number: 1435217

PO Number: 0015119898

Release Number: SHRILL HOPKINS

State of Sample Origin: WA

<u>Client Sample Description</u>	<u>Lancaster Labs (LL) #</u>
QA NA Water	7284330
MW-115 Grab Groundwater	7284331
MW-115 Filtered Grab Groundwater	7284332
MW-116 Grab Groundwater	7284333
MW-116 Filtered Grab Groundwater	7284334
MW-116 Filtered Grab Groundwater	7284335
MW-117 Grab Groundwater	7284336
MW-117 Filtered Grab Groundwater	7284337
MW-117 Filtered Grab Groundwater	7284338
MW-118 Grab Groundwater	7284339
MW-118 Filtered Grab Groundwater	7284340
MW-120 Grab Groundwater	7284341
MW-120 Filtered Grab Groundwater	7284342

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

ELECTRONIC COPY TO
ELECTRONIC COPY TO
ELECTRONIC COPY TO

Gettler-Ryan Inc.
SAIC
SAIC

Attn: Gettler Ryan

Attn: Jamalyn Green

Attn: Russ Shropshire

Respectfully Submitted,



Amek Carter
Specialist

(717) 556-7252

Sample Description: QA NA Water
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7284330
LL Group # 1435217
Account # 11260

Project Name: 211556

Collected: 11/19/2013

Chevron

Submitted: 11/20/2013 09:05

6001 Bollinger Canyon Road
L4310

Reported: 12/04/2013 20:51

San Ramon CA 94583

MRTQA

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles			SW-846 8260B	ug/l	
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles			ECY 97-602 NWTPH-Gx	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	F133301AA	11/26/2013 07:03	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F133301AA	11/26/2013 07:03	Anita M Dale	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	13326A07A	11/23/2013 15:32	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	13326A07A	11/23/2013 15:32	Catherine J Schwarz	1

Sample Description: MW-115 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7284331
LL Group # 1435217
Account # 11260

Project Name: 211556

Collected: 11/19/2013 11:31 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 11/20/2013 09:05

Reported: 12/04/2013 20:51

MRT15

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B			ug/l	ug/l	
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx			ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	29	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	67	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1
The reverse surrogate, capric acid, is present at <1%.					

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	F133301AA	11/26/2013 07:24	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F133301AA	11/26/2013 07:24	Anita M Dale	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	13326A07A	11/23/2013 19:19	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	13326A07A	11/23/2013 19:19	Catherine J Schwarz	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	133290033A	11/27/2013 14:30	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	133290034A	12/03/2013 11:33	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	133290034A	11/26/2013 08:15	Kerrie A Freeburn	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	133290033A	11/26/2013 08:15	Kerrie A Freeburn	1

Sample Description: MW-115 Filtered Grab Groundwater
 Facility# 211556 Job# 386773
 101 Mulford Rd - Toledo, WA

LL Sample # WW 7284332
 LL Group # 1435217
 Account # 11260

Project Name: 211556

Collected: 11/19/2013 11:31 by JP

Chevron

6001 Bollinger Canyon Road
 L4310

Submitted: 11/20/2013 09:05

San Ramon CA 94583

Reported: 12/04/2013 20:51

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
06035	Lead	SW-846 6020 7439-92-1	ug/l 0.45	ug/l 0.085	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was filtered in the lab for dissolved lead.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	133316050004A	12/04/2013 02:41	John P Hook	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	133316050004	12/02/2013 11:36	James L Mertz	1

Sample Description: MW-116 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7284333
LL Group # 1435217
Account # 11260

Project Name: 211556

Collected: 11/19/2013 10:31 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 11/20/2013 09:05

Reported: 12/04/2013 20:51

MRT16

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B ug/l					
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx ug/l					
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Miscellaneous RSKSOP-175 modified ug/l					
07105	Methane	74-82-8	N.D.	3.0	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	29	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	67	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0 ug/l					
00368	Nitrate Nitrogen	14797-55-8	790	250	5
00228	Sulfate	14808-79-8	4,100	1,500	5
SM 2320 B-1997 ug/l as CaCO3					
12150	Total Alkalinity	n.a.	37,600	700	1
SM 4500-S2 D-2000 ug/l					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	F133301AA	11/26/2013 08:29	Anita M Dale	1

Sample Description: MW-116 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7284333
LL Group # 1435217
Account # 11260

Project Name: 211556

Collected: 11/19/2013 10:31 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 11/20/2013 09:05

Reported: 12/04/2013 20:51

San Ramon CA 94583

MRT16

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F133301AA	11/26/2013 08:29	Anita M Dale	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	13326A07A	11/23/2013 19:44	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	13326A07A	11/23/2013 19:44	Catherine J Schwarz	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	133330001A	11/29/2013 15:02	Nicholas R Rossi	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	133290033A	11/27/2013 14:52	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	133290034A	12/03/2013 11:56	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	133290034A	11/26/2013 08:15	Kerrie A Freeburn	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	133290033A	11/26/2013 08:15	Kerrie A Freeburn	1
00368	Nitrate Nitrogen	EPA 300.0	1	13324347602B	11/20/2013 15:16	Sandra J Miller	5
00228	Sulfate	EPA 300.0	1	13324347602B	11/20/2013 15:16	Sandra J Miller	5
12150	Total Alkalinity	SM 2320 B-1997	1	13325003102A	11/21/2013 13:26	Michele L Graham	1
00230	Sulfide	SM 4500-S2 D-2000	1	13325023001A	11/21/2013 08:50	Susan E Hibner	1

Sample Description: MW-116 Filtered Grab Groundwater
 Facility# 211556 Job# 386773
 101 Mulford Rd - Toledo, WA

LL Sample # WW 7284334
 LL Group # 1435217
 Account # 11260

Project Name: 211556

Collected: 11/19/2013 10:31 by JP

Chevron

6001 Bollinger Canyon Road
 L4310

Submitted: 11/20/2013 09:05

Reported: 12/04/2013 20:51

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
06035	Lead	SW-846 6020 7439-92-1	ug/l 0.10	ug/l 0.085	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was filtered in the lab for dissolved lead.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	133316050004A	12/04/2013 02:43	John P Hook	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	133316050004	12/02/2013 11:36	James L Mertz	1

Sample Description: MW-116 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7284335
LL Group # 1435217
Account # 11260

Project Name: 211556

Collected: 11/19/2013 10:31 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 11/20/2013 09:05

San Ramon CA 94583

Reported: 12/04/2013 20:51

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
		SW-846 6010B	ug/l	ug/l	
01754	Iron	7439-89-6	175	43.0	1
07058	Manganese	7439-96-5	13.2	0.83	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was field filtered for dissolved iron and manganese.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	133261848003	11/26/2013 09:57	Joanne M Gates	1
07058	Manganese	SW-846 6010B	1	133261848003	11/26/2013 09:57	Joanne M Gates	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	133261848003	11/25/2013 10:55	Denise K Conners	1

Sample Description: MW-117 Grab Groundwater
Facility# 211556 **Job#** 386773
 101 Mulford Rd - Toledo, WA

LL Sample # WW 7284336
LL Group # 1435217
Account # 11260

Project Name: 211556

Collected: 11/19/2013 12:40 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 11/20/2013 09:05

Reported: 12/04/2013 20:51

MRT17

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B					
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx					
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Miscellaneous RSKSOP-175 modified					
07105	Methane	74-82-8	N.D.	3.0	1
GC Petroleum ECY 97-602 NWTPH-Dx					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	29	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	67	1
GC Petroleum ECY 97-602 NWTPH-Dx					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0					
00368	Nitrate Nitrogen	14797-55-8	580	250	5
00228	Sulfate	14808-79-8	3,900	1,500	5
SM 2320 B-1997					
12150	Total Alkalinity	n.a.	14,700	700	1
SM 4500-S2 D-2000					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	F133301AA	11/26/2013 08:50	Anita M Dale	1

Sample Description: MW-117 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7284336
LL Group # 1435217
Account # 11260

Project Name: 211556

Collected: 11/19/2013 12:40 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 11/20/2013 09:05

Reported: 12/04/2013 20:51

San Ramon CA 94583

MRT17

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F133301AA	11/26/2013 08:50	Anita M Dale	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	13326A07A	11/23/2013 20:09	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	13326A07A	11/23/2013 20:09	Catherine J Schwarz	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	133330001A	11/29/2013 15:20	Nicholas R Rossi	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	133310027A	12/03/2013 10:48	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	133310028A	12/02/2013 21:34	Michele D Hamilton	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	133310028A	11/29/2013 19:00	Elaine F Stoltzfus	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	133310027A	11/29/2013 19:00	Elaine F Stoltzfus	1
00368	Nitrate Nitrogen	EPA 300.0	1	13324347602B	11/20/2013 16:37	Sandra J Miller	5
00228	Sulfate	EPA 300.0	1	13324347602B	11/20/2013 16:37	Sandra J Miller	5
12150	Total Alkalinity	SM 2320 B-1997	1	13325003102A	11/21/2013 13:31	Michele L Graham	1
00230	Sulfide	SM 4500-S2 D-2000	1	13325023001A	11/21/2013 08:50	Susan E Hibner	1

Sample Description: MW-117 Filtered Grab Groundwater
 Facility# 211556 Job# 386773
 101 Mulford Rd - Toledo, WA

LL Sample # WW 7284337
 LL Group # 1435217
 Account # 11260

Project Name: 211556

Collected: 11/19/2013 12:40 by JP

Chevron

6001 Bollinger Canyon Road
 L4310

Submitted: 11/20/2013 09:05

Reported: 12/04/2013 20:51

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved		SW-846 6020	ug/l	ug/l	
06035	Lead	7439-92-1	N.D.	0.085	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was filtered in the lab for dissolved lead.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	133316050004A	12/04/2013 02:45	John P Hook	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	133316050004	12/02/2013 11:36	James L Mertz	1

Sample Description: MW-117 Filtered Grab Groundwater
 Facility# 211556 Job# 386773
 101 Mulford Rd - Toledo, WA

LL Sample # WW 7284338
 LL Group # 1435217
 Account # 11260

Project Name: 211556

Collected: 11/19/2013 12:40 by JP

Chevron

6001 Bollinger Canyon Road

Submitted: 11/20/2013 09:05

L4310

Reported: 12/04/2013 20:51

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
		SW-846 6010B	ug/l	ug/l	
01754	Iron	7439-89-6	N.D.	43.0	1
07058	Manganese	7439-96-5	3.0	0.83	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was field filtered for dissolved iron and manganese.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	133261848003	11/26/2013 10:08	Joanne M Gates	1
07058	Manganese	SW-846 6010B	1	133261848003	11/26/2013 10:08	Joanne M Gates	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	133261848003	11/25/2013 10:55	Denise K Conners	1

Sample Description: MW-118 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7284339
LL Group # 1435217
Account # 11260

Project Name: 211556

Collected: 11/19/2013 09:21 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 11/20/2013 09:05

San Ramon CA 94583

Reported: 12/04/2013 20:51

MRT18

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B			ug/l	ug/l	
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx			ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	29	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	67	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1
The reverse surrogate, capric acid, is present at <1%.					

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	F133301AA	11/26/2013 09:12	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F133301AA	11/26/2013 09:12	Anita M Dale	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	13326A07A	11/23/2013 20:34	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	13326A07A	11/23/2013 20:34	Catherine J Schwarz	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	133310027A	12/03/2013 11:10	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	133310028A	12/02/2013 21:57	Michele D Hamilton	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	133310028A	11/29/2013 19:00	Elaine F Stoltzfus	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	133310027A	11/29/2013 19:00	Elaine F Stoltzfus	1

Sample Description: MW-118 Filtered Grab Groundwater
 Facility# 211556 Job# 386773
 101 Mulford Rd - Toledo, WA

LL Sample # WW 7284340
 LL Group # 1435217
 Account # 11260

Project Name: 211556

Collected: 11/19/2013 09:21 by JP

Chevron

6001 Bollinger Canyon Road
 L4310

Submitted: 11/20/2013 09:05

San Ramon CA 94583

Reported: 12/04/2013 20:51

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
06035	Lead	SW-846 6020 7439-92-1	ug/l 0.15	ug/l 0.085	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was filtered in the lab for dissolved lead.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	133316050004A	12/04/2013 02:47	John P Hook	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	133316050004	12/02/2013 11:36	James L Mertz	1

Sample Description: MW-120 Grab Groundwater
Facility# 211556 **Job#** 386773
 101 Mulford Rd - Toledo, WA

LL Sample # WW 7284341
LL Group # 1435217
Account # 11260

Project Name: 211556

Collected: 11/19/2013 13:43 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 11/20/2013 09:05

Reported: 12/04/2013 20:51

MRT20

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B			ug/l	ug/l	
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTTPH-Gx			ug/l	ug/l	
08273	NWTTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Petroleum ECY 97-602 NWTTPH-Dx			ug/l	ug/l	
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	29	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	67	1
GC Petroleum ECY 97-602 NWTTPH-Dx			ug/l	ug/l	
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1
The reverse surrogate, capric acid, is present at <1%.					

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	F133301AA	11/26/2013 09:34	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F133301AA	11/26/2013 09:34	Anita M Dale	1
08273	NWTTPH-Gx water C7-C12	ECY 97-602 NWTTPH-Gx	1	13326A07A	11/23/2013 21:00	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	13326A07A	11/23/2013 21:00	Catherine J Schwarz	1
08271	NWTTPH-Dx water	ECY 97-602 NWTTPH-Dx modified	1	133310027A	12/03/2013 11:33	Christine E Dolman	1
12005	NWTTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTTPH-Dx modified	1	133310028A	12/02/2013 22:20	Michele D Hamilton	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTTPH-Dx 06/97	1	133310028A	11/29/2013 19:00	Elaine F Stoltzfus	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTTPH-Dx 06/97	1	133310027A	11/29/2013 19:00	Elaine F Stoltzfus	1

Sample Description: MW-120 Filtered Grab Groundwater
 Facility# 211556 Job# 386773
 101 Mulford Rd - Toledo, WA

LL Sample # WW 7284342
 LL Group # 1435217
 Account # 11260

Project Name: 211556

Collected: 11/19/2013 13:43 by JP

Chevron

6001 Bollinger Canyon Road
 L4310

Submitted: 11/20/2013 09:05

San Ramon CA 94583

Reported: 12/04/2013 20:51

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
06035	Lead	SW-846 6020 7439-92-1	ug/l 0.088	ug/l 0.085	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was filtered in the lab for dissolved lead.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	133316050004A	12/04/2013 02:49	John P Hook	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	133316050004	12/02/2013 11:36	James L Mertz	1

Quality Control Summary

Client Name: Chevron
Reported: 12/04/13 at 08:51 PM

Group Number: 1435217

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

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: F133301AA	Sample number(s): 7284330-7284331,7284333,7284336,7284339,7284341							
Benzene	N.D.	0.5	ug/l	88		78-120		
Ethylbenzene	N.D.	0.5	ug/l	85		79-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	82		75-120		
Toluene	N.D.	0.5	ug/l	89		80-120		
Xylene (Total)	N.D.	0.5	ug/l	86		80-120		
Batch number: 13326A07A	Sample number(s): 7284330-7284331,7284333,7284336,7284339,7284341							
NWTPH-Gx water C7-C12	N.D.	50.	ug/l	95	99	75-135	5	30
Batch number: 133330001A	Sample number(s): 7284333,7284336							
Methane	N.D.	3.0	ug/l	100		80-120		
Batch number: 133290033A	Sample number(s): 7284331,7284333							
Diesel Range Organics C12-C24	N.D.	30.	ug/l	73	70	50-113	4	20
Heavy Range Organics C24-C40	N.D.	70.	ug/l					
Batch number: 133310027A	Sample number(s): 7284336,7284339,7284341							
Diesel Range Organics C12-C24	N.D.	30.	ug/l	78	73	50-113	6	20
Heavy Range Organics C24-C40	N.D.	70.	ug/l					
Batch number: 133290034A	Sample number(s): 7284331,7284333							
DRO C12-C24 w/Si Gel	N.D.	30.	ug/l	67	75	32-117	12	20
HRO C24-C40 w/Si Gel	N.D.	70.	ug/l					
Batch number: 133310028A	Sample number(s): 7284336,7284339,7284341							
DRO C12-C24 w/Si Gel	N.D.	30.	ug/l	76	76	32-117	0	20
HRO C24-C40 w/Si Gel	N.D.	70.	ug/l					
Batch number: 133261848003	Sample number(s): 7284335,7284338							
Iron	N.D.	43.0	ug/l	94		90-112		
Manganese	N.D.	0.83	ug/l	102		90-110		
Batch number: 133316050004A	Sample number(s): 7284332,7284334,7284337,7284340,7284342							
Lead	N.D.	0.085	ug/l	104		90-110		
Batch number: 13324347602B	Sample number(s): 7284333,7284336							
Nitrate Nitrogen	N.D.	50.	ug/l	102		90-110		
Sulfate	N.D.	300.	ug/l	101		90-110		
Batch number: 13325003102A	Sample number(s): 7284333,7284336							
Total Alkalinity	N.D.	700.	ug/l as CaCO3	98		90-110		

*- 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: 1435217
Reported: 12/04/13 at 08:51 PM

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 13325023001A	Sample number(s): 7284333, 7284336							
Sulfide	N.D.	54.	ug/l	97		90-110		

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

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: F133301AA	Sample number(s): 7284330-7284331, 7284333, 7284336, 7284339, 7284341 UNSPK: 7284331								
Benzene	94	94	72-134	1	30				
Ethylbenzene	90	92	71-134	1	30				
Methyl Tertiary Butyl Ether	78	83	72-126	5	30				
Toluene	93	93	80-125	0	30				
Xylene (Total)	92	94	79-125	2	30				
Batch number: 133330001A	Sample number(s): 7284333, 7284336 UNSPK: P284547								
Methane	-3004 (2)	-2045 (2)	35-157	23*	20				
Batch number: 133261848003	Sample number(s): 7284335, 7284338 UNSPK: P283961 BKG: P283961								
Iron	151 (2)	125 (2)	75-125	5	20	4,030	3,970	1	20
Manganese	100	101	75-125	1	20	113	111	2	20
Batch number: 133316050004A	Sample number(s): 7284332, 7284334, 7284337, 7284340, 7284342 UNSPK: P285114 BKG: P285114								
Lead	100	103	89-120	3	20	0.62	0.64	3 (1)	20
Batch number: 13324347602B	Sample number(s): 7284333, 7284336 UNSPK: 7284333 BKG: 7284333								
Nitrate Nitrogen	136*		90-110			790	750	5 (1)	20
Sulfate	134*		90-110			4,100	3,900	5 (1)	20
Batch number: 13325003102A	Sample number(s): 7284333, 7284336 UNSPK: P284547 BKG: P284547								
Total Alkalinity	77	101	10-159	9*	5	339,000	341,000	1	5
Batch number: 13325023001A	Sample number(s): 7284333, 7284336 UNSPK: P279698 BKG: P279698								
Sulfide	92	105	42-131	11	16	140	170	19* (1)	5

Surrogate Quality Control

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

Analysis Name: UST VOCs by 8260B - Water

Batch number: F133301AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7284330	99	97	98	94
7284331	96	95	99	92

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 12/04/13 at 08:51 PM

Group Number: 1435217

Surrogate Quality Control

7284333	101	92	99	95
7284336	103	101	96	94
7284339	106	99	98	94
7284341	95	93	99	94
Blank	97	96	98	92
LCS	100	97	100	97
MS	97	102	98	95
MSD	103	102	99	95

Limits: 80-116 77-113 80-113 78-113

Analysis Name: NWTPH-Gx water C7-C12
Batch number: 13326A07A
Trifluorotoluene-F

7284330	93
7284331	94
7284333	91
7284336	95
7284339	95
7284341	95
Blank	98
LCS	104
LCSD	105

Limits: 63-135

Analysis Name: NWTPH-Dx water
Batch number: 133290033A
Orthoterphenyl

7284331	96
7284333	106
Blank	102
LCS	104
LCSD	98

Limits: 50-150

Analysis Name: NWTPH-Dx water w/ 10g Si Gel
Batch number: 133290034A
Orthoterphenyl

7284331	86
7284333	90
Blank	86
LCS	86
LCSD	94

Limits: 50-150

Analysis Name: NWTPH-Dx water
Batch number: 133310027A
Orthoterphenyl

7284336	99
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*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 12/04/13 at 08:51 PM

Group Number: 1435217

Surrogate Quality Control

7284339 100
7284341 94
Blank 96
LCS 105
LCSD 96

Limits: 50-150

Analysis Name: NWTPH-Dx water w/ 10g Si Gel
Batch number: 133310028A
Orthoterphenyl

7284336 90
7284339 96
7284341 91
Blank 98
LCS 101
LCSD 99

Limits: 50-150

Analysis Name: Volatile Headspace Hydrocarbon
Batch number: 133330001A
Propene

7284333 83
7284336 79
Blank 90
LCS 90
MS 68
MSD 64

Limits: 42-131

*- 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



Lancaster Laboratories

Acct. # 11260

For Eurofins Lancaster Laboratories use only
 Group # 1435217 Sample # 7284330-42

Instructions on reverse side correspond with circled numbers.

1 Client Information				4 Matrix				5 Analyses Requested										6 Remarks													
Facility # <u>SS#211556-OML G-R#386773</u> WBS Site Address <u>101 Mulford Road, TOLEDO, WA</u> Chevron PM <u>MHO</u> LEIDOSRS Lead Consultant <u>Russell Shropshire</u> Consultant/Office <u>Gettler-Ryan, Inc., 6747 Sierra Court, Suite J, Dublin, CA 94568</u> Consultant Project Mgr. <u>Deanna L. Harding, (deanna@grinc.com), (925) 551-7444 x180</u> Consultant Phone # <u>(425) 482-3323 x</u> Sampler <u>J. Payne</u>				<input type="checkbox"/> Sediment <input checked="" type="checkbox"/> Ground <input type="checkbox"/> Surface <input type="checkbox"/> Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Air				<input type="checkbox"/> BTEX + MTBE <input type="checkbox"/> 8021 <input type="checkbox"/> 8260 <input type="checkbox"/> Naphth <input type="checkbox"/> 8260 full scan <input type="checkbox"/> Oxygenates <input type="checkbox"/> NWTPH-Gx <input checked="" type="checkbox"/> NWTPH-Dx with Silica Gel Cleanup <input checked="" type="checkbox"/> NWTPH-Dx without Silica Gel Cleanup <input type="checkbox"/> WA VPH <input type="checkbox"/> WA EPH <input type="checkbox"/> Lead <input type="checkbox"/> Total <input checked="" type="checkbox"/> Diss. Method <u>6020</u> <u>NITRATE / SULFATE</u> <u>DISSOLVED IRON / MANGANESE</u> <u>SULFIDE / METHANE</u> <u>ALKALINITY F.F.</u>										SCR #: _____ <input type="checkbox"/> Results in Dry Weight <input type="checkbox"/> J value reporting needed <input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds <input type="checkbox"/> 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run _____ oxy's on highest hit <input type="checkbox"/> Run _____ oxy's on all hits													
2 Sample Identification		3 Collected		Grab	Composite	Soil	Water	Oil	Total Number of Containers	BTEX + MTBE	8021	8260	Naphth	Oxygenates	NWTPH-Gx	NWTPH-Dx with Silica Gel Cleanup	NWTPH-Dx without Silica Gel Cleanup	WA VPH	WA EPH	Lead	Total	Diss.	Method	6020	NITRATE / SULFATE	DISSOLVED IRON / MANGANESE	SULFIDE / METHANE	ALKALINITY F.F.	6 Remarks		
Date	Time																														
<u>Q.A</u>	<u>11-19-13</u>			X			X		2	X					X																Please report results for Dx with and without silica gel cleanup. Dissolved iron & manganese, as well as Alkalinity samples have been field filtered.
<u>MW-115</u>		<u>1131</u>		X			X		9	X					X	X	X														
<u>MW-116</u>		<u>1031</u>		X			X		16	X					X	X	X														
<u>MW-117</u>		<u>1240</u>		X			X		16	X					X	X	X														
<u>MW-118</u>		<u>0921</u>		X			X		9	X					X	X	X														
<u>MW-120</u>		<u>1843</u>		X			X		9	X					X	X	X														
7 Turnaround Time Requested (TAT) (please circle) <input checked="" type="radio"/> Standard 5 day 4 day 72 hour 48 hour 24 hour				Relinquished by <u>[Signature]</u> Date <u>11-19-13</u> Time <u>1700</u>				Relinquished by _____ Date _____ Time _____				Received by _____ Date _____ Time _____				Received by _____ Date _____ Time _____															
8 Data Package (circle if required) Type I - Full Type VI (Raw Data)				EDD (circle if required) <u>EDF/EDD</u> CVX-RTBU-FL_05 (default) Other: _____				Relinquished by Commercial Carrier: UPS <input checked="" type="checkbox"/> FedEx _____ Other _____				Received by <u>[Signature]</u> Date <u>11-20-13</u> Time <u>0905</u>				Temperature Upon Receipt <u>1.2-2.2°C</u> Custody Seals Intact? <input checked="" type="radio"/> Yes <input type="radio"/> No															

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 \geq 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 \geq 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.

ANALYTICAL RESULTS

Prepared by:

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

Prepared for:

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

February 19, 2014

Project: 211556

Submittal Date: 02/06/2014
Group Number: 1450644
PO Number: 0015119898
Release Number: HOPKINS/HORNE
State of Sample Origin: WA

<u>Client Sample Description</u>	<u>Lancaster Labs (LL) #</u>
QA NA Water	7355985
B-1 Grab Groundwater	7355986
B-1 Filtered Grab Groundwater	7355987
B-1 Filtered Grab Groundwater	7355988
B-2 Grab Groundwater	7355989
B-2 Filtered Grab Groundwater	7355990
B-2 Filtered Grab Groundwater	7355991
B-3 Grab Groundwater	7355992
B-3 Filtered Grab Groundwater	7355993
B-3 Filtered Grab Groundwater	7355994
B-4 Grab Groundwater	7355995
B-4 Filtered Grab Groundwater	7355996
B-4 Filtered Grab Groundwater	7355997
MW-111 Grab Groundwater	7355998
MW-111 Filtered Grab Groundwater	7355999
MW-111 Filtered Grab Groundwater	7356000

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

ELECTRONIC COPY TO	Gettler-Ryan Inc.	Attn: Gettler Ryan
ELECTRONIC COPY TO	SAIC	Attn: Jamalyn Green
ELECTRONIC COPY TO	SAIC	Attn: Russ Shropshire

Respectfully Submitted,



Amek Carter
Specialist

(717) 556-7252

Sample Description: QA NA Water
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7355985
LL Group # 1450644
Account # 11260

Project Name: 211556

Collected: 02/05/2014

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 02/06/2014 09:15

San Ramon CA 94583

Reported: 02/19/2014 13:20

MTWQA

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles			SW-846 8260B	ug/l	
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles			ECY 97-602 NWTPH-Gx	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	F140421AA	02/11/2014 10:14	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F140421AA	02/11/2014 10:14	Anita M Dale	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	14041A53A	02/11/2014 12:46	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	14041A53A	02/11/2014 12:46	Marie D Beamenderfer	1

Sample Description: B-1 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7355986
LL Group # 1450644
Account # 11260

Project Name: 211556

Collected: 02/05/2014 10:33 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 02/06/2014 09:15

San Ramon CA 94583

Reported: 02/19/2014 13:20

MTWB1

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B ug/l					
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx ug/l					
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Miscellaneous RSKSOP-175 modified ug/l					
07105	Methane	74-82-8	5.2	3.0	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	29	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	68	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	68	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0 ug/l					
00368	Nitrate Nitrogen	14797-55-8	660	250	5
00228	Sulfate	14808-79-8	4,400	1,500	5
SM 2320 B-1997 ug/l as CaCO3					
12150	Total Alkalinity	n.a.	76,900	700	1
SM 4500-S2 D-2000 ug/l					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	D140411AA	02/10/2014 13:35	Daniel H Heller	1

Sample Description: B-1 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7355986
LL Group # 1450644
Account # 11260

Project Name: 211556

Collected: 02/05/2014 10:33 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 02/06/2014 09:15

Reported: 02/19/2014 13:20

San Ramon CA 94583

MTWB1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D140411AA	02/10/2014 13:35	Daniel H Heller	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	14041A53A	02/11/2014 13:39	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	14041A53A	02/11/2014 13:39	Marie D Beamenderfer	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	140410004A	02/10/2014 14:53	Elizabeth J Marin	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	140410020A	02/12/2014 13:36	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	140410021A	02/14/2014 15:44	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	140410021A	02/11/2014 11:30	Kelli M Barto	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	140410020A	02/11/2014 11:30	Kelli M Barto	1
00368	Nitrate Nitrogen	EPA 300.0	1	14037987601A	02/06/2014 15:29	Clinton M Wilson	5
00228	Sulfate	EPA 300.0	1	14037987601A	02/06/2014 15:29	Clinton M Wilson	5
12150	Total Alkalinity	SM 2320 B-1997	1	14042003104A	02/11/2014 23:35	Michele L Graham	1
00230	Sulfide	SM 4500-S2 D-2000	1	14038023001A	02/07/2014 10:30	Michele L Graham	1

Sample Description: B-1 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 735987
LL Group # 1450644
Account # 11260

Project Name: 211556

Collected: 02/05/2014 10:33 by JP

Chevron

6001 Bollinger Canyon Road

Submitted: 02/06/2014 09:15

L4310

Reported: 02/19/2014 13:20

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved			SW-846 6010B	ug/l	
01754	Iron	7439-89-6	65.2	43.0	1
07058	Manganese	7439-96-5	221	0.83	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	140381848003	02/11/2014 04:03	Tara L Snyder	1
07058	Manganese	SW-846 6010B	1	140381848003	02/11/2014 04:03	Tara L Snyder	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	140381848003	02/10/2014 12:02	James L Mertz	1

Sample Description: B-1 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7355988
LL Group # 1450644
Account # 11260

Project Name: 211556

Collected: 02/05/2014 10:33 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 02/06/2014 09:15

Reported: 02/19/2014 13:20

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved		SW-846 6020	ug/l	ug/l	
06035	Lead	7439-92-1	N.D.	0.085	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was lab filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	140386050001A	02/12/2014 18:06	Parker D Lindstrom	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	140386050001	02/10/2014 12:23	James L Mertz	1

Sample Description: B-2 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7355989
LL Group # 1450644
Account # 11260

Project Name: 211556

Collected: 02/05/2014 09:25 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 02/06/2014 09:15

San Ramon CA 94583

Reported: 02/19/2014 13:20

MTWB2

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B ug/l					
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx ug/l					
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Miscellaneous RSKSOP-175 modified ug/l					
07105	Methane	74-82-8	N.D.	3.0	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	28	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	66	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	28	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	66	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0 ug/l					
00368	Nitrate Nitrogen	14797-55-8	1,000	250	5
00228	Sulfate	14808-79-8	3,400	1,500	5
SM 2320 B-1997 ug/l as CaCO3					
12150	Total Alkalinity	n.a.	75,300	700	1
SM 4500-S2 D-2000 ug/l					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	D140411AA	02/10/2014 14:44	Daniel H Heller	1

Sample Description: B-2 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7355989
LL Group # 1450644
Account # 11260

Project Name: 211556

Collected: 02/05/2014 09:25 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 02/06/2014 09:15

Reported: 02/19/2014 13:20

San Ramon CA 94583

MTWB2

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D140411AA	02/10/2014 14:44	Daniel H Heller	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	14041A53A	02/11/2014 14:06	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	14041A53A	02/11/2014 14:06	Marie D Beamenderfer	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	140410004A	02/10/2014 15:11	Elizabeth J Marin	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	140410020A	02/12/2014 13:59	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	140410021A	02/14/2014 16:06	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	140410021A	02/11/2014 11:30	Kelli M Barto	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	140410020A	02/11/2014 11:30	Kelli M Barto	1
00368	Nitrate Nitrogen	EPA 300.0	1	14037987601A	02/06/2014 16:17	Clinton M Wilson	5
00228	Sulfate	EPA 300.0	1	14037987601A	02/06/2014 16:17	Clinton M Wilson	5
12150	Total Alkalinity	SM 2320 B-1997	1	14042003104A	02/12/2014 00:54	Michele L Graham	1
00230	Sulfide	SM 4500-S2 D-2000	1	14038023001A	02/07/2014 10:30	Michele L Graham	1

Sample Description: B-2 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7355990
LL Group # 1450644
Account # 11260

Project Name: 211556

Collected: 02/05/2014 09:25 by JP

Chevron

6001 Bollinger Canyon Road

Submitted: 02/06/2014 09:15

L4310

Reported: 02/19/2014 13:20

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
		SW-846 6010B	ug/l	ug/l	
01754	Iron	7439-89-6	N.D.	43.0	1
07058	Manganese	7439-96-5	34.3	0.83	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	140381848003	02/11/2014 04:07	Tara L Snyder	1
07058	Manganese	SW-846 6010B	1	140381848003	02/11/2014 04:07	Tara L Snyder	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	140381848003	02/10/2014 12:02	James L Mertz	1

Sample Description: B-2 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7355991
LL Group # 1450644
Account # 11260

Project Name: 211556

Collected: 02/05/2014 09:25 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 02/06/2014 09:15

Reported: 02/19/2014 13:20

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved		SW-846 6020	ug/l	ug/l	
06035	Lead	7439-92-1	N.D.	0.085	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was lab filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	140386050001A	02/12/2014 18:07	Parker D Lindstrom	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	140386050001	02/10/2014 12:23	James L Mertz	1

Sample Description: B-3 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7355992
LL Group # 1450644
Account # 11260

Project Name: 211556

Collected: 02/05/2014 13:10 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 02/06/2014 09:15

San Ramon CA 94583

Reported: 02/19/2014 13:20

MTWB3

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B ug/l					
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	2	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx ug/l					
08273	NWTPH-Gx water C7-C12	n.a.	480	50	1
GC Miscellaneous RSKSOP-175 modified ug/l					
07105	Methane	74-82-8	96	3.0	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	730	29	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	67	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	36	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0 ug/l					
00368	Nitrate Nitrogen	14797-55-8	21,100	500	10
00228	Sulfate	14808-79-8	6,900	1,500	5
SM 2320 B-1997 ug/l as CaCO3					
12150	Total Alkalinity	n.a.	83,200	700	1
SM 4500-S2 D-2000 ug/l					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	D140411AA	02/10/2014 15:07	Daniel H Heller	1

Sample Description: B-3 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7355992
LL Group # 1450644
Account # 11260

Project Name: 211556

Collected: 02/05/2014 13:10 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 02/06/2014 09:15

Reported: 02/19/2014 13:20

San Ramon CA 94583

MTWB3

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D140411AA	02/10/2014 15:07	Daniel H Heller	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	14041A53A	02/11/2014 14:33	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	14041A53A	02/11/2014 14:33	Marie D Beamenderfer	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	140410004A	02/10/2014 15:29	Elizabeth J Marin	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	140410020A	02/12/2014 16:15	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	140410021A	02/19/2014 09:21	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	140410021A	02/11/2014 11:30	Kelli M Barto	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	140410020A	02/11/2014 11:30	Kelli M Barto	1
00368	Nitrate Nitrogen	EPA 300.0	1	14037987601A	02/07/2014 12:27	Sandra J Miller	10
00228	Sulfate	EPA 300.0	1	14037987601A	02/06/2014 16:33	Clinton M Wilson	5
12150	Total Alkalinity	SM 2320 B-1997	1	14042003104A	02/12/2014 00:11	Michele L Graham	1
00230	Sulfide	SM 4500-S2 D-2000	1	14038023001A	02/07/2014 10:30	Michele L Graham	1

Sample Description: B-3 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7355993
LL Group # 1450644
Account # 11260

Project Name: 211556

Collected: 02/05/2014 13:10 by JP

Chevron

6001 Bollinger Canyon Road

Submitted: 02/06/2014 09:15

L4310

Reported: 02/19/2014 13:20

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved			SW-846 6010B	ug/l	
01754	Iron	7439-89-6	2,440	43.0	1
07058	Manganese	7439-96-5	3,890	0.83	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	140381848003	02/11/2014 04:11	Tara L Snyder	1
07058	Manganese	SW-846 6010B	1	140381848003	02/11/2014 04:11	Tara L Snyder	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	140381848003	02/10/2014 12:02	James L Mertz	1

Sample Description: B-3 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7355994
LL Group # 1450644
Account # 11260

Project Name: 211556

Collected: 02/05/2014 13:10 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 02/06/2014 09:15

Reported: 02/19/2014 13:20

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved		SW-846 6020	ug/l	ug/l	
06035	Lead	7439-92-1	7.4	0.085	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was lab filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	140386050001A	02/12/2014 18:09	Parker D Lindstrom	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	140386050001	02/10/2014 12:23	James L Mertz	1

Sample Description: B-4 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7355995
LL Group # 1450644
Account # 11260

Project Name: 211556

Collected: 02/05/2014 11:24 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 02/06/2014 09:15

San Ramon CA 94583

Reported: 02/19/2014 13:20

MTWB4

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B					
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	3	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx					
08273	NWTPH-Gx water C7-C12	n.a.	1,800	50	1
GC Miscellaneous RSKSOP-175 modified					
07105	Methane	74-82-8	1,100	15	5
GC Petroleum ECY 97-602 NWTPH-Dx					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	170	29	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	68	1
GC Petroleum ECY 97-602 NWTPH-Dx					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	140	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	68	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0					
00368	Nitrate Nitrogen	14797-55-8	N.D.	250	5
00228	Sulfate	14808-79-8	N.D.	1,500	5
SM 2320 B-1997					
12150	Total Alkalinity	n.a.	119,000	700	1
SM 4500-S2 D-2000					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	Z140421AA	02/11/2014 19:28	Daniel H Heller	1

Sample Description: B-4 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7355995
LL Group # 1450644
Account # 11260

Project Name: 211556

Collected: 02/05/2014 11:24 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 02/06/2014 09:15

Reported: 02/19/2014 13:20

San Ramon CA 94583

MTWB4

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z140421AA	02/11/2014 19:28	Daniel H Heller	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	14041A53A	02/11/2014 15:00	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	14041A53A	02/11/2014 15:00	Marie D Beamenderfer	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	140410004A	02/10/2014 19:00	Elizabeth J Marin	5
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	140410020A	02/12/2014 16:37	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	140410021A	02/18/2014 10:49	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	140410021A	02/11/2014 11:30	Kelli M Barto	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	140410020A	02/11/2014 11:30	Kelli M Barto	1
00368	Nitrate Nitrogen	EPA 300.0	1	14037987601A	02/06/2014 16:49	Clinton M Wilson	5
00228	Sulfate	EPA 300.0	1	14037987601A	02/06/2014 16:49	Clinton M Wilson	5
12150	Total Alkalinity	SM 2320 B-1997	1	14042003103A	02/11/2014 21:04	Michele L Graham	1
00230	Sulfide	SM 4500-S2 D-2000	1	14038023001A	02/07/2014 10:30	Michele L Graham	1

Sample Description: B-4 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7355996
LL Group # 1450644
Account # 11260

Project Name: 211556

Collected: 02/05/2014 11:24 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 02/06/2014 09:15

Reported: 02/19/2014 13:20

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved			SW-846 6010B	ug/l	
01754	Iron	7439-89-6	11,400	43.0	1
07058	Manganese	7439-96-5	2,480	0.83	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	140381848003	02/11/2014 04:15	Tara L Snyder	1
07058	Manganese	SW-846 6010B	1	140381848003	02/11/2014 04:15	Tara L Snyder	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	140381848003	02/10/2014 12:02	James L Mertz	1

Sample Description: B-4 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7355997
LL Group # 1450644
Account # 11260

Project Name: 211556

Collected: 02/05/2014 11:24 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 02/06/2014 09:15

Reported: 02/19/2014 13:20

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
06035	Lead	SW-846 6020 7439-92-1	ug/l 2.4	ug/l 0.085	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was lab filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	140386050001A	02/12/2014 18:11	Parker D Lindstrom	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	140386050001	02/10/2014 12:23	James L Mertz	1

Sample Description: MW-111 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7355998
LL Group # 1450644
Account # 11260

Project Name: 211556

Collected: 02/05/2014 12:16 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 02/06/2014 09:15

San Ramon CA 94583

Reported: 02/19/2014 13:20

MTW11

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B			ug/l	ug/l	
10943	Benzene	71-43-2	1	0.5	1
10943	Ethylbenzene	100-41-4	75	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	7	0.5	1
GC Volatiles ECY 97-602 NWT PH-Gx			ug/l	ug/l	
08273	NWT PH-Gx water C7-C12	n.a.	4,800	50	1
GC Miscellaneous RSKSOP-175 modified			ug/l	ug/l	
07105	Methane	74-82-8	4,700	60	20
GC Petroleum ECY 97-602 NWT PH-Dx			ug/l	ug/l	
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	1,000	29	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	68	1
GC Petroleum ECY 97-602 NWT PH-Dx			ug/l	ug/l	
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	410	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	68	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0			ug/l	ug/l	
00368	Nitrate Nitrogen	14797-55-8	N.D.	250	5
00228	Sulfate	14808-79-8	N.D.	1,500	5
SM 2320 B-1997			ug/l as CaCO3	ug/l as CaCO3	
12150	Total Alkalinity	n.a.	181,000	700	1
SM 4500-S2 D-2000			ug/l	ug/l	
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	D140411AA	02/10/2014 15:53	Daniel H Heller	1

Sample Description: MW-111 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7355998
LL Group # 1450644
Account # 11260

Project Name: 211556

Collected: 02/05/2014 12:16 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 02/06/2014 09:15

Reported: 02/19/2014 13:20

San Ramon CA 94583

MTW11

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D140411AA	02/10/2014 15:53	Daniel H Heller	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	14041A53A	02/11/2014 15:27	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	14041A53A	02/11/2014 15:27	Marie D Beamenderfer	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	140410004A	02/10/2014 19:17	Elizabeth J Marin	20
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	140410020A	02/12/2014 17:17	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	140410021A	02/18/2014 11:11	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	140410021A	02/11/2014 11:30	Kelli M Barto	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	140410020A	02/11/2014 11:30	Kelli M Barto	1
00368	Nitrate Nitrogen	EPA 300.0	1	14037987601A	02/06/2014 17:06	Clinton M Wilson	5
00228	Sulfate	EPA 300.0	1	14037987601A	02/06/2014 17:06	Clinton M Wilson	5
12150	Total Alkalinity	SM 2320 B-1997	1	14042003103A	02/11/2014 20:43	Michele L Graham	1
00230	Sulfide	SM 4500-S2 D-2000	1	14038023001A	02/07/2014 10:30	Michele L Graham	1

Sample Description: MW-111 Filtered Grab Groundwater
 Facility# 211556 Job# 386773
 101 Mulford Rd - Toledo, WA

LL Sample # WW 7355999
 LL Group # 1450644
 Account # 11260

Project Name: 211556

Collected: 02/05/2014 12:16 by JP

Chevron

6001 Bollinger Canyon Road
 L4310

Submitted: 02/06/2014 09:15

Reported: 02/19/2014 13:20

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved			ug/l	ug/l	
01754	Iron	7439-89-6	9,100	43.0	1
07058	Manganese	7439-96-5	4,750	0.83	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	140431848002	02/13/2014 03:31	Tara L Snyder	1
07058	Manganese	SW-846 6010B	1	140431848002	02/13/2014 03:31	Tara L Snyder	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	140431848002	02/12/2014 18:00	Annamaria Kuhns	1

Sample Description: MW-111 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7356000
LL Group # 1450644
Account # 11260

Project Name: 211556

Collected: 02/05/2014 12:16 by JP

Chevron

6001 Bollinger Canyon Road

Submitted: 02/06/2014 09:15

L4310

Reported: 02/19/2014 13:20

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved		SW-846 6020	ug/l	ug/l	
06035	Lead	7439-92-1	27.3	0.085	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was lab filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	140386050001A	02/12/2014 18:13	Parker D Lindstrom	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	140386050001	02/10/2014 12:23	James L Mertz	1

Quality Control Summary

Client Name: Chevron
Reported: 02/19/14 at 01:20 PM

Group Number: 1450644

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

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: D140411AA	Sample number(s): 7355986,7355989,7355992,7355998							
Benzene	N.D.	0.5	ug/l	116		78-120		
Ethylbenzene	N.D.	0.5	ug/l	106		79-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	119		75-120		
Toluene	N.D.	0.5	ug/l	110		80-120		
Xylene (Total)	N.D.	0.5	ug/l	109		80-120		
Batch number: F140421AA	Sample number(s): 7355985							
Benzene	N.D.	0.5	ug/l	93		78-120		
Ethylbenzene	N.D.	0.5	ug/l	91		79-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	91		75-120		
Toluene	N.D.	0.5	ug/l	92		80-120		
Xylene (Total)	N.D.	0.5	ug/l	97		80-120		
Batch number: Z140421AA	Sample number(s): 7355995							
Benzene	N.D.	0.5	ug/l	96	97	78-120	1	30
Ethylbenzene	N.D.	0.5	ug/l	93	93	79-120	0	30
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	90	92	75-120	3	30
Toluene	N.D.	0.5	ug/l	101	101	80-120	1	30
Xylene (Total)	N.D.	0.5	ug/l	98	97	80-120	1	30
Batch number: 14041A53A	Sample number(s): 7355985-7355986,7355989,7355992,7355995,7355998							
NWTPH-Gx water C7-C12	N.D.	50.	ug/l	104	105	75-135	2	30
Batch number: 140410004A	Sample number(s): 7355986,7355989,7355992,7355995,7355998							
Methane	N.D.	3.0	ug/l	99		80-120		
Batch number: 140410020A	Sample number(s): 7355986,7355989,7355992,7355995,7355998							
Diesel Range Organics C12-C24	N.D.	30.	ug/l	73	73	50-113	1	20
Heavy Range Organics C24-C40	N.D.	70.	ug/l					
Batch number: 140410021A	Sample number(s): 7355986,7355989,7355992,7355995,7355998							
DRO C12-C24 w/Si Gel	N.D.	30.	ug/l	79	69	32-117	14	20
HRO C24-C40 w/Si Gel	N.D.	70.	ug/l					
Batch number: 140381848003	Sample number(s): 7355987,7355990,7355993,7355996							
Iron	N.D.	43.0	ug/l	103		90-112		
Manganese	N.D.	0.83	ug/l	105		90-110		
Batch number: 140386050001A	Sample number(s): 7355988,7355991,7355994,7355997,7356000							
Lead	N.D.	0.085	ug/l	102		90-110		
Batch number: 140431848002	Sample number(s): 7355999							
Iron	N.D.	43.0	ug/l	101		90-112		

*- 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: 1450644
Reported: 02/19/14 at 01:20 PM

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Manganese	N.D.	0.83	ug/l	103		90-110		
Batch number: 14037987601A	Sample number(s): 7355986,7355989,7355992,7355995,7355998							
Nitrate Nitrogen	N.D.	50.	ug/l	102		90-110		
Sulfate	N.D.	300.	ug/l	99		90-110		
Batch number: 14038023001A	Sample number(s): 7355986,7355989,7355992,7355995,7355998							
Sulfide	N.D.	54.	ug/l	99		90-110		
Batch number: 14042003103A	Sample number(s): 7355995,7355998							
Total Alkalinity	N.D.	700.	ug/l as CaCO3	97		90-110		
Batch number: 14042003104A	Sample number(s): 7355986,7355989,7355992							
Total Alkalinity	1,200	700.	ug/l as CaCO3	97		90-110		

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

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: D140411AA	Sample number(s): 7355986,7355989,7355992,7355998 UNSPK: 7355986								
Benzene	119	114	72-134	4	30				
Ethylbenzene	105	105	71-134	0	30				
Methyl Tertiary Butyl Ether	105	121	72-126	14	30				
Toluene	100	118	80-125	17	30				
Xylene (Total)	112	107	79-125	4	30				
Batch number: F140421AA	Sample number(s): 7355985 UNSPK: P357317								
Benzene	101	98	72-134	3	30				
Ethylbenzene	98	98	71-134	0	30				
Methyl Tertiary Butyl Ether	96	91	72-126	5	30				
Toluene	99	100	80-125	0	30				
Xylene (Total)	104	103	79-125	1	30				
Batch number: 140410004A	Sample number(s): 7355986,7355989,7355992,7355995,7355998 UNSPK: P354805								
Methane	111	77	35-157	8	20				
Batch number: 140381848003	Sample number(s): 7355987,7355990,7355993,7355996 UNSPK: P354281 BKG: P354281								
Iron	554*	513*	75-125	6	20	1,380	5,900	124*	20
Manganese	104	102	75-125	2	20	38.8	44.1	13	20
Batch number: 140386050001A	Sample number(s): 7355988,7355991,7355994,7355997,7356000 UNSPK: P354264 BKG: P354264								
Lead	94	99	89-120	4	20	6.2	4.9	24* (1)	20
Batch number: 140431848002	Sample number(s): 7355999 UNSPK: P361047 BKG: P361047								
Iron	100	109	75-125	4	20	1,140	1,130	1	20
Manganese	101	103	75-125	2	20	24.8	25.5	3 (1)	20

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron Group Number: 1450644
Reported: 02/19/14 at 01:20 PM

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	BKG MAX	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 14037987601A	Sample number(s): 7355986,7355989,7355992,7355995,7355998 UNSPK: 7355986 BKG:							
Nitrate Nitrogen	95		90-110			660	650	1 (1)
Sulfate	94		90-110			4,400	4,400	1 (1)
Batch number: 14038023001A	Sample number(s): 7355986,7355989,7355992,7355995,7355998 UNSPK: 7355986 BKG:							
Sulfide	74	79	42-131	7	16	N.D.	N.D.	0 (1)
Batch number: 14042003103A	Sample number(s): 7355995,7355998 UNSPK: P356778 BKG: P356778							
Total Alkalinity	46		10-159			663,000	658,000	1
Batch number: 14042003104A	Sample number(s): 7355986,7355989,7355992 UNSPK: P357325 BKG: P357325							
Total Alkalinity	94		10-159			33,200	34,000	2

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: UST VOCs by 8260B - Water
Batch number: D140411AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7355986	106	106	102	98
7355989	100	98	99	100
7355992	110	109	88	113
7355998	105	105	99	101
Blank	102	100	94	99
LCS	105	103	101	102
MS	99	106	90	112
MSD	105	106	105	102
Limits:	80-116	77-113	80-113	78-113

Analysis Name: UST VOCs by 8260B - Water
Batch number: F140421AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7355985	107	100	94	94
Blank	108	97	97	94
LCS	107	102	96	94
MS	106	108	95	94
MSD	107	100	96	96
Limits:	80-116	77-113	80-113	78-113

Analysis Name: UST VOCs by 8260B - Water
Batch number: Z140421AA

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 02/19/14 at 01:20 PM

Group Number: 1450644

Surrogate Quality Control

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7355995	98	95	101	96
Blank	106	102	99	89
LCS	104	100	98	99
LCSD	104	100	97	100
Limits:	80-116	77-113	80-113	78-113

Analysis Name: NWTPH-Gx water C7-C12
Batch number: 14041A53A
Trifluorotoluene-F

7355985	69
7355986	68
7355989	71
7355992	73
7355995	102
7355998	100
Blank	69
LCS	75
LCSD	76

Limits: 63-135

Analysis Name: Volatile Headspace Hydrocarbon
Batch number: 140410004A
Propene

7355986	76
7355989	73
7355992	75
7355995	82
7355998	94
Blank	93
LCS	95
MS	81
MSD	76

Limits: 42-131

Analysis Name: NWTPH-Dx water
Batch number: 140410020A
Orthoterphenyl

7355986	98
7355989	93
7355992	96
7355995	90
7355998	92
Blank	100
LCS	97
LCSD	97

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.

Quality Control Summary

Client Name: Chevron
Reported: 02/19/14 at 01:20 PM

Group Number: 1450644

Surrogate Quality Control

Analysis Name: NWTPH-Dx water w/ 10g Si Gel
Batch number: 140410021A
Orthoterphenyl

7355986	100
7355989	81
7355992	89
7355995	100
7355998	119
Blank	52
LCS	99
LCSD	84

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



Lancaster Laboratories

Acct. # 11260 For Eurofins Lancaster Laboratories use only Group # 1450644 Sample # 1355985-6000
 Instructions on reverse side correspond with circled numbers.

1 Client Information				4 Matrix				5 Analyses Requested												6 Remarks						
Facility # SS#211556-OML G-R#386773 WBS Site Address 101 Mulford Road, TOLEDO, WA Chevron PM MHO LEIDOSRS Lead Consultant Russell Shropshire Consultant/Office Gettler-Ryan, Inc., 6805 Sierra Court, Suite G, Dublin, CA 94568 Consultant Project Mgr. Deanna L. Harding, (deanna@grinc.com) Consultant Phone # (925) 551-7444 x180 Sampler J. Payne				<input type="checkbox"/> Sediment <input checked="" type="checkbox"/> Potable Ground <input type="checkbox"/> NPDES Surface <input type="checkbox"/> Air				<input type="checkbox"/> BTEX + MTBE 8021 <input type="checkbox"/> 8260 full scan <input type="checkbox"/> Oxygenates <input type="checkbox"/> NWTPH-Gx <input checked="" type="checkbox"/> NWTPH-Dx with Silica Gel Cleanup <input checked="" type="checkbox"/> NWTPH-Dx without Silica Gel Cleanup <input type="checkbox"/> WA VPH <input type="checkbox"/> Lead <input type="checkbox"/> Total <input checked="" type="checkbox"/> Diss. Method <u>4020</u> NITRATE / SULFATE DISSOLVED IRON / MANGANESE SULFIDE / METHANES ALKALINITY												SCR #: _____ <input type="checkbox"/> Results in Dry Weight <input type="checkbox"/> J value reporting needed <input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds <input type="checkbox"/> 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run _____ oxy's on highest hit <input type="checkbox"/> Run _____ oxy's on all hits						
2 Sample Identification		3 Collected		Grab	Composite	Soil	Water	Oil	Total Number of Containers	BTEX + MTBE 8021	8260 full scan	Oxygenates	NWTPH-Gx	NWTPH-Dx with Silica Gel Cleanup	NWTPH-Dx without Silica Gel Cleanup	WA VPH	Lead	Total	Diss.	Method	NITRATE / SULFATE	DISSOLVED IRON / MANGANESE	SULFIDE / METHANES	ALKALINITY	6	
Date	Time																									
QA	2.5.14			X			X		X				X													Please report results for Dx with & without sgc. Dissolved Iron, Lead, and Manganese, as well as Alkalinity samples have been field filtered. Please forward lab results directly to the LC and cc: G-R. The TPW sample results should be forwarded directly
B.1		1033		X			X		X				X	X	X		X	X	X	X	X	X	X	X		
B.2		0925		X			X		X				X	X	X		X	X	X	X	X	X	X	X		
B.3		1310		X			X		X				X	X	X		X	X	X	X	X	X	X	X		
B.4		1124		X			X		X				X	X	X		X	X	X	X	X	X	X	X		
MW.111		1216		X			X		X				X	X	X		X	X	X	X	X	X	X	X		
7 Turnaround Time Requested (TAT) (please circle) Standard <input checked="" type="radio"/> 5 day 72 hour <input type="radio"/> 48 hour				Relinquished by Date 2.5.14 Time 1700				Relinquished by _____ Date _____ Time _____				Received by Date _____ Time _____				Received by _____ Date _____ Time _____										
8 Data Package (circle if required) Type I - Full Type VI (Raw Data)				EDD (circle if required) <input checked="" type="checkbox"/> CVX-RTBU-FI_05 (default) Other: _____				Relinquished by Commercial Carrier: UPS <input checked="" type="checkbox"/> FedEx _____ Other _____ Temperature Upon Receipt 13.1.5 °C				Received by Custody Seals Intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				Date 2/6/14 Time 0915										

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 \geq the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ).

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

- A** TIC is a possible aldol-condensation product
- B** Analyte was also detected in the blank
- C** Pesticide result confirmed by GC/MS
- D** Compound quantitated on a diluted sample
- E** Concentration exceeds the calibration range of the instrument
- N** Presumptive evidence of a compound (TICs only)
- P** Concentration difference between primary and confirmation columns $>25\%$
- U** Compound was not detected
- X,Y,Z** Defined in case narrative

Inorganic Qualifiers

- B** Value is $<$ CRDL, but \geq IDL
- E** Estimated due to interference
- M** Duplicate injection precision not met
- N** Spike sample not within control limits
- S** Method of standard additions (MSA) used for calculation
- U** Compound was not detected
- W** Post digestion spike out of control limits
- *** Duplicate analysis not within control limits
- +** 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.

ANALYTICAL RESULTS

Prepared by:

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

Prepared for:

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

February 19, 2014

Project: 211556

Submittal Date: 02/07/2014

Group Number: 1450998

PO Number: 0015119898

Release Number: HOPKINS/HORNE

State of Sample Origin: WA

<u>Client Sample Description</u>	<u>Lancaster Labs (LL) #</u>
QA NA Water	7357316
MW-103 Grab Groundwater	7357317
MW-103 Filtered Grab Groundwater	7357318
MW-103 Filtered Grab Groundwater	7357319
MW-110 Grab Groundwater	7357320
MW-110 Filtered Grab Groundwater	7357321
MW-112 Grab Groundwater	7357322
MW-112 Filtered Grab Groundwater	7357323
MW-112 Filtered Grab Groundwater	7357324
MW-113 Grab Groundwater	7357325
MW-113 Filtered Grab Groundwater	7357326
MW-113 Filtered Grab Groundwater	7357327
MW-119 Grab Groundwater	7357328
MW-119 Filtered Grab Groundwater	7357329
MW-119 Filtered Grab Groundwater	7357330

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

ELECTRONIC Gettler-Ryan Inc.
COPY TO
ELECTRONIC SAIC
COPY TO
ELECTRONIC SAIC
COPY TO

Attn: Gettler Ryan

Attn: Jamalyn Green

Attn: Russ Shropshire

Respectfully Submitted,



Amek Carter
Specialist

(717) 556-7252

Sample Description: QA NA Water
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7357316
LL Group # 1450998
Account # 11260

Project Name: 211556

Collected: 02/06/2014

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 02/07/2014 09:20

San Ramon CA 94583

Reported: 02/19/2014 13:21

MRT-Q

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles			SW-846 8260B	ug/l	
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles			ECY 97-602 NWTPH-Gx	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	F140421AA	02/11/2014 10:36	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F140421AA	02/11/2014 10:36	Anita M Dale	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	14041A53A	02/11/2014 13:13	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	14041A53A	02/11/2014 13:13	Marie D Beamenderfer	1

Sample Description: MW-103 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7357317
LL Group # 1450998
Account # 11260

Project Name: 211556

Collected: 02/06/2014 10:31 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 02/07/2014 09:20

San Ramon CA 94583

Reported: 02/19/2014 13:21

MRT03

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B ug/l					
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx ug/l					
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Miscellaneous RSKSOP-175 modified ug/l					
07105	Methane	74-82-8	6.5	3.0	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	29	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	67	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0 ug/l					
00368	Nitrate Nitrogen	14797-55-8	N.D.	250	5
00228	Sulfate	14808-79-8	2,800	1,500	5
SM 2320 B-1997 ug/l as CaCO3					
12150	Total Alkalinity	n.a.	113,000	700	1
SM 4500-S2 D-2000 ug/l					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	F140421AA	02/11/2014 10:57	Anita M Dale	1

Sample Description: MW-103 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7357317
LL Group # 1450998
Account # 11260

Project Name: 211556

Collected: 02/06/2014 10:31 by JP

Chevron

6001 Bollinger Canyon Road

Submitted: 02/07/2014 09:20

L4310

Reported: 02/19/2014 13:21

San Ramon CA 94583

MRT03

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F140421AA	02/11/2014 10:57	Anita M Dale	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	14041A53A	02/11/2014 16:20	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	14041A53A	02/11/2014 16:20	Marie D Beamenderfer	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	140420002A	02/11/2014 14:48	Nicholas R Rossi	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	140410020A	02/12/2014 14:21	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	140410021A	02/14/2014 17:37	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	140410021A	02/11/2014 11:30	Kelli M Barto	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	140410020A	02/11/2014 11:30	Kelli M Barto	1
00368	Nitrate Nitrogen	EPA 300.0	1	14038987601A	02/07/2014 18:06	Sandra J Miller	5
00228	Sulfate	EPA 300.0	1	14038987601A	02/07/2014 18:06	Sandra J Miller	5
12150	Total Alkalinity	SM 2320 B-1997	1	14042003103A	02/11/2014 21:31	Michele L Graham	1
00230	Sulfide	SM 4500-S2 D-2000	1	14042023001A	02/11/2014 07:55	Susan E Hibner	1

Sample Description: MW-103 Filtered Grab Groundwater
 Facility# 211556 Job# 386773
 101 Mulford Rd - Toledo, WA

LL Sample # WW 7357318
 LL Group # 1450998
 Account # 11260

Project Name: 211556

Collected: 02/06/2014 10:31 by JP

Chevron

6001 Bollinger Canyon Road

Submitted: 02/07/2014 09:20

L4310

Reported: 02/19/2014 13:21

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved			SW-846 6010B	ug/l	
01754	Iron	7439-89-6	N.D.	43.0	1
07058	Manganese	7439-96-5	111	0.83	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	140421848002	02/12/2014 19:25	Katlin N Cataldi	1
07058	Manganese	SW-846 6010B	1	140421848002	02/12/2014 19:25	Katlin N Cataldi	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	140421848002	02/12/2014 13:08	James L Mertz	1

Sample Description: MW-103 Filtered Grab Groundwater
 Facility# 211556 Job# 386773
 101 Mulford Rd - Toledo, WA

LL Sample # WW 7357319
 LL Group # 1450998
 Account # 11260

Project Name: 211556

Collected: 02/06/2014 10:31 by JP

Chevron

6001 Bollinger Canyon Road
 L4310

Submitted: 02/07/2014 09:20

San Ramon CA 94583

Reported: 02/19/2014 13:21

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
06035	Lead	SW-846 6020 7439-92-1	ug/l 0.11	ug/l 0.085	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was lab filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	140446050001A	02/17/2014 20:00	John P Hook	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	140446050001	02/16/2014 10:12	James L Mertz	1

Sample Description: MW-110 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7357320
LL Group # 1450998
Account # 11260

Project Name: 211556

Collected: 02/06/2014 09:31 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 02/07/2014 09:20

Reported: 02/19/2014 13:21

MRT10

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B			ug/l	ug/l	
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx			ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	29	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	67	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1
The reverse surrogate, capric acid, is present at <1%.					

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	F140421AA	02/11/2014 12:47	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F140421AA	02/11/2014 12:47	Anita M Dale	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	14041A53A	02/11/2014 16:47	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	14041A53A	02/11/2014 16:47	Marie D Beamenderfer	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	140410020A	02/12/2014 14:44	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	140410021A	02/14/2014 18:00	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	140410021A	02/11/2014 11:30	Kelli M Barto	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	140410020A	02/11/2014 11:30	Kelli M Barto	1

Sample Description: MW-110 Filtered Grab Groundwater
 Facility# 211556 Job# 386773
 101 Mulford Rd - Toledo, WA

LL Sample # WW 7357321
 LL Group # 1450998
 Account # 11260

Project Name: 211556

Collected: 02/06/2014 09:31 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 02/07/2014 09:20

Reported: 02/19/2014 13:21

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved		SW-846 6020	ug/l	ug/l	
06035	Lead	7439-92-1	0.16	0.085	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was lab filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	140446050001A	02/17/2014 20:02	John P Hook	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	140446050001	02/16/2014 10:12	James L Mertz	1

Sample Description: MW-112 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7357322
LL Group # 1450998
Account # 11260

Project Name: 211556

Collected: 02/06/2014 13:07 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 02/07/2014 09:20

San Ramon CA 94583

Reported: 02/19/2014 13:21

MRT12

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B ug/l					
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx ug/l					
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Miscellaneous RSKSOP-175 modified ug/l					
07105	Methane	74-82-8	100	3.0	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	29	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	68	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	68	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0 ug/l					
00368	Nitrate Nitrogen	14797-55-8	370	250	5
00228	Sulfate	14808-79-8	2,500	1,500	5
SM 2320 B-1997 ug/l as CaCO3					
12150	Total Alkalinity	n.a.	110,000	700	1
SM 4500-S2 D-2000 ug/l					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	F140421AA	02/11/2014 13:09	Anita M Dale	1

Sample Description: MW-112 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7357322
LL Group # 1450998
Account # 11260

Project Name: 211556

Collected: 02/06/2014 13:07 by JP

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6001 Bollinger Canyon Road

Submitted: 02/07/2014 09:20

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Reported: 02/19/2014 13:21

San Ramon CA 94583

MRT12

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F140421AA	02/11/2014 13:09	Anita M Dale	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	14041A53A	02/11/2014 17:14	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	14041A53A	02/11/2014 17:14	Marie D Beamenderfer	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	140420002A	02/11/2014 15:06	Nicholas R Rossi	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	140410020A	02/12/2014 15:07	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	140410021A	02/19/2014 09:45	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	140410021A	02/11/2014 11:30	Kelli M Barto	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	140410020A	02/11/2014 11:30	Kelli M Barto	1
00368	Nitrate Nitrogen	EPA 300.0	1	14038987601A	02/07/2014 18:22	Sandra J Miller	5
00228	Sulfate	EPA 300.0	1	14038987601A	02/07/2014 18:22	Sandra J Miller	5
12150	Total Alkalinity	SM 2320 B-1997	1	14042003103B	02/11/2014 20:30	Michele L Graham	1
00230	Sulfide	SM 4500-S2 D-2000	1	14042023001A	02/11/2014 07:55	Susan E Hibner	1

Sample Description: MW-112 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7357323
LL Group # 1450998
Account # 11260

Project Name: 211556

Collected: 02/06/2014 13:07 by JP

Chevron

6001 Bollinger Canyon Road

Submitted: 02/07/2014 09:20

L4310

Reported: 02/19/2014 13:21

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved			SW-846 6010B	ug/l	
01754	Iron	7439-89-6	1,730	43.0	1
07058	Manganese	7439-96-5	1,750	0.83	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	140421848002	02/12/2014 19:29	Katlin N Cataldi	1
07058	Manganese	SW-846 6010B	1	140421848002	02/12/2014 19:29	Katlin N Cataldi	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	140421848002	02/12/2014 13:08	James L Mertz	1

Sample Description: MW-112 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7357324
LL Group # 1450998
Account # 11260

Project Name: 211556

Collected: 02/06/2014 13:07 by JP

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Submitted: 02/07/2014 09:20

San Ramon CA 94583

Reported: 02/19/2014 13:21

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved		SW-846 6020	ug/l	ug/l	
06035	Lead	7439-92-1	0.38	0.085	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was lab filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	140446050001A	02/17/2014 20:03	John P Hook	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	140446050001	02/16/2014 10:12	James L Mertz	1

Sample Description: MW-113 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7357325
LL Group # 1450998
Account # 11260

Project Name: 211556

Collected: 02/06/2014 14:02 by JP

Chevron

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L4310

Submitted: 02/07/2014 09:20

San Ramon CA 94583

Reported: 02/19/2014 13:21

MRT13

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B ug/l					
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx ug/l					
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Miscellaneous RSKSOP-175 modified ug/l					
07105	Methane	74-82-8	N.D.	3.0	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	29	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	69	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	69	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0 ug/l					
00368	Nitrate Nitrogen	14797-55-8	440	250	5
00228	Sulfate	14808-79-8	2,900	1,500	5
SM 2320 B-1997 ug/l as CaCO3					
12150	Total Alkalinity	n.a.	33,200	700	1
SM 4500-S2 D-2000 ug/l					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	F140421AA	02/11/2014 13:31	Anita M Dale	1

Sample Description: MW-113 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7357325
LL Group # 1450998
Account # 11260

Project Name: 211556

Collected: 02/06/2014 14:02 by JP

Chevron

6001 Bollinger Canyon Road

Submitted: 02/07/2014 09:20

L4310

Reported: 02/19/2014 13:21

San Ramon CA 94583

MRT13

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F140421AA	02/11/2014 13:31	Anita M Dale	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	14045A53A	02/14/2014 12:34	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	14045A53A	02/14/2014 12:34	Marie D Beamenderfer	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	140420002A	02/11/2014 15:23	Nicholas R Rossi	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	140410020A	02/12/2014 15:29	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	140410021A	02/14/2014 18:46	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	140410021A	02/11/2014 11:30	Kelli M Barto	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	140410020A	02/11/2014 11:30	Kelli M Barto	1
00368	Nitrate Nitrogen	EPA 300.0	1	14038987601A	02/07/2014 18:38	Sandra J Miller	5
00228	Sulfate	EPA 300.0	1	14038987601A	02/07/2014 18:38	Sandra J Miller	5
12150	Total Alkalinity	SM 2320 B-1997	1	14042003104A	02/11/2014 22:50	Michele L Graham	1
00230	Sulfide	SM 4500-S2 D-2000	1	14042023001A	02/11/2014 07:55	Susan E Hibner	1

Sample Description: MW-113 Filtered Grab Groundwater
 Facility# 211556 Job# 386773
 101 Mulford Rd - Toledo, WA

LL Sample # WW 7357326
 LL Group # 1450998
 Account # 11260

Project Name: 211556

Collected: 02/06/2014 14:02 by JP

Chevron

6001 Bollinger Canyon Road

Submitted: 02/07/2014 09:20

L4310

Reported: 02/19/2014 13:21

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
		SW-846 6010B	ug/l	ug/l	
01754	Iron	7439-89-6	N.D.	43.0	1
07058	Manganese	7439-96-5	4.6	0.83	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	140421848002	02/12/2014 19:32	Katlin N Cataldi	1
07058	Manganese	SW-846 6010B	1	140421848002	02/12/2014 19:32	Katlin N Cataldi	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	140421848002	02/12/2014 13:08	James L Mertz	1

Sample Description: MW-113 Filtered Grab Groundwater
 Facility# 211556 Job# 386773
 101 Mulford Rd - Toledo, WA

LL Sample # WW 7357327
 LL Group # 1450998
 Account # 11260

Project Name: 211556

Collected: 02/06/2014 14:02 by JP

Chevron

6001 Bollinger Canyon Road
 L4310

Submitted: 02/07/2014 09:20

San Ramon CA 94583

Reported: 02/19/2014 13:21

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved		SW-846 6020	ug/l	ug/l	
06035	Lead	7439-92-1	N.D.	0.085	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was lab filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	140436050002A	02/17/2014 22:17	John P Hook	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	140436050002	02/12/2014 18:30	Annamaria Kuhns	1

Sample Description: MW-119 Grab Groundwater
Facility# 211556 **Job#** 386773
 101 Mulford Rd - Toledo, WA

LL Sample # WW 7357328
LL Group # 1450998
Account # 11260

Project Name: 211556

Collected: 02/06/2014 12:14 by JP

Chevron

6001 Bollinger Canyon Road
 L4310

Submitted: 02/07/2014 09:20

San Ramon CA 94583

Reported: 02/19/2014 13:21

MRT19

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B					
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx					
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Miscellaneous RSKSOP-175 modified					
07105	Methane	74-82-8	N.D.	3.0	1
GC Petroleum ECY 97-602 NWTPH-Dx					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	29	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	68	1
GC Petroleum ECY 97-602 NWTPH-Dx					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	68	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0					
00368	Nitrate Nitrogen	14797-55-8	490	250	5
00228	Sulfate	14808-79-8	3,500	1,500	5
SM 2320 B-1997					
12150	Total Alkalinity	n.a.	72,800	700	1
SM 4500-S2 D-2000					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	F140421AA	02/11/2014 13:52	Anita M Dale	1

Sample Description: MW-119 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7357328
LL Group # 1450998
Account # 11260

Project Name: 211556

Collected: 02/06/2014 12:14 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 02/07/2014 09:20

Reported: 02/19/2014 13:21

San Ramon CA 94583

MRT19

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F140421AA	02/11/2014 13:52	Anita M Dale	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	14045A53A	02/14/2014 13:01	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	14045A53A	02/14/2014 13:01	Marie D Beamenderfer	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	140420002A	02/11/2014 15:41	Nicholas R Rossi	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	140410020A	02/12/2014 15:52	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	140410021A	02/14/2014 19:08	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	140410021A	02/11/2014 11:30	Kelli M Barto	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	140410020A	02/11/2014 11:30	Kelli M Barto	1
00368	Nitrate Nitrogen	EPA 300.0	1	14038987601A	02/07/2014 18:55	Sandra J Miller	5
00228	Sulfate	EPA 300.0	1	14038987601A	02/07/2014 18:55	Sandra J Miller	5
12150	Total Alkalinity	SM 2320 B-1997	1	14042003103A	02/11/2014 22:22	Michele L Graham	1
00230	Sulfide	SM 4500-S2 D-2000	1	14042023001A	02/11/2014 07:55	Susan E Hibner	1

Sample Description: MW-119 Filtered Grab Groundwater
 Facility# 211556 Job# 386773
 101 Mulford Rd - Toledo, WA

LL Sample # WW 7357329
 LL Group # 1450998
 Account # 11260

Project Name: 211556

Collected: 02/06/2014 12:14 by JP

Chevron

6001 Bollinger Canyon Road

Submitted: 02/07/2014 09:20

L4310

Reported: 02/19/2014 13:21

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved			ug/l	ug/l	
01754	Iron	7439-89-6	N.D.	43.0	1
07058	Manganese	7439-96-5	38.4	0.83	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	140421848002	02/12/2014 19:36	Katlin N Cataldi	1
07058	Manganese	SW-846 6010B	1	140421848002	02/12/2014 19:36	Katlin N Cataldi	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	140421848002	02/12/2014 13:08	James L Mertz	1

Sample Description: MW-119 Filtered Grab Groundwater
 Facility# 211556 Job# 386773
 101 Mulford Rd - Toledo, WA

LL Sample # WW 7357330
 LL Group # 1450998
 Account # 11260

Project Name: 211556

Collected: 02/06/2014 12:14 by JP

Chevron

6001 Bollinger Canyon Road
 L4310

Submitted: 02/07/2014 09:20

San Ramon CA 94583

Reported: 02/19/2014 13:21

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved		SW-846 6020	ug/l	ug/l	
06035	Lead	7439-92-1	0.16	0.085	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was lab filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	140436050002A	02/17/2014 21:36	John P Hook	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	140436050002	02/12/2014 18:30	Annamaria Kuhns	1

Quality Control Summary

Client Name: Chevron
Reported: 02/19/14 at 01:21 PM

Group Number: 1450998

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

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: F140421AA	Sample number(s): 7357316-7357317,7357320,7357322,7357325,7357328							
Benzene	N.D.	0.5	ug/l	93		78-120		
Ethylbenzene	N.D.	0.5	ug/l	91		79-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	91		75-120		
Toluene	N.D.	0.5	ug/l	92		80-120		
Xylene (Total)	N.D.	0.5	ug/l	97		80-120		
Batch number: 14041A53A	Sample number(s): 7357316-7357317,7357320,7357322							
NWTPH-Gx water C7-C12	N.D.	50.	ug/l	104	105	75-135	2	30
Batch number: 14045A53A	Sample number(s): 7357325,7357328							
NWTPH-Gx water C7-C12	N.D.	50.	ug/l	109	111	75-135	2	30
Batch number: 140420002A	Sample number(s): 7357317,7357322,7357325,7357328							
Methane	N.D.	3.0	ug/l	100		80-120		
Batch number: 140410020A	Sample number(s): 7357317,7357320,7357322,7357325,7357328							
Diesel Range Organics C12-C24	N.D.	30.	ug/l	73	73	50-113	1	20
Heavy Range Organics C24-C40	N.D.	70.	ug/l					
Batch number: 140410021A	Sample number(s): 7357317,7357320,7357322,7357325,7357328							
DRO C12-C24 w/Si Gel	N.D.	30.	ug/l	79	69	32-117	14	20
HRO C24-C40 w/Si Gel	N.D.	70.	ug/l					
Batch number: 140421848002	Sample number(s): 7357318,7357323,7357326,7357329							
Iron	N.D.	43.0	ug/l	102		90-112		
Manganese	N.D.	0.83	ug/l	103		90-110		
Batch number: 140436050002A	Sample number(s): 7357327,7357330							
Lead	N.D.	0.085	ug/l	102		90-110		
Batch number: 140446050001A	Sample number(s): 7357319,7357321,7357324							
Lead	N.D.	0.085	ug/l	107		90-110		
Batch number: 14038987601A	Sample number(s): 7357317,7357322,7357325,7357328							
Nitrate Nitrogen	N.D.	50.	ug/l	101	101	90-110	0	20
Sulfate	N.D.	300.	ug/l	97	100	90-110	3	20
Batch number: 14042003103A	Sample number(s): 7357317,7357328							
Total Alkalinity	N.D.	700.	ug/l as CaCO3	97		90-110		
Batch number: 14042003103B	Sample number(s): 7357322							
Total Alkalinity	N.D.	700.	ug/l as	97		90-110		

*- 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: 1450998
Reported: 02/19/14 at 01:21 PM

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 14042003104A Total Alkalinity	Sample number(s): 7357325 1,200	700.	ug/l as CaCO3	97		90-110		
Batch number: 14042023001A Sulfide	Sample number(s): 7357317,7357322,7357325,7357328 N.D.	54.	ug/l	102		90-110		

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

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: F140421AA	Sample number(s): 7357316-7357317,7357320,7357322,7357325,7357328 UNSPK: 7357317								
Benzene	101	98	72-134	3	30				
Ethylbenzene	98	98	71-134	0	30				
Methyl Tertiary Butyl Ether	96	91	72-126	5	30				
Toluene	99	100	80-125	0	30				
Xylene (Total)	104	103	79-125	1	30				
Batch number: 140420002A	Sample number(s): 7357317,7357322,7357325,7357328 UNSPK: P356182								
Methane	-10346	-8482	35-157	11	20				
	(2)	(2)							
Batch number: 140421848002	Sample number(s): 7357318,7357323,7357326,7357329 UNSPK: P358108 BKG: P358108								
Iron	137*	148*	75-125	6	20	591	846	36* (1)	20
Manganese	117	127*	75-125	5	20	262	331	23*	20
Batch number: 140436050002A	Sample number(s): 7357327,7357330 UNSPK: P360395 BKG: P360395								
Lead	100	99	89-120	1	20	0.59	0.64	8 (1)	20
Batch number: 140446050001A	Sample number(s): 7357319,7357321,7357324 UNSPK: P361408 BKG: P361408								
Lead	106	106	89-120	0	20	0.61	0.67	9 (1)	20
Batch number: 14038987601A	Sample number(s): 7357317,7357322,7357325,7357328 UNSPK: P356855 BKG: P356855								
Nitrate Nitrogen	114*		90-110			N.D.	N.D.	0 (1)	20
Sulfate	112*		90-110			57,300	59,100	3	20
Batch number: 14042003103A	Sample number(s): 7357317,7357328 UNSPK: P356778 BKG: P356778								
Total Alkalinity	46		10-159			663,000	658,000	1	5
Batch number: 14042003103B	Sample number(s): 7357322 UNSPK: P356778 BKG: 7357322								
Total Alkalinity	46		10-159			110,000	111,000	1	5
Batch number: 14042003104A	Sample number(s): 7357325 UNSPK: 7357325 BKG: 7357325								
Total Alkalinity	94		10-159			33,200	34,000	2	5
Batch number: 14042023001A	Sample number(s): 7357317,7357322,7357325,7357328 UNSPK: P357795 BKG: P357795								
Sulfide	101	108	42-131	6	16	N.D.	N.D.	0 (1)	5

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 02/19/14 at 01:21 PM

Group Number: 1450998

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: UST VOCs by 8260B - Water
Batch number: F140421AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7357316	108	99	96	93
7357317	108	100	96	94
7357320	108	103	95	93
7357322	107	97	95	94
7357325	111	97	97	95
7357328	106	101	97	96
Blank	108	97	97	94
LCS	107	102	96	94
MS	106	108	95	94
MSD	107	100	96	96
Limits:	80-116	77-113	80-113	78-113

Analysis Name: NWTPH-Gx water C7-C12
Batch number: 14041A53A
Trifluorotoluene-F

7357316	68
7357317	68
7357320	68
7357322	73
Blank	69
LCS	75
LCSD	76
Limits:	63-135

Analysis Name: NWTPH-Gx water C7-C12
Batch number: 14045A53A
Trifluorotoluene-F

7357325	71
7357328	71
Blank	71
LCS	77
LCSD	78
Limits:	63-135

Analysis Name: NWTPH-Dx water
Batch number: 140410020A
Orthoterphenyl

7357317	97
7357320	92
7357322	94

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 02/19/14 at 01:21 PM

Group Number: 1450998

Surrogate Quality Control

7357325	87
7357328	97
Blank	100
LCS	97
LCSD	97

Limits: 50-150

Analysis Name: NWTPH-Dx water w/ 10g Si Gel
Batch number: 140410021A
Orthoterphenyl

7357317	75
7357320	75
7357322	96
7357325	104
7357328	78
Blank	52
LCS	99
LCSD	84

Limits: 50-150

Analysis Name: Volatile Headspace Hydrocarbon
Batch number: 140420002A
Propene

7357317	71
7357322	77
7357325	73
7357328	77
Blank	93
LCS	93
MS	60
MSD	67

Limits: 42-131

*- 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



Lancaster Laboratories

Acct. # 11260 For Eurofins Lancaster Laboratories use only
 Group # 1450998 Sample # 7357316-30
 Instructions on reverse side correspond with circled numbers.

1 Client Information				4 Matrix				5 Analyses Requested										6 Remarks																	
Facility # SS#211556-OML G-R#386773 WBS Site Address 101 Mulford Road, TOLEDO, WA Chevron PM MHO Lead Consultant LEIDOSRS Russell Shroves Consultant/Office Gettler-Ryan, Inc., 6805 Sierra Court, Suite G, Dublin, CA 94568 Consultant Project Mgr. Deanna L. Harding, (deanna@grinc.com) Consultant Phone # (925) 551-7444 x180 Sampler J. Payne				<input type="checkbox"/> Sediment <input checked="" type="checkbox"/> Potable Ground <input type="checkbox"/> NPDES Surface <input type="checkbox"/> Air Total Number of Containers				<input type="checkbox"/> Naphth <input type="checkbox"/> 8260 <input type="checkbox"/> 8021 <input type="checkbox"/> 8260 8260 full scan Oxygenates NWTPH-Gx <input checked="" type="checkbox"/> NWTPH-DX with Silica Gel Cleanup <input checked="" type="checkbox"/> NWTPH-DX without Silica Gel Cleanup WA VPH <input type="checkbox"/> WA EPH <input type="checkbox"/> Lead <input type="checkbox"/> Total <input type="checkbox"/> Diss. <input checked="" type="checkbox"/> Method 6020 NITRATE / SULFATE 300.0 DISS. IRON / MANGANESE SULFIDE / METHANE ALKALINITY										SCR #: _____ <input type="checkbox"/> Results in Dry Weight <input type="checkbox"/> J value reporting needed <input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds <input type="checkbox"/> 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run _____ oxy's on highest hit <input type="checkbox"/> Run _____ oxy's on all hits																	
2 Sample Identification		3 Collected		Grab	Composite	Soil	Water	Oil	Total Number of Containers	BTEX + MTBE	8021	8260	Naphth	8260	8260 full scan	Oxygenates	NWTPH-Gx	NWTPH-DX with Silica Gel Cleanup	NWTPH-DX without Silica Gel Cleanup	WA VPH	WA EPH	Lead	Total	Diss.	Method	6020	NITRATE / SULFATE 300.0	DISS. IRON / MANGANESE	SULFIDE / METHANE	ALKALINITY					
Date	Time																																		
QA	2.6.14			X			X		2	X								X																	
MW-103	2.6.14	1031		X			X		16	X								X	X	X							X	X	X	X	X	X	X	X	X
MW-110		0931		X			X		9	X								X	X	X							X	X	X	X	X	X	X	X	X
MW-112		1307		X			X		16	X								X	X	X							X	X	X	X	X	X	X	X	X
MW-113		1402		X			X		16	X								X	X	X							X	X	X	X	X	X	X	X	X
MW-119		1214		X			X		16	X								X	X	X							X	X	X	X	X	X	X	X	X
7 Turnaround Time Requested (TAT) (please circle) Standard <input checked="" type="radio"/> 5 day <input type="radio"/> 4 day <input type="radio"/> 24 hour 72 hour <input type="radio"/> 48 hour <input type="radio"/> 24 hour EDF/EDD				Relinquished by <i>[Signature]</i> Date 2.6.14 Time 1700 Received by _____				Relinquished by _____ Date _____ Time _____ Received by _____		Relinquished by Commercial Carrier: UPS <input checked="" type="checkbox"/> FedEx _____ Other _____ Temperature Upon Receipt 04.05 °C		Received by <i>[Signature]</i> Date 2/7/14 Time 0920 Custody Seals Intact? <input checked="" type="radio"/> Yes <input type="radio"/> No		9 Please report results for Dx with & without sgc. Dissolved Iron, Lead , and Manganese, as well as Alkalinity samples have been field filtered. Please forward lab results directly to the LC and cc: G-R. The TPW sample results should be forwarded directly																					
8 Data Package (circle if required) Type I - Full <input type="checkbox"/> Type VI (Raw Data) <input type="checkbox"/>				EDD (circle if required) CVX-RTBU-FL_05 (default) <input type="checkbox"/> Other: _____				Relinquished by Commercial Carrier: UPS <input checked="" type="checkbox"/> FedEx _____ Other _____ Temperature Upon Receipt 04.05 °C		Received by <i>[Signature]</i> Date 2/7/14 Time 0920 Custody Seals Intact? <input checked="" type="radio"/> Yes <input type="radio"/> No		9 Please report results for Dx with & without sgc. Dissolved Iron, Lead , and Manganese, as well as Alkalinity samples have been field filtered. Please forward lab results directly to the LC and cc: G-R. The TPW sample results should be forwarded directly																							

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 \geq 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 \geq 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.

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ANALYTICAL RESULTS

Prepared by:

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

Prepared for:

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

February 20, 2014

Project: 211556

Submittal Date: 02/11/2014
Group Number: 1451708
PO Number: 0015119898
Release Number: HOPKINS/HORNE
State of Sample Origin: WA

<u>Client Sample Description</u>	<u>Lancaster Labs (LL) #</u>
QA NA Water	7360245
MW-115 Grab Groundwater	7360246
MW-115 Filtered Grab Groundwater	7360247
MW-116 Grab Groundwater	7360248
MW-116 Filtered Grab Groundwater	7360249
MW-116 Filtered Grab Groundwater	7360250
MW-117 Grab Groundwater	7360251
MW-117 Filtered Grab Groundwater	7360252
MW-117 Filtered Grab Groundwater	7360253
MW-118 Grab Groundwater	7360254
MW-118 Filtered Grab Groundwater	7360255
MW-120 Grab Groundwater	7360256
MW-120 Filtered Grab Groundwater	7360257

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

ELECTRONIC COPY TO	Gettler-Ryan Inc.	Attn: Gettler Ryan
ELECTRONIC COPY TO	SAIC	Attn: Jamalyn Green
ELECTRONIC COPY TO	SAIC	Attn: Russ Shropshire

Respectfully Submitted,



Amek Carter
Specialist

(717) 556-7252

Sample Description: QA NA Water
Facility# 211556 Job# 386773
101 Milford Rd - Toledo, WA

LL Sample # WW 7360245
LL Group # 1451708
Account # 11260

Project Name: 211556

Collected: 02/10/2014

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 02/11/2014 09:40

San Ramon CA 94583

Reported: 02/20/2014 16:10

MT-QA

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles			SW-846 8260B	ug/l	
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles			ECY 97-602 NWTPH-Gx	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	D140491AA	02/18/2014 13:03	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D140491AA	02/18/2014 13:03	Daniel H Heller	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	14045A53A	02/14/2014 12:07	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	14045A53A	02/14/2014 12:07	Marie D Beamenderfer	1

Sample Description: MW-115 Grab Groundwater
Facility# 211556 Job# 386773
101 Milford Rd - Toledo, WA

LL Sample # WW 7360246
LL Group # 1451708
Account # 11260

Project Name: 211556

Collected: 02/10/2014 13:01 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 02/11/2014 09:40

Reported: 02/20/2014 16:10

San Ramon CA 94583

MT115

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B			ug/l	ug/l	
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx			ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	28	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	66	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	28	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	66	1
The reverse surrogate, capric acid, is present at <1%.					

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	D140491AA	02/18/2014 19:13	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D140491AA	02/18/2014 19:13	Daniel H Heller	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	14045A53A	02/14/2014 13:28	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	14045A53A	02/14/2014 13:28	Marie D Beamenderfer	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	140430020A	02/15/2014 00:26	Glorines Suarez-Rivera	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	140430021A	02/17/2014 14:07	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	140430021A	02/12/2014 21:00	Karen L Beyer	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	140430020A	02/12/2014 21:00	Karen L Beyer	1

Sample Description: MW-115 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Milford Rd - Toledo, WA

LL Sample # WW 7360247
LL Group # 1451708
Account # 11260

Project Name: 211556

Collected: 02/10/2014 13:01 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 02/11/2014 09:40

San Ramon CA 94583

Reported: 02/20/2014 16:10

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved		SW-846 6020	ug/l	ug/l	
06035	Lead	7439-92-1	0.43	0.085	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was lab filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	140436050002A	02/17/2014 22:09	John P Hook	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	140436050002	02/12/2014 18:30	Annamaria Kuhns	1

Sample Description: MW-116 Grab Groundwater
Facility# 211556 Job# 386773
101 Milford Rd - Toledo, WA

LL Sample # WW 7360248
LL Group # 1451708
Account # 11260

Project Name: 211556

Collected: 02/10/2014 12:02 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 02/11/2014 09:40

San Ramon CA 94583

Reported: 02/20/2014 16:10

MT116

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B					
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx					
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Miscellaneous RSKSOP-175 modified					
07105	Methane	74-82-8	N.D.	3.0	1
GC Petroleum ECY 97-602 NWTPH-Dx					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	29	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	68	1
GC Petroleum ECY 97-602 NWTPH-Dx					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	68	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0					
00368	Nitrate Nitrogen	14797-55-8	630	250	5
00228	Sulfate	14808-79-8	3,700	1,500	5
SM 2320 B-1997					
12150	Total Alkalinity	n.a.	38,000	700	1
SM 4500-S2 D-2000					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	D140491AA	02/18/2014 19:36	Daniel H Heller	1

Sample Description: MW-116 Grab Groundwater
Facility# 211556 Job# 386773
101 Milford Rd - Toledo, WA

LL Sample # WW 7360248
LL Group # 1451708
Account # 11260

Project Name: 211556

Collected: 02/10/2014 12:02 by JP

Chevron

6001 Bollinger Canyon Road

Submitted: 02/11/2014 09:40

L4310

Reported: 02/20/2014 16:10

San Ramon CA 94583

MT116

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D140491AA	02/18/2014 19:36	Daniel H Heller	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	14045A53A	02/14/2014 13:55	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	14045A53A	02/14/2014 13:55	Marie D Beamenderfer	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	140480001A	02/17/2014 11:46	Elizabeth J Marin	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	140430020A	02/14/2014 23:41	Glorines Suarez-Rivera	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	140430021A	02/17/2014 14:29	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	140430021A	02/12/2014 21:00	Karen L Beyer	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	140430020A	02/12/2014 21:00	Karen L Beyer	1
00368	Nitrate Nitrogen	EPA 300.0	1	14043347601A	02/12/2014 06:49	Sandra J Miller	5
00228	Sulfate	EPA 300.0	1	14043347601A	02/12/2014 06:49	Sandra J Miller	5
12150	Total Alkalinity	SM 2320 B-1997	1	14048002202A	02/17/2014 18:10	Michele L Graham	1
00230	Sulfide	SM 4500-S2 D-2000	1	14043023001A	02/12/2014 08:05	Susan E Hibner	1

Sample Description: MW-116 Filtered Grab Groundwater
 Facility# 211556 Job# 386773
 101 Milford Rd - Toledo, WA

LL Sample # WW 7360249
 LL Group # 1451708
 Account # 11260

Project Name: 211556

Collected: 02/10/2014 12:02 by JP

Chevron

6001 Bollinger Canyon Road

Submitted: 02/11/2014 09:40

L4310

Reported: 02/20/2014 16:10

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved				ug/l	
01754	Iron	7439-89-6	N.D.	43.0	1
07058	Manganese	7439-96-5	5.4	0.83	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	140431848006	02/14/2014 12:38	Joanne M Gates	1
07058	Manganese	SW-846 6010B	1	140431848006	02/14/2014 12:38	Joanne M Gates	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	140431848006	02/13/2014 08:00	James L Mertz	1

Sample Description: MW-116 Filtered Grab Groundwater
 Facility# 211556 Job# 386773
 101 Milford Rd - Toledo, WA

LL Sample # WW 7360250
 LL Group # 1451708
 Account # 11260

Project Name: 211556

Collected: 02/10/2014 12:02 by JP

Chevron

6001 Bollinger Canyon Road
 L4310

Submitted: 02/11/2014 09:40

Reported: 02/20/2014 16:10

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
06035	Lead	SW-846 6020 7439-92-1	ug/l N.D.	ug/l 0.085	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was lab filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	140436050002A	02/17/2014 22:11	John P Hook	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	140436050002	02/12/2014 18:30	Annamaria Kuhns	1

Sample Description: MW-117 Grab Groundwater
Facility# 211556 Job# 386773
101 Milford Rd - Toledo, WA

LL Sample # WW 7360251
LL Group # 1451708
Account # 11260

Project Name: 211556

Collected: 02/10/2014 10:12 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 02/11/2014 09:40

San Ramon CA 94583

Reported: 02/20/2014 16:10

MT117

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B ug/l					
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx ug/l					
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Miscellaneous RSKSOP-175 modified ug/l					
07105	Methane	74-82-8	N.D.	3.0	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	29	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	67	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0 ug/l					
00368	Nitrate Nitrogen	14797-55-8	440	250	5
00228	Sulfate	14808-79-8	6,500	1,500	5
SM 2320 B-1997 ug/l as CaCO3					
12150	Total Alkalinity	n.a.	28,900	700	1
SM 4500-S2 D-2000 ug/l					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	D140491AA	02/18/2014 19:59	Daniel H Heller	1

Sample Description: MW-117 Grab Groundwater
Facility# 211556 Job# 386773
101 Milford Rd - Toledo, WA

LL Sample # WW 7360251
LL Group # 1451708
Account # 11260

Project Name: 211556

Collected: 02/10/2014 10:12 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 02/11/2014 09:40

Reported: 02/20/2014 16:10

San Ramon CA 94583

MT117

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D140491AA	02/18/2014 19:59	Daniel H Heller	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	14045A53A	02/14/2014 14:22	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	14045A53A	02/14/2014 14:22	Marie D Beamenderfer	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	140480001A	02/17/2014 12:03	Elizabeth J Marin	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	140430020A	02/15/2014 00:04	Glorines Suarez-Rivera	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	140430021A	02/17/2014 14:52	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	140430021A	02/12/2014 21:00	Karen L Beyer	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	140430020A	02/12/2014 21:00	Karen L Beyer	1
00368	Nitrate Nitrogen	EPA 300.0	1	14043347601A	02/12/2014 07:38	Sandra J Miller	5
00228	Sulfate	EPA 300.0	1	14043347601A	02/12/2014 07:38	Sandra J Miller	5
12150	Total Alkalinity	SM 2320 B-1997	1	14048002202A	02/17/2014 18:26	Michele L Graham	1
00230	Sulfide	SM 4500-S2 D-2000	1	14043023001A	02/12/2014 08:05	Susan E Hibner	1

Sample Description: MW-117 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Milford Rd - Toledo, WA

LL Sample # WW 7360252
LL Group # 1451708
Account # 11260

Project Name: 211556

Collected: 02/10/2014 10:12 by JP

Chevron

6001 Bollinger Canyon Road

Submitted: 02/11/2014 09:40

L4310

Reported: 02/20/2014 16:10

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved			SW-846 6010B	ug/l	
01754	Iron	7439-89-6	N.D.	43.0	1
07058	Manganese	7439-96-5	2.5	0.83	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	140431848006	02/14/2014 12:42	Joanne M Gates	1
07058	Manganese	SW-846 6010B	1	140431848006	02/14/2014 12:42	Joanne M Gates	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	140431848006	02/13/2014 08:00	James L Mertz	1

Sample Description: MW-117 Filtered Grab Groundwater
 Facility# 211556 Job# 386773
 101 Milford Rd - Toledo, WA

LL Sample # WW 7360253
 LL Group # 1451708
 Account # 11260

Project Name: 211556

Collected: 02/10/2014 10:12 by JP

Chevron

6001 Bollinger Canyon Road
 L4310

Submitted: 02/11/2014 09:40

Reported: 02/20/2014 16:10

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved		SW-846 6020	ug/l	ug/l	
06035	Lead	7439-92-1	N.D.	0.085	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was lab filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	140436050002A	02/17/2014 22:13	John P Hook	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	140436050002	02/12/2014 18:30	Annamaria Kuhns	1

Sample Description: MW-118 Grab Groundwater
Facility# 211556 **Job#** 386773
 101 Milford Rd - Toledo, WA

LL Sample # WW 7360254
LL Group # 1451708
Account # 11260

Project Name: 211556

Collected: 02/10/2014 11:10 by JP

Chevron

6001 Bollinger Canyon Road
 L4310

Submitted: 02/11/2014 09:40

San Ramon CA 94583

Reported: 02/20/2014 16:10

MT118

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B			ug/l	ug/l	
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx			ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	29	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	68	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	68	1
The reverse surrogate, capric acid, is present at <1%.					

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	D140491AA	02/18/2014 20:22	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D140491AA	02/18/2014 20:22	Daniel H Heller	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	14048A94A	02/18/2014 13:26	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	14048A94A	02/18/2014 13:26	Marie D Beamenderfer	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	140430020A	02/15/2014 00:49	Glorines Suarez-Rivera	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	140430021A	02/17/2014 15:17	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	140430021A	02/12/2014 21:00	Karen L Beyer	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	140430020A	02/12/2014 21:00	Karen L Beyer	1

Sample Description: MW-118 Filtered Grab Groundwater
 Facility# 211556 Job# 386773
 101 Milford Rd - Toledo, WA

LL Sample # WW 7360255
 LL Group # 1451708
 Account # 11260

Project Name: 211556

Collected: 02/10/2014 11:10 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 02/11/2014 09:40

Reported: 02/20/2014 16:10

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved		SW-846 6020	ug/l	ug/l	
06035	Lead	7439-92-1	N.D.	0.085	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was lab filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	140436050002A	02/17/2014 22:15	John P Hook	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	140436050002	02/12/2014 18:30	Annamaria Kuhns	1

Sample Description: MW-120 Grab Groundwater
Facility# 211556 Job# 386773
101 Milford Rd - Toledo, WA

LL Sample # WW 7360256
LL Group # 1451708
Account # 11260

Project Name: 211556

Collected: 02/10/2014 09:23 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 02/11/2014 09:40

Reported: 02/20/2014 16:10

San Ramon CA 94583

MT120

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B			ug/l	ug/l	
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx			ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	29	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	67	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1
The reverse surrogate, capric acid, is present at <1%.					

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	D140491AA	02/18/2014 20:45	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D140491AA	02/18/2014 20:45	Daniel H Heller	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	14048A94A	02/18/2014 13:51	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	14048A94A	02/18/2014 13:51	Marie D Beamenderfer	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	140430020A	02/15/2014 01:11	Glorines Suarez-Rivera	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	140430021A	02/17/2014 15:39	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	140430021A	02/12/2014 21:00	Karen L Beyer	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	140430020A	02/12/2014 21:00	Karen L Beyer	1

Sample Description: MW-120 Filtered Grab Groundwater
 Facility# 211556 Job# 386773
 101 Milford Rd - Toledo, WA

LL Sample # WW 7360257
 LL Group # 1451708
 Account # 11260

Project Name: 211556

Collected: 02/10/2014 09:23 by JP

Chevron

6001 Bollinger Canyon Road

Submitted: 02/11/2014 09:40

L4310

Reported: 02/20/2014 16:10

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved		SW-846 6020	ug/l	ug/l	
06035	Lead	7439-92-1	N.D.	0.085	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was lab filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	140446050001A	02/17/2014 20:05	John P Hook	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	140446050001	02/16/2014 10:12	James L Mertz	1

Quality Control Summary

Client Name: Chevron
Reported: 02/20/14 at 04:10 PM

Group Number: 1451708

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

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: D140491AA	Sample number(s): 7360245-7360246,7360248,7360251,7360254,7360256							
Benzene	N.D.	0.5	ug/l	94		78-120		
Ethylbenzene	N.D.	0.5	ug/l	94		79-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	95		75-120		
Toluene	N.D.	0.5	ug/l	97		80-120		
Xylene (Total)	N.D.	0.5	ug/l	96		80-120		
Batch number: 14045A53A	Sample number(s): 7360245-7360246,7360248,7360251							
NWTPH-Gx water C7-C12	N.D.	50.	ug/l	109	111	75-135	2	30
Batch number: 14048A94A	Sample number(s): 7360254,7360256							
NWTPH-Gx water C7-C12	N.D.	50.	ug/l	108	109	75-135	0	30
Batch number: 140480001A	Sample number(s): 7360248,7360251							
Methane	N.D.	3.0	ug/l	101		80-120		
Batch number: 140430020A	Sample number(s): 7360246,7360248,7360251,7360254,7360256							
Diesel Range Organics C12-C24	N.D.	30.	ug/l	73	71	50-113	3	20
Heavy Range Organics C24-C40	N.D.	70.	ug/l					
Batch number: 140430021A	Sample number(s): 7360246,7360248,7360251,7360254,7360256							
DRO C12-C24 w/Si Gel	N.D.	30.	ug/l	72	81	32-117	12	20
HRO C24-C40 w/Si Gel	N.D.	70.	ug/l					
Batch number: 140431848006	Sample number(s): 7360249,7360252							
Iron	N.D.	43.0	ug/l	101		90-112		
Manganese	N.D.	0.83	ug/l	103		90-110		
Batch number: 140436050002A	Sample number(s): 7360247,7360250,7360253,7360255							
Lead	N.D.	0.085	ug/l	102		90-110		
Batch number: 140446050001A	Sample number(s): 7360257							
Lead	N.D.	0.085	ug/l	107		90-110		
Batch number: 14043347601A	Sample number(s): 7360248,7360251							
Nitrate Nitrogen	N.D.	50.	ug/l	101		90-110		
Sulfate	N.D.	300.	ug/l	100		90-110		
Batch number: 14043023001A	Sample number(s): 7360248,7360251							
Sulfide	N.D.	54.	ug/l	104		90-110		
Batch number: 14048002202A	Sample number(s): 7360248,7360251							
Total Alkalinity	N.D.	700.	ug/l as CaCO3	98		90-110		

*- 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: 1451708
Reported: 02/20/14 at 04:10 PM

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
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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

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: D140491AA	Sample number(s): 7360245-7360246,7360248,7360251,7360254,7360256 UNSPK: P360436								
Benzene	87	99	72-134	3	30				
Ethylbenzene	97	102	71-134	5	30				
Methyl Tertiary Butyl Ether	93	100	72-126	6	30				
Toluene	100	106	80-125	6	30				
Xylene (Total)	100	106	79-125	5	30				
Batch number: 140480001A	Sample number(s): 7360248,7360251 UNSPK: P360925								
Methane	-70 (2)	24 (2)	35-157	13	20				
Batch number: 140431848006	Sample number(s): 7360249,7360252 UNSPK: P356308 BKG: P356308								
Iron	109	102	75-125	6	20	73.8	62.0	17 (1)	20
Manganese	100	96	75-125	2	20	313	338	8	20
Batch number: 140436050002A	Sample number(s): 7360247,7360250,7360253,7360255 UNSPK: P360395 BKG: P360395								
Lead	100	99	89-120	1	20	0.59	0.64	8 (1)	20
Batch number: 140446050001A	Sample number(s): 7360257 UNSPK: P361408 BKG: P361408								
Lead	106	106	89-120	0	20	0.61	0.67	9 (1)	20
Batch number: 14043347601A	Sample number(s): 7360248,7360251 UNSPK: 7360248 BKG: 7360248								
Nitrate Nitrogen	103		90-110			630	640	1 (1)	20
Sulfate	103		90-110			3,700	3,600	4 (1)	20
Batch number: 14043023001A	Sample number(s): 7360248,7360251 UNSPK: 7360251 BKG: 7360251								
Sulfide	92	90	42-131	2	16	N.D.	N.D.	0 (1)	5
Batch number: 14048002202A	Sample number(s): 7360248,7360251 UNSPK: 7360248 BKG: 7360248								
Total Alkalinity	99		10-159			38,000	38,200	0	5

Surrogate Quality Control

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

Analysis Name: UST VOCs by 8260B - Water
Batch number: D140491AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7360245	100	96	100	100
7360246	100	99	99	100
7360248	101	97	99	99

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 02/20/14 at 04:10 PM

Group Number: 1451708

Surrogate Quality Control

7360251	101	96	99	99
7360254	102	95	98	99
7360256	100	100	98	100
Blank	99	97	99	100
LCS	102	101	99	100
MS	101	103	99	103
MSD	100	102	101	104

Limits: 80-116 77-113 80-113 78-113

Analysis Name: NWT PH-Gx water C7-C12
Batch number: 14045A53A
Trifluorotoluene-F

7360245	71
7360246	70
7360248	70
7360251	71
Blank	71
LCS	77
LCSD	78

Limits: 63-135

Analysis Name: NWT PH-Gx water C7-C12
Batch number: 14048A94A
Trifluorotoluene-F

7360254	87
7360256	87
Blank	95
LCS	91
LCSD	92

Limits: 63-135

Analysis Name: NWT PH-Dx water
Batch number: 140430020A
Orthoterphenyl

7360246	93
7360248	98
7360251	98
7360254	97
7360256	97
Blank	102
LCS	99
LCSD	95

Limits: 50-150

Analysis Name: NWT PH-Dx water w/ 10g Si Gel
Batch number: 140430021A
Orthoterphenyl

7360246	91
---------	----

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 02/20/14 at 04:10 PM

Group Number: 1451708

Surrogate Quality Control

7360248	103
7360251	97
7360254	74
7360256	96
Blank	95
LCS	97
LCSD	101

Limits: 50-150

Analysis Name: Volatile Headspace Hydrocarbon
Batch number: 140480001A
Propene

7360248	83
7360251	83
Blank	97
LCS	98
MS	188*
MSD	209*

Limits: 42-131

*- 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



Lancaster Laboratories

Acct. # 11260

For Eurofins Lancaster Laboratories use only
 Lab # 1451708 Sample # 7360245-257

Instructions on reverse side correspond with circled numbers.

1 Client Information				4 Matrix				5 Analyses Requested										6 Remarks							
Facility # <u>SS#211556-OML G-R#386773</u> WBS Site Address <u>101 Mulford Road, TOLEDO, WA</u> Chevron PM <u>MHO</u> LEIDOSRS Lead Consultant <u>Russell Shropshire</u> Consultant/Office <u>Gettler-Ryan, Inc., 6805 Sierra Court, Suite G, Dublin, CA 94568</u> Consultant Project Mgr. <u>Deanna L. Harding, (deanna@grinc.com)</u> Consultant Phone # <u>(925) 551-7444 x180</u> Sampler <u>J. Payne</u>				<input type="checkbox"/> Sediment <input checked="" type="checkbox"/> Potable Ground <input type="checkbox"/> NPDES Surface <input type="checkbox"/> Air <input type="checkbox"/> Oil				<input type="checkbox"/> Total Number of Containers <input type="checkbox"/> BTEX + MTBE 8021 <input type="checkbox"/> 8260 <input checked="" type="checkbox"/> Naphth <input type="checkbox"/> 8260 full scan <input type="checkbox"/> Oxygenates <input type="checkbox"/> NWTPh-Gx <input checked="" type="checkbox"/> NWTPh-Dx with Silica Gel Cleanup <input checked="" type="checkbox"/> NWTPh-Dx without Silica Gel Cleanup <input type="checkbox"/> WA VPH <input type="checkbox"/> WA EPH <input type="checkbox"/> Lead Total <input type="checkbox"/> Diss. <input checked="" type="checkbox"/> Method <u>6020</u> <u>NITRATE/SULFATE</u> <u>DISS. IRON/MANGANESE</u> <u>SULFIDE/METHANE</u> <u>ALKALINITY</u>										SCR #: _____ <input type="checkbox"/> Results in Dry Weight <input type="checkbox"/> J value reporting needed <input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds <input type="checkbox"/> 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run _____ oxy's on highest hit <input type="checkbox"/> Run _____ oxy's on all hits							
2 Sample Identification		3 Collected		Grab	Composite	Soil	Water	Oil	Total Number of Containers	BTEX + MTBE 8021	8260 full scan	Oxygenates	NWTPh-Gx	NWTPh-Dx with Silica Gel Cleanup	NWTPh-Dx without Silica Gel Cleanup	WA VPH	WA EPH	Lead Total	Diss.	Method	NITRATE/SULFATE	DISS. IRON/MANGANESE	SULFIDE/METHANE	ALKALINITY	
Date	Time																								
<u>R.A.R.</u>	<u>2.10.14</u>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		<u>2</u>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>										
<u>MW-115</u>	<u>1301</u>	<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>		<u>9</u>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>										
<u>MW-116</u>	<u>1202</u>	<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>		<u>16</u>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>										
<u>MW-117</u>	<u>1012</u>	<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>		<u>16</u>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>										
<u>MW-118</u>	<u>1110</u>	<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>		<u>9</u>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>										
<u>MW-120</u>	<u>0923</u>	<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>		<u>9</u>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>										
Turnaround Time Requested (TAT) (please circle) <input checked="" type="radio"/> Standard 5 day 4 day 72 hour 48 hour 24 hour				Relinquished By <u>[Signature]</u> Date <u>2.10.14</u> Time <u>1700</u>				Relinquished By _____ Date _____ Time _____				Received by _____ Date _____ Time _____				Received by _____ Date _____ Time _____									
Data Package (circle if required) Type I - Full <input type="checkbox"/> Type VI (Raw Data) <input type="checkbox"/>				EDD (circle if required) CVX-RTBU-FL_05 (default) <input type="checkbox"/> Other: _____				Relinquished by Commercial Carrier: UPS <input checked="" type="checkbox"/> FedEx _____ Other _____				Received by <u>[Signature]</u> Date <u>2/11/14</u> Time <u>0940</u>				Temperature Upon Receipt <u>04.07</u> °C Custody Seals Intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No									

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 \geq 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 \geq 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.

ANALYTICAL RESULTS

Prepared by:

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

Prepared for:

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

February 25, 2014

Project: 211556

Submittal Date: 02/14/2014
Group Number: 1452665
PO Number: 0015119898
Release Number: HOPKINS/HORNE

State of Sample Origin: WA

<u>Client Sample Description</u>	<u>Lancaster Labs (LL) #</u>
QA NA Water	7364298
MW-109 Grab Groundwater	7364299
MW-109 Filtered Grab Groundwater	7364300
MW-114 Grab Groundwater	7364301
MW-114 Filtered Grab Groundwater	7364302

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

ELECTRONIC COPY TO	Gettler-Ryan Inc.	Attn: Gettler Ryan
ELECTRONIC COPY TO	SAIC	Attn: Jamalyn Green
ELECTRONIC COPY TO	SAIC	Attn: Russ Shropshire

Respectfully Submitted,



Amek Carter
Specialist

(717) 556-7252

Sample Description: QA NA Water
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7364298
LL Group # 1452665
Account # 11260

Project Name: 211556

Collected: 02/11/2014

Chevron

Submitted: 02/14/2014 10:00

6001 Bollinger Canyon Road
L4310

Reported: 02/25/2014 15:28

San Ramon CA 94583

MRTQA

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles			SW-846 8260B	ug/l	
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles			ECY 97-602 NWTPH-Gx	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	F140512AA	02/20/2014 08:26	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F140512AA	02/20/2014 08:26	Anita M Dale	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	14052A94A	02/24/2014 11:51	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	14052A94A	02/24/2014 11:51	Marie D Beamenderfer	1

Sample Description: MW-109 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7364299
LL Group # 1452665
Account # 11260

Project Name: 211556

Collected: 02/11/2014 10:05 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 02/14/2014 10:00

Reported: 02/25/2014 15:28

MR109

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B			ug/l	ug/l	
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx			ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	30	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	70	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	30	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	70	1
The reverse surrogate, capric acid, is present at <1%.					

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	F140514AA	02/20/2014 21:22	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F140514AA	02/20/2014 21:22	Brett W Kenyon	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	14052A94A	02/24/2014 18:59	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	14052A94A	02/24/2014 18:59	Marie D Beamenderfer	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	140490013A	02/19/2014 19:55	Heather E Williams	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	140490014A	02/21/2014 22:31	Heather E Williams	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	140490014A	02/19/2014 03:00	Sherry L Morrow	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	140490013A	02/19/2014 03:00	Sherry L Morrow	1

Sample Description: MW-109 Filtered Grab Groundwater
 Facility# 211556 Job# 386773
 101 Mulford Road - Toledo, WA

LL Sample # WW 7364300
 LL Group # 1452665
 Account # 11260

Project Name: 211556

Collected: 02/11/2014 10:05 by JP

Chevron

6001 Bollinger Canyon Road
 L4310

Submitted: 02/14/2014 10:00

Reported: 02/25/2014 15:28

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
06035	Lead	SW-846 6020 7439-92-1	ug/l 0.20	ug/l 0.085	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was lab filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	140506050002A	02/20/2014 22:43	John P Hook	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	140506050002	02/20/2014 09:19	James L Mertz	1

Sample Description: MW-114 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7364301
LL Group # 1452665
Account # 11260

Project Name: 211556

Collected: 02/11/2014 10:51 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 02/14/2014 10:00

Reported: 02/25/2014 15:28

MR114

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B			ug/l	ug/l	
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx			ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	29	1
08271	Heavy Range Organics C24-C40	n.a.	71	67	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1
The reverse surrogate, capric acid, is present at <1%.					

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	F140514AA	02/20/2014 21:44	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F140514AA	02/20/2014 21:44	Brett W Kenyon	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	14052A94A	02/24/2014 19:49	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	14052A94A	02/24/2014 19:49	Marie D Beamenderfer	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	140490013A	02/19/2014 22:08	Heather E Williams	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	140490014A	02/21/2014 23:15	Heather E Williams	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	140490014A	02/19/2014 03:00	Sherry L Morrow	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	140490013A	02/19/2014 03:00	Sherry L Morrow	1

Sample Description: MW-114 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7364302
LL Group # 1452665
Account # 11260

Project Name: 211556

Collected: 02/11/2014 10:51 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 02/14/2014 10:00

Reported: 02/25/2014 15:28

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
06035	Lead	SW-846 6020 7439-92-1	ug/l 0.12	ug/l 0.085	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was lab filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	140506050002A	02/20/2014 22:46	John P Hook	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	140506050002	02/20/2014 09:19	James L Mertz	1

Quality Control Summary

Client Name: Chevron Group Number: 1452665
Reported: 02/25/14 at 03:28 PM

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: F140512AA Sample number(s): 7364298								
Benzene	N.D.	0.5	ug/l	93		78-120		
Ethylbenzene	N.D.	0.5	ug/l	94		79-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	94		75-120		
Toluene	N.D.	0.5	ug/l	94		80-120		
Xylene (Total)	N.D.	0.5	ug/l	94		80-120		
Batch number: F140514AA Sample number(s): 7364299,7364301								
Benzene	N.D.	0.5	ug/l	92		78-120		
Ethylbenzene	N.D.	0.5	ug/l	89		79-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	91		75-120		
Toluene	N.D.	0.5	ug/l	91		80-120		
Xylene (Total)	N.D.	0.5	ug/l	91		80-120		
Batch number: 14052A94A Sample number(s): 7364298-7364299,7364301								
NWTPH-Gx water C7-C12	N.D.	50.	ug/l	114	108	75-135	5	30
Batch number: 140490013A Sample number(s): 7364299,7364301								
Diesel Range Organics C12-C24	N.D.	30.	ug/l	66	72	50-113	10	20
Heavy Range Organics C24-C40	N.D.	70.	ug/l					
Batch number: 140490014A Sample number(s): 7364299,7364301								
DRO C12-C24 w/Si Gel	N.D.	30.	ug/l	59	70	32-117	17	20
HRO C24-C40 w/Si Gel	N.D.	70.	ug/l					
Batch number: 140506050002A Sample number(s): 7364300,7364302								
Lead	N.D.	0.085	ug/l	103		90-110		

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: F140512AA Sample number(s): 7364298 UNSPK: P364248									
Benzene	99	98	72-134	1	30				
Ethylbenzene	99	98	71-134	2	30				
Methyl Tertiary Butyl Ether	95	95	72-126	0	30				
Toluene	101	98	80-125	2	30				
Xylene (Total)	100	99	79-125	1	30				

*- Outside of specification

- The result for one or both determinations was less than five times the LOQ.
- The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron Group Number: 1452665
Reported: 02/25/14 at 03:28 PM

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

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: F140514AA	Sample number(s): 7364299,7364301 UNSPK: P364260								
Benzene	94	96	72-134	2	30				
Ethylbenzene	94	92	71-134	2	30				
Methyl Tertiary Butyl Ether	89	91	72-126	2	30				
Toluene	97	95	80-125	2	30				
Xylene (Total)	106	93	79-125	8	30				
Batch number: 140506050002A	Sample number(s): 7364300,7364302 UNSPK: P364441 BKG: P364441								
Lead	118	121*	89-120	1	20	16.5	18.2	10	20

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: UST VOCs by 8260B - Water

Batch number: F140512AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7364298	100	100	100	99
Blank	101	101	101	98
LCS	100	101	100	99
MS	99	100	100	101
MSD	98	102	100	100
Limits:	80-116	77-113	80-113	78-113

Analysis Name: UST VOCs by 8260B - Water

Batch number: F140514AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7364299	102	102	99	97
7364301	100	101	99	97
Blank	100	101	100	99
LCS	98	103	98	98
MS	99	100	98	99
MSD	101	102	99	98
Limits:	80-116	77-113	80-113	78-113

Analysis Name: NWTPH-Gx water C7-C12

Batch number: 14052A94A

	Trifluorotoluene-F
7364298	88
7364299	87
7364301	87
Blank	89

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 02/25/14 at 03:28 PM

Group Number: 1452665

Surrogate Quality Control

LCS 92
LCSD 90

Limits: 63-135

Analysis Name: NWTPH-Dx water
Batch number: 140490013A
Orthoterphenyl

7364299 107
7364301 98
Blank 109
LCS 102
LCSD 111

Limits: 50-150

Analysis Name: NWTPH-Dx water w/ 10g Si Gel
Batch number: 140490014A
Orthoterphenyl

7364299 99
7364301 88
Blank 106
LCS 90
LCSD 102

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



Lancaster Laboratories

Acct. # 11260

For Eurofins Lancaster Laboratories use only
 Lab # 1452665 Sample # 1304298-302

Instructions on reverse side correspond with circled numbers.

1 Client Information				4 Matrix				5 Analyses Requested												6 Remarks					
Facility # SS#211556-OML G-R#386773 WBS Site Address 101 Mulford Road, TOLEDO, WA Chevron PM MHO LEIDOSRS Lead Consultant Russell Shroeder Consultant/Office Gettler-Ryan, Inc., 6805 Sierra Court, Suite G, Dublin, CA 94568 Consultant Project Mgr. Deanna L. Harding, (deanna@grinc.com) Consultant Phone # (925) 551-7444 x180 Sampler				<input type="checkbox"/> Sediment <input checked="" type="checkbox"/> Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Air <input type="checkbox"/> Surface <input type="checkbox"/> Total Number of Containers				<input type="checkbox"/> BTEX + MTBE <input type="checkbox"/> 8021 <input type="checkbox"/> 8260 full scan <input type="checkbox"/> Oxygenates <input type="checkbox"/> NWTPH-Gx <input checked="" type="checkbox"/> NWTPH-Dx with Silica Gel Cleanup <input checked="" type="checkbox"/> NWTPH-Dx without Silica Gel Cleanup <input type="checkbox"/> WA VPH <input type="checkbox"/> Lead <input checked="" type="checkbox"/> Method <u>6020</u>												SCR #: _____ <input type="checkbox"/> Results in Dry Weight <input type="checkbox"/> J value reporting needed <input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds <input type="checkbox"/> 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run _____ oxy's on highest hit <input type="checkbox"/> Run _____ oxy's on all hits					
2 Sample Identification		3 Collected		Grab	Composite	Soil	Water	Oil	Total Number of Containers	BTEX + MTBE	8021	8260	Oxygenates	NWTPH-Gx	NWTPH-Dx with Silica Gel Cleanup	NWTPH-Dx without Silica Gel Cleanup	WA VPH	Lead	Total	Diss.	Method	6 Remarks			
Date	Time	Date	Time																			7 Turnaround Time Requested (TAT) (please circle)		Relinquished by	
J. Payne Q.A. 2.11.14 MW-109 MW-114		1005 1051		X			X		2	X				X		X	X					Please report results for Dx with & without sgc. Dissolved Iron, Lead , and Manganese, as well as Alkalinity samples have been field filtered. Please forward lab results directly to the LC and cc: G-R. The TPW sample results should be forwarded directly			
				X			X		9	X				X	X	X									
				X			X																		
Standard <input checked="" type="checkbox"/> 5 day 72-hour <input type="checkbox"/> 48 hour				4 day <input type="checkbox"/> 24 hour <input type="checkbox"/>				Relinquished by <u>[Signature]</u> Date <u>2.11.14</u> Time <u>1430</u>				Received by <u>[Signature]</u> Date _____ Time _____				Date _____ Time _____									
EDD <input checked="" type="checkbox"/> (circle if required) CVX-RTBU-FL_05 (default)				Relinquished by Commercial Carrier: UPS <input checked="" type="checkbox"/> FedEx _____ Other _____				Temperature Upon Receipt <u>12</u> °C				Received by <u>[Signature]</u> Date <u>2/11/14</u> Time <u>1000</u>				Custody Seals Intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No									

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 \geq 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 \geq 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.

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ANALYTICAL RESULTS

Prepared by:

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

Prepared for:

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

June 25, 2014

Project: 211556

Submittal Date: 06/13/2014

Group Number: 1481697

PO Number: 0015146917

Release Number: HORNE

State of Sample Origin: WA

<u>Client Sample Description</u>	<u>Lancaster Labs (LL) #</u>
QA NA Water	7498023
B-1 Grab Groundwater	7498024
B-1 Filtered Grab Groundwater	7498025
B-2 Grab Groundwater	7498026
B-2 Filtered Grab Groundwater	7498027
B-3 Grab Groundwater	7498028
B-3 Filtered Grab Groundwater	7498029
B-4 Grab Groundwater	7498030
B-4 Filtered Grab Groundwater	7498031
MW-110 Grab Groundwater	7498032
MW-110 Filtered Grab Groundwater	7498033
MW-111 Grab Groundwater	7498034
MW-111 Filtered Grab Groundwater	7498035

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

ELECTRONIC COPY TO	Gettler-Ryan Inc.	Attn: Gettler Ryan
ELECTRONIC COPY TO	SAIC	Attn: Jamalyn Green
ELECTRONIC COPY TO	SAIC	Attn: Russ Shropshire

Respectfully Submitted,



Amek Carter
Specialist

(717) 556-7252

Sample Description: QA NA Water
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7498023
LL Group # 1481697
Account # 11260

Project Name: 211556

Collected: 06/12/2014

Chevron

Submitted: 06/13/2014 09:45

6001 Bollinger Canyon Road
L4310

Reported: 06/25/2014 14:44

San Ramon CA 94583

TL-QA

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles			SW-846 8260B	ug/l	
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles			ECY 97-602 NWTPH-Gx	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	F141692AA	06/18/2014 09:11	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F141692AA	06/18/2014 09:11	Anita M Dale	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	14168A94A	06/18/2014 22:55	Miranda P Tillinghast	1
01146	GC VOA Water Prep	SW-846 5030B	1	14168A94A	06/18/2014 22:55	Miranda P Tillinghast	1

Sample Description: B-1 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7498024
LL Group # 1481697
Account # 11260

Project Name: 211556

Collected: 06/12/2014 11:50 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 06/13/2014 09:45

Reported: 06/25/2014 14:44

TLB1-

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B					
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx					
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Miscellaneous RSKSOP-175 modified					
07105	Methane	74-82-8	22	3.0	1
GC Petroleum ECY 97-602 NWTPH-Dx					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	28	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	66	1
GC Petroleum ECY 97-602 NWTPH-Dx					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	28	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	66	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0					
00368	Nitrate Nitrogen	14797-55-8	370	250	5
00228	Sulfate	14808-79-8	3,300	1,500	5
SM 2320 B-1997					
12150	Total Alkalinity	n.a.	66,800	700	1
SM 4500-S2 D-2000					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	F141692AA	06/18/2014 09:33	Anita M Dale	1

Sample Description: B-1 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7498024
LL Group # 1481697
Account # 11260

Project Name: 211556

Collected: 06/12/2014 11:50 by JP

Chevron

6001 Bollinger Canyon Road

Submitted: 06/13/2014 09:45

L4310

Reported: 06/25/2014 14:44

San Ramon CA 94583

TLB1-

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F141692AA	06/18/2014 09:33	Anita M Dale	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	14168A94A	06/19/2014 01:28	Miranda P Tillinghast	1
01146	GC VOA Water Prep	SW-846 5030B	1	14168A94A	06/19/2014 01:28	Miranda P Tillinghast	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	141680031A	06/17/2014 23:29	Elizabeth J Marin	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	141700017A	06/20/2014 15:40	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	141700016A	06/23/2014 12:47	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	141700016A	06/20/2014 02:30	Sherry L Morrow	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	141700017A	06/20/2014 02:30	Sherry L Morrow	1
00368	Nitrate Nitrogen	EPA 300.0	1	14164987601A	06/13/2014 20:55	Clinton M Wilson	5
00228	Sulfate	EPA 300.0	1	14164987601A	06/13/2014 20:55	Clinton M Wilson	5
12150	Total Alkalinity	SM 2320 B-1997	1	14168002103A	06/17/2014 21:29	Kenneth A Bell	1
00230	Sulfide	SM 4500-S2 D-2000	1	14167023002A	06/16/2014 11:40	Michele L Graham	1

Sample Description: B-1 Filtered Grab Groundwater
 Facility# 211556 Job# 386773
 101 Mulford Rd - Toledo, WA

LL Sample # WW 7498025
 LL Group # 1481697
 Account # 11260

Project Name: 211556

Collected: 06/12/2014 11:50 by JP

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Submitted: 06/13/2014 09:45

Reported: 06/25/2014 14:44

San Ramon CA 94583

TLB1F

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
		SW-846 6010B	ug/l	ug/l	
01754	Iron	7439-89-6	57.0	43.0	1
07058	Manganese	7439-96-5	225	0.83	1
		SW-846 6020	ug/l	ug/l	
06035	Lead	7439-92-1	N.D.	0.085	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	141681848003	06/18/2014 20:34	John P Hook	1
07058	Manganese	SW-846 6010B	1	141681848003	06/18/2014 20:34	John P Hook	1
06035	Lead	SW-846 6020	1	141686050001A	06/18/2014 18:47	John P Hook	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	141681848003	06/18/2014 09:16	Micaela L Dishong	1
06050	ICP/MS SW-846 Water Digest	SW-846 3020A	1	141686050001	06/18/2014 10:20	James L Mertz	1

Sample Description: B-2 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7498026
LL Group # 1481697
Account # 11260

Project Name: 211556

Collected: 06/12/2014 14:55 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 06/13/2014 09:45

San Ramon CA 94583

Reported: 06/25/2014 14:44

TLB2-

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B					
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx					
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Miscellaneous RSKSOP-175 modified					
07105	Methane	74-82-8	N.D.	3.0	1
GC Petroleum ECY 97-602 NWTPH-Dx					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	29	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	67	1
GC Petroleum ECY 97-602 NWTPH-Dx					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0					
00368	Nitrate Nitrogen	14797-55-8	570	250	5
00228	Sulfate	14808-79-8	3,000	1,500	5
SM 2320 B-1997					
12150	Total Alkalinity	n.a.	66,900	700	1
SM 4500-S2 D-2000					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	F141691AA	06/18/2014 09:23	Anita M Dale	1

Sample Description: B-2 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7498026
LL Group # 1481697
Account # 11260

Project Name: 211556

Collected: 06/12/2014 14:55 by JP

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Submitted: 06/13/2014 09:45

Reported: 06/25/2014 14:44

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TLB2-

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F141691AA	06/18/2014 09:23	Anita M Dale	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	14168A94A	06/19/2014 02:19	Miranda P Tillinghast	1
01146	GC VOA Water Prep	SW-846 5030B	1	14168A94A	06/19/2014 02:19	Miranda P Tillinghast	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	141680031A	06/18/2014 00:03	Elizabeth J Marin	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	141700017A	06/20/2014 16:02	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	141700016A	06/23/2014 13:08	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	141700016A	06/20/2014 02:30	Sherry L Morrow	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	141700017A	06/20/2014 02:30	Sherry L Morrow	1
00368	Nitrate Nitrogen	EPA 300.0	1	14164987601A	06/13/2014 21:11	Clinton M Wilson	5
00228	Sulfate	EPA 300.0	1	14164987601A	06/13/2014 21:11	Clinton M Wilson	5
12150	Total Alkalinity	SM 2320 B-1997	1	14168002103A	06/17/2014 20:40	Kenneth A Bell	1
00230	Sulfide	SM 4500-S2 D-2000	1	14167023002A	06/16/2014 11:40	Michele L Graham	1

Sample Description: B-2 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7498027
LL Group # 1481697
Account # 11260

Project Name: 211556

Collected: 06/12/2014 14:55 by JP

Chevron

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L4310

Submitted: 06/13/2014 09:45

Reported: 06/25/2014 14:44

San Ramon CA 94583

TLB2F

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
		SW-846 6010B	ug/l	ug/l	
01754	Iron	7439-89-6	94.0	43.0	1
07058	Manganese	7439-96-5	75.6	0.83	1
		SW-846 6020	ug/l	ug/l	
06035	Lead	7439-92-1	N.D.	0.085	1

General Sample Comments

State of Washington Lab Certification No. C457
This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	141681848003	06/18/2014 20:38	John P Hook	1
07058	Manganese	SW-846 6010B	1	141681848003	06/18/2014 20:38	John P Hook	1
06035	Lead	SW-846 6020	1	141686050001A	06/18/2014 18:49	John P Hook	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	141681848003	06/18/2014 09:16	Micaela L Dishong	1
06050	ICP/MS SW-846 Water Digest	SW-846 3020A	1	141686050001	06/18/2014 10:20	James L Mertz	1

Sample Description: B-3 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7498028
LL Group # 1481697
Account # 11260

Project Name: 211556

Collected: 06/12/2014 13:50 by JP

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

Submitted: 06/13/2014 09:45

Reported: 06/25/2014 14:44

TLB3-

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B ug/l					
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	1	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx ug/l					
08273	NWTPH-Gx water C7-C12	n.a.	260	50	1
GC Miscellaneous RSKSOP-175 modified ug/l					
07105	Methane	74-82-8	170	3.0	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	780	28	1
08271	Heavy Range Organics C24-C40	n.a.	100	66	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	100	28	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	66	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0 ug/l					
00368	Nitrate Nitrogen	14797-55-8	2,900	250	5
00228	Sulfate	14808-79-8	7,000	1,500	5
SM 2320 B-1997 ug/l as CaCO3					
12150	Total Alkalinity	n.a.	125,000	700	1
SM 4500-S2 D-2000 ug/l					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	F141692AA	06/18/2014 11:01	Anita M Dale	1

Sample Description: B-3 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7498028
LL Group # 1481697
Account # 11260

Project Name: 211556

Collected: 06/12/2014 13:50 by JP

Chevron

6001 Bollinger Canyon Road

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L4310

Reported: 06/25/2014 14:44

San Ramon CA 94583

TLB3-

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F141692AA	06/18/2014 11:01	Anita M Dale	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	14168A94A	06/19/2014 02:44	Miranda P Tillinghast	1
01146	GC VOA Water Prep	SW-846 5030B	1	14168A94A	06/19/2014 02:44	Miranda P Tillinghast	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	141680031A	06/18/2014 00:20	Elizabeth J Marin	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	141700017A	06/20/2014 17:29	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	141700016A	06/23/2014 13:30	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	141700016A	06/20/2014 02:30	Sherry L Morrow	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	141700017A	06/20/2014 02:30	Sherry L Morrow	1
00368	Nitrate Nitrogen	EPA 300.0	1	14164987601A	06/13/2014 21:59	Clinton M Wilson	5
00228	Sulfate	EPA 300.0	1	14164987601A	06/13/2014 21:59	Clinton M Wilson	5
12150	Total Alkalinity	SM 2320 B-1997	1	14168002103A	06/17/2014 21:47	Kenneth A Bell	1
00230	Sulfide	SM 4500-S2 D-2000	1	14167023002A	06/16/2014 11:40	Michele L Graham	1

Sample Description: B-3 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7498029
LL Group # 1481697
Account # 11260

Project Name: 211556

Collected: 06/12/2014 13:50 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 06/13/2014 09:45

Reported: 06/25/2014 14:44

San Ramon CA 94583

TLB3F

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
		SW-846 6010B	ug/l	ug/l	
01754	Iron	7439-89-6	8,330	43.0	1
07058	Manganese	7439-96-5	4,620	0.83	1
		SW-846 6020	ug/l	ug/l	
06035	Lead	7439-92-1	8.3	0.085	1

General Sample Comments

State of Washington Lab Certification No. C457
This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	141681848003	06/18/2014 20:42	John P Hook	1
07058	Manganese	SW-846 6010B	1	141681848003	06/18/2014 20:42	John P Hook	1
06035	Lead	SW-846 6020	1	141686050001A	06/18/2014 18:51	John P Hook	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	141681848003	06/18/2014 09:16	Micaela L Dishong	1
06050	ICP/MS SW-846 Water Digest	SW-846 3020A	1	141686050001	06/18/2014 10:20	James L Mertz	1

Sample Description: B-4 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7498030
LL Group # 1481697
Account # 11260

Project Name: 211556

Collected: 06/12/2014 12:52 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 06/13/2014 09:45

San Ramon CA 94583

Reported: 06/25/2014 14:44

TLB4-

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B					
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	1	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx					
08273	NWTPH-Gx water C7-C12	n.a.	1,200	50	1
GC Miscellaneous RSKSOP-175 modified					
07105	Methane	74-82-8	430	3.0	1
GC Petroleum ECY 97-602 NWTPH-Dx					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	260	29	1
08271	Heavy Range Organics C24-C40	n.a.	73	67	1
GC Petroleum ECY 97-602 NWTPH-Dx					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	120	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0					
00368	Nitrate Nitrogen	14797-55-8	N.D.	250	5
00228	Sulfate	14808-79-8	N.D.	1,500	5
SM 2320 B-1997					
12150	Total Alkalinity	n.a.	112,000	700	1
SM 4500-S2 D-2000					
00230	Sulfide	18496-25-8	67	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	F141692AA	06/18/2014 11:22	Anita M Dale	1

Sample Description: B-4 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7498030
LL Group # 1481697
Account # 11260

Project Name: 211556

Collected: 06/12/2014 12:52 by JP

Chevron

6001 Bollinger Canyon Road
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Submitted: 06/13/2014 09:45

Reported: 06/25/2014 14:44

San Ramon CA 94583

TLB4-

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F141692AA	06/18/2014 11:22	Anita M Dale	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	14168A94A	06/19/2014 03:10	Miranda P Tillinghast	1
01146	GC VOA Water Prep	SW-846 5030B	1	14168A94A	06/19/2014 03:10	Miranda P Tillinghast	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	141680031A	06/18/2014 00:36	Elizabeth J Marin	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	141700017A	06/20/2014 17:50	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	141700016A	06/25/2014 13:23	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	141700016A	06/20/2014 02:30	Sherry L Morrow	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	141700017A	06/20/2014 02:30	Sherry L Morrow	1
00368	Nitrate Nitrogen	EPA 300.0	1	14164987601B	06/13/2014 22:16	Clinton M Wilson	5
00228	Sulfate	EPA 300.0	1	14164987601B	06/13/2014 22:16	Clinton M Wilson	5
12150	Total Alkalinity	SM 2320 B-1997	1	14168002103A	06/17/2014 21:41	Kenneth A Bell	1
00230	Sulfide	SM 4500-S2 D-2000	1	14167023002A	06/16/2014 11:40	Michele L Graham	1

Sample Description: B-4 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7498031
LL Group # 1481697
Account # 11260

Project Name: 211556

Collected: 06/12/2014 12:52 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 06/13/2014 09:45

Reported: 06/25/2014 14:44

San Ramon CA 94583

TLB4F

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved			ug/l	ug/l	
01754	Iron	7439-89-6	10,900	43.0	1
07058	Manganese	7439-96-5	2,310	0.83	1
SW-846 6010B			ug/l	ug/l	
06035	Lead	7439-92-1	1.8	0.085	1

General Sample Comments

State of Washington Lab Certification No. C457
This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	141681848003	06/18/2014 20:46	John P Hook	1
07058	Manganese	SW-846 6010B	1	141681848003	06/18/2014 20:46	John P Hook	1
06035	Lead	SW-846 6020	1	141686050001A	06/18/2014 18:53	John P Hook	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	141681848003	06/18/2014 09:16	Micaela L Dishong	1
06050	ICP/MS SW-846 Water Digest	SW-846 3020A	1	141686050001	06/18/2014 10:20	James L Mertz	1

Sample Description: MW-110 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7498032
LL Group # 1481697
Account # 11260

Project Name: 211556

Collected: 06/12/2014 09:50 by JP

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

Submitted: 06/13/2014 09:45

Reported: 06/25/2014 14:44

TL110

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B			ug/l	ug/l	
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx			ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	29	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	67	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1
The reverse surrogate, capric acid, is present at <1%.					

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	F141692AA	06/18/2014 11:44	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F141692AA	06/18/2014 11:44	Anita M Dale	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	14168A94A	06/19/2014 06:09	Miranda P Tillinghast	1
01146	GC VOA Water Prep	SW-846 5030B	1	14168A94A	06/19/2014 06:09	Miranda P Tillinghast	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	141700017A	06/20/2014 16:23	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	141700016A	06/23/2014 14:12	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	141700016A	06/20/2014 02:30	Sherry L Morrow	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	141700017A	06/20/2014 02:30	Sherry L Morrow	1

Sample Description: MW-110 Filtered Grab Groundwater
 Facility# 211556 Job# 386773
 101 Mulford Rd - Toledo, WA

LL Sample # WW 7498033
 LL Group # 1481697
 Account # 11260

Project Name: 211556

Collected: 06/12/2014 09:50 by JP

Chevron

6001 Bollinger Canyon Road

Submitted: 06/13/2014 09:45

L4310

Reported: 06/25/2014 14:44

San Ramon CA 94583

T110F

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
06035	Lead	SW-846 6020 7439-92-1	ug/l 0.22	ug/l 0.085	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was filtered in the lab for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	141686050001A	06/18/2014 18:54	John P Hook	1
06050	ICP/MS SW-846 Water Digest	SW-846 3020A	1	141686050001	06/18/2014 10:20	James L Mertz	1

Sample Description: MW-111 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7498034
LL Group # 1481697
Account # 11260

Project Name: 211556

Collected: 06/12/2014 10:51 by JP

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

Submitted: 06/13/2014 09:45

Reported: 06/25/2014 14:44

TL111

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B			ug/l	ug/l	
10943	Benzene	71-43-2	2	0.5	1
10943	Ethylbenzene	100-41-4	130	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	14	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx			ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	4,200	250	5
GC Miscellaneous RSKSOP-175 modified			ug/l	ug/l	
07105	Methane	74-82-8	7,000	150	50
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	1,200	29	1
08271	Heavy Range Organics C24-C40	n.a.	83	67	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	380	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0			ug/l	ug/l	
00368	Nitrate Nitrogen	14797-55-8	N.D.	250	5
00228	Sulfate	14808-79-8	N.D.	1,500	5
SM 2320 B-1997			ug/l as CaCO3	ug/l as CaCO3	
12150	Total Alkalinity	n.a.	174,000	700	1
SM 4500-S2 D-2000			ug/l	ug/l	
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	F141692AA	06/18/2014 12:06	Anita M Dale	1

Sample Description: MW-111 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7498034
LL Group # 1481697
Account # 11260

Project Name: 211556

Collected: 06/12/2014 10:51 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 06/13/2014 09:45

Reported: 06/25/2014 14:44

San Ramon CA 94583

TL111

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F141692AA	06/18/2014 12:06	Anita M Dale	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	14171B94A	06/24/2014 17:33	Laura M Krieger	5
01146	GC VOA Water Prep	SW-846 5030B	1	14171B94A	06/24/2014 17:33	Laura M Krieger	5
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	141680031A	06/18/2014 18:46	Elizabeth J Marin	50
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	141700017A	06/20/2014 17:07	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	141700016A	06/23/2014 14:33	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	141700016A	06/20/2014 02:30	Sherry L Morrow	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	141700017A	06/20/2014 02:30	Sherry L Morrow	1
00368	Nitrate Nitrogen	EPA 300.0	1	14164987601A	06/13/2014 20:39	Clinton M Wilson	5
00228	Sulfate	EPA 300.0	1	14164987601A	06/13/2014 20:39	Clinton M Wilson	5
12150	Total Alkalinity	SM 2320 B-1997	1	14168002103A	06/17/2014 21:35	Kenneth A Bell	1
00230	Sulfide	SM 4500-S2 D-2000	1	14167023002A	06/16/2014 11:40	Michele L Graham	1

Sample Description: MW-111 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7498035
LL Group # 1481697
Account # 11260

Project Name: 211556

Collected: 06/12/2014 10:51 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 06/13/2014 09:45

Reported: 06/25/2014 14:44

San Ramon CA 94583

T111F

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
		SW-846 6010B	ug/l	ug/l	
01754	Iron	7439-89-6	11,200	43.0	1
07058	Manganese	7439-96-5	5,330	0.83	1
		SW-846 6020	ug/l	ug/l	
06035	Lead	7439-92-1	16.1	0.085	1

General Sample Comments

State of Washington Lab Certification No. C457
This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	141681848003	06/18/2014 20:50	John P Hook	1
07058	Manganese	SW-846 6010B	1	141681848003	06/18/2014 20:50	John P Hook	1
06035	Lead	SW-846 6020	1	141686050001A	06/18/2014 18:56	John P Hook	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	141681848003	06/18/2014 09:16	Micaela L Dishong	1
06050	ICP/MS SW-846 Water Digest	SW-846 3020A	1	141686050001	06/18/2014 10:20	James L Mertz	1

Quality Control Summary

Client Name: Chevron
Reported: 06/25/14 at 02:44 PM

Group Number: 1481697

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

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: F141691AA	Sample number(s): 7498026							
Benzene	N.D.	0.5	ug/l	96		78-120		
Ethylbenzene	N.D.	0.5	ug/l	92		79-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	90		75-120		
Toluene	N.D.	0.5	ug/l	94		80-120		
Xylene (Total)	N.D.	0.5	ug/l	94		80-120		
Batch number: F141692AA	Sample number(s): 7498023-7498024,7498028,7498030,7498032,7498034							
Benzene	N.D.	0.5	ug/l	90		78-120		
Ethylbenzene	N.D.	0.5	ug/l	87		79-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	92		75-120		
Toluene	N.D.	0.5	ug/l	91		80-120		
Xylene (Total)	N.D.	0.5	ug/l	89		80-120		
Batch number: 14168A94A	Sample number(s): 7498023-7498024,7498026,7498028,7498030,7498032							
NWTPH-Gx water C7-C12	N.D.	50.	ug/l	103		75-135		
Batch number: 14171B94A	Sample number(s): 7498034							
NWTPH-Gx water C7-C12	N.D.	50.	ug/l	103	102	75-135	1	30
Batch number: 141680031A	Sample number(s): 7498024,7498026,7498028,7498030,7498034							
Methane	N.D.	3.0	ug/l	106		80-120		
Batch number: 141700017A	Sample number(s): 7498024,7498026,7498028,7498030,7498032,7498034							
Diesel Range Organics C12-C24	N.D.	30.	ug/l	75	69	50-113	8	20
Heavy Range Organics C24-C40	N.D.	70.	ug/l					
Batch number: 141700016A	Sample number(s): 7498024,7498026,7498028,7498030,7498032,7498034							
DRO C12-C24 w/Si Gel	N.D.	30.	ug/l	58	66	32-117	14	20
HRO C24-C40 w/Si Gel	N.D.	70.	ug/l					
Batch number: 141681848003	Sample number(s): 7498025,7498027,7498029,7498031,7498035							
Iron	N.D.	43.0	ug/l	110		90-112		
Manganese	N.D.	0.83	ug/l	109		90-110		
Batch number: 141686050001A	Sample number(s): 7498025,7498027,7498029,7498031,7498033,7498035							
Lead	N.D.	0.085	ug/l	100		90-110		
Batch number: 14164987601A	Sample number(s): 7498024,7498026,7498028,7498034							
Nitrate Nitrogen	N.D.	50.	ug/l	95	95	90-110	1	20
Sulfate	N.D.	300.	ug/l	96	95	90-110	1	20
Batch number: 14164987601B	Sample number(s): 7498030							
Nitrate Nitrogen	N.D.	50.	ug/l	95	95	90-110	1	20

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron Group Number: 1481697
Reported: 06/25/14 at 02:44 PM

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDI</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Sulfate	N.D.	300.	ug/l	96	95	90-110	1	20
Batch number: 14167023002A	Sample number(s): 7498024,7498026,7498028,7498030,7498034							
Sulfide	N.D.	54.	ug/l	96		90-110		
Batch number: 14168002103A	Sample number(s): 7498024,7498026,7498028,7498030,7498034							
Total Alkalinity	N.D.	700.	ug/l as CaCO3	92		90-110		

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

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: F141691AA	Sample number(s): 7498026 UNSPK: 7498026								
Benzene	102	102	72-134	0	30				
Ethylbenzene	98	99	71-134	2	30				
Methyl Tertiary Butyl Ether	92	96	72-126	4	30				
Toluene	100	101	80-125	0	30				
Xylene (Total)	97	99	79-125	1	30				
Batch number: F141692AA	Sample number(s): 7498023-7498024,7498028,7498030,7498032,7498034 UNSPK: 7498024								
Benzene	103	100	72-134	3	30				
Ethylbenzene	97	95	71-134	2	30				
Methyl Tertiary Butyl Ether	94	91	72-126	3	30				
Toluene	99	96	80-125	3	30				
Xylene (Total)	98	97	79-125	1	30				
Batch number: 14168A94A	Sample number(s): 7498023-7498024,7498026,7498028,7498030,7498032 UNSPK: P498126								
NWTPH-Gx water C7-C12	105	110	75-135	2	30				
Batch number: 141680031A	Sample number(s): 7498024,7498026,7498028,7498030,7498034 UNSPK: P496299								
Methane	89	77	35-157	10	20				
Batch number: 141681848003	Sample number(s): 7498025,7498027,7498029,7498031,7498035 UNSPK: P499015 BKG: P499015								
Iron	126 (2)	340 (2)	75-125	6	20	32,200	30,300	6	20
Manganese	148 (2)	41 (2)	75-125	6	20	8,640	8,210	5	20
Batch number: 141686050001A	Sample number(s): 7498025,7498027,7498029,7498031,7498033,7498035 UNSPK: P498316 BKG: P498316								
Lead	101	100	89-120	1	20	0.59	0.56	5 (1)	20
Batch number: 14164987601A	Sample number(s): 7498024,7498026,7498028,7498034 UNSPK: P498218 BKG: P498218								
Nitrate Nitrogen	87*		90-110			N.D.	N.D.	0 (1)	20
Sulfate	88*		90-110			460	340	29* (1)	20
Batch number: 14164987601B	Sample number(s): 7498030 UNSPK: 7498030 BKG: 7498030								
Nitrate Nitrogen	94		90-110			N.D.	N.D.	0 (1)	20
Sulfate	95		90-110			N.D.	N.D.	0 (1)	20

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron Group Number: 1481697
Reported: 06/25/14 at 02:44 PM

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	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 14167023002A	Sample number(s): 7498024,7498026,7498028,7498030,7498034 UNSPK: 7498034 BKG:								
Sulfide	79	79	42-131	0	16	N.D.	N.D.	0 (1)	5
Batch number: 14168002103A	Sample number(s): 7498024,7498026,7498028,7498030,7498034 UNSPK: P493899 BKG:								
Total Alkalinity	93		17-146			58,100	61,600	6*	5

Surrogate Quality Control

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

Analysis Name: UST VOCs by 8260B - Water

Batch number: F141691AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7498026	98	98	100	98
Blank	96	97	102	98
LCS	98	101	98	96
MS	97	102	99	97
MSD	97	102	100	97

Limits: 80-116 77-113 80-113 78-113

Analysis Name: UST VOCs by 8260B - Water

Batch number: F141692AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7498023	97	102	98	95
7498024	99	104	97	95
7498028	101	100	99	97
7498030	96	99	99	99
7498032	97	97	99	96
7498034	98	98	98	100
Blank	99	103	98	96
LCS	100	104	97	96
MS	98	105	97	96
MSD	100	101	100	97

Limits: 80-116 77-113 80-113 78-113

Analysis Name: NWTPH-Gx water C7-C12

Batch number: 14168A94A

	Trifluorotoluene-F
7498023	82
7498024	82
7498026	83

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 06/25/14 at 02:44 PM

Group Number: 1481697

Surrogate Quality Control

7498028	90
7498030	109
7498032	81
Blank	83
LCS	90
MS	100
MSD	100

Limits: 63-135

Analysis Name: NWTPH-Gx water C7-C12
Batch number: 14171B94A
Trifluorotoluene-F

7498034	85
Blank	81
LCS	89
LCSD	89

Limits: 63-135

Analysis Name: Volatile Headspace Hydrocarbon
Batch number: 141680031A
Propene

7498024	67
7498026	74
7498028	66
7498030	63
7498034	99
Blank	96
LCS	87
MS	86
MSD	77

Limits: 42-131

Analysis Name: NWTPH-Dx water w/ 10g Si Gel
Batch number: 141700016A
Orthoterphenyl

7498024	91
7498026	86
7498028	90
7498030	82
7498032	94
7498034	95
Blank	81
LCS	100
LCSD	101

Limits: 50-150

Analysis Name: NWTPH-Dx water
Batch number: 141700017A
Orthoterphenyl

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 06/25/14 at 02:44 PM

Group Number: 1481697

Surrogate Quality Control

7498024	100
7498026	100
7498028	111
7498030	104
7498032	99
7498034	114
Blank	94
LCS	114
LCSD	106

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



Lancaster Laboratories

Acct. # 11260 For Eurofins Lancaster Laboratories use only
 Group # 1481697 Sample # 7498023-35
Instructions on reverse side correspond with circled numbers.

1 Client Information			4 Matrix			5 Analyses Requested										6 Remarks	
Facility # SS#211556-OML G-R#386773 WBS			<input type="checkbox"/> Sediment <input checked="" type="checkbox"/> Ground Water <input type="checkbox"/> Surface			Total Number of Containers BTEX + MTBE 8021 <input type="checkbox"/> 8260 <input checked="" type="checkbox"/> Naphth <input type="checkbox"/> 8260 full scan Oxygenates NWTPH-Gx NWTPH-Dx with Silica Gel Cleanup <input checked="" type="checkbox"/> NWTPH-Dx without Silica Gel Cleanup <input checked="" type="checkbox"/> WA VPH <input type="checkbox"/> WA EPH <input type="checkbox"/> Lead <input type="checkbox"/> Total <input type="checkbox"/> Diss. <input checked="" type="checkbox"/> Method 6020 NITRATE / SULFATE DISS. IRON / MANGANESE SUCFIDE / ALKALINITY										SCR #: _____	
Site Address 101 Mulford Road, TOLEDO, WA			Chevron PM MHO LEIDOSRS Lead Consultant Russell Shrobbins													<input type="checkbox"/> Results in Dry Weight <input type="checkbox"/> J value reporting needed <input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds <input type="checkbox"/> 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run _____ oxy's on highest hit <input type="checkbox"/> Run _____ oxy's on all hits	
Consultant/Office Gettler-Ryan, Inc., 6805 Sierra Court, Suite G, Dublin, CA 94568			Consultant Project Mgr. Deanna L. Harding, (deanna@grinc.com)													6 Please report results for Dx with & without sgc. Dissolved Iron, Lead, and Manganese, as well as Alkalinity samples have been field filtered. <i>Shrobbins</i> Please forward lab results directly to the LC and oc: G-R. The TPW sample results should be forwarded directly to Doug Lee (dlee@grinc.com)	
Consultant Phone # (925) 551-7444 x180			Sampler J. PAYNE														
2 Sample Identification			3 Composite														
		Collected		Grab	Composite												
		Date	Time														
RA		6-12-14		X													
B-1		1160		X													
B-2		1466		X													
B-3		1360		X													
B-4		1262		X													
MW-110		0960		X													
MW-111		0961		X													
7 Turnaround Time Requested (TAT) (please circle)			Relinquished by <i>JDP</i>			Date 6-12-14		Time 1700		Received by _____			Date _____		Time _____		
Standard <input checked="" type="radio"/> 5 day 72 hour 4 day <input type="radio"/> 48 hour EDF/EDD 24 hour			Relinquished by _____			Date _____		Time _____		Received by _____			Date _____		Time _____		
8 Data Package (circle if required)			EDD (circle if required)			Relinquished by Commercial Carrier:				Received by _____			Date _____		Time _____		
Type I - Full			CVX-RTBU-FL_05 (default)			UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> Other <input type="checkbox"/>				Custody Seals Intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			Date 6/13/14		Time 0945		
Type VI (Raw Data)			Other: _____			Temperature Upon Receipt <u>11-4.3</u> °C											

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 \geq the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ).

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

- A** TIC is a possible aldol-condensation product
- B** Analyte was also detected in the blank
- C** Pesticide result confirmed by GC/MS
- D** Compound quantitated on a diluted sample
- E** Concentration exceeds the calibration range of the instrument
- N** Presumptive evidence of a compound (TICs only)
- P** Concentration difference between primary and confirmation columns $>25\%$
- U** Compound was not detected
- X,Y,Z** Defined in case narrative

Inorganic Qualifiers

- B** Value is $<$ CRDL, but \geq IDL
- E** Estimated due to interference
- M** Duplicate injection precision not met
- N** Spike sample not within control limits
- S** Method of standard additions (MSA) used for calculation
- U** Compound was not detected
- W** Post digestion spike out of control limits
- *** Duplicate analysis not within control limits
- +** 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.

ANALYTICAL RESULTS

Prepared by:

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

Prepared for:

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

June 26, 2014

Project: 211556

Submittal Date: 06/14/2014
Group Number: 1481949
PO Number: 0015146917
Release Number: HORNE
State of Sample Origin: WA

<u>Client Sample Description</u>	<u>Lancaster Labs (LL) #</u>
MW-109 Grab Groundwater	7499464
MW-113 Grab Groundwater	7499466
MW-113 Filtered Grab Groundwater	7499467
MW-114 Grab Groundwater	7499469
MW-114 Filtered Grab Groundwater	7499470
MW-117 Grab Groundwater	7499471
MW-117 Filtered Grab Groundwater	7499472

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

ELECTRONIC COPY TO	Gettler-Ryan Inc.	Attn: Gettler Ryan
ELECTRONIC COPY TO	SAIC	Attn: Jamalyn Green
ELECTRONIC COPY TO	SAIC	Attn: Russ Shropshire

Respectfully Submitted,



Amek Carter
Specialist

(717) 556-7252

Sample Description: MW-109 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7499464
LL Group # 1481949
Account # 11260

Project Name: 211556

Collected: 06/13/2014 11:00 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 06/14/2014 10:10

Reported: 06/26/2014 09:05

MR109

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B			ug/l	ug/l	
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx			ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	28	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	66	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	28	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	66	1
The reverse surrogate, capric acid, is present at <1%.					

General Sample Comments

State of Washington Lab Certification No. C457
 Trip blank vials were not received by the laboratory for this sample group.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	F141702AA	06/19/2014 07:57	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F141702AA	06/19/2014 07:57	Anita M Dale	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	14170B20A	06/20/2014 15:34	Miranda P Tillinghast	1
01146	GC VOA Water Prep	SW-846 5030B	1	14170B20A	06/20/2014 15:34	Miranda P Tillinghast	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	141700017A	06/20/2014 16:45	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	141700016A	06/23/2014 14:55	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	141700016A	06/20/2014 02:30	Sherry L Morrow	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	141700017A	06/20/2014 02:30	Sherry L Morrow	1

Sample Description: MW-113 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7499466
LL Group # 1481949
Account # 11260

Project Name: 211556

Collected: 06/13/2014 13:15 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 06/14/2014 10:10

San Ramon CA 94583

Reported: 06/26/2014 09:05

MR113

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B ug/l					
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx ug/l					
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Miscellaneous RSKSOP-175 modified ug/l					
07105	Methane	74-82-8	N.D.	3.0	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	29	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	67	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0 ug/l					
00368	Nitrate Nitrogen	14797-55-8	N.D.	250	5
00228	Sulfate	14808-79-8	3,700	1,500	5
SM 4500-S2 D-2000 ug/l					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457
Trip blank vials were not received by the laboratory for this sample group.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	D141691AA	06/18/2014 11:48	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D141691AA	06/18/2014 11:48	Anita M Dale	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	14170B20A	06/20/2014 16:02	Miranda P Tillinghast	1

Sample Description: MW-113 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7499466
LL Group # 1481949
Account # 11260

Project Name: 211556

Collected: 06/13/2014 13:15 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 06/14/2014 10:10

Reported: 06/26/2014 09:05

San Ramon CA 94583

MR113

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01146	GC VOA Water Prep	SW-846 5030B	1	14170B20A	06/20/2014 16:02	Miranda P Tillinghast	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	141700030A	06/19/2014 20:47	Elizabeth J Marin	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	141700019A	06/20/2014 19:38	Glorines Suarez-Rivera	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	141700018A	06/23/2014 16:42	Glorines Suarez-Rivera	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	141700018A	06/20/2014 02:30	Sherry L Morrow	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	141700019A	06/20/2014 02:30	Sherry L Morrow	1
00368	Nitrate Nitrogen	EPA 300.0	1	14165987601A	06/14/2014 19:17	Sandra J Miller	5
00228	Sulfate	EPA 300.0	1	14165987601A	06/14/2014 19:17	Sandra J Miller	5
00230	Sulfide	SM 4500-S2 D-2000	1	14170023001A	06/19/2014 10:15	Susan E Hibner	1

Sample Description: MW-113 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7499467
LL Group # 1481949
Account # 11260

Project Name: 211556

Collected: 06/13/2014 13:15 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 06/14/2014 10:10

San Ramon CA 94583

Reported: 06/26/2014 09:05

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
	SW-846 6010B		ug/l	ug/l	
01754	Iron	7439-89-6	N.D.	43.0	1
07058	Manganese	7439-96-5	11.9	0.83	1
SW-846 6020					
	SW-846 6020		ug/l	ug/l	
06035	Lead	7439-92-1	N.D.	0.085	1
Wet Chemistry					
	SM 2320 B-1997		ug/l as CaCO3	ug/l as CaCO3	
12150	Total Alkalinity	n.a.	34,200	700	1

General Sample Comments

State of Washington Lab Certification No. C457
This sample was field filtered.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	141681848003	06/18/2014 20:55	John P Hook	1
07058	Manganese	SW-846 6010B	1	141681848003	06/18/2014 20:55	John P Hook	1
06035	Lead	SW-846 6020	1	141686050002A	06/19/2014 07:12	Choon Y Tian	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	141681848003	06/18/2014 09:16	Micaela L Dishong	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	141686050002	06/18/2014 10:38	James L Mertz	1
12150	Total Alkalinity	SM 2320 B-1997	1	14168002103A	06/17/2014 21:19	Kenneth A Bell	1

Sample Description: MW-114 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7499469
LL Group # 1481949
Account # 11260

Project Name: 211556

Collected: 06/13/2014 09:50 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 06/14/2014 10:10

San Ramon CA 94583

Reported: 06/26/2014 09:05

MR114

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B			ug/l	ug/l	
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWT PH-Gx			ug/l	ug/l	
08273	NWT PH-Gx water C7-C12	n.a.	N.D.	50	1
GC Petroleum ECY 97-602 NWT PH-Dx			ug/l	ug/l	
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	94	29	1
08271	Heavy Range Organics C24-C40	n.a.	820	67	1
GC Petroleum ECY 97-602 NWT PH-Dx			ug/l	ug/l	
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	38	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	340	67	1
The reverse surrogate, capric acid, is present at <1%.					

General Sample Comments

State of Washington Lab Certification No. C457
 Trip blank vials were not received by the laboratory for this sample group.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	D141691AA	06/18/2014 12:11	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D141691AA	06/18/2014 12:11	Anita M Dale	1
08273	NWT PH-Gx water C7-C12	ECY 97-602 NWT PH-Gx	1	14170B20A	06/20/2014 16:31	Miranda P Tillinghast	1
01146	GC VOA Water Prep	SW-846 5030B	1	14170B20A	06/20/2014 16:31	Miranda P Tillinghast	1
08271	NWT PH-Dx water	ECY 97-602 NWT PH-Dx modified	1	141700019A	06/20/2014 21:05	Glorines Suarez-Rivera	1
12005	NWT PH-Dx water w/ 10g Si Gel	ECY 97-602 NWT PH-Dx modified	1	141700018A	06/23/2014 17:03	Glorines Suarez-Rivera	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWT PH-Dx 06/97	1	141700018A	06/20/2014 02:30	Sherry L Morrow	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWT PH-Dx 06/97	1	141700019A	06/20/2014 02:30	Sherry L Morrow	1

Sample Description: MW-114 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7499470
LL Group # 1481949
Account # 11260

Project Name: 211556

Collected: 06/13/2014 09:50 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 06/14/2014 10:10

Reported: 06/26/2014 09:05

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
06035	Lead	SW-846 6020 7439-92-1	ug/l 0.18	ug/l 0.085	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was lab filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	141686050002A	06/19/2014 07:14	Choon Y Tian	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	141686050002	06/18/2014 10:38	James L Mertz	1

Sample Description: MW-117 Grab Groundwater
Facility# 211556 **Job#** 386773
 101 Mulford Road - Toledo, WA

LL Sample # WW 7499471
LL Group # 1481949
Account # 11260

Project Name: 211556

Collected: 06/13/2014 12:02 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 06/14/2014 10:10

Reported: 06/26/2014 09:05

MR117

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B			ug/l	ug/l	
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWT PH-Gx			ug/l	ug/l	
08273	NWT PH-Gx water C7-C12	n.a.	N.D.	50	1
GC Miscellaneous RSKSOP-175 modified			ug/l	ug/l	
07105	Methane	74-82-8	N.D.	3.0	1
GC Petroleum ECY 97-602 NWT PH-Dx			ug/l	ug/l	
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	28	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	66	1
GC Petroleum ECY 97-602 NWT PH-Dx			ug/l	ug/l	
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	28	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	66	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0			ug/l	ug/l	
00368	Nitrate Nitrogen	14797-55-8	540	250	5
00228	Sulfate	14808-79-8	5,900	1,500	5
SM 4500-S2 D-2000			ug/l	ug/l	
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457
 Trip blank vials were not received by the laboratory for this sample group.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	D141691AA	06/18/2014 12:34	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D141691AA	06/18/2014 12:34	Anita M Dale	1
08273	NWT PH-Gx water C7-C12	ECY 97-602 NWT PH-Gx	1	14170B20A	06/20/2014 16:59	Miranda P Tillinghast	1

Sample Description: MW-117 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7499471
LL Group # 1481949
Account # 11260

Project Name: 211556

Collected: 06/13/2014 12:02 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 06/14/2014 10:10

Reported: 06/26/2014 09:05

San Ramon CA 94583

MR117

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01146	GC VOA Water Prep	SW-846 5030B	1	14170B20A	06/20/2014 16:59	Miranda P Tillinghast	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	141700030A	06/19/2014 21:04	Elizabeth J Marin	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	141700019A	06/20/2014 20:00	Glorines Suarez-Rivera	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	141700018A	06/23/2014 17:24	Glorines Suarez-Rivera	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	141700018A	06/20/2014 02:30	Sherry L Morrow	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	141700019A	06/20/2014 02:30	Sherry L Morrow	1
00368	Nitrate Nitrogen	EPA 300.0	1	14165987601A	06/14/2014 20:06	Sandra J Miller	5
00228	Sulfate	EPA 300.0	1	14165987601A	06/14/2014 20:06	Sandra J Miller	5
00230	Sulfide	SM 4500-S2 D-2000	1	14170023001A	06/19/2014 10:15	Susan E Hibner	1

Sample Description: MW-117 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7499472
LL Group # 1481949
Account # 11260

Project Name: 211556

Collected: 06/13/2014 12:02 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 06/14/2014 10:10

San Ramon CA 94583

Reported: 06/26/2014 09:05

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
	SW-846 6010B		ug/l	ug/l	
01754	Iron	7439-89-6	N.D.	43.0	1
07058	Manganese	7439-96-5	2.8	0.83	1
	SW-846 6020		ug/l	ug/l	
06035	Lead	7439-92-1	N.D.	0.085	1
Wet Chemistry					
	SM 2320 B-1997		ug/l as CaCO3	ug/l as CaCO3	
12150	Total Alkalinity	n.a.	30,700	700	1

General Sample Comments

State of Washington Lab Certification No. C457
This sample was field filtered.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	141681848003	06/18/2014 20:59	John P Hook	1
07058	Manganese	SW-846 6010B	1	141681848003	06/18/2014 20:59	John P Hook	1
06035	Lead	SW-846 6020	1	141686050002A	06/19/2014 07:21	Choon Y Tian	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	141681848003	06/18/2014 09:16	Micaela L Dishong	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	141686050002	06/18/2014 10:38	James L Mertz	1
12150	Total Alkalinity	SM 2320 B-1997	1	14168002103A	06/17/2014 20:46	Kenneth A Bell	1

Quality Control Summary

Client Name: Chevron
Reported: 06/26/14 at 09:05 AM

Group Number: 1481949

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

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: D141691AA	Sample number(s): 7499466,7499469,7499471							
Benzene	N.D.	0.5	ug/l	96		78-120		
Ethylbenzene	N.D.	0.5	ug/l	99		79-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	96		75-120		
Toluene	N.D.	0.5	ug/l	98		80-120		
Xylene (Total)	N.D.	0.5	ug/l	100		80-120		
Batch number: F141702AA	Sample number(s): 7499464							
Benzene	N.D.	0.5	ug/l	90		78-120		
Ethylbenzene	N.D.	0.5	ug/l	86		79-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	91		75-120		
Toluene	N.D.	0.5	ug/l	86		80-120		
Xylene (Total)	N.D.	0.5	ug/l	87		80-120		
Batch number: 14170B20A	Sample number(s): 7499464,7499466,7499469,7499471							
NWTPH-Gx water C7-C12	N.D.	50.	ug/l	101	101	75-135	0	30
Batch number: 141700030A	Sample number(s): 7499466,7499471							
Methane	N.D.	3.0	ug/l	103		80-120		
Batch number: 141700017A	Sample number(s): 7499464							
Diesel Range Organics C12-C24	N.D.	30.	ug/l	75	69	50-113	8	20
Heavy Range Organics C24-C40	N.D.	70.	ug/l					
Batch number: 141700019A	Sample number(s): 7499466,7499469,7499471							
Diesel Range Organics C12-C24	N.D.	30.	ug/l	72	71	50-113	2	20
Heavy Range Organics C24-C40	N.D.	70.	ug/l					
Batch number: 141700016A	Sample number(s): 7499464							
DRO C12-C24 w/Si Gel	N.D.	30.	ug/l	58	66	32-117	14	20
HRO C24-C40 w/Si Gel	N.D.	70.	ug/l					
Batch number: 141700018A	Sample number(s): 7499466,7499469,7499471							
DRO C12-C24 w/Si Gel	N.D.	30.	ug/l	63	70	32-117	11	20
HRO C24-C40 w/Si Gel	N.D.	70.	ug/l					
Batch number: 141681848003	Sample number(s): 7499467,7499472							
Iron	N.D.	43.0	ug/l	110		90-112		
Manganese	N.D.	0.83	ug/l	109		90-110		
Batch number: 141686050002A	Sample number(s): 7499467,7499470,7499472							
Lead	N.D.	0.085	ug/l	98		90-110		
Batch number: 14165987601A	Sample number(s): 7499466,7499471							

*- 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: 1481949
Reported: 06/26/14 at 09:05 AM

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Nitrate Nitrogen	N.D.	50.	ug/l	95	93	90-110	3	20
Sulfate	N.D.	300.	ug/l	96	93	90-110	3	20
Batch number: 14168002103A	Sample number(s): 7499467,7499472							
Total Alkalinity	N.D.	700.	ug/l as CaCO3	92		90-110		
Batch number: 14170023001A	Sample number(s): 7499466,7499471							
Sulfide	N.D.	54.	ug/l	92		90-110		

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

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: D141691AA	Sample number(s): 7499466,7499469,7499471 UNSPK: P499499								
Benzene	106	108	72-134	1	30				
Ethylbenzene	109	109	71-134	1	30				
Methyl Tertiary Butyl Ether	101	102	72-126	2	30				
Toluene	108	108	80-125	1	30				
Xylene (Total)	110	109	79-125	0	30				
Batch number: F141702AA	Sample number(s): 7499464 UNSPK: 7499464								
Benzene	100	100	72-134	0	30				
Ethylbenzene	98	97	71-134	0	30				
Methyl Tertiary Butyl Ether	99	95	72-126	4	30				
Toluene	101	100	80-125	1	30				
Xylene (Total)	98	98	79-125	1	30				
Batch number: 141700030A	Sample number(s): 7499466,7499471 UNSPK: P501998								
Methane	82	81	35-157	1	20				
Batch number: 141681848003	Sample number(s): 7499467,7499472 UNSPK: P499015 BKG: P499015								
Iron	126 (2)	340 (2)	75-125	6	20	32,200	30,300	6	20
Manganese	148 (2)	41 (2)	75-125	6	20	8,640	8,210	5	20
Batch number: 141686050002A	Sample number(s): 7499467,7499470,7499472 UNSPK: P495786 BKG: P495786								
Lead	106	103	89-120	3	20	0.14	0.15	3 (1)	20
Batch number: 14165987601A	Sample number(s): 7499466,7499471 UNSPK: 7499466 BKG: 7499466								
Nitrate Nitrogen	99		90-110			N.D.	N.D.	0 (1)	20
Sulfate	96		90-110			3,700	3,700	0 (1)	20
Batch number: 14168002103A	Sample number(s): 7499467,7499472 UNSPK: P493899 BKG: P493899								
Total Alkalinity	93		17-146			58,100	61,600	6*	5
Batch number: 14170023001A	Sample number(s): 7499466,7499471 UNSPK: P499437 BKG: P499437								
Sulfide	81	90	42-131	4	16	7,400	6,700	9* (1)	5

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 06/26/14 at 09:05 AM

Group Number: 1481949

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: UST VOCs by 8260B - Water
Batch number: D141691AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7499466	100	99	99	98
7499469	99	96	99	98
7499471	100	98	99	97
Blank	100	97	99	98
LCS	99	100	99	99
MS	100	99	98	99
MSD	100	100	98	98
Limits:	80-116	77-113	80-113	78-113

Analysis Name: UST VOCs by 8260B - Water
Batch number: F141702AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7499464	100	102	99	100
Blank	101	99	100	99
LCS	101	105	100	98
MS	100	105	98	98
MSD	101	104	98	99
Limits:	80-116	77-113	80-113	78-113

Analysis Name: NWTPH-Gx water C7-C12
Batch number: 14170B20A

	Trifluorotoluene-F
7499464	91
7499466	91
7499469	90
7499471	90
Blank	90
LCS	92
LCSD	92
Limits:	63-135

Analysis Name: NWTPH-Dx water w/ 10g Si Gel
Batch number: 141700016A

	Orthoterphenyl
7499464	94
Blank	81
LCS	100
LCSD	101
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.

Quality Control Summary

Client Name: Chevron
Reported: 06/26/14 at 09:05 AM

Group Number: 1481949

Surrogate Quality Control

Analysis Name: NWTPH-Dx water
Batch number: 141700017A
Orthoterphenyl

7499464	97
Blank	94
LCS	114
LCSD	106

Limits: 50-150

Analysis Name: NWTPH-Dx water w/ 10g Si Gel
Batch number: 141700018A
Orthoterphenyl

7499466	88
7499469	85
7499471	87
Blank	89
LCS	91
LCSD	104

Limits: 50-150

Analysis Name: NWTPH-Dx water
Batch number: 141700019A
Orthoterphenyl

7499466	97
7499469	104
7499471	101
Blank	103
LCS	106
LCSD	104

Limits: 50-150

Analysis Name: Volatile Headspace Hydrocarbon
Batch number: 141700030A
Propene

7499466	79
7499471	87
Blank	102
LCS	102
MS	81
MSD	81

Limits: 42-131

*- 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



Lancaster Laboratories

Act. # 11260 For Eurofins Lancaster Laboratories use only
 Group # 1481949 Sample # 7499464-73
Instructions on reverse side correspond with circled numbers.

1 Client Information				4 Matrix				5 Analyses Requested												6 Remarks						
Facility # SS#211556-OML G-R#386773 WBS				<input type="checkbox"/> Sediment <input checked="" type="checkbox"/> Ground <input type="checkbox"/> Surface <input type="checkbox"/> Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Air Total Number of Containers: _____ BTEX + MTBE 8021 <input type="checkbox"/> 8260 <input type="checkbox"/> Naphth <input type="checkbox"/> 8260 full scan <input type="checkbox"/> Oxygenates _____ NWTPH-Gx _____ NWTPH-Dx with Silica Gel Cleanup <input type="checkbox"/> NWTPH-Dx without Silica Gel Cleanup <input type="checkbox"/> WA VPH <input type="checkbox"/> WA EPH <input type="checkbox"/> Lead Total <input type="checkbox"/> Diss <input checked="" type="checkbox"/> Method <u>6020</u> NITRATE SULFATE DISS IRON / MANGANESE SULFIDE METALS ALKALINITY				SCR #: _____ <input type="checkbox"/> Results in Dry Weight <input type="checkbox"/> J value reporting needed <input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds <input type="checkbox"/> 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run _____ oxy's on highest hit <input type="checkbox"/> Run _____ oxy's on all hits												6 Please report results for Dx with & without sgc. Dissolved Iron, Lead, and Manganese, as well as Alkalinity samples have been field filtered. COC AMENDED ON 06-17-14 M/W/C Please forward lab results directly to the LC and oo: G-R. The TPW results should be forwarded directly to Doug Lee (dlee@eurofins.com)						
Site Address 101 Mulford Road, TOLEDO, WA																										
Chevron PM MHO LEIDOSRS Lead Consultant Russell Shropshire																										
Consultant/Office Gettler-Ryan, Inc., 6805 Sierra Court, Suite G, Dublin, CA 94568																										
Consultant Project Mgr. Deanna L. Harding, (deanna@grinc.com)																										
Consultant Phone # (925) 551-7444 x180																										
Sampler J. PAYNE																										
2 Sample Identification		3 Collected																								
		Date	Time	Grab	Composite	Soil	Water	Oil	Total Number of Containers	BTEX + MTBE	8021	8260	Naphth	Oxygenates	NWTPH-Gx	NWTPH-Dx with Silica Gel Cleanup	NWTPH-Dx without Silica Gel Cleanup	WA VPH	WA EPH	Lead	Total	Diss	Method			
M/W · 109		6-18-14	1100	X			X	9	16	X			X		X	X	X	X	X	X	X	X	X	X		
M/W · 113			1315	X			X		16	X			X		X	X	X	X	X	X	X	X	X	X		
M/W · 114			0950	X			X		16	X			X		X	X	X	X	X	X	X	X	X	X		
M/W · 117			1202	X			X		16	X			X		X	X	X	X	X	X	X	X	X	X		
7 Turnaround Time Requested (TAT) (please circle)				Relinquished by <i>[Signature]</i> Date <u>6-13-14</u> Time <u>1600</u>				Received by _____ Date _____ Time _____								9										
Standard 5 day 72 hour 48 hour 4 day EDF/EDD 24 hour				Relinquished by _____ Date _____ Time _____				Received by _____ Date _____ Time _____																		
8 Data Package (circle if required)				Relinquished by Commercial Carrier:				Received by <i>[Signature]</i> Date <u>6/14/14</u> Time <u>1010</u>																		
Type I - Full				CVX-RTBU-FL_05 (default)				UPS <input checked="" type="checkbox"/> FedEx _____ Other _____				Temperature Upon Receipt <u>1-3.3 °C</u>				Custody Seals Intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No										
Type VI (Raw Data)				Other: _____																						

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 \geq the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ).

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quantitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
N	Presumptive evidence of a compound (TICs only)
P	Concentration difference between primary and confirmation columns $>25\%$
U	Compound was not detected
X,Y,Z	Defined in case narrative

Inorganic Qualifiers

B	Value is $<$ CRDL, but \geq IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike sample not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*	Duplicate analysis not within control limits
+	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.

ANALYTICAL RESULTS

Prepared by:

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

Prepared for:

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

June 26, 2014

Project: 211556

Submittal Date: 06/17/2014
Group Number: 1482431
PO Number: 0015146917
Release Number: HORNE
State of Sample Origin: WA

Client Sample Description

QA NA Water
MW-120 Grab Groundwater
MW-120 Filtered Grab Groundwater

Lancaster Labs (LL) #

7501459
7501460
7501461

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

ELECTRONIC COPY TO	Gettler-Ryan Inc.	Attn: Gettler Ryan
ELECTRONIC COPY TO	SAIC	Attn: Jamalyn Green
ELECTRONIC COPY TO	SAIC	Attn: Russ Shropshire
ELECTRONIC COPY TO	Gettler-Ryan	Attn: Doug Lee

Respectfully Submitted,

A handwritten signature in black ink that reads "Amek Carter". The signature is written in a cursive style with a large initial 'A' and a long horizontal stroke at the end.

Amek Carter
Specialist

(717) 556-7252

Sample Description: QA NA Water
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7501459
LL Group # 1482431
Account # 11260

Project Name: 211556

Collected: 06/14/2014

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 06/17/2014 09:35

San Ramon CA 94583

Reported: 06/26/2014 09:04

MRTTB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles			SW-846 8260B	ug/l	
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles			ECY 97-602 NWTPH-Gx	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	D141711AA	06/20/2014 07:45	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D141711AA	06/20/2014 07:45	Anita M Dale	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	14170B20A	06/20/2014 14:38	Miranda P Tillinghast	1
01146	GC VOA Water Prep	SW-846 5030B	1	14170B20A	06/20/2014 14:38	Miranda P Tillinghast	1

Sample Description: MW-120 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7501460
LL Group # 1482431
Account # 11260

Project Name: 211556

Collected: 06/14/2014 09:02 by JP

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

Submitted: 06/17/2014 09:35

Reported: 06/26/2014 09:04

MR120

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B			ug/l	ug/l	
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx			ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Petroleum ECY 97-602 NWTPH-Dx Hydrocarbons modified			ug/l	ug/l	
08271	Diesel Range Organics C12-C24	n.a.	N.D.	29	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	68	1
GC Petroleum ECY 97-602 NWTPH-Dx Hydrocarbons w/Si modified			ug/l	ug/l	
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	68	1
The reverse surrogate, capric acid, is present at <1%.					

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	D141711AA	06/20/2014 08:08	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D141711AA	06/20/2014 08:08	Anita M Dale	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	14170B20A	06/20/2014 17:27	Miranda P Tillinghast	1
01146	GC VOA Water Prep	SW-846 5030B	1	14170B20A	06/20/2014 17:27	Miranda P Tillinghast	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	141700019A	06/20/2014 20:22	Glorines Suarez-Rivera	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	141700018A	06/23/2014 17:46	Glorines Suarez-Rivera	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	141700018A	06/20/2014 02:30	Sherry L Morrow	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	141700019A	06/20/2014 02:30	Sherry L Morrow	1

Sample Description: MW-120 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7501461
LL Group # 1482431
Account # 11260

Project Name: 211556

Collected: 06/14/2014 09:02 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 06/17/2014 09:35

San Ramon CA 94583

Reported: 06/26/2014 09:04

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved		SW-846 6020	ug/l	ug/l	
06035	Lead	7439-92-1	N.D.	0.082	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was lab filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	141756050004A	06/25/2014 17:39	Maria A Orrs	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	141756050004	06/25/2014 09:13	Micaela L Dishong	1

Quality Control Summary

Client Name: Chevron
Reported: 06/26/14 at 09:04 AM

Group Number: 1482431

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

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: D141711AA	Sample number(s): 7501459-7501460							
Benzene	N.D.	0.5	ug/l	100		78-120		
Ethylbenzene	N.D.	0.5	ug/l	99		79-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	103		75-120		
Toluene	N.D.	0.5	ug/l	101		80-120		
Xylene (Total)	N.D.	0.5	ug/l	100		80-120		
Batch number: 14170B20A	Sample number(s): 7501459-7501460							
NWTPH-Gx water C7-C12	N.D.	50.	ug/l	101	101	75-135	0	30
Batch number: 141700019A	Sample number(s): 7501460							
Diesel Range Organics C12-C24	N.D.	30.	ug/l	72	71	50-113	2	20
Heavy Range Organics C24-C40	N.D.	70.	ug/l					
Batch number: 141700018A	Sample number(s): 7501460							
DRO C12-C24 w/Si Gel	N.D.	30.	ug/l	63	70	32-117	11	20
HRO C24-C40 w/Si Gel	N.D.	70.	ug/l					
Batch number: 141756050004A	Sample number(s): 7501461							
Lead	N.D.	0.082	ug/l	105		90-110		

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

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: D141711AA	Sample number(s): 7501459-7501460 UNSPK: 7501460								
Benzene	106	100	72-134	6	30				
Ethylbenzene	105	99	71-134	5	30				
Methyl Tertiary Butyl Ether	103	97	72-126	6	30				
Toluene	106	99	80-125	6	30				
Xylene (Total)	106	100	79-125	6	30				
Batch number: 141756050004A	Sample number(s): 7501461 UNSPK: P502028 BKG: P502028								
Lead	102	101	89-120	1	20	0.10	0.096	4 (1)	20

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 06/26/14 at 09:04 AM

Group Number: 1482431

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: UST VOCs by 8260B - Water
Batch number: D141711AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7501459	104	99	97	96
7501460	103	101	97	97
Blank	104	99	97	99
LCS	101	102	98	99
MS	103	99	98	99
MSD	103	101	98	98
Limits:	80-116	77-113	80-113	78-113

Analysis Name: NWT PH-Gx water C7-C12
Batch number: 14170B20A
Trifluorotoluene-F

7501459	89
7501460	89
Blank	90
LCS	92
LCSD	92
Limits:	63-135

Analysis Name: NWT PH-Dx water w/ 10g Si Gel
Batch number: 141700018A
Orthoterphenyl

7501460	100
Blank	89
LCS	91
LCSD	104
Limits:	50-150

Analysis Name: NWT PH-Dx water
Batch number: 141700019A
Orthoterphenyl

7501460	103
Blank	103
LCS	106
LCSD	104
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



Lancaster Laboratories

Acct. # 11260

For Eurofins Lancaster Laboratories use only
 Group # 1482431 Sample # 747501459-61
Instructions on reverse side correspond with circled numbers.

JH 6/17/14

1 Client Information				4 Matrix				5 Analyses Requested										6 Remarks	
Facility # SS#211556-OML G-R#386773 WBS Site Address 101 Mulford Road, TOLEDO, WA Chevron PM MHO LEIDOSRS Lead Consultant Russell Shropshire Consultant/Office Gettler-Ryan, Inc., 6805 Sierra Court, Suite G, Dublin, CA 94568 Consultant Project Mgr. Deanna L. Harding, (deanna@grinc.com) Consultant Phone # (925) 551-7444 x180 Sampler J. PAVNE				<input type="checkbox"/> Sediment <input checked="" type="checkbox"/> Groundwater <input type="checkbox"/> Surface <input type="checkbox"/> Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Air <input type="checkbox"/> Oil				Total Number of Containers BTEX + MTBE 8021 <input type="checkbox"/> 8260 <input type="checkbox"/> Naphth <input type="checkbox"/> 8260 full scan Oxygenates NWTPH-Gx NWTPH-Dx with Silica Gel Cleanup <input checked="" type="checkbox"/> NWTPH-Dx without Silica Gel Cleanup <input checked="" type="checkbox"/> WA VPH <input type="checkbox"/> WA EPH <input type="checkbox"/> Lead <input type="checkbox"/> Total <input type="checkbox"/> Diss. <input checked="" type="checkbox"/> Method <u>6030</u>										SCR #: _____ <input type="checkbox"/> Results in Dry Weight <input type="checkbox"/> J value reporting needed <input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds <input type="checkbox"/> 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run _____ oxy's on highest hit <input type="checkbox"/> Run _____ oxy's on all hits	
2 Sample Identification		3 Collected		Grab		Composite												6 Remarks	
																		Please report results for Dx with & without sgc. Dissolved Iron, Lead, and Manganese, as well as Alkalinity samples have been field filtered. Please forward lab results directly to the LC and cc: G-R. The TPW sample results should be forwarded directly to Doug Lee (dlee@grinc.com)	
<i>MW-120</i>		<i>6.14.14 0902</i>		<input checked="" type="checkbox"/>		<input type="checkbox"/>													
				<input type="checkbox"/>		<input type="checkbox"/>													
				<input type="checkbox"/>		<input type="checkbox"/>													
				<input type="checkbox"/>		<input type="checkbox"/>													
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				<input type="checkbox"/>		<input type="checkbox"/>													
				<input type="checkbox"/>		<input type="checkbox"/>													
				<input type="checkbox"/>		<input type="checkbox"/>													
7 Turnaround Time Requested (TAT) (please circle) Standard <input checked="" type="radio"/> 5 day 72 hour <input type="radio"/> 48 hour 4 day <input type="radio"/> EDF/EDD 24 hour <input type="radio"/>				Relinquished by <i>[Signature]</i> Date <i>6.16.14</i> Time <i>1300</i>				Received by _____ Date _____ Time _____				Relinquished by _____ Date _____ Time _____		Received by _____ Date _____ Time _____					
8 Data Package (circle if required) Type I - Full Type VI (Raw Data)		EDD (circle if required) CVX-RTBU-FI_05 (default) Other: _____		Relinquished by Commercial Carrier: UPS <input checked="" type="checkbox"/> FedEx _____ Other _____ Temperature Upon Receipt <u>0.9</u> °C				Received by <i>[Signature]</i> Date <i>6/17/14</i> Time <i>0835</i>				Custody Seals Intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No							

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 \geq the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ).

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quantitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
N	Presumptive evidence of a compound (TICs only)
P	Concentration difference between primary and confirmation columns $>25\%$
U	Compound was not detected
X,Y,Z	Defined in case narrative

Inorganic Qualifiers

B	Value is $<$ CRDL, but \geq IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike sample not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*	Duplicate analysis not within control limits
+	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.

ANALYTICAL RESULTS

Prepared by:

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

Prepared for:

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

September 02, 2014

Project: 211556

Submittal Date: 08/20/2014
Group Number: 1497326
PO Number: 0015146917
Release Number: HORNE
State of Sample Origin: WA

<u>Client Sample Description</u>	<u>Lancaster Labs (LL) #</u>
QA NA Water	7571286
MW-111 Grab Groundwater	7571287
MW-111 Filtered Grab Groundwater	7571288
B-1 Grab Groundwater	7571289
B-1 Filtered Grab Groundwater	7571290
B-2 Grab Groundwater	7571291
B-2 Filtered Grab Groundwater	7571292
B-3 Grab Groundwater	7571293
B-3 Filtered Grab Groundwater	7571294
B-4 Grab Groundwater	7571295
B-4 Filtered Grab Groundwater	7571296

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

ELECTRONIC COPY TO	Gettler-Ryan Inc.	Attn: Gettler Ryan
ELECTRONIC COPY TO	Leidos	Attn: Jamalyn Agyei
ELECTRONIC COPY TO	Leidos	Attn: Russ Shropshire

Respectfully Submitted,



Amek Carter
Specialist

(717) 556-7252

Sample Description: QA NA Water
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7571286
LL Group # 1497326
Account # 11260

Project Name: 211556

Collected: 08/19/2014

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 08/20/2014 09:30

San Ramon CA 94583

Reported: 09/02/2014 15:18

MRTQA

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles			SW-846 8260B	ug/l	
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles			ECY 97-602 NWTPH-Gx	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	D142331AA	08/21/2014 13:21	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D142331AA	08/21/2014 13:21	Daniel H Heller	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	14234B20A	08/25/2014 21:21	Miranda P Tillinghast	1
01146	GC VOA Water Prep	SW-846 5030B	1	14234B20A	08/25/2014 21:21	Miranda P Tillinghast	1

Sample Description: MW-111 Grab Groundwater
Facility# 211556 **Job#** 386773
 101 Mulford Rd - Toledo, WA

LL Sample # WW 7571287
LL Group # 1497326
Account # 11260

Project Name: 211556

Collected: 08/19/2014 11:52 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 08/20/2014 09:30

Reported: 09/02/2014 15:18

MRT11

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B			ug/l	ug/l	
10943	Benzene	71-43-2	1	0.5	1
10943	Ethylbenzene	100-41-4	49	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	1	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx			ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	4,700	50	1
GC Miscellaneous RSKSOP-175 modified			ug/l	ug/l	
07105	Methane	74-82-8	6,100	60	20
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	1,400	29	1
08271	Heavy Range Organics C24-C40	n.a.	100	67	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	310	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0			ug/l	ug/l	
00368	Nitrate Nitrogen	14797-55-8	N.D.	250	5
00228	Sulfate	14808-79-8	N.D.	1,500	5
SM 2320 B-1997			ug/l as CaCO3	ug/l as CaCO3	
12150	Total Alkalinity	n.a.	165,000	700	1
SM 4500-S2 D-2000			ug/l	ug/l	
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	D142332AA	08/21/2014 13:32	Daniel H Heller	1

Sample Description: MW-111 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7571287
LL Group # 1497326
Account # 11260

Project Name: 211556

Collected: 08/19/2014 11:52 by JP

Chevron

6001 Bollinger Canyon Road

Submitted: 08/20/2014 09:30

L4310

Reported: 09/02/2014 15:18

San Ramon CA 94583

MRT11

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D142332AA	08/21/2014 13:32	Daniel H Heller	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	14234B20A	08/26/2014 04:04	Miranda P Tillinghast	1
01146	GC VOA Water Prep	SW-846 5030B	1	14234B20A	08/26/2014 04:04	Miranda P Tillinghast	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	142390030A	08/28/2014 19:22	Elizabeth J Marin	20
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	142370030A	08/27/2014 20:46	Elizabeth J Marin	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	142370031A	08/29/2014 13:56	Glorines Suarez-Rivera	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	142370031A	08/26/2014 08:45	Kerrie A Freeburn	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	142370030A	08/26/2014 08:45	Kerrie A Freeburn	1
00368	Nitrate Nitrogen	EPA 300.0	1	14233347601A	08/21/2014 05:45	Sandra J Miller	5
00228	Sulfate	EPA 300.0	1	14233347601A	08/21/2014 05:45	Sandra J Miller	5
12150	Total Alkalinity	SM 2320 B-1997	1	14238003106A	08/27/2014 09:34	Yolunder Y Bunch	1
00230	Sulfide	SM 4500-S2 D-2000	1	14237023001A	08/25/2014 12:45	Michele L Graham	1

Sample Description: MW-111 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7571288
LL Group # 1497326
Account # 11260

Project Name: 211556

Collected: 08/19/2014 11:52 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 08/20/2014 09:30

Reported: 09/02/2014 15:18

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
		SW-846 6010B	ug/l	ug/l	
01754	Iron	7439-89-6	9,410	33.4	1
07058	Manganese	7439-96-5	3,820	0.83	1
		SW-846 6020	mg/l	mg/l	
06035	Lead	7439-92-1	0.0109	0.000082	1

General Sample Comments

State of Washington Lab Certification No. C457
This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	142321848001	08/21/2014 18:56	Katlin N Cataldi	1
07058	Manganese	SW-846 6010B	1	142321848001	08/21/2014 18:56	Katlin N Cataldi	1
06035	Lead	SW-846 6020	1	142326050002A	08/21/2014 08:34	Choon Y Tian	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	142321848001	08/20/2014 22:00	Annamaria Kuhns	1
06050	ICP/MS SW-846 Water Digest	SW-846 3020A	1	142326050002	08/20/2014 22:00	Annamaria Kuhns	1

Sample Description: B-1 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7571289
LL Group # 1497326
Account # 11260

Project Name: 211556

Collected: 08/19/2014 10:05 by JP

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

Submitted: 08/20/2014 09:30

Reported: 09/02/2014 15:18

MRTB1

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B					
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx					
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Miscellaneous RSKSOP-175 modified					
07105	Methane	74-82-8	28	3.0	1
GC Petroleum ECY 97-602 NWTPH-Dx					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	28	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	66	1
GC Petroleum ECY 97-602 NWTPH-Dx					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	28	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	66	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0					
00368	Nitrate Nitrogen	14797-55-8	N.D.	250	5
00228	Sulfate	14808-79-8	3,500	1,500	5
SM 2320 B-1997					
12150	Total Alkalinity	n.a.	91,600	700	1
SM 4500-S2 D-2000					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	D142332AA	08/21/2014 14:46	Daniel H Heller	1

Sample Description: B-1 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7571289
LL Group # 1497326
Account # 11260

Project Name: 211556

Collected: 08/19/2014 10:05 by JP

Chevron

6001 Bollinger Canyon Road

Submitted: 08/20/2014 09:30

L4310

Reported: 09/02/2014 15:18

San Ramon CA 94583

MRTB1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D142332AA	08/21/2014 14:46	Daniel H Heller	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	14234B20A	08/26/2014 00:02	Miranda P Tillinghast	1
01146	GC VOA Water Prep	SW-846 5030B	1	14234B20A	08/26/2014 00:02	Miranda P Tillinghast	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	142390030A	08/28/2014 01:04	Elizabeth J Marin	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	142370030A	08/27/2014 19:19	Elizabeth J Marin	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	142370031A	08/29/2014 14:18	Glorines Suarez-Rivera	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	142370031A	08/26/2014 08:45	Kerrie A Freeburn	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	142370030A	08/26/2014 08:45	Kerrie A Freeburn	1
00368	Nitrate Nitrogen	EPA 300.0	1	14233347601A	08/21/2014 06:01	Sandra J Miller	5
00228	Sulfate	EPA 300.0	1	14233347601A	08/21/2014 06:01	Sandra J Miller	5
12150	Total Alkalinity	SM 2320 B-1997	1	14238003105A	08/27/2014 07:32	Yolunder Y Bunch	1
00230	Sulfide	SM 4500-S2 D-2000	1	14237023001A	08/25/2014 12:45	Michele L Graham	1

Sample Description: B-1 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7571290
LL Group # 1497326
Account # 11260

Project Name: 211556

Collected: 08/19/2014 10:05 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 08/20/2014 09:30

Reported: 09/02/2014 15:18

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
		SW-846 6010B	ug/l	ug/l	
01754	Iron	7439-89-6	179	33.4	1
07058	Manganese	7439-96-5	319	0.83	1
		SW-846 6020	mg/l	mg/l	
06035	Lead	7439-92-1	N.D.	0.000082	1

General Sample Comments

State of Washington Lab Certification No. C457
This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	142321848001	08/21/2014 19:00	Katlin N Cataldi	1
07058	Manganese	SW-846 6010B	1	142321848001	08/21/2014 19:00	Katlin N Cataldi	1
06035	Lead	SW-846 6020	1	142326050002A	08/21/2014 07:53	Choon Y Tian	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	142321848001	08/20/2014 22:00	Annamaria Kuhns	1
06050	ICP/MS SW-846 Water Digest	SW-846 3020A	1	142326050002	08/20/2014 22:00	Annamaria Kuhns	1

Sample Description: B-2 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7571291
LL Group # 1497326
Account # 11260

Project Name: 211556

Collected: 08/19/2014 09:15 by JP

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

Submitted: 08/20/2014 09:30

Reported: 09/02/2014 15:18

MRTB2

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B					
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx					
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Miscellaneous RSKSOP-175 modified					
07105	Methane	74-82-8	N.D.	3.0	1
GC Petroleum ECY 97-602 NWTPH-Dx					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	29	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	68	1
GC Petroleum ECY 97-602 NWTPH-Dx					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	68	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0					
00368	Nitrate Nitrogen	14797-55-8	N.D.	250	5
00228	Sulfate	14808-79-8	2,100	1,500	5
SM 2320 B-1997					
12150	Total Alkalinity	n.a.	82,500	700	1
SM 4500-S2 D-2000					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	D142332AA	08/21/2014 15:09	Daniel H Heller	1

Sample Description: B-2 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7571291
LL Group # 1497326
Account # 11260

Project Name: 211556

Collected: 08/19/2014 09:15 by JP

Chevron

6001 Bollinger Canyon Road

Submitted: 08/20/2014 09:30

L4310

Reported: 09/02/2014 15:18

San Ramon CA 94583

MRTB2

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D142332AA	08/21/2014 15:09	Daniel H Heller	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	14234B20A	08/26/2014 00:29	Miranda P Tillinghast	1
01146	GC VOA Water Prep	SW-846 5030B	1	14234B20A	08/26/2014 00:29	Miranda P Tillinghast	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	142390030A	08/28/2014 01:23	Elizabeth J Marin	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	142370030A	08/27/2014 19:41	Elizabeth J Marin	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	142370031A	08/29/2014 14:40	Glorines Suarez-Rivera	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	142370031A	08/26/2014 08:45	Kerrie A Freeburn	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	142370030A	08/26/2014 08:45	Kerrie A Freeburn	1
00368	Nitrate Nitrogen	EPA 300.0	1	14233347601A	08/21/2014 06:17	Sandra J Miller	5
00228	Sulfate	EPA 300.0	1	14233347601A	08/21/2014 06:17	Sandra J Miller	5
12150	Total Alkalinity	SM 2320 B-1997	1	14238003105A	08/27/2014 07:38	Yolunder Y Bunch	1
00230	Sulfide	SM 4500-S2 D-2000	1	14237023001A	08/25/2014 12:45	Michele L Graham	1

Sample Description: B-2 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7571292
LL Group # 1497326
Account # 11260

Project Name: 211556

Collected: 08/19/2014 09:15 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 08/20/2014 09:30

San Ramon CA 94583

Reported: 09/02/2014 15:18

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
		SW-846 6010B	ug/l	ug/l	
01754	Iron	7439-89-6	N.D.	33.4	1
07058	Manganese	7439-96-5	41.7	0.83	1
		SW-846 6020	mg/l	mg/l	
06035	Lead	7439-92-1	N.D.	0.000082	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	142321848001	08/21/2014 19:03	Katlin N Cataldi	1
07058	Manganese	SW-846 6010B	1	142321848001	08/21/2014 19:03	Katlin N Cataldi	1
06035	Lead	SW-846 6020	1	142326050002A	08/21/2014 08:36	Choon Y Tian	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	142321848001	08/20/2014 22:00	Annamaria Kuhns	1
06050	ICP/MS SW-846 Water Digest	SW-846 3020A	1	142326050002	08/20/2014 22:00	Annamaria Kuhns	1

Sample Description: B-3 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7571293
LL Group # 1497326
Account # 11260

Project Name: 211556

Collected: 08/19/2014 13:30 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 08/20/2014 09:30

San Ramon CA 94583

Reported: 09/02/2014 15:18

MRTB3

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B ug/l					
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	9	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	0.7	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx ug/l					
08273	NWTPH-Gx water C7-C12	n.a.	1,000	50	1
GC Miscellaneous RSKSOP-175 modified ug/l					
07105	Methane	74-82-8	780	15	5
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	1,000	29	1
08271	Heavy Range Organics C24-C40	n.a.	170	68	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	180	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	68	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0 ug/l					
00368	Nitrate Nitrogen	14797-55-8	N.D.	250	5
00228	Sulfate	14808-79-8	10,500	1,500	5
SM 2320 B-1997 ug/l as CaCO3					
12150	Total Alkalinity	n.a.	90,100	700	1
SM 4500-S2 D-2000 ug/l					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	D142332AA	08/21/2014 15:32	Daniel H Heller	1

Sample Description: B-3 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7571293
LL Group # 1497326
Account # 11260

Project Name: 211556

Collected: 08/19/2014 13:30 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 08/20/2014 09:30

Reported: 09/02/2014 15:18

San Ramon CA 94583

MRTB3

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D142332AA	08/21/2014 15:32	Daniel H Heller	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	14234B20A	08/26/2014 00:56	Miranda P Tillinghast	1
01146	GC VOA Water Prep	SW-846 5030B	1	14234B20A	08/26/2014 00:56	Miranda P Tillinghast	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	142390030A	08/28/2014 19:40	Elizabeth J Marin	5
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	142370030A	08/27/2014 21:30	Elizabeth J Marin	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	142370031A	08/29/2014 15:02	Glorines Suarez-Rivera	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	142370031A	08/26/2014 08:45	Kerrie A Freeburn	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	142370030A	08/26/2014 08:45	Kerrie A Freeburn	1
00368	Nitrate Nitrogen	EPA 300.0	1	14233347601A	08/21/2014 06:33	Sandra J Miller	5
00228	Sulfate	EPA 300.0	1	14233347601A	08/21/2014 06:33	Sandra J Miller	5
12150	Total Alkalinity	SM 2320 B-1997	1	14238003105A	08/27/2014 06:14	Yolunder Y Bunch	1
00230	Sulfide	SM 4500-S2 D-2000	1	14237023002A	08/25/2014 14:30	Michele L Graham	1

Sample Description: B-3 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7571294
LL Group # 1497326
Account # 11260

Project Name: 211556

Collected: 08/19/2014 13:30 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 08/20/2014 09:30

San Ramon CA 94583

Reported: 09/02/2014 15:18

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
		SW-846 6010B	ug/l	ug/l	
01754	Iron	7439-89-6	11,300	33.4	1
07058	Manganese	7439-96-5	4,600	0.83	1
		SW-846 6020	mg/l	mg/l	
06035	Lead	7439-92-1	0.0089	0.000082	1

General Sample Comments

State of Washington Lab Certification No. C457
This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	142321848001	08/21/2014 19:07	Katlin N Cataldi	1
07058	Manganese	SW-846 6010B	1	142321848001	08/21/2014 19:07	Katlin N Cataldi	1
06035	Lead	SW-846 6020	1	142326050002A	08/21/2014 08:38	Choon Y Tian	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	142321848001	08/20/2014 22:00	Annamaria Kuhns	1
06050	ICP/MS SW-846 Water Digest	SW-846 3020A	1	142326050002	08/20/2014 22:00	Annamaria Kuhns	1

Sample Description: B-4 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7571295
LL Group # 1497326
Account # 11260

Project Name: 211556

Collected: 08/19/2014 10:58 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 08/20/2014 09:30

San Ramon CA 94583

Reported: 09/02/2014 15:18

MRTB4

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B ug/l					
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	1	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	0.5	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx ug/l					
08273	NWTPH-Gx water C7-C12	n.a.	1,800	50	1
GC Miscellaneous RSKSOP-175 modified ug/l					
07105	Methane	74-82-8	330	3.0	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	300	29	1
08271	Heavy Range Organics C24-C40	n.a.	88	67	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	140	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0 ug/l					
00368	Nitrate Nitrogen	14797-55-8	N.D.	250	5
00228	Sulfate	14808-79-8	1,600	1,500	5
SM 2320 B-1997 ug/l as CaCO3					
12150	Total Alkalinity	n.a.	115,000	700	1
SM 4500-S2 D-2000 ug/l					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	D142332AA	08/21/2014 15:55	Daniel H Heller	1

Sample Description: B-4 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7571295
LL Group # 1497326
Account # 11260

Project Name: 211556

Collected: 08/19/2014 10:58 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 08/20/2014 09:30

Reported: 09/02/2014 15:18

San Ramon CA 94583

MRTB4

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D142332AA	08/21/2014 15:55	Daniel H Heller	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	14234B20A	08/26/2014 01:50	Miranda P Tillinghast	1
01146	GC VOA Water Prep	SW-846 5030B	1	14234B20A	08/26/2014 01:50	Miranda P Tillinghast	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	142390030A	08/28/2014 01:59	Elizabeth J Marin	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	142370030A	08/27/2014 21:08	Elizabeth J Marin	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	142370031A	08/29/2014 15:23	Glorines Suarez-Rivera	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	142370031A	08/26/2014 08:45	Kerrie A Freeburn	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	142370030A	08/26/2014 08:45	Kerrie A Freeburn	1
00368	Nitrate Nitrogen	EPA 300.0	1	14233347601A	08/21/2014 06:49	Sandra J Miller	5
00228	Sulfate	EPA 300.0	1	14233347601A	08/21/2014 06:49	Sandra J Miller	5
12150	Total Alkalinity	SM 2320 B-1997	1	14240003103A	08/28/2014 22:56	Kenneth A Bell	1
00230	Sulfide	SM 4500-S2 D-2000	1	14237023002A	08/25/2014 14:30	Michele L Graham	1

Sample Description: B-4 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7571296
LL Group # 1497326
Account # 11260

Project Name: 211556

Collected: 08/19/2014 10:58 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 08/20/2014 09:30

San Ramon CA 94583

Reported: 09/02/2014 15:18

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
		SW-846 6010B	ug/l	ug/l	
01754	Iron	7439-89-6	9,220	33.4	1
07058	Manganese	7439-96-5	1,990	0.83	1
		SW-846 6020	mg/l	mg/l	
06035	Lead	7439-92-1	0.0014	0.000082	1

General Sample Comments

State of Washington Lab Certification No. C457
This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	142321848001	08/21/2014 19:18	Katlin N Cataldi	1
07058	Manganese	SW-846 6010B	1	142321848001	08/21/2014 19:18	Katlin N Cataldi	1
06035	Lead	SW-846 6020	1	142326050002A	08/21/2014 08:39	Choon Y Tian	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	142321848001	08/20/2014 22:00	Annamaria Kuhns	1
06050	ICP/MS SW-846 Water Digest	SW-846 3020A	1	142326050002	08/20/2014 22:00	Annamaria Kuhns	1

Quality Control Summary

Client Name: Chevron
Reported: 09/02/14 at 03:18 PM

Group Number: 1497326

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

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: D142331AA	Sample number(s): 7571286							
Benzene	N.D.	0.5	ug/l	97		78-120		
Ethylbenzene	N.D.	0.5	ug/l	99		79-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	93		75-120		
Toluene	N.D.	0.5	ug/l	100		80-120		
Xylene (Total)	N.D.	0.5	ug/l	101		80-120		
Batch number: D142332AA	Sample number(s): 7571287,7571289,7571291,7571293,7571295							
Benzene	N.D.	0.5	ug/l	87		78-120		
Ethylbenzene	N.D.	0.5	ug/l	95		79-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	90		75-120		
Toluene	N.D.	0.5	ug/l	96		80-120		
Xylene (Total)	N.D.	0.5	ug/l	97		80-120		
Batch number: 14234B20A	Sample number(s): 7571286-7571287,7571289,7571291,7571293,7571295							
NWTPH-Gx water C7-C12	N.D.	50.	ug/l	105	106	75-135	1	30
Batch number: 142390030A	Sample number(s): 7571287,7571289,7571291,7571293,7571295							
Methane	N.D.	3.0	ug/l	108		80-120		
Batch number: 142370030A	Sample number(s): 7571287,7571289,7571291,7571293,7571295							
Diesel Range Organics C12-C24	N.D.	30.	ug/l	84	79	50-113	7	20
Heavy Range Organics C24-C40	N.D.	70.	ug/l					
Batch number: 142370031A	Sample number(s): 7571287,7571289,7571291,7571293,7571295							
DRO C12-C24 w/Si Gel	N.D.	30.	ug/l	76	78	32-117	1	20
HRO C24-C40 w/Si Gel	N.D.	70.	ug/l					
Batch number: 142321848001	Sample number(s): 7571288,7571290,7571292,7571294,7571296							
Iron	N.D.	33.4	ug/l	105		90-112		
Manganese	N.D.	0.83	ug/l	102		90-110		
Batch number: 142326050002A	Sample number(s): 7571288,7571290,7571292,7571294,7571296							
Lead	N.D.	0.00008	mg/l	100		90-110		
		2						
Batch number: 14233347601A	Sample number(s): 7571287,7571289,7571291,7571293,7571295							
Nitrate Nitrogen	N.D.	50.	ug/l	100		90-110		
Sulfate	N.D.	300.	ug/l	99		90-110		
Batch number: 14237023001A	Sample number(s): 7571287,7571289,7571291							
Sulfide	N.D.	54.	ug/l	107		90-110		
Batch number: 14237023002A	Sample number(s): 7571293,7571295							

*- 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: 1497326
Reported: 09/02/14 at 03:18 PM

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Sulfide	N.D.	54.	ug/l	106		90-110		
Batch number: 14238003105A	Sample number(s): 7571289,7571291,7571293							
Total Alkalinity	N.D.	700.	ug/l as CaCO3	94		90-110		
Batch number: 14238003106A	Sample number(s): 7571287							
Total Alkalinity	N.D.	700.	ug/l as CaCO3	95		90-110		
Batch number: 14240003103A	Sample number(s): 7571295							
Total Alkalinity	N.D.	700.	ug/l as CaCO3	95		90-110		

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

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: D142331AA	Sample number(s): 7571286 UNSPK: P571435								
Benzene	94	96	72-134	1	30				
Ethylbenzene	98	99	71-134	0	30				
Methyl Tertiary Butyl Ether	87	89	72-126	2	30				
Toluene	99	99	80-125	1	30				
Xylene (Total)	100	97	79-125	3	30				
Batch number: D142332AA	Sample number(s): 7571287,7571289,7571291,7571293,7571295 UNSPK: 7571287								
Benzene	93	91	72-134	2	30				
Ethylbenzene	155*	123	71-134	8	30				
Methyl Tertiary Butyl Ether	91	88	72-126	3	30				
Toluene	106	103	80-125	2	30				
Xylene (Total)	108	105	79-125	2	30				
Batch number: 142390030A	Sample number(s): 7571287,7571289,7571291,7571293,7571295 UNSPK: 7571287								
Methane	-3382 (2)	-4074 (2)	35-157	11	20				
Batch number: 142321848001	Sample number(s): 7571288,7571290,7571292,7571294,7571296 UNSPK: P570333 BKG:								
Iron	126*	126*	75-125	0	20	753	810	7 (1)	20
Manganese	101	103	75-125	1	20	11.4	11.5	1 (1)	20
Batch number: 142326050002A	Sample number(s): 7571288,7571290,7571292,7571294,7571296 UNSPK: 7571290 BKG:								
Lead	101	101	89-120	0	20	N.D.	N.D.	0 (1)	20
Batch number: 14233347601A	Sample number(s): 7571287,7571289,7571291,7571293,7571295 UNSPK: 7571287 BKG:								
Nitrate Nitrogen	98		90-110			N.D.	N.D.	0 (1)	20
Sulfate	98		90-110			N.D.	N.D.	0 (1)	20

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 09/02/14 at 03:18 PM

Group Number: 1497326

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	BKG MAX Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 14237023001A Sulfide	81	82	42-131	2	16 N.D.	N.D.	0 (1)	5
Batch number: 14237023002A Sulfide	73	74	42-131	0	16 N.D.	N.D.	0 (1)	5
Batch number: 14238003105A Total Alkalinity	20		17-146		120,000	121,000	1	5
Batch number: 14238003106A Total Alkalinity	86		17-146		165,000	166,000	1	5
Batch number: 14240003103A Total Alkalinity	92		17-146		277,000	272,000	2	5

Surrogate Quality Control

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

Analysis Name: UST VOCs by 8260B - Water
Batch number: D142331AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7571286	100	99	104	93
Blank	103	102	102	90
LCS	100	101	103	95
MS	100	102	104	94
MSD	101	103	102	93
Limits:	80-116	77-113	80-113	78-113

Analysis Name: UST VOCs by 8260B - Water
Batch number: D142332AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7571287	101	94	104	96
7571289	102	97	104	92
7571291	103	100	104	90
7571293	101	96	104	94
7571295	101	97	104	95
Blank	102	94	104	92
LCS	101	99	103	93
MS	102	101	104	97
MSD	100	101	104	98
Limits:	80-116	77-113	80-113	78-113

Analysis Name: NWTPH-Gx water C7-C12

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 09/02/14 at 03:18 PM

Group Number: 1497326

Surrogate Quality Control

Batch number: 14234B20A
Trifluorotoluene-F

7571286	92
7571287	126
7571289	92
7571291	91
7571293	104
7571295	113
Blank	93
LCS	96
LCSD	95

Limits: 63-135

Analysis Name: NWTPH-Dx water
Batch number: 142370030A
Orthoterphenyl

7571287	132
7571289	87
7571291	86
7571293	102
7571295	99
Blank	82
LCS	107
LCSD	98

Limits: 50-150

Analysis Name: NWTPH-Dx water w/ 10g Si Gel
Batch number: 142370031A
Orthoterphenyl

7571287	80
7571289	78
7571291	91
7571293	82
7571295	96
Blank	85
LCS	105
LCSD	98

Limits: 50-150

Analysis Name: Volatile Headspace Hydrocarbon
Batch number: 142390030A
Propene

7571287	83
7571289	70
7571291	73
7571293	72
7571295	77
Blank	87
LCS	87

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 09/02/14 at 03:18 PM

Group Number: 1497326

Surrogate Quality Control

MS	78
MSD	59

Limits: 42-131

*- 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



Lancaster Laboratories

Acct. # 11260 For Eurofins Lancaster Laboratories use only
 Group # 1497326 Sample # 7571286-96
 Instructions on reverse side correspond with circled numbers.

SCR #: _____

1 Client Information			4 Matrix			5 Analyses Requested													
Facility # <u>SS#211556-OML G-R#386773</u> WBS			Sediment <input type="checkbox"/> Ground <input checked="" type="checkbox"/> Surface <input type="checkbox"/>	Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Air <input type="checkbox"/>	Oil <input type="checkbox"/>	Total Number of Containers	BTEX + MTBE 8021 <input type="checkbox"/> 8260 full scan <input type="checkbox"/>	8260 <input type="checkbox"/>	Naphth <input type="checkbox"/>	Oxygenates	NWTPH-Gx	NWTPH-Dx with Silica Gel Cleanup <input checked="" type="checkbox"/>	NWTPH-Dx without Silica Gel Cleanup <input checked="" type="checkbox"/>	WA VPH <input type="checkbox"/>	WA EPH <input type="checkbox"/>	Lead <input type="checkbox"/>	Total <input type="checkbox"/>	Diss. <input type="checkbox"/>	Method <u>6020</u>
Site Address <u>101 Mulford Road, TOLEDO, WA</u>																			
Chevron PM <u>MHO</u> LEIDOSRS Lead Consultant <u>Russell Shropshire</u>																			
Consultant/Office <u>Gettier-Ryan, Inc., 6805 Sierra Court, Suite G, Dublin, CA 94568</u>																			
Consultant Project Mgr. <u>Deanna L. Harding, (deanna@grinc.com)</u>																			
Consultant Phone # <u>(925) 551-7444 x180</u>																			
Sampler <u>J. PAVNE</u>																			

2 Sample Identification		3 Collected		Grab <input type="checkbox"/>	Composite <input type="checkbox"/>	Soil <input type="checkbox"/>	Water <input type="checkbox"/>	Oil <input type="checkbox"/>	Total Number of Containers	BTEX + MTBE 8021 <input type="checkbox"/>	8260 full scan <input type="checkbox"/>	Oxygenates	NWTPH-Gx	NWTPH-Dx with Silica Gel Cleanup <input checked="" type="checkbox"/>	NWTPH-Dx without Silica Gel Cleanup <input checked="" type="checkbox"/>	WA VPH <input type="checkbox"/>	WA EPH <input type="checkbox"/>	Lead <input type="checkbox"/>	Total <input type="checkbox"/>	Diss. <input type="checkbox"/>	Method <u>6020</u>	<u>NITRATE</u>	<u>ALKALINITY</u>	<u>METHANE</u>	<u>SULFIDE</u>	<u>DISS. IRON & MANGANESE</u>	
Date	Time																										
<u>Q.A</u>	<u>8.19.14</u>			X			X		2	X			X														
<u>MUD-111</u>		<u>1157</u>		X			X		16	X			X	X	X												
<u>B.1</u>		<u>1005</u>		X			X		16	X			X	X	X												
<u>B.2</u>		<u>0915</u>		X			X		16	X			X	X	X												
<u>B.3</u>		<u>1330</u>		X			X		16	X			X	X	X												
<u>B.4</u>		<u>1450</u>		X			X		16	X			X	X	X												

- 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

Please report results for Dx with & without sgc. Dissolved Iron, Lead, and Manganese, as well as Alkalinity samples have been field filtered.

Please forward lab results directly to the LC and cc: G-R. The TPW sample results should be forwarded directly to Deanna Harding

7 Turnaround Time Requested (TAT) (please circle)

Standard 5 day 4 day EDF/EDD

72 hour 48 hour 24 hour

Relinquished by <u>[Signature]</u>	Date <u>8.19.14</u>	Time <u>1630</u>	Received by _____	Date _____	Time _____
Relinquished by _____	Date _____	Time _____	Received by _____	Date _____	Time _____

8 Data Package (circle if required)

Type I - Full Type VI (Raw Data)

EDD (circle if required) EDF/EDD

CVX-RTBU-FL_05 (default) Other: _____

Relinquished by Commercial Carrier:

UPS FedEx _____ Other _____

Temperature Upon Receipt 1.8 - 3.7 °C

Received by [Signature] Date 8.20.14 Time 0930

Custody Seals Intact? Yes No

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 \geq 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 \geq 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.

ANALYTICAL RESULTS

Prepared by:

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

Prepared for:

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

September 05, 2014

Project: 211556

Submittal Date: 08/22/2014
Group Number: 1497991
PO Number: 0015146917
Release Number: HORNE
State of Sample Origin: WA

<u>Client Sample Description</u>	<u>Lancaster Labs (LL) #</u>
QA NA Water	7574518
MW-103 Grab Groundwater	7574519
MW-103 Filtered Grab Groundwater	7574520
MW-110 Grab Groundwater	7574521
MW-110 Filtered Grab Groundwater	7574522
MW-112 Grab Groundwater	7574523
MW-112 Filtered Grab Groundwater	7574524
MW-113 Grab Groundwater	7574525
MW-113 Filtered Grab Groundwater	7574526
MW-114 Grab Groundwater	7574527
MW-114 Filtered Grab Groundwater	7574528
MW-115 Grab Groundwater	7574529
MW-115 Filtered Grab Groundwater	7574530
MW-116 Grab Groundwater	7574531
MW-116 Filtered Grab Groundwater	7574532
MW-117 Grab Groundwater	7574533
MW-117 Filtered Grab Groundwater	7574534
MW-118 Grab Groundwater	7574535
MW-118 Filtered Grab Groundwater	7574536
MW-119 Grab Groundwater	7574537
MW-119 Filtered Grab Groundwater	7574538
MW-120 Grab Groundwater	7574539
MW-120 Filtered Grab Groundwater	7574540

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

ELECTRONIC Gettler-Ryan Inc.

Attn: Gettler Ryan

COPY TO
ELECTRONIC Leidos
COPY TO
ELECTRONIC Leidos
COPY TO

Attn: Jamalyn Agyei

Attn: Russ Shropshire

Respectfully Submitted,



Amek Carter
Specialist

(717) 556-7252

Sample Description: QA NA Water
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7574518
LL Group # 1497991
Account # 11260

Project Name: 211556

Collected: 08/20/2014

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 08/22/2014 09:45

San Ramon CA 94583

Reported: 09/05/2014 11:34

MRT-Q

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles			SW-846 8260B	ug/l	
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles			ECY 97-602 NWTPH-Gx	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	F142381AA	08/26/2014 07:29	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F142381AA	08/26/2014 07:29	Anita M Dale	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	14234B20A	08/25/2014 22:15	Miranda P Tillinghast	1
01146	GC VOA Water Prep	SW-846 5030B	1	14234B20A	08/25/2014 22:15	Miranda P Tillinghast	1

Sample Description: MW-103 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7574519
LL Group # 1497991
Account # 11260

Project Name: 211556

Collected: 08/21/2014 09:15 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 08/22/2014 09:45

Reported: 09/05/2014 11:34

San Ramon CA 94583

MRT03

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B ug/l					
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx ug/l					
08273	NWTPH-Gx water C7-C12	n.a.	62	50	1
GC Miscellaneous RSKSOP-175 modified ug/l					
07105	Methane	74-82-8	30	3.0	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	29	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	68	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	68	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0 ug/l					
00368	Nitrate Nitrogen	14797-55-8	N.D.	250	5
00228	Sulfate	14808-79-8	3,700	1,500	5
SM 2320 B-1997 ug/l as CaCO3					
12150	Total Alkalinity	n.a.	97,700	700	1
SM 4500-S2 D-2000 ug/l					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	F142381AA	08/26/2014 07:51	Anita M Dale	1

Sample Description: MW-103 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7574519
LL Group # 1497991
Account # 11260

Project Name: 211556

Collected: 08/21/2014 09:15 by JP

Chevron

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L4310

Submitted: 08/22/2014 09:45

Reported: 09/05/2014 11:34

San Ramon CA 94583

MRT03

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F142381AA	08/26/2014 07:51	Anita M Dale	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	14241B20A	08/29/2014 13:17	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	14241B20A	08/29/2014 13:17	Laura M Krieger	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	142410016A	08/30/2014 06:10	Elizabeth J Marin	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	142370030A	08/27/2014 20:02	Elizabeth J Marin	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	142370031A	08/29/2014 15:45	Glorines Suarez-Rivera	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	142370031A	08/26/2014 08:45	Kerrie A Freeburn	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	142370030A	08/26/2014 08:45	Kerrie A Freeburn	1
00368	Nitrate Nitrogen	EPA 300.0	1	14234987901A	08/22/2014 14:58	Clinton M Wilson	5
00228	Sulfate	EPA 300.0	1	14234987901A	08/22/2014 14:58	Clinton M Wilson	5
12150	Total Alkalinity	SM 2320 B-1997	1	14238003104A	08/27/2014 04:59	Yolunder Y Bunch	1
00230	Sulfide	SM 4500-S2 D-2000	1	14238023001A	08/26/2014 11:20	Michele L Graham	1

Sample Description: MW-103 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7574520
LL Group # 1497991
Account # 11260

Project Name: 211556

Collected: 08/21/2014 09:15 by JP

Chevron

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L4310

Submitted: 08/22/2014 09:45

Reported: 09/05/2014 11:34

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
		SW-846 6010B	ug/l	ug/l	
01754	Iron	7439-89-6	N.D.	33.4	1
07058	Manganese	7439-96-5	115	0.83	1
		SW-846 6020	ug/l	ug/l	
06035	Lead	7439-92-1	0.18	0.082	1

General Sample Comments

State of Washington Lab Certification No. C457
This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	142371848003	08/26/2014 10:37	Eric L Eby	1
07058	Manganese	SW-846 6010B	1	142371848003	08/26/2014 10:37	Eric L Eby	1
06035	Lead	SW-846 6020	1	142376050003A	08/28/2014 16:41	Maria A Orrs	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	142371848003	08/25/2014 23:00	Annamaria Kuhns	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	142376050003	08/25/2014 22:00	Annamaria Kuhns	1

Sample Description: MW-110 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7574521
LL Group # 1497991
Account # 11260

Project Name: 211556

Collected: 08/20/2014 13:10 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 08/22/2014 09:45

San Ramon CA 94583

Reported: 09/05/2014 11:34

MRT10

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B			ug/l	ug/l	
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx			ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	28	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	66	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	28	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	66	1
The reverse surrogate, capric acid, is present at <1%.					

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	F142372AA	08/25/2014 07:26	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F142372AA	08/25/2014 07:26	Anita M Dale	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	14234B20A	08/25/2014 22:42	Miranda P Tillinghast	1
01146	GC VOA Water Prep	SW-846 5030B	1	14234B20A	08/25/2014 22:42	Miranda P Tillinghast	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	142370030A	08/27/2014 20:24	Elizabeth J Marin	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	142370031A	09/04/2014 20:42	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	142370031A	08/26/2014 08:45	Kerrie A Freeburn	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	142370030A	08/26/2014 08:45	Kerrie A Freeburn	1

Sample Description: MW-110 Filtered Grab Groundwater
 Facility# 211556 Job# 386773
 101 Mulford Rd - Toledo, WA

LL Sample # WW 7574522
 LL Group # 1497991
 Account # 11260

Project Name: 211556

Collected: 08/20/2014 13:10 by JP

Chevron
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 L4310
 San Ramon CA 94583

Submitted: 08/22/2014 09:45

Reported: 09/05/2014 11:34

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
06035	Lead	SW-846 6020 7439-92-1	ug/l 0.10	ug/l 0.082	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was lab filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	142376050003A	08/28/2014 16:43	Maria A Orrs	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	142376050003	08/25/2014 22:00	Annamaria Kuhns	1

Sample Description: MW-112 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7574523
LL Group # 1497991
Account # 11260

Project Name: 211556

Collected: 08/21/2014 10:12 by JP

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

Submitted: 08/22/2014 09:45

Reported: 09/05/2014 11:34

MRT12

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B ug/l					
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPh-Gx ug/l					
08273	NWTPh-Gx water C7-C12	n.a.	N.D.	50	1
GC Miscellaneous RSKSOP-175 modified ug/l					
07105	Methane	74-82-8	59	3.0	1
GC Petroleum ECY 97-602 NWTPh-Dx ug/l					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	29	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	68	1
GC Petroleum ECY 97-602 NWTPh-Dx ug/l					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	68	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0 ug/l					
00368	Nitrate Nitrogen	14797-55-8	N.D.	250	5
00228	Sulfate	14808-79-8	2,500	1,500	5
SM 2320 B-1997 ug/l as CaCO3					
12150	Total Alkalinity	n.a.	92,800	700	1
SM 4500-S2 D-2000 ug/l					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	F142371AA	08/25/2014 07:16	Anita M Dale	1

Sample Description: MW-112 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7574523
LL Group # 1497991
Account # 11260

Project Name: 211556

Collected: 08/21/2014 10:12 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 08/22/2014 09:45

Reported: 09/05/2014 11:34

San Ramon CA 94583

MRT12

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F142371AA	08/25/2014 07:16	Anita M Dale	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	14241B20A	08/29/2014 13:44	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	14241B20A	08/29/2014 13:44	Laura M Krieger	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	142410016A	08/30/2014 06:28	Elizabeth J Marin	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	142390016A	09/02/2014 19:11	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	142390017A	09/03/2014 00:16	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	142390017A	08/27/2014 20:45	David V Hershey Jr	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	142390016A	08/27/2014 20:45	David V Hershey Jr	1
00368	Nitrate Nitrogen	EPA 300.0	1	14234987901A	08/22/2014 15:15	Clinton M Wilson	5
00228	Sulfate	EPA 300.0	1	14234987901A	08/22/2014 15:15	Clinton M Wilson	5
12150	Total Alkalinity	SM 2320 B-1997	1	14238003105A	08/27/2014 05:29	Yolunder Y Bunch	1
00230	Sulfide	SM 4500-S2 D-2000	1	14238023001A	08/26/2014 11:20	Michele L Graham	1

Sample Description: MW-112 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7574524
LL Group # 1497991
Account # 11260

Project Name: 211556

Collected: 08/21/2014 10:12 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 08/22/2014 09:45

Reported: 09/05/2014 11:34

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
		SW-846 6010B	ug/l	ug/l	
01754	Iron	7439-89-6	2,690	33.4	1
07058	Manganese	7439-96-5	2,000	0.83	1
		SW-846 6020	ug/l	ug/l	
06035	Lead	7439-92-1	0.36	0.082	1

General Sample Comments

State of Washington Lab Certification No. C457
This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	142371848003	08/26/2014 10:40	Eric L Eby	1
07058	Manganese	SW-846 6010B	1	142371848003	08/26/2014 10:40	Eric L Eby	1
06035	Lead	SW-846 6020	1	142376050003A	08/28/2014 16:44	Maria A Orrs	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	142371848003	08/25/2014 23:00	Annamaria Kuhns	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	142376050003	08/25/2014 22:00	Annamaria Kuhns	1

Sample Description: MW-113 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7574525
LL Group # 1497991
Account # 11260

Project Name: 211556

Collected: 08/21/2014 11:10 by JP

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

Submitted: 08/22/2014 09:45

Reported: 09/05/2014 11:34

MRT13

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B					
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx					
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Miscellaneous RSKSOP-175 modified					
07105	Methane	74-82-8	78	3.0	1
GC Petroleum ECY 97-602 NWTPH-Dx					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	30	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	71	1
GC Petroleum ECY 97-602 NWTPH-Dx					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	30	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	71	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0					
00368	Nitrate Nitrogen	14797-55-8	N.D.	250	5
00228	Sulfate	14808-79-8	2,300	1,500	5
SM 2320 B-1997					
12150	Total Alkalinity	n.a.	92,800	700	1
SM 4500-S2 D-2000					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	Z142372AA	08/25/2014 12:21	Daniel H Heller	1

Sample Description: MW-113 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7574525
LL Group # 1497991
Account # 11260

Project Name: 211556

Collected: 08/21/2014 11:10 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 08/22/2014 09:45

San Ramon CA 94583

Reported: 09/05/2014 11:34

MRT13

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time		Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z142372AA	08/25/2014	12:21	Daniel H Heller	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	14241B20A	08/29/2014	14:10	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	14241B20A	08/29/2014	14:10	Laura M Krieger	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	142410016A	08/30/2014	06:46	Elizabeth J Marin	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	142390016A	09/02/2014	19:33	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	142390017A	09/03/2014	00:38	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	142390017A	08/27/2014	20:45	David V Hershey Jr	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	142390016A	08/27/2014	20:45	David V Hershey Jr	1
00368	Nitrate Nitrogen	EPA 300.0	1	14234987901B	08/22/2014	16:03	Clinton M Wilson	5
00228	Sulfate	EPA 300.0	1	14234987901B	08/22/2014	16:03	Clinton M Wilson	5
12150	Total Alkalinity	SM 2320 B-1997	1	14238003104A	08/27/2014	05:06	Yolunder Y Bunch	1
00230	Sulfide	SM 4500-S2 D-2000	1	14238023002A	08/26/2014	13:20	Michele L Graham	1

Sample Description: MW-113 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7574526
LL Group # 1497991
Account # 11260

Project Name: 211556

Collected: 08/21/2014 11:10 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 08/22/2014 09:45

San Ramon CA 94583

Reported: 09/05/2014 11:34

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
		SW-846 6010B	ug/l	ug/l	
01754	Iron	7439-89-6	2,620	33.4	1
07058	Manganese	7439-96-5	1,960	0.83	1
		SW-846 6020	ug/l	ug/l	
06035	Lead	7439-92-1	0.35	0.082	1

General Sample Comments

State of Washington Lab Certification No. C457
This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	142371848003	08/26/2014 10:44	Eric L Eby	1
07058	Manganese	SW-846 6010B	1	142371848003	08/26/2014 10:44	Eric L Eby	1
06035	Lead	SW-846 6020	1	142376050003A	08/28/2014 16:46	Maria A Orrs	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	142371848003	08/25/2014 23:00	Annamaria Kuhns	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	142376050003	08/25/2014 22:00	Annamaria Kuhns	1

Sample Description: MW-114 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7574527
LL Group # 1497991
Account # 11260

Project Name: 211556

Collected: 08/20/2014 14:20 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 08/22/2014 09:45

Reported: 09/05/2014 11:34

MRT14

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B			ug/l	ug/l	
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx			ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	29	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	67	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1
The reverse surrogate, capric acid, is present at <1%.					

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	Z142372AA	08/25/2014 13:33	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z142372AA	08/25/2014 13:33	Daniel H Heller	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	14234B20A	08/25/2014 23:09	Miranda P Tillinghast	1
01146	GC VOA Water Prep	SW-846 5030B	1	14234B20A	08/25/2014 23:09	Miranda P Tillinghast	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	142390016A	09/02/2014 19:54	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	142390017A	09/03/2014 01:00	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	142390017A	08/27/2014 20:45	David V Hershey Jr	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	142390016A	08/27/2014 20:45	David V Hershey Jr	1

Sample Description: MW-114 Filtered Grab Groundwater
 Facility# 211556 Job# 386773
 101 Mulford Rd - Toledo, WA

LL Sample # WW 7574528
 LL Group # 1497991
 Account # 11260

Project Name: 211556

Collected: 08/20/2014 14:20 by JP

Chevron

6001 Bollinger Canyon Road
 L4310

Submitted: 08/22/2014 09:45

San Ramon CA 94583

Reported: 09/05/2014 11:34

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
06035	Lead	SW-846 6020 7439-92-1	ug/l 0.10	ug/l 0.082	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was lab filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	142376050003A	08/28/2014 16:51	Maria A Orrs	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	142376050003	08/25/2014 22:00	Annamaria Kuhns	1

Sample Description: MW-115 Grab Groundwater
Facility# 211556 **Job#** 386773
 101 Mulford Rd - Toledo, WA

LL Sample # WW 7574529
LL Group # 1497991
Account # 11260

Project Name: 211556

Collected: 08/20/2014 12:08 by JP

Chevron

6001 Bollinger Canyon Road
 L4310

Submitted: 08/22/2014 09:45

San Ramon CA 94583

Reported: 09/05/2014 11:34

MRT15

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles			SW-846 8260B	ug/l	
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles			ECY 97-602 NWTPH-Gx	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	66	50	1
GC Petroleum Hydrocarbons			ECY 97-602 NWTPH-Dx modified	ug/l	
08271	Diesel Range Organics C12-C24	n.a.	36	29	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	68	1
GC Petroleum Hydrocarbons w/Si			ECY 97-602 NWTPH-Dx modified	ug/l	
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	68	1
The reverse surrogate, capric acid, is present at <1%.					

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	Z142372AA	08/25/2014 13:57	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z142372AA	08/25/2014 13:57	Daniel H Heller	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	14241B20A	08/29/2014 14:37	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	14241B20A	08/29/2014 14:37	Laura M Krieger	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	142390016A	09/02/2014 20:16	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	142390017A	09/03/2014 01:22	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	142390017A	08/27/2014 20:45	David V Hershey Jr	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	142390016A	08/27/2014 20:45	David V Hershey Jr	1

Sample Description: MW-115 Filtered Grab Groundwater
 Facility# 211556 Job# 386773
 101 Mulford Rd - Toledo, WA

LL Sample # WW 7574530
 LL Group # 1497991
 Account # 11260

Project Name: 211556

Collected: 08/20/2014 12:08 by JP

Chevron

6001 Bollinger Canyon Road
 L4310

Submitted: 08/22/2014 09:45

Reported: 09/05/2014 11:34

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
06035	Lead	SW-846 6020 7439-92-1	ug/l 0.82	ug/l 0.082	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was lab filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	142376050003A	08/28/2014 16:14	Maria A Orrs	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	142376050003	08/25/2014 22:00	Annamaria Kuhns	1

Sample Description: MW-116 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7574531
LL Group # 1497991
Account # 11260

Project Name: 211556

Collected: 08/21/2014 13:00 by JP

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

Submitted: 08/22/2014 09:45

Reported: 09/05/2014 11:34

MRT16

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B					
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx					
08273	NWTPH-Gx water C7-C12	n.a.	68	50	1
GC Miscellaneous RSKSOP-175 modified					
07105	Methane	74-82-8	360	3.0	1
GC Petroleum ECY 97-602 NWTPH-Dx					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	38	29	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	67	1
GC Petroleum ECY 97-602 NWTPH-Dx					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0					
00368	Nitrate Nitrogen	14797-55-8	N.D.	250	5
00228	Sulfate	14808-79-8	N.D.	1,500	5
SM 2320 B-1997					
12150	Total Alkalinity	n.a.	149,000	700	1
SM 4500-S2 D-2000					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	Z142372AA	08/25/2014 14:21	Daniel H Heller	1

Sample Description: MW-116 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7574531
LL Group # 1497991
Account # 11260

Project Name: 211556

Collected: 08/21/2014 13:00 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 08/22/2014 09:45

San Ramon CA 94583

Reported: 09/05/2014 11:34

MRT16

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z142372AA	08/25/2014 14:21	Daniel H Heller	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	14241B20A	08/29/2014 15:04	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	14241B20A	08/29/2014 15:04	Laura M Krieger	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	142410016A	08/30/2014 07:04	Elizabeth J Marin	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	142390016A	09/02/2014 20:38	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	142390017A	09/03/2014 01:44	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	142390017A	08/27/2014 20:45	David V Hershey Jr	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	142390016A	08/27/2014 20:45	David V Hershey Jr	1
00368	Nitrate Nitrogen	EPA 300.0	1	14234987901A	08/22/2014 16:19	Clinton M Wilson	5
00228	Sulfate	EPA 300.0	1	14234987901A	08/22/2014 16:19	Clinton M Wilson	5
12150	Total Alkalinity	SM 2320 B-1997	1	14238003105A	08/27/2014 06:21	Yolunder Y Bunch	1
00230	Sulfide	SM 4500-S2 D-2000	1	14238023002A	08/26/2014 13:20	Michele L Graham	1

Sample Description: MW-116 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7574532
LL Group # 1497991
Account # 11260

Project Name: 211556

Collected: 08/21/2014 13:00 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 08/22/2014 09:45

San Ramon CA 94583

Reported: 09/05/2014 11:34

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
		SW-846 6010B	ug/l	ug/l	
01754	Iron	7439-89-6	1,450	33.4	1
07058	Manganese	7439-96-5	4,270	0.83	1
		SW-846 6020	ug/l	ug/l	
06035	Lead	7439-92-1	0.78	0.082	1

General Sample Comments

State of Washington Lab Certification No. C457
This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	142371848003	08/26/2014 10:48	Eric L Eby	1
07058	Manganese	SW-846 6010B	1	142371848003	08/26/2014 10:48	Eric L Eby	1
06035	Lead	SW-846 6020	1	142376050003A	08/28/2014 16:53	Maria A Orrs	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	142371848003	08/25/2014 23:00	Annamaria Kuhns	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	142376050003	08/25/2014 22:00	Annamaria Kuhns	1

Sample Description: MW-117 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7574533
LL Group # 1497991
Account # 11260

Project Name: 211556

Collected: 08/21/2014 12:10 by JP

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

Submitted: 08/22/2014 09:45

Reported: 09/05/2014 11:34

MRT17

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B ug/l					
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx ug/l					
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Miscellaneous RSKSOP-175 modified ug/l					
07105	Methane	74-82-8	210	3.0	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	29	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	68	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	68	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0 ug/l					
00368	Nitrate Nitrogen	14797-55-8	N.D.	250	5
00228	Sulfate	14808-79-8	3,500	1,500	5
SM 2320 B-1997 ug/l as CaCO3					
12150	Total Alkalinity	n.a.	98,400	700	1
SM 4500-S2 D-2000 ug/l					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	Z142372AA	08/25/2014 14:45	Daniel H Heller	1

Sample Description: MW-117 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7574533
LL Group # 1497991
Account # 11260

Project Name: 211556

Collected: 08/21/2014 12:10 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 08/22/2014 09:45

Reported: 09/05/2014 11:34

San Ramon CA 94583

MRT17

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z142372AA	08/25/2014 14:45	Daniel H Heller	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	14241B20A	08/29/2014 15:31	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	14241B20A	08/29/2014 15:31	Marie D Beamenderfer	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	142410016A	08/30/2014 07:23	Elizabeth J Marin	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	142390016A	09/02/2014 21:00	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	142390017A	09/03/2014 02:05	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	142390017A	08/27/2014 20:45	David V Hershey Jr	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	142390016A	08/27/2014 20:45	David V Hershey Jr	1
00368	Nitrate Nitrogen	EPA 300.0	1	14234987901A	08/22/2014 16:36	Clinton M Wilson	5
00228	Sulfate	EPA 300.0	1	14234987901A	08/22/2014 16:36	Clinton M Wilson	5
12150	Total Alkalinity	SM 2320 B-1997	1	14238003105A	08/27/2014 06:08	Yolunder Y Bunch	1
00230	Sulfide	SM 4500-S2 D-2000	1	14238023002A	08/26/2014 13:20	Michele L Graham	1

Sample Description: MW-117 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7574534
LL Group # 1497991
Account # 11260

Project Name: 211556

Collected: 08/21/2014 12:10 by JP

Chevron

6001 Bollinger Canyon Road

Submitted: 08/22/2014 09:45

L4310

Reported: 09/05/2014 11:34

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
		SW-846 6010B	ug/l	ug/l	
01754	Iron	7439-89-6	144	33.4	1
07058	Manganese	7439-96-5	2,170	0.83	1
		SW-846 6020	ug/l	ug/l	
06035	Lead	7439-92-1	0.37	0.082	1

General Sample Comments

State of Washington Lab Certification No. C457
This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	142371848003	08/26/2014 10:51	Eric L Eby	1
07058	Manganese	SW-846 6010B	1	142371848003	08/26/2014 10:51	Eric L Eby	1
06035	Lead	SW-846 6020	1	142376050003A	08/28/2014 16:55	Maria A Orrs	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	142371848003	08/25/2014 23:00	Annamaria Kuhns	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	142376050003	08/25/2014 22:00	Annamaria Kuhns	1

Sample Description: MW-118 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7574535
LL Group # 1497991
Account # 11260

Project Name: 211556

Collected: 08/20/2014 11:11 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 08/22/2014 09:45

Reported: 09/05/2014 11:34

MRT18

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B			ug/l	ug/l	
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTTPH-Gx			ug/l	ug/l	
08273	NWTTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Petroleum ECY 97-602 NWTTPH-Dx			ug/l	ug/l	
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	29	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	67	1
GC Petroleum ECY 97-602 NWTTPH-Dx			ug/l	ug/l	
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1
The reverse surrogate, capric acid, is present at <1%.					

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	Z142372AA	08/25/2014 15:09	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z142372AA	08/25/2014 15:09	Daniel H Heller	1
08273	NWTTPH-Gx water C7-C12	ECY 97-602 NWTTPH-Gx	1	14241B20A	08/29/2014 15:58	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	14241B20A	08/29/2014 15:58	Marie D Beamenderfer	1
08271	NWTTPH-Dx water	ECY 97-602 NWTTPH-Dx modified	1	142390016A	09/02/2014 21:22	Christine E Dolman	1
12005	NWTTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTTPH-Dx modified	1	142390017A	09/03/2014 02:27	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTTPH-Dx 06/97	1	142390017A	08/27/2014 20:45	David V Hershey Jr	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTTPH-Dx 06/97	1	142390016A	08/27/2014 20:45	David V Hershey Jr	1

Sample Description: MW-118 Filtered Grab Groundwater
 Facility# 211556 Job# 386773
 101 Mulford Rd - Toledo, WA

LL Sample # WW 7574536
 LL Group # 1497991
 Account # 11260

Project Name: 211556

Collected: 08/20/2014 11:11 by JP

Chevron

6001 Bollinger Canyon Road
 L4310

Submitted: 08/22/2014 09:45

San Ramon CA 94583

Reported: 09/05/2014 11:34

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
06035	Lead	SW-846 6020 7439-92-1	ug/l 0.41	ug/l 0.082	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was lab filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	142376050003A	08/28/2014 16:57	Maria A Orrs	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	142376050003	08/25/2014 22:00	Annamaria Kuhns	1

Sample Description: MW-119 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7574537
LL Group # 1497991
Account # 11260

Project Name: 211556

Collected: 08/21/2014 08:20 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 08/22/2014 09:45

San Ramon CA 94583

Reported: 09/05/2014 11:34

MRT19

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B ug/l					
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx ug/l					
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Miscellaneous RSKSOP-175 modified ug/l					
07105	Methane	74-82-8	5.1	3.0	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	28	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	66	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	28	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	66	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0 ug/l					
00368	Nitrate Nitrogen	14797-55-8	N.D.	250	5
00228	Sulfate	14808-79-8	2,500	1,500	5
SM 2320 B-1997 ug/l as CaCO3					
12150	Total Alkalinity	n.a.	89,900	700	1
SM 4500-S2 D-2000 ug/l					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	Z142372AA	08/25/2014 15:33	Daniel H Heller	1

Sample Description: MW-119 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7574537
LL Group # 1497991
Account # 11260

Project Name: 211556

Collected: 08/21/2014 08:20 by JP

Chevron

6001 Bollinger Canyon Road

Submitted: 08/22/2014 09:45

L4310

Reported: 09/05/2014 11:34

San Ramon CA 94583

MRT19

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z142372AA	08/25/2014 15:33	Daniel H Heller	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	14240A20A	09/02/2014 15:02	Miranda P Tillinghast	1
01146	GC VOA Water Prep	SW-846 5030B	1	14240A20A	09/02/2014 15:02	Miranda P Tillinghast	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	142410016A	08/30/2014 07:41	Elizabeth J Marin	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	142390016A	09/02/2014 21:43	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	142390017A	09/03/2014 02:49	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	142390017A	08/27/2014 20:45	David V Hershey Jr	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	142390016A	08/27/2014 20:45	David V Hershey Jr	1
00368	Nitrate Nitrogen	EPA 300.0	1	14234987901A	08/22/2014 16:52	Clinton M Wilson	5
00228	Sulfate	EPA 300.0	1	14234987901A	08/22/2014 16:52	Clinton M Wilson	5
12150	Total Alkalinity	SM 2320 B-1997	1	14238003104A	08/27/2014 05:22	Yolunder Y Bunch	1
00230	Sulfide	SM 4500-S2 D-2000	1	14238023002A	08/26/2014 13:20	Michele L Graham	1

Sample Description: MW-119 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7574538
LL Group # 1497991
Account # 11260

Project Name: 211556

Collected: 08/21/2014 08:20 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 08/22/2014 09:45

Reported: 09/05/2014 11:34

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
		SW-846 6010B	ug/l	ug/l	
01754	Iron	7439-89-6	N.D.	33.4	1
07058	Manganese	7439-96-5	82.6	0.83	1
		SW-846 6020	ug/l	ug/l	
06035	Lead	7439-92-1	0.17	0.082	1

General Sample Comments

State of Washington Lab Certification No. C457
This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	142371848003	08/26/2014 10:55	Eric L Eby	1
07058	Manganese	SW-846 6010B	1	142371848003	08/26/2014 10:55	Eric L Eby	1
06035	Lead	SW-846 6020	1	142376050003A	08/28/2014 16:58	Maria A Orrs	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	142371848003	08/25/2014 23:00	Annamaria Kuhns	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	142376050003	08/25/2014 22:00	Annamaria Kuhns	1

Sample Description: MW-120 Grab Groundwater
Facility# 211556 **Job#** 386773
 101 Mulford Rd - Toledo, WA

LL Sample # WW 7574539
LL Group # 1497991
Account # 11260

Project Name: 211556

Collected: 08/20/2014 10:17 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 08/22/2014 09:45

Reported: 09/05/2014 11:34

MRT20

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B			ug/l	ug/l	
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx			ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	28	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	66	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	28	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	66	1
The reverse surrogate, capric acid, is present at <1%.					

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	Z142372AA	08/25/2014 15:57	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z142372AA	08/25/2014 15:57	Daniel H Heller	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	14241B20A	08/29/2014 16:25	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	14241B20A	08/29/2014 16:25	Laura M Krieger	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	142390016A	09/02/2014 22:05	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	142390017A	09/03/2014 03:11	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	142390017A	08/27/2014 20:45	David V Hershey Jr	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	142390016A	08/27/2014 20:45	David V Hershey Jr	1

Sample Description: MW-120 Filtered Grab Groundwater
 Facility# 211556 Job# 386773
 101 Mulford Rd - Toledo, WA

LL Sample # WW 7574540
 LL Group # 1497991
 Account # 11260

Project Name: 211556

Collected: 08/20/2014 10:17 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 08/22/2014 09:45

Reported: 09/05/2014 11:34

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
06035	Lead	SW-846 6020 7439-92-1	ug/l 0.32	ug/l 0.082	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was lab filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	142376050003A	08/28/2014 17:00	Maria A Orrs	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	142376050003	08/25/2014 22:00	Annamaria Kuhns	1

Quality Control Summary

Client Name: Chevron
Reported: 09/05/14 at 11:34 AM

Group Number: 1497991

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

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: F142371AA	Sample number(s): 7574523							
Benzene	N.D.	0.5	ug/l	102		78-120		
Ethylbenzene	N.D.	0.5	ug/l	102		79-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	102		75-120		
Toluene	N.D.	0.5	ug/l	100		80-120		
Xylene (Total)	N.D.	0.5	ug/l	102		80-120		
Batch number: F142372AA	Sample number(s): 7574521							
Benzene	N.D.	0.5	ug/l	102		78-120		
Ethylbenzene	N.D.	0.5	ug/l	99		79-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	101		75-120		
Toluene	N.D.	0.5	ug/l	102		80-120		
Xylene (Total)	N.D.	0.5	ug/l	102		80-120		
Batch number: F142381AA	Sample number(s): 7574518-7574519							
Benzene	N.D.	0.5	ug/l	93		78-120		
Ethylbenzene	N.D.	0.5	ug/l	95		79-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	97		75-120		
Toluene	N.D.	0.5	ug/l	94		80-120		
Xylene (Total)	N.D.	0.5	ug/l	94		80-120		
Batch number: Z142372AA	Sample number(s): 7574525, 7574527, 7574529, 7574531, 7574533, 7574535, 7574537, 7574539							
Benzene	N.D.	0.5	ug/l	97		78-120		
Ethylbenzene	N.D.	0.5	ug/l	97		79-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	97		75-120		
Toluene	N.D.	0.5	ug/l	97		80-120		
Xylene (Total)	N.D.	0.5	ug/l	101		80-120		
Batch number: 14234B20A	Sample number(s): 7574518, 7574521, 7574527							
NWTPH-Gx water C7-C12	N.D.	50.	ug/l	105	106	75-135	1	30
Batch number: 14240A20A	Sample number(s): 7574537							
NWTPH-Gx water C7-C12	N.D.	50.	ug/l	105	106	75-135	1	30
Batch number: 14241B20A	Sample number(s): 7574519, 7574523, 7574525, 7574529, 7574531, 7574533, 7574535, 7574539							
NWTPH-Gx water C7-C12	N.D.	50.	ug/l	112	110	75-135	2	30
Batch number: 142410016A	Sample number(s): 7574519, 7574523, 7574525, 7574531, 7574533, 7574537							
Methane	N.D.	3.0	ug/l	110		80-120		
Batch number: 142370030A	Sample number(s): 7574519, 7574521							
Diesel Range Organics C12-C24	N.D.	30.	ug/l	84	79	50-113	7	20

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron Group Number: 1497991
Reported: 09/05/14 at 11:34 AM

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDI</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Heavy Range Organics C24-C40	N.D.	70.	ug/l					
Batch number: 142390016A	Sample number(s): 7574523, 7574525, 7574527, 7574529, 7574531, 7574533, 7574535, 7574537, 7574539							
Diesel Range Organics C12-C24	N.D.	30.	ug/l	103	99	50-113	4	20
Heavy Range Organics C24-C40	N.D.	70.	ug/l					
Batch number: 142370031A	Sample number(s): 7574519, 7574521							
DRO C12-C24 w/Si Gel	N.D.	30.	ug/l	76	78	32-117	1	20
HRO C24-C40 w/Si Gel	N.D.	70.	ug/l					
Batch number: 142390017A	Sample number(s): 7574523, 7574525, 7574527, 7574529, 7574531, 7574533, 7574535, 7574537, 7574539							
DRO C12-C24 w/Si Gel	N.D.	30.	ug/l	73	95	32-117	25*	20
HRO C24-C40 w/Si Gel	N.D.	70.	ug/l					
Batch number: 142371848003	Sample number(s): 7574520, 7574524, 7574526, 7574532, 7574534, 7574538							
Iron	N.D.	33.4	ug/l	104		90-112		
Manganese	N.D.	0.83	ug/l	103		90-110		
Batch number: 142376050003A	Sample number(s): 7574520, 7574522, 7574524, 7574526, 7574528, 7574530, 7574532, 7574534, 7574536, 7574538, 7574540							
Lead	N.D.	0.082	ug/l	104		90-110		
Batch number: 14234987901A	Sample number(s): 7574519, 7574523, 7574531, 7574533, 7574537							
Nitrate Nitrogen	N.D.	50.	ug/l	98	99	90-110	1	20
Sulfate	N.D.	300.	ug/l	102	102	90-110	0	20
Batch number: 14234987901B	Sample number(s): 7574525							
Nitrate Nitrogen	N.D.	50.	ug/l	98	99	90-110	1	20
Sulfate	N.D.	300.	ug/l	102	102	90-110	0	20
Batch number: 14238003104A	Sample number(s): 7574519, 7574525, 7574537							
Total Alkalinity	N.D.	700.	ug/l as CaCO3	92		90-110		
Batch number: 14238003105A	Sample number(s): 7574523, 7574531, 7574533							
Total Alkalinity	N.D.	700.	ug/l as CaCO3	94		90-110		
Batch number: 14238023001A	Sample number(s): 7574519, 7574523							
Sulfide	N.D.	54.	ug/l	107		90-110		
Batch number: 14238023002A	Sample number(s): 7574525, 7574531, 7574533, 7574537							
Sulfide	N.D.	54.	ug/l	105		90-110		

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

MS MSD MS/MSD RPD BKG DUP DUP Dup RPD

*- 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: 1497991
Reported: 09/05/14 at 11:34 AM

<u>Analysis Name</u>	<u>%REC</u>	<u>%REC</u>	<u>Limits</u>	<u>RPD</u>	<u>MAX</u>	<u>Conc</u>	<u>Conc</u>	<u>RPD</u>	<u>Max</u>
Batch number: F142371AA	Sample number(s): 7574523 UNSPK: 7574523								
Benzene	104	104	72-134	0	30				
Ethylbenzene	104	103	71-134	1	30				
Methyl Tertiary Butyl Ether	103	103	72-126	1	30				
Toluene	104	102	80-125	2	30				
Xylene (Total)	104	104	79-125	0	30				
Batch number: F142372AA	Sample number(s): 7574521 UNSPK: 7574521								
Benzene	104	106	72-134	2	30				
Ethylbenzene	100	102	71-134	2	30				
Methyl Tertiary Butyl Ether	103	103	72-126	0	30				
Toluene	102	105	80-125	4	30				
Xylene (Total)	102	103	79-125	1	30				
Batch number: F142381AA	Sample number(s): 7574518-7574519 UNSPK: 7574519								
Benzene	98	100	72-134	2	30				
Ethylbenzene	101	105	71-134	3	30				
Methyl Tertiary Butyl Ether	100	100	72-126	0	30				
Toluene	100	101	80-125	0	30				
Xylene (Total)	102	105	79-125	4	30				
Batch number: Z142372AA	Sample number(s): 7574525,7574527,7574529,7574531,7574533,7574535,7574537,7574539 UNSPK: 7574525								
Benzene	100	103	72-134	2	30				
Ethylbenzene	102	105	71-134	3	30				
Methyl Tertiary Butyl Ether	98	101	72-126	3	30				
Toluene	101	105	80-125	4	30				
Xylene (Total)	105	108	79-125	3	30				
Batch number: 142410016A	Sample number(s): 7574519,7574523,7574525,7574531,7574533,7574537 UNSPK: P578231								
Methane	102	110	35-157	7	20				
Batch number: 142371848003	Sample number(s): 7574520,7574524,7574526,7574532,7574534,7574538 UNSPK: P573822								
Iron	184 (2)	156 (2)	75-125	1	20	23,400	23,900	2	20
Manganese	-118 (2)	-22 (2)	75-125	1	20	35,100	35,200	0	20
Batch number: 142376050003A	Sample number(s): 7574520,7574522,7574524,7574526,7574528,7574530,7574532,7574534,7574536,7574538,7574540 UNSPK: 7574530 BKG: 7574530								
Lead	104	104	89-120	0	20	0.82	0.85	3 (1)	20
Batch number: 14234987901A	Sample number(s): 7574519,7574523,7574531,7574533,7574537 UNSPK: 7574523 BKG: 7574523								
Nitrate Nitrogen	92		90-110			N.D.	N.D.	0 (1)	20
Sulfate	99		90-110			2,500	2,500	3 (1)	20
Batch number: 14234987901B	Sample number(s): 7574525 UNSPK: 7574525 BKG: 7574525								
Nitrate Nitrogen	97		90-110			N.D.	N.D.	0 (1)	20
Sulfate	99		90-110			2,300	2,700	15 (1)	20
Batch number: 14238003104A	Sample number(s): 7574519,7574525,7574537 UNSPK: P574639 BKG: P574639								
Total Alkalinity	73 (2)	69 (2)	17-146	0	5	1,820,000	1,820,000	0	5
Batch number: 14238003105A	Sample number(s): 7574523,7574531,7574533 UNSPK: P575153 BKG: P575153								

*- 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: 1497991
Reported: 09/05/14 at 11:34 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
Total Alkalinity	20		17-146			120,000	121,000	1	5
Batch number: 14238023001A	Sample number(s): 7574519,7574523 UNSPK: 7574519 BKG: 7574519								
Sulfide	80	77	42-131	4	16	N.D.	N.D.	0 (1)	5
Batch number: 14238023002A	Sample number(s): 7574525,7574531,7574533,7574537 UNSPK: 7574537 BKG: 7574537								
Sulfide	75	71	42-131	5	16	N.D.	N.D.	0 (1)	5

Surrogate Quality Control

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

Analysis Name: UST VOCs by 8260B - Water
Batch number: F142371AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7574523	103	97	98	99
Blank	103	101	100	101
LCS	104	102	100	101
MS	101	97	98	100
MSD	103	103	98	100
Limits:	80-116	77-113	80-113	78-113

Analysis Name: UST VOCs by 8260B - Water
Batch number: F142372AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7574521	100	103	101	104
Blank	101	101	99	101
LCS	104	102	100	101
MS	100	103	97	98
MSD	101	105	98	100
Limits:	80-116	77-113	80-113	78-113

Analysis Name: UST VOCs by 8260B - Water
Batch number: F142381AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7574518	101	97	100	97
7574519	100	97	101	100
Blank	101	96	101	100
LCS	100	99	100	99
MS	102	98	99	98
MSD	101	99	101	101
Limits:	80-116	77-113	80-113	78-113

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 09/05/14 at 11:34 AM

Group Number: 1497991

Surrogate Quality Control

Analysis Name: UST VOCs by 8260B - Water
Batch number: Z142372AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7574525	105	98	98	97
7574527	103	98	98	99
7574529	104	98	99	99
7574531	104	99	99	98
7574533	105	98	98	98
7574535	105	100	98	98
7574537	104	98	98	98
7574539	105	100	98	98
Blank	106	98	97	99
LCS	103	99	98	102
MS	102	99	98	102
MSD	102	100	98	102
Limits:	80-116	77-113	80-113	78-113

Analysis Name: NWTPH-Gx water C7-C12
Batch number: 14234B20A

	Trifluorotoluene-F
7574518	91
7574521	92
7574527	89
Blank	93
LCS	96
LCSD	95
Limits:	63-135

Analysis Name: NWTPH-Gx water C7-C12
Batch number: 14240A20A

	Trifluorotoluene-F
7574537	90
Blank	92
LCS	95
LCSD	97
Limits:	63-135

Analysis Name: NWTPH-Gx water C7-C12
Batch number: 14241B20A

	Trifluorotoluene-F
7574519	90
7574523	91
7574525	89
7574529	95
7574531	93
7574533	92
7574535	92
7574539	89

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 09/05/14 at 11:34 AM

Group Number: 1497991

Surrogate Quality Control

Blank 91
LCS 96
LCSD 96

Limits: 63-135

Analysis Name: NWT PH-Dx water
Batch number: 142370030A
Orthoterphenyl

7574519 87
7574521 87
Blank 82
LCS 107
LCSD 98

Limits: 50-150

Analysis Name: NWT PH-Dx water w/ 10g Si Gel
Batch number: 142370031A
Orthoterphenyl

7574519 81
7574521 89
Blank 85
LCS 105
LCSD 98

Limits: 50-150

Analysis Name: NWT PH-Dx water
Batch number: 142390016A
Orthoterphenyl

7574523 122
7574525 126
7574527 103
7574529 114
7574531 107
7574533 107
7574535 123
7574537 113
7574539 115
Blank 111
LCS 136
LCSD 129

Limits: 50-150

Analysis Name: NWT PH-Dx water w/ 10g Si Gel
Batch number: 142390017A
Orthoterphenyl

7574523 105
7574525 138
7574527 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
Reported: 09/05/14 at 11:34 AM

Group Number: 1497991

Surrogate Quality Control

7574529	109
7574531	112
7574533	120
7574535	116
7574537	111
7574539	108
Blank	125
LCS	101
LCSD	126

Limits: 50-150

Analysis Name: Volatile Headspace Hydrocarbon
Batch number: 142410016A
Propene

7574519	67
7574523	74
7574525	77
7574531	82
7574533	77
7574537	84
Blank	85
LCS	83
MS	75
MSD	74

Limits: 42-131

*- 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



Lancaster Laboratories

Acct. # 11260 For Eurofins Lancaster Laboratories use only
 Group # 1497991 Sample # 7574518-40
 Instructions on reverse side correspond with circled numbers.

1 Client Information				4 Matrix				5 Analyses Requested										6 Remarks										
Facility # SS#211556-OML G-R#386773 WBS Site Address 101 Mulford Road, TOLEDO, WA Chevron PM MHO LEIDOSRS Lead Consultant Russell Shropshire Consultant/Office Gettler-Ryan, Inc., 6805 Sierra Court, Suite G, Dublin, CA 94568 Consultant Project Mgr. Deanna L. Harding, (deanna@grinc.com) Consultant Phone # (925) 551-7444 x180				<input type="checkbox"/> Sediment <input checked="" type="checkbox"/> Potable Ground <input type="checkbox"/> NPDES Surface <input type="checkbox"/> Air				Total Number of Containers <input type="checkbox"/> BTEX + MTBE 8021 <input type="checkbox"/> 8260 <input type="checkbox"/> 8260 full scan Oxygenates NWTPH-Gx <input checked="" type="checkbox"/> NWTPH-Dx with Silica Gel Cleanup <input checked="" type="checkbox"/> NWTPH-Dx without Silica Gel Cleanup WA VPH <input type="checkbox"/> WA EPH <input type="checkbox"/> Lead <input type="checkbox"/> Total <input type="checkbox"/> Diss. <input checked="" type="checkbox"/> Method 8020 NITRATE / SULFATE DISSOLVED IRON & MANGANESE SULFIDE / METHANE ALKALINITY										SCR #: _____ <input type="checkbox"/> Results in Dry Weight <input type="checkbox"/> J value reporting needed <input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds <input type="checkbox"/> 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run _____ oxy's on highest hit <input type="checkbox"/> Run _____ oxy's on all hits										
2 Sample Identification		3 Collected		Grab	Composite	Soil	Water	Oil	Total	BTEX	8260	Oxygenates	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx	WA VPH	Lead	Total	Diss.	Method	Nitrate	Iron	Manganese	Sulfide	Methane	Alkalinity	Remarks	
Date	Time																											
<i>J. PANE</i>																											Please report results for Dx with & without sgc. Dissolved Iron, Lead, and Manganese, as well as Alkalinity samples have been field filtered. Please forward lab results directly to the LC and cc: G-R. The TPW sample results should be forwarded directly to Deanna Harding	
<i>RA</i>	<i>8.20</i>	<i>0815</i>	<i>X</i>				<i>X</i>		<i>7</i>	<i>X</i>			<i>X</i>	<i>X</i>	<i>X</i>													
<i>NW-103</i>	<i>8.21</i>	<i>0815</i>	<i>X</i>				<i>X</i>		<i>16</i>	<i>X</i>			<i>X</i>	<i>X</i>	<i>X</i>						<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>			
<i>NW-110</i>	<i>8.20</i>	<i>0810</i>	<i>X</i>				<i>X</i>		<i>9</i>	<i>X</i>			<i>X</i>	<i>X</i>	<i>X</i>						<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>			
<i>NW-112</i>	<i>8.21</i>	<i>1012</i>	<i>X</i>				<i>X</i>		<i>16</i>	<i>X</i>			<i>X</i>	<i>X</i>	<i>X</i>						<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>			
<i>NW-113</i>	<i>8.21</i>	<i>1110</i>	<i>X</i>				<i>X</i>		<i>16</i>	<i>X</i>			<i>X</i>	<i>X</i>	<i>X</i>						<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>			
<i>NW-114</i>	<i>8.20</i>	<i>1420</i>	<i>X</i>				<i>X</i>		<i>9</i>	<i>X</i>			<i>X</i>	<i>X</i>	<i>X</i>						<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>			
<i>NW-115</i>	<i>8.20</i>	<i>1200</i>	<i>X</i>				<i>X</i>		<i>9</i>	<i>X</i>			<i>X</i>	<i>X</i>	<i>X</i>						<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>			
<i>NW-116</i>	<i>8.21</i>	<i>1300</i>	<i>X</i>				<i>X</i>		<i>16</i>	<i>X</i>			<i>X</i>	<i>X</i>	<i>X</i>						<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>			
<i>NW-117</i>	<i>8.21</i>	<i>1210</i>	<i>X</i>				<i>X</i>		<i>16</i>	<i>X</i>			<i>X</i>	<i>X</i>	<i>X</i>						<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>			
<i>NW-118</i>	<i>8.20</i>	<i>1111</i>	<i>X</i>				<i>X</i>		<i>9</i>	<i>X</i>			<i>X</i>	<i>X</i>	<i>X</i>						<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>			
<i>NW-119</i>	<i>8.21</i>	<i>0820</i>	<i>X</i>				<i>X</i>		<i>16</i>	<i>X</i>			<i>X</i>	<i>X</i>	<i>X</i>						<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>			
<i>NW-120</i>	<i>8.20</i>	<i>1017</i>	<i>X</i>				<i>X</i>		<i>9</i>	<i>X</i>			<i>X</i>	<i>X</i>	<i>X</i>						<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>			
7 Turnaround Time Requested (TAT) (please circle) Standard <input checked="" type="radio"/> 5 day <input type="radio"/> 4 day 72 hour <input type="radio"/> 48 hour <input type="radio"/> 24 hour				Relinquished by <i>[Signature]</i> Date <i>8.21.14</i> Time <i>1630</i>				Received by _____ Date _____ Time _____				Relinquished by _____ Date _____ Time _____				Received by _____ Date _____ Time _____												
8 Data Package (circle if required) Type I - Full <input type="checkbox"/> Type VI (Raw Data) <input type="checkbox"/>				EDD (circle if required) <input type="checkbox"/> CVX-RTBU-FL_05 (default) <input type="checkbox"/> Other: _____				Relinquished by Commercial Carrier: UPS <input checked="" type="checkbox"/> FedEx _____ Other _____				Received by <i>[Signature]</i> Date <i>8/22/14</i> Time <i>0945</i>				Temperature Upon Receipt <i>0.7-3.6</i> °C Custody Seals Intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No												

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 \geq 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 \geq 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.

ANALYTICAL RESULTS

Prepared by:

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

Prepared for:

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

December 03, 2014

Project: 211556

Submittal Date: 11/20/2014
Group Number: 1520101
PO Number: 0015146917
Release Number: HORNE
State of Sample Origin: WA

<u>Client Sample Description</u>	<u>Lancaster Labs (LL) #</u>
QA NA Water	7682985
B-1 Grab Groundwater	7682986
B-1 Filtered Grab Groundwater	7682987
B-2 Grab Groundwater	7682988
B-2 Filtered Grab Groundwater	7682989
B-3 Grab Groundwater	7682990
B-3 Filtered Grab Groundwater	7682991
MW-103 Grab Groundwater	7682992
MW-103 Filtered Grab Groundwater	7682993
MW-112 Grab Groundwater	7682994
MW-112 Filtered Grab Groundwater	7682995
MW-113 Grab Groundwater	7682996
MW-113 Filtered Grab Groundwater	7682997
MW-116 Grab Groundwater	7682998
MW-116 Filtered Grab Groundwater	7682999
MW-117 Grab Groundwater	7683000
MW-117 Filtered Grab Groundwater	7683001
MW-119 Grab Groundwater	7683002
MW-119 Filtered Grab Groundwater	7683003

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

ELECTRONIC COPY TO
ELECTRONIC COPY TO
ELECTRONIC COPY TO

Gettler-Ryan Inc.
Leidos
Leidos

Attn: Gettler Ryan
Attn: Jamalyn Agyei
Attn: Russ Shropshire

COPY TO

Respectfully Submitted,



Amek Carter
Specialist

(717) 556-7252

Sample Description: QA NA Water
Facility# 211556 Job# 386773
101 Milford Rd - Toledo, WA

LL Sample # WW 7682985
LL Group # 1520101
Account # 11260

Project Name: 211556

Collected: 11/19/2014

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 11/20/2014 09:40

San Ramon CA 94583

Reported: 12/03/2014 13:37

MRTQA

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles			SW-846 8260B	ug/l	
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles			ECY 97-602 NWTPH-Gx	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	F143281AA	11/24/2014 07:21	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F143281AA	11/24/2014 07:21	Anita M Dale	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	14326A20A	11/23/2014 23:07	Brett W Kenyon	1
01146	GC VOA Water Prep	SW-846 5030B	1	14326A20A	11/23/2014 23:07	Brett W Kenyon	1

Sample Description: B-1 Grab Groundwater
Facility# 211556 Job# 386773
101 Milford Rd - Toledo, WA

LL Sample # WW 7682986
LL Group # 1520101
Account # 11260

Project Name: 211556

Collected: 11/19/2014 10:10 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 11/20/2014 09:40

Reported: 12/03/2014 13:37

MRTB1

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B ug/l					
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx ug/l					
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Miscellaneous RSKSOP-175 modified ug/l					
07105	Methane	74-82-8	4.8	3.0	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	29	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	68	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	68	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0 ug/l					
00368	Nitrate Nitrogen	14797-55-8	N.D.	250	5
00228	Sulfate	14808-79-8	7,500	1,500	5
SM 2320 B-1997 ug/l as CaCO3					
12150	Total Alkalinity	n.a.	87,700	700	1
SM 4500-S2 D-2000 ug/l					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	F143281AA	11/24/2014 07:42	Anita M Dale	1

Sample Description: B-1 Grab Groundwater
Facility# 211556 Job# 386773
101 Milford Rd - Toledo, WA

LL Sample # WW 7682986
LL Group # 1520101
Account # 11260

Project Name: 211556

Collected: 11/19/2014 10:10 by JP

Chevron

6001 Bollinger Canyon Road

Submitted: 11/20/2014 09:40

L4310

Reported: 12/03/2014 13:37

San Ramon CA 94583

MRTB1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F143281AA	11/24/2014 07:42	Anita M Dale	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	14326A20A	11/24/2014 00:01	Brett W Kenyon	1
01146	GC VOA Water Prep	SW-846 5030B	1	14326A20A	11/24/2014 00:01	Brett W Kenyon	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	143350034A	12/01/2014 19:56	Elizabeth J Marin	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	143250031A	11/24/2014 18:28	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	143250032A	12/01/2014 16:20	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	143250032A	11/23/2014 09:00	David S Schrum	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	143250031A	11/23/2014 09:00	David S Schrum	1
00368	Nitrate Nitrogen	EPA 300.0	1	14324347901A	11/20/2014 14:50	Sandra J Miller	5
00228	Sulfate	EPA 300.0	1	14324347901A	11/20/2014 14:50	Sandra J Miller	5
12150	Total Alkalinity	SM 2320 B-1997	1	14328002202A	11/24/2014 22:29	Kenneth A Bell	1
00230	Sulfide	SM 4500-S2 D-2000	1	14325023001A	11/21/2014 12:00	Michele L Graham	1

Sample Description: B-1 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Milford Rd - Toledo, WA

LL Sample # WW 7682987
LL Group # 1520101
Account # 11260

Project Name: 211556

Collected: 11/19/2014 10:10 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 11/20/2014 09:40

San Ramon CA 94583

Reported: 12/03/2014 13:37

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
		SW-846 6010B	ug/l	ug/l	
01754	Iron	7439-89-6	454	33.4	1
07058	Manganese	7439-96-5	369	0.83	1
		SW-846 6020	mg/l	mg/l	
06035	Lead	7439-92-1	N.D.	0.000082	1

General Sample Comments

State of Washington Lab Certification No. C457
This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	143281848001	11/28/2014 14:16	Eric L Eby	1
07058	Manganese	SW-846 6010B	1	143281848001	11/28/2014 14:16	Eric L Eby	1
06035	Lead	SW-846 6020	1	143286050002A	11/29/2014 14:02	Deborah A Krady	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	143281848001	11/25/2014 10:31	Micaela L Dishong	1
06050	ICP/MS SW-846 Water Digest	SW-846 3020A	1	143286050002	11/25/2014 09:15	Micaela L Dishong	1

Sample Description: B-2 Grab Groundwater
Facility# 211556 Job# 386773
101 Milford Rd - Toledo, WA

LL Sample # WW 7682988
LL Group # 1520101
Account # 11260

Project Name: 211556

Collected: 11/19/2014 09:05 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 11/20/2014 09:40

Reported: 12/03/2014 13:37

MRTB2

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B ug/l					
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx ug/l					
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Miscellaneous RSKSOP-175 modified ug/l					
07105	Methane	74-82-8	5.2	3.0	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	29	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	68	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	68	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0 ug/l					
00368	Nitrate Nitrogen	14797-55-8	360	250	5
00228	Sulfate	14808-79-8	2,600	1,500	5
SM 2320 B-1997 ug/l as CaCO3					
12150	Total Alkalinity	n.a.	84,100	700	1
SM 4500-S2 D-2000 ug/l					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	D143292AA	11/25/2014 14:03	Daniel H Heller	1

Sample Description: B-2 Grab Groundwater
Facility# 211556 Job# 386773
101 Milford Rd - Toledo, WA

LL Sample # WW 7682988
LL Group # 1520101
Account # 11260

Project Name: 211556

Collected: 11/19/2014 09:05 by JP

Chevron

6001 Bollinger Canyon Road

Submitted: 11/20/2014 09:40

L4310

Reported: 12/03/2014 13:37

San Ramon CA 94583

MRTB2

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D143292AA	11/25/2014 14:03	Daniel H Heller	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	14326A20A	11/24/2014 00:29	Brett W Kenyon	1
01146	GC VOA Water Prep	SW-846 5030B	1	14326A20A	11/24/2014 00:29	Brett W Kenyon	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	143350034A	12/01/2014 20:46	Elizabeth J Marin	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	143250031A	11/24/2014 18:50	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	143250032A	12/01/2014 16:42	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	143250032A	11/23/2014 09:00	David S Schrum	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	143250031A	11/23/2014 09:00	David S Schrum	1
00368	Nitrate Nitrogen	EPA 300.0	1	14324347901A	11/20/2014 15:06	Sandra J Miller	5
00228	Sulfate	EPA 300.0	1	14324347901A	11/20/2014 15:06	Sandra J Miller	5
12150	Total Alkalinity	SM 2320 B-1997	1	14328002202A	11/24/2014 22:22	Kenneth A Bell	1
00230	Sulfide	SM 4500-S2 D-2000	1	14325023001A	11/21/2014 12:00	Michele L Graham	1

Sample Description: B-2 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Milford Rd - Toledo, WA

LL Sample # WW 7682989
LL Group # 1520101
Account # 11260

Project Name: 211556

Collected: 11/19/2014 09:05 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 11/20/2014 09:40

San Ramon CA 94583

Reported: 12/03/2014 13:37

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
		SW-846 6010B	ug/l	ug/l	
01754	Iron	7439-89-6	N.D.	33.4	1
07058	Manganese	7439-96-5	91.7	0.83	1
		SW-846 6020	mg/l	mg/l	
06035	Lead	7439-92-1	N.D.	0.000082	1

General Sample Comments

State of Washington Lab Certification No. C457
This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	143281848001	11/28/2014 12:37	Eric L Eby	1
07058	Manganese	SW-846 6010B	1	143281848001	11/28/2014 12:37	Eric L Eby	1
06035	Lead	SW-846 6020	1	143286050002A	11/29/2014 14:05	Deborah A Krady	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	143281848001	11/25/2014 10:31	Micaela L Dishong	1
06050	ICP/MS SW-846 Water Digest	SW-846 3020A	1	143286050002	11/25/2014 09:15	Micaela L Dishong	1

Sample Description: B-3 Grab Groundwater
Facility# 211556 Job# 386773
101 Milford Rd - Toledo, WA

LL Sample # WW 7682990
LL Group # 1520101
Account # 11260

Project Name: 211556

Collected: 11/19/2014 11:20 by JP

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

Submitted: 11/20/2014 09:40

Reported: 12/03/2014 13:37

MRTB3

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B					
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	7	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx					
08273	NWTPH-Gx water C7-C12	n.a.	900	50	1
GC Miscellaneous RSKSOP-175 modified					
07105	Methane	74-82-8	220	3.0	1
GC Petroleum ECY 97-602 NWTPH-Dx					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	1,400	29	1
08271	Heavy Range Organics C24-C40	n.a.	160	67	1
GC Petroleum ECY 97-602 NWTPH-Dx					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	130	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0					
00368	Nitrate Nitrogen	14797-55-8	770	250	5
00228	Sulfate	14808-79-8	14,100	1,500	5
SM 2320 B-1997					
12150	Total Alkalinity	n.a.	166,000	700	1
SM 4500-S2 D-2000					
00230	Sulfide	18496-25-8	55	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	F143282AA	11/24/2014 15:27	Anita M Dale	1

Sample Description: B-3 Grab Groundwater
Facility# 211556 Job# 386773
101 Milford Rd - Toledo, WA

LL Sample # WW 7682990
LL Group # 1520101
Account # 11260

Project Name: 211556

Collected: 11/19/2014 11:20 by JP

Chevron

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Submitted: 11/20/2014 09:40

L4310

Reported: 12/03/2014 13:37

San Ramon CA 94583

MRTB3

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F143282AA	11/24/2014 15:27	Anita M Dale	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	14328D20A	11/25/2014 16:50	Brett W Kenyon	1
01146	GC VOA Water Prep	SW-846 5030B	1	14328D20A	11/25/2014 16:50	Brett W Kenyon	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	143350034A	12/01/2014 21:03	Elizabeth J Marin	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	143250031A	11/24/2014 21:22	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	143250032A	12/01/2014 17:04	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	143250032A	11/23/2014 09:00	David S Schrum	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	143250031A	11/23/2014 09:00	David S Schrum	1
00368	Nitrate Nitrogen	EPA 300.0	1	14324347901B	11/20/2014 15:22	Sandra J Miller	5
00228	Sulfate	EPA 300.0	1	14324347901B	11/20/2014 15:22	Sandra J Miller	5
12150	Total Alkalinity	SM 2320 B-1997	1	14328002202A	11/24/2014 22:53	Kenneth A Bell	1
00230	Sulfide	SM 4500-S2 D-2000	1	14325023001A	11/21/2014 12:00	Michele L Graham	1

Sample Description: B-3 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Milford Rd - Toledo, WA

LL Sample # WW 7682991
LL Group # 1520101
Account # 11260

Project Name: 211556

Collected: 11/19/2014 11:20 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 11/20/2014 09:40

San Ramon CA 94583

Reported: 12/03/2014 13:37

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved			ug/l	ug/l	
01754	Iron	7439-89-6	12,900	33.4	1
07058	Manganese	7439-96-5	4,590	0.83	1
SW-846 6010B			mg/l	mg/l	
06035	Lead	7439-92-1	0.0134	0.000082	1

General Sample Comments

State of Washington Lab Certification No. C457
This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	143281848001	11/28/2014 14:20	Eric L Eby	1
07058	Manganese	SW-846 6010B	1	143281848001	11/28/2014 14:20	Eric L Eby	1
06035	Lead	SW-846 6020	1	143286050002A	11/29/2014 14:07	Deborah A Krady	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	143281848001	11/25/2014 10:31	Micaela L Dishong	1
06050	ICP/MS SW-846 Water Digest	SW-846 3020A	1	143286050002	11/25/2014 09:15	Micaela L Dishong	1

Sample Description: MW-103 Grab Groundwater
Facility# 211556 Job# 386773
101 Milford Rd - Toledo, WA

LL Sample # WW 7682992
LL Group # 1520101
Account # 11260

Project Name: 211556

Collected: 11/19/2014 10:40 by JP

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6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

Submitted: 11/20/2014 09:40

Reported: 12/03/2014 13:37

MRT03

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B ug/l					
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx ug/l					
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Miscellaneous RSKSOP-175 modified ug/l					
07105	Methane	74-82-8	7.5	3.0	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	29	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	67	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0 ug/l					
00368	Nitrate Nitrogen	14797-55-8	N.D.	250	5
00228	Sulfate	14808-79-8	2,700	1,500	5
SM 2320 B-1997 ug/l as CaCO3					
12150	Total Alkalinity	n.a.	117,000	700	1
SM 4500-S2 D-2000 ug/l					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	F143282AA	11/24/2014 07:52	Anita M Dale	1

Sample Description: MW-103 Grab Groundwater
Facility# 211556 Job# 386773
101 Milford Rd - Toledo, WA

LL Sample # WW 7682992
LL Group # 1520101
Account # 11260

Project Name: 211556

Collected: 11/19/2014 10:40 by JP

Chevron

6001 Bollinger Canyon Road

Submitted: 11/20/2014 09:40

L4310

Reported: 12/03/2014 13:37

San Ramon CA 94583

MRT03

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F143282AA	11/24/2014 07:52	Anita M Dale	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	14328D20A	11/25/2014 17:56	Brett W Kenyon	1
01146	GC VOA Water Prep	SW-846 5030B	1	14328D20A	11/25/2014 17:56	Brett W Kenyon	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	143350034A	12/01/2014 21:20	Elizabeth J Marin	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	143250031A	11/24/2014 19:12	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	143250032A	12/01/2014 17:25	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	143250032A	11/23/2014 09:00	David S Schrum	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	143250031A	11/23/2014 09:00	David S Schrum	1
00368	Nitrate Nitrogen	EPA 300.0	1	14324347901B	11/20/2014 15:38	Sandra J Miller	5
00228	Sulfate	EPA 300.0	1	14324347901B	11/20/2014 15:38	Sandra J Miller	5
12150	Total Alkalinity	SM 2320 B-1997	1	14328002202A	11/24/2014 22:17	Kenneth A Bell	1
00230	Sulfide	SM 4500-S2 D-2000	1	14325023001A	11/21/2014 12:00	Michele L Graham	1

Sample Description: MW-103 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Milford Rd - Toledo, WA

LL Sample # WW 7682993
LL Group # 1520101
Account # 11260

Project Name: 211556

Collected: 11/19/2014 10:40 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 11/20/2014 09:40

San Ramon CA 94583

Reported: 12/03/2014 13:37

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
		SW-846 6010B	ug/l	ug/l	
01754	Iron	7439-89-6	N.D.	33.4	1
07058	Manganese	7439-96-5	80.1	0.83	1
		SW-846 6020	mg/l	mg/l	
06035	Lead	7439-92-1	N.D.	0.000082	1

General Sample Comments

State of Washington Lab Certification No. C457
This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	143281848001	11/28/2014 14:25	Eric L Eby	1
07058	Manganese	SW-846 6010B	1	143281848001	11/28/2014 14:25	Eric L Eby	1
06035	Lead	SW-846 6020	1	143286050002A	11/29/2014 14:09	Deborah A Krady	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	143281848001	11/25/2014 10:31	Micaela L Dishong	1
06050	ICP/MS SW-846 Water Digest	SW-846 3020A	1	143286050002	11/25/2014 09:15	Micaela L Dishong	1

Sample Description: MW-112 Grab Groundwater
Facility# 211556 Job# 386773
101 Milford Rd - Toledo, WA

LL Sample # WW 7682994
LL Group # 1520101
Account # 11260

Project Name: 211556

Collected: 11/19/2014 11:55 by JP

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

Submitted: 11/20/2014 09:40

Reported: 12/03/2014 13:37

MRT12

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B ug/l					
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx ug/l					
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Miscellaneous RSKSOP-175 modified ug/l					
07105	Methane	74-82-8	4.3	3.0	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	29	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	68	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	68	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0 ug/l					
00368	Nitrate Nitrogen	14797-55-8	540	250	5
00228	Sulfate	14808-79-8	2,500	1,500	5
SM 2320 B-1997 ug/l as CaCO3					
12150	Total Alkalinity	n.a.	40,100	700	1
SM 4500-S2 D-2000 ug/l					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	F143282AA	11/24/2014 08:57	Anita M Dale	1

Sample Description: MW-112 Grab Groundwater
Facility# 211556 Job# 386773
101 Milford Rd - Toledo, WA

LL Sample # WW 7682994
LL Group # 1520101
Account # 11260

Project Name: 211556

Collected: 11/19/2014 11:55 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 11/20/2014 09:40

Reported: 12/03/2014 13:37

San Ramon CA 94583

MRT12

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F143282AA	11/24/2014 08:57	Anita M Dale	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	14328D20A	11/25/2014 18:18	Brett W Kenyon	1
01146	GC VOA Water Prep	SW-846 5030B	1	14328D20A	11/25/2014 18:18	Brett W Kenyon	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	143350034A	12/01/2014 21:37	Elizabeth J Marin	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	143250031A	11/24/2014 21:00	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	143250032A	12/01/2014 17:47	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	143250032A	11/23/2014 09:00	David S Schrum	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	143250031A	11/23/2014 09:00	David S Schrum	1
00368	Nitrate Nitrogen	EPA 300.0	1	14324347901B	11/20/2014 16:27	Sandra J Miller	5
00228	Sulfate	EPA 300.0	1	14324347901B	11/20/2014 16:27	Sandra J Miller	5
12150	Total Alkalinity	SM 2320 B-1997	1	14328002203A	11/25/2014 01:39	Kenneth A Bell	1
00230	Sulfide	SM 4500-S2 D-2000	1	14325023001A	11/21/2014 12:00	Michele L Graham	1

Sample Description: MW-112 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Milford Rd - Toledo, WA

LL Sample # WW 7682995
LL Group # 1520101
Account # 11260

Project Name: 211556

Collected: 11/19/2014 11:55 by JP

Chevron

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L4310

Submitted: 11/20/2014 09:40

Reported: 12/03/2014 13:37

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
		SW-846 6010B	ug/l	ug/l	
01754	Iron	7439-89-6	534	33.4	1
07058	Manganese	7439-96-5	645	0.83	1
		SW-846 6020	mg/l	mg/l	
06035	Lead	7439-92-1	0.00013	0.000082	1

General Sample Comments

State of Washington Lab Certification No. C457
This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	143281848001	11/28/2014 14:29	Eric L Eby	1
07058	Manganese	SW-846 6010B	1	143281848001	11/28/2014 14:29	Eric L Eby	1
06035	Lead	SW-846 6020	1	143286050002A	11/29/2014 14:12	Deborah A Krady	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	143281848001	11/25/2014 10:31	Micaela L Dishong	1
06050	ICP/MS SW-846 Water Digest	SW-846 3020A	1	143286050002	11/25/2014 09:15	Micaela L Dishong	1

Sample Description: MW-113 Grab Groundwater
Facility# 211556 Job# 386773
101 Milford Rd - Toledo, WA

LL Sample # WW 7682996
LL Group # 1520101
Account # 11260

Project Name: 211556

Collected: 11/19/2014 09:30 by JP

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

Submitted: 11/20/2014 09:40

Reported: 12/03/2014 13:37

MRT13

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B					
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx					
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Miscellaneous RSKSOP-175 modified					
07105	Methane	74-82-8	N.D.	3.0	1
GC Petroleum ECY 97-602 NWTPH-Dx					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	29	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	67	1
GC Petroleum ECY 97-602 NWTPH-Dx					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0					
00368	Nitrate Nitrogen	14797-55-8	470	250	5
00228	Sulfate	14808-79-8	1,700	1,500	5
SM 2320 B-1997					
12150	Total Alkalinity	n.a.	25,400	700	1
SM 4500-S2 D-2000					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	Z143312AA	11/27/2014 09:02	Anita M Dale	1

Sample Description: MW-113 Grab Groundwater
Facility# 211556 Job# 386773
101 Milford Rd - Toledo, WA

LL Sample # WW 7682996
LL Group # 1520101
Account # 11260

Project Name: 211556

Collected: 11/19/2014 09:30 by JP

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Submitted: 11/20/2014 09:40

L4310

Reported: 12/03/2014 13:37

San Ramon CA 94583

MRT13

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z143312AA	11/27/2014 09:02	Anita M Dale	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	14328D20A	11/25/2014 19:02	Brett W Kenyon	1
01146	GC VOA Water Prep	SW-846 5030B	1	14328D20A	11/25/2014 19:02	Brett W Kenyon	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	143350034A	12/01/2014 22:11	Elizabeth J Marin	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	143250031A	11/24/2014 19:33	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	143250032A	12/01/2014 18:09	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	143250032A	11/23/2014 09:00	David S Schrum	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	143250031A	11/23/2014 09:00	David S Schrum	1
00368	Nitrate Nitrogen	EPA 300.0	1	14324347901B	11/20/2014 16:43	Sandra J Miller	5
00228	Sulfate	EPA 300.0	1	14324347901B	11/20/2014 16:43	Sandra J Miller	5
12150	Total Alkalinity	SM 2320 B-1997	1	14328002202A	11/24/2014 22:41	Kenneth A Bell	1
00230	Sulfide	SM 4500-S2 D-2000	1	14325023001A	11/21/2014 12:00	Michele L Graham	1

Sample Description: MW-113 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Milford Rd - Toledo, WA

LL Sample # WW 7682997
LL Group # 1520101
Account # 11260

Project Name: 211556

Collected: 11/19/2014 09:30 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 11/20/2014 09:40

Reported: 12/03/2014 13:37

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
		SW-846 6010B	ug/l	ug/l	
01754	Iron	7439-89-6	N.D.	33.4	1
07058	Manganese	7439-96-5	1.5	0.83	1
		SW-846 6020	mg/l	mg/l	
06035	Lead	7439-92-1	N.D.	0.000082	1

General Sample Comments

State of Washington Lab Certification No. C457
This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	143251848001	11/23/2014 12:32	Eric L Eby	1
07058	Manganese	SW-846 6010B	1	143251848001	11/23/2014 12:32	Eric L Eby	1
06035	Lead	SW-846 6020	1	143256050004A	11/24/2014 05:26	Choon Y Tian	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	143251848001	11/22/2014 13:18	James L Mertz	1
06050	ICP/MS SW-846 Water Digest	SW-846 3020A	1	143256050004	11/23/2014 06:28	James L Mertz	1

Sample Description: MW-116 Grab Groundwater
Facility# 211556 Job# 386773
101 Milford Rd - Toledo, WA

LL Sample # WW 7682998
LL Group # 1520101
Account # 11260

Project Name: 211556

Collected: 11/19/2014 11:58 by JP

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

Submitted: 11/20/2014 09:40

Reported: 12/03/2014 13:37

MRT16

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B					
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx					
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Miscellaneous RSKSOP-175 modified					
07105	Methane	74-82-8	N.D.	3.0	1
GC Petroleum ECY 97-602 NWTPH-Dx					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	28	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	66	1
GC Petroleum ECY 97-602 NWTPH-Dx					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	28	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	66	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0					
00368	Nitrate Nitrogen	14797-55-8	350	250	5
00228	Sulfate	14808-79-8	3,800	1,500	5
SM 2320 B-1997					
12150	Total Alkalinity	n.a.	35,300	700	1
SM 4500-S2 D-2000					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	Z143312AA	11/27/2014 10:18	Anita M Dale	1

Sample Description: MW-116 Grab Groundwater
Facility# 211556 Job# 386773
101 Milford Rd - Toledo, WA

LL Sample # WW 7682998
LL Group # 1520101
Account # 11260

Project Name: 211556

Collected: 11/19/2014 11:58 by JP

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6001 Bollinger Canyon Road
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Submitted: 11/20/2014 09:40

Reported: 12/03/2014 13:37

San Ramon CA 94583

MRT16

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z143312AA	11/27/2014 10:18	Anita M Dale	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	14328D20A	11/25/2014 19:24	Brett W Kenyon	1
01146	GC VOA Water Prep	SW-846 5030B	1	14328D20A	11/25/2014 19:24	Brett W Kenyon	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	143350034A	12/01/2014 22:27	Elizabeth J Marin	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	143250031A	11/24/2014 20:17	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	143250032A	12/01/2014 18:30	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	143250032A	11/23/2014 09:00	David S Schrum	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	143250031A	11/23/2014 09:00	David S Schrum	1
00368	Nitrate Nitrogen	EPA 300.0	1	14324347901B	11/20/2014 16:59	Sandra J Miller	5
00228	Sulfate	EPA 300.0	1	14324347901B	11/20/2014 16:59	Sandra J Miller	5
12150	Total Alkalinity	SM 2320 B-1997	1	14328002204A	11/25/2014 05:32	Kenneth A Bell	1
00230	Sulfide	SM 4500-S2 D-2000	1	14325023001A	11/21/2014 12:00	Michele L Graham	1

Sample Description: MW-116 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Milford Rd - Toledo, WA

LL Sample # WW 7682999
LL Group # 1520101
Account # 11260

Project Name: 211556

Collected: 11/19/2014 11:58 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 11/20/2014 09:40

Reported: 12/03/2014 13:37

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
		SW-846 6010B	ug/l	ug/l	
01754	Iron	7439-89-6	43.6	33.4	1
07058	Manganese	7439-96-5	3.3	0.83	1
		SW-846 6020	mg/l	mg/l	
06035	Lead	7439-92-1	N.D.	0.000082	1

General Sample Comments

State of Washington Lab Certification No. C457
This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	143251848001	11/23/2014 12:45	Eric L Eby	1
07058	Manganese	SW-846 6010B	1	143251848001	11/23/2014 12:45	Eric L Eby	1
06035	Lead	SW-846 6020	1	143256050004A	11/24/2014 05:28	Choon Y Tian	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	143251848001	11/22/2014 13:18	James L Mertz	1
06050	ICP/MS SW-846 Water Digest	SW-846 3020A	1	143256050004	11/23/2014 06:28	James L Mertz	1

Sample Description: MW-117 Grab Groundwater
Facility# 211556 Job# 386773
101 Milford Rd - Toledo, WA

LL Sample # WW 7683000
LL Group # 1520101
Account # 11260

Project Name: 211556

Collected: 11/19/2014 10:40 by JP

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

Submitted: 11/20/2014 09:40

Reported: 12/03/2014 13:37

MRT17

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B					
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx					
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Miscellaneous RSKSOP-175 modified					
07105	Methane	74-82-8	N.D.	3.0	1
GC Petroleum ECY 97-602 NWTPH-Dx					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	29	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	67	1
GC Petroleum ECY 97-602 NWTPH-Dx					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0					
00368	Nitrate Nitrogen	14797-55-8	270	250	5
00228	Sulfate	14808-79-8	4,300	1,500	5
SM 2320 B-1997					
12150	Total Alkalinity	n.a.	20,900	700	1
SM 4500-S2 D-2000					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	Z143312AA	11/27/2014 10:42	Anita M Dale	1

Sample Description: MW-117 Grab Groundwater
Facility# 211556 Job# 386773
101 Milford Rd - Toledo, WA

LL Sample # WW 7683000
LL Group # 1520101
Account # 11260

Project Name: 211556

Collected: 11/19/2014 10:40 by JP

Chevron

6001 Bollinger Canyon Road

Submitted: 11/20/2014 09:40

L4310

Reported: 12/03/2014 13:37

San Ramon CA 94583

MRT17

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z143312AA	11/27/2014 10:42	Anita M Dale	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	14328D20A	11/25/2014 19:46	Brett W Kenyon	1
01146	GC VOA Water Prep	SW-846 5030B	1	14328D20A	11/25/2014 19:46	Brett W Kenyon	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	143350034A	12/01/2014 22:44	Elizabeth J Marin	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	143250031A	11/24/2014 20:39	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	143250032A	12/01/2014 18:51	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	143250032A	11/23/2014 09:00	David S Schrum	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	143250031A	11/23/2014 09:00	David S Schrum	1
00368	Nitrate Nitrogen	EPA 300.0	1	14324347901B	11/20/2014 17:16	Sandra J Miller	5
00228	Sulfate	EPA 300.0	1	14324347901B	11/20/2014 17:16	Sandra J Miller	5
12150	Total Alkalinity	SM 2320 B-1997	1	14328002203A	11/25/2014 01:22	Kenneth A Bell	1
00230	Sulfide	SM 4500-S2 D-2000	1	14325023001A	11/21/2014 12:00	Michele L Graham	1

Sample Description: MW-117 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Milford Rd - Toledo, WA

LL Sample # WW 7683001
LL Group # 1520101
Account # 11260

Project Name: 211556

Collected: 11/19/2014 10:40 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 11/20/2014 09:40

San Ramon CA 94583

Reported: 12/03/2014 13:37

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
		SW-846 6010B	ug/l	ug/l	
01754	Iron	7439-89-6	123	33.4	1
07058	Manganese	7439-96-5	5.6	0.83	1
		SW-846 6020	mg/l	mg/l	
06035	Lead	7439-92-1	N.D.	0.000082	1

General Sample Comments

State of Washington Lab Certification No. C457
This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	143251848001	11/23/2014 12:49	Eric L Eby	1
07058	Manganese	SW-846 6010B	1	143251848001	11/23/2014 12:49	Eric L Eby	1
06035	Lead	SW-846 6020	1	143256050004A	11/24/2014 05:29	Choon Y Tian	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	143251848001	11/22/2014 13:18	James L Mertz	1
06050	ICP/MS SW-846 Water Digest	SW-846 3020A	1	143256050004	11/23/2014 06:28	James L Mertz	1

Sample Description: MW-119 Grab Groundwater
Facility# 211556 Job# 386773
101 Milford Rd - Toledo, WA

LL Sample # WW 7683002
LL Group # 1520101
Account # 11260

Project Name: 211556

Collected: 11/19/2014 09:30 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 11/20/2014 09:40

San Ramon CA 94583

Reported: 12/03/2014 13:37

MRT19

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B ug/l					
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx ug/l					
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Miscellaneous RSKSOP-175 modified ug/l					
07105	Methane	74-82-8	N.D.	3.0	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	29	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	67	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0 ug/l					
00368	Nitrate Nitrogen	14797-55-8	890	250	5
00228	Sulfate	14808-79-8	2,600	1,500	5
SM 2320 B-1997 ug/l as CaCO3					
12150	Total Alkalinity	n.a.	67,000	700	1
SM 4500-S2 D-2000 ug/l					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	Z143312AA	11/27/2014 11:06	Anita M Dale	1

Sample Description: MW-119 Grab Groundwater
Facility# 211556 Job# 386773
101 Milford Rd - Toledo, WA

LL Sample # WW 7683002
LL Group # 1520101
Account # 11260

Project Name: 211556

Collected: 11/19/2014 09:30 by JP

Chevron

6001 Bollinger Canyon Road

Submitted: 11/20/2014 09:40

L4310

Reported: 12/03/2014 13:37

San Ramon CA 94583

MRT19

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z143312AA	11/27/2014 11:06	Anita M Dale	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	14328D20A	11/25/2014 20:08	Brett W Kenyon	1
01146	GC VOA Water Prep	SW-846 5030B	1	14328D20A	11/25/2014 20:08	Brett W Kenyon	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	143350034A	12/01/2014 23:01	Elizabeth J Marin	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	143250031A	11/24/2014 19:55	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	143250032A	12/01/2014 19:13	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	143250032A	11/23/2014 09:00	David S Schrum	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	143250031A	11/23/2014 09:00	David S Schrum	1
00368	Nitrate Nitrogen	EPA 300.0	1	14324347901B	11/20/2014 17:32	Sandra J Miller	5
00228	Sulfate	EPA 300.0	1	14324347901B	11/20/2014 17:32	Sandra J Miller	5
12150	Total Alkalinity	SM 2320 B-1997	1	14328002203A	11/25/2014 01:09	Kenneth A Bell	1
00230	Sulfide	SM 4500-S2 D-2000	1	14325023001A	11/21/2014 12:00	Michele L Graham	1

Sample Description: MW-119 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Milford Rd - Toledo, WA

LL Sample # WW 7683003
LL Group # 1520101
Account # 11260

Project Name: 211556

Collected: 11/19/2014 09:30 by JP

Chevron

6001 Bollinger Canyon Road

Submitted: 11/20/2014 09:40

L4310

Reported: 12/03/2014 13:37

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
		SW-846 6010B	ug/l	ug/l	
01754	Iron	7439-89-6	127	33.4	1
07058	Manganese	7439-96-5	34.4	0.83	1
		SW-846 6020	mg/l	mg/l	
06035	Lead	7439-92-1	0.00014	0.000082	1

General Sample Comments

State of Washington Lab Certification No. C457
This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	143251848001	11/23/2014 12:54	Eric L Eby	1
07058	Manganese	SW-846 6010B	1	143251848001	11/23/2014 12:54	Eric L Eby	1
06035	Lead	SW-846 6020	1	143256050004A	11/24/2014 05:35	Choon Y Tian	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	143251848001	11/22/2014 13:18	James L Mertz	1
06050	ICP/MS SW-846 Water Digest	SW-846 3020A	1	143256050004	11/23/2014 06:28	James L Mertz	1

Quality Control Summary

Client Name: Chevron
Reported: 12/03/14 at 01:37 PM

Group Number: 1520101

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

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: D143292AA	Sample number(s): 7682988							
Benzene	N.D.	0.5	ug/l	92		78-120		
Ethylbenzene	N.D.	0.5	ug/l	96		79-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	91		75-120		
Toluene	N.D.	0.5	ug/l	95		80-120		
Xylene (Total)	N.D.	0.5	ug/l	99		80-120		
Batch number: F143281AA	Sample number(s): 7682985-7682986							
Benzene	N.D.	0.5	ug/l	95		78-120		
Ethylbenzene	N.D.	0.5	ug/l	98		79-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	93		75-120		
Toluene	N.D.	0.5	ug/l	100		80-120		
Xylene (Total)	N.D.	0.5	ug/l	96		80-120		
Batch number: F143282AA	Sample number(s): 7682990,7682992,7682994							
Benzene	N.D.	0.5	ug/l	93		78-120		
Ethylbenzene	N.D.	0.5	ug/l	98		79-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	91		75-120		
Toluene	N.D.	0.5	ug/l	97		80-120		
Xylene (Total)	N.D.	0.5	ug/l	93		80-120		
Batch number: Z143312AA	Sample number(s): 7682996,7682998,7683000,7683002							
Benzene	N.D.	0.5	ug/l	93		78-120		
Ethylbenzene	N.D.	0.5	ug/l	100		79-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	90		75-120		
Toluene	N.D.	0.5	ug/l	100		80-120		
Xylene (Total)	N.D.	0.5	ug/l	101		80-120		
Batch number: 14326A20A	Sample number(s): 7682985-7682986,7682988							
NWTPH-Gx water C7-C12	N.D.	50.	ug/l	97	96	75-135	1	30
Batch number: 14328D20A	Sample number(s): 7682990,7682992,7682994,7682996,7682998,7683000,7683002							
NWTPH-Gx water C7-C12	N.D.	50.	ug/l	97	97	75-135	1	30
Batch number: 143350034A	Sample number(s): 7682986,7682988,7682990,7682992,7682994,7682996,7682998,7683000,7683002							
Methane	N.D.	3.0	ug/l	99		85-115		
Batch number: 143250031A	Sample number(s): 7682986,7682988,7682990,7682992,7682994,7682996,7682998,7683000,7683002							
Diesel Range Organics C12-C24	N.D.	30.	ug/l	64	64	50-113	0	20
Heavy Range Organics C24-C40	N.D.	70.	ug/l					
Batch number: 143250032A	Sample number(s):							

*- 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: 1520101
Reported: 12/03/14 at 01:37 PM

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDI</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
DRO C12-C24 w/Si Gel	N.D.	30.	ug/l	59	65	32-117	11	20
HRO C24-C40 w/Si Gel	N.D.	70.	ug/l					
Batch number: 143251848001	Sample number(s): 7682997,7682999,7683001,7683003							
Iron	N.D.	33.4	ug/l	99		80-120		
Manganese	1.3	0.83	ug/l	96		80-120		
Batch number: 143256050004A	Sample number(s): 7682997,7682999,7683001,7683003							
Lead	N.D.	0.00008	mg/l	99		80-120		
		2						
Batch number: 143281848001	Sample number(s): 7682987,7682989,7682991,7682993,7682995							
Iron	N.D.	33.4	ug/l	99		80-120		
Manganese	N.D.	0.83	ug/l	101		80-120		
Batch number: 143286050002A	Sample number(s): 7682987,7682989,7682991,7682993,7682995							
Lead	N.D.	0.00008	mg/l	102		80-120		
		2						
Batch number: 14324347901A	Sample number(s): 7682986,7682988							
Nitrate Nitrogen	N.D.	50.	ug/l	106		90-110		
Sulfate	N.D.	300.	ug/l	105		90-110		
Batch number: 14324347901B	Sample number(s): 7682990,7682992,7682994,7682996,7682998,7683000,7683002							
Nitrate Nitrogen	N.D.	50.	ug/l	106		90-110		
Sulfate	N.D.	300.	ug/l	105		90-110		
Batch number: 14325023001A	Sample number(s): 7682986,7682988,7682990,7682992,7682994,7682996,7682998,7683000,7683002							
Sulfide	N.D.	54.	ug/l	100		90-110		
Batch number: 14328002202A	Sample number(s): 7682986,7682988,7682990,7682992,7682996							
Total Alkalinity	N.D.	700.	ug/l as CaCO3	97		90-110		
Batch number: 14328002203A	Sample number(s): 7682994,7683000,7683002							
Total Alkalinity	N.D.	700.	ug/l as CaCO3	97		90-110		
Batch number: 14328002204A	Sample number(s): 7682998							
Total Alkalinity	N.D.	700.	ug/l as CaCO3	98		90-110		

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

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: D143292AA	Sample number(s): 7682988 UNSPK: P681332								
Benzene	113	103	72-134	10	30				

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 12/03/14 at 01:37 PM

Group Number: 1520101

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

<u>Analysis Name</u>	<u>MS</u>	<u>MSD</u>	<u>MS/MSD</u>	<u>RPD</u>	<u>BKG</u>	<u>DUP</u>	<u>DUP</u>	<u>Dup RPD</u>	
	<u>%REC</u>	<u>%REC</u>	<u>Limits</u>	<u>RPD</u>	<u>MAX</u>	<u>Conc</u>	<u>RPD</u>	<u>Max</u>	
Ethylbenzene	115	103	71-134	11	30				
Methyl Tertiary Butyl Ether	103	93	72-126	9	30				
Toluene	113	103	80-125	9	30				
Xylene (Total)	116	105	79-125	10	30				
Batch number: F143281AA Sample number(s): 7682985-7682986 UNSPK: 7682986									
Benzene	102	103	72-134	1	30				
Ethylbenzene	104	105	71-134	1	30				
Methyl Tertiary Butyl Ether	96	98	72-126	2	30				
Toluene	106	106	80-125	1	30				
Xylene (Total)	102	102	79-125	1	30				
Batch number: F143282AA Sample number(s): 7682990,7682992,7682994 UNSPK: 7682992									
Benzene	105	105	72-134	1	30				
Ethylbenzene	110	107	71-134	3	30				
Methyl Tertiary Butyl Ether	97	97	72-126	0	30				
Toluene	109	105	80-125	3	30				
Xylene (Total)	102	100	79-125	2	30				
Batch number: Z143312AA Sample number(s): 7682996,7682998,7683000,7683002 UNSPK: 7682996									
Benzene	93	84	72-134	10	30				
Ethylbenzene	101	90	71-134	11	30				
Methyl Tertiary Butyl Ether	85	77	72-126	10	30				
Toluene	100	90	80-125	11	30				
Xylene (Total)	101	90	79-125	12	30				
Batch number: 143350034A Sample number(s): 7682986,7682988,7682990,7682992,7682994,7682996,7682998,7683000,7683002 UNSPK: 7682986									
Methane	96	98	46-129	2	20				
Batch number: 143251848001 Sample number(s): 7682997,7682999,7683001,7683003 UNSPK: P682896 BKG: P682896									
Iron	102	103	75-125	1	20	N.D.	N.D.	0 (1) 20	
Manganese	100	102	75-125	1	20	8.1	8.0	1 (1) 20	
Batch number: 143256050004A Sample number(s): 7682997,7682999,7683001,7683003 UNSPK: P683824 BKG: P683824									
Lead	102	104	75-125	2	20	N.D.	N.D.	0 (1) 20	
Batch number: 143281848001 Sample number(s): 7682987,7682989,7682991,7682993,7682995 UNSPK: 7682989 BKG: 7682989									
Iron	104	104	75-125	0	20	N.D.	N.D.	0 (1) 20	
Manganese	103	105	75-125	2	20	91.7	95.7	4 20	
Batch number: 143286050002A Sample number(s): 7682987,7682989,7682991,7682993,7682995 UNSPK: P681643 BKG: P681643									
Lead	112	110	75-125	1	20	0.0146	0.0145	1 20	
Batch number: 14324347901A Sample number(s): 7682986,7682988 UNSPK: P681643 BKG: P681643									
Nitrate Nitrogen	99		90-110			N.D.	N.D.	0 (1) 20	
Sulfate	100		90-110			14,700	13,800	7 (1) 20	
Batch number: 14324347901B Sample number(s): 7682990,7682992,7682994,7682996,7682998,7683000,7683002 UNSPK:									

*- 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: 1520101
Reported: 12/03/14 at 01:37 PM

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
Nitrate Nitrogen	119*		90-110			N.D.	N.D.	0 (1)	20
Sulfate	121*		90-110			N.D.	N.D.	0 (1)	20
Batch number: 14325023001A	Sample number(s): P683187 BKG: P683187								
Sulfide	66	70	42-131	5	16	N.D.	N.D.	0 (1)	5
Batch number: 14328002202A	Sample number(s): 7682986,7682988,7682990,7682992,7682996 UNSPK: P683638 BKG: P683638								
Total Alkalinity	58		17-146			321,000	322,000	0	5
Batch number: 14328002203A	Sample number(s): 7682994,7683000,7683002 UNSPK: P683967 BKG: P683967								
Total Alkalinity	85	86	17-146	1	5	N.D.	N.D.	0 (1)	5
Batch number: 14328002204A	Sample number(s): 7682998 UNSPK: P685978 BKG: P685978								
Total Alkalinity	66	63	17-146	1	5	225,000	223,000	1	5

Surrogate Quality Control

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

Analysis Name: BTEX/MTBE
Batch number: D143292AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7682988	104	99	99	93
Blank	105	101	99	93
LCS	99	98	99	103
MS	100	100	99	104
MSD	98	99	100	103
Limits:	80-116	77-113	80-113	78-113

Analysis Name: BTEX/MTBE
Batch number: F143281AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7682985	95	101	108	101
7682986	95	102	108	101
Blank	95	100	108	101
LCS	92	99	108	103
MS	94	101	109	104
MSD	93	102	109	103
Limits:	80-116	77-113	80-113	78-113

Analysis Name: BTEX/MTBE
Batch number: F143282AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
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*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 12/03/14 at 01:37 PM

Group Number: 1520101

Surrogate Quality Control

7682990	93	101	108	106
7682992	94	101	108	102
7682994	93	99	107	102
Blank	94	100	108	103
LCS	95	102	107	105
MS	95	101	107	104
MSD	93	103	108	104
Limits:	80-116	77-113	80-113	78-113

Analysis Name: BTEX/MTBE
Batch number: Z143312AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7682996	97	96	98	94
7682998	98	98	98	94
7683000	98	96	98	95
7683002	98	96	99	95
Blank	97	96	98	95
LCS	95	94	99	102
MS	95	97	98	102
MSD	96	94	97	101
Limits:	80-116	77-113	80-113	78-113

Analysis Name: NWTPH-Gx water C7-C12
Batch number: 14326A20A

	Trifluorotoluene-F
7682985	88
7682986	89
7682988	88
Blank	88
LCS	95
LCSD	93
Limits:	63-135

Analysis Name: NWTPH-Gx water C7-C12
Batch number: 14328D20A

	Trifluorotoluene-F
7682990	99
7682992	77
7682994	91
7682996	89
7682998	89
7683000	88
7683002	89
Blank	89
LCS	94
LCSD	93
Limits:	63-135

Analysis Name: NWTPH-Dx water
Batch number: 143250031A

	Orthoterphenyl
7682986	89
7682988	91
7682990	104
7682992	91

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 12/03/14 at 01:37 PM

Group Number: 1520101

Surrogate Quality Control

7682994	86
7682996	91
7682998	89
7683000	87
7683002	92
Blank	89
LCS	97
LCSD	97

Limits: 50-150

Analysis Name: NWTPH-Dx water w/ 10g Si Gel
Batch number: 143250032A

Orthoterphenyl

7682986	82
7682988	81
7682990	75
7682992	85
7682994	84
7682996	89
7682998	82
7683000	87
7683002	81
Blank	82
LCS	82
LCSD	90

Limits: 50-150

Analysis Name: Volatile Headspace Hydrocarbon
Batch number: 143350034A

Propene

7682986	97
7682988	89
7682990	74
7682992	74
7682994	78
7682996	86
7682998	92
7683000	80
7683002	72
Blank	109
LCS	105
MS	85
MSD	87

Limits: 47-116

*- 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



Lancaster Laboratories

For Eurofins Lancaster Laboratories use only
 Acct. # 11260 Group # 1520101 Sample # 7682985-3003
 Instructions on reverse side correspond with circled numbers.

1 Client Information				4 Matrix				5 Analyses Requested										6 Remarks				
Facility # SS#211556-OML G-R#386773 WBS Site Address 101 Mulford Road, TOLEDO, WA Chevron PM MHO LEIDOSRS Lead Consultant Russell Shropshire Consultant/Office Gettler-Ryan, Inc., 6805 Sierra Court, Suite G, Dublin, CA 94568 Consultant Project Mgr. Deanna L. Harding, (deanna@grinc.com) Consultant Phone # (925) 551-7444 x180 Sampler J. Payne, Alex. Gilbert				<input type="checkbox"/> Sediment <input checked="" type="checkbox"/> Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Air <input type="checkbox"/> Ground <input type="checkbox"/> Surface				Total Number of Containers BTEX + MTBE 8021 <input type="checkbox"/> 8260 <input type="checkbox"/> Naphth <input type="checkbox"/> 8260 full scan Oxygenates NWTPH-Gx NWTPH-Dx with Silica Gel Cleanup <input checked="" type="checkbox"/> NWTPH-Dx without Silica Gel Cleanup <input checked="" type="checkbox"/> WA VPH <input type="checkbox"/> WA EPH <input type="checkbox"/> Lead <input type="checkbox"/> Total <input type="checkbox"/> Diss. <input checked="" type="checkbox"/> Method EDDD NITRATE / SULFATE DISSOLVED IRON / MANGANESE SULFIDE SIMZD 4500 520 METHANE / ALKALINITY										SCR #: _____ <input type="checkbox"/> Results in Dry Weight <input type="checkbox"/> J value reporting needed <input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds <input type="checkbox"/> 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run ____ oxy's on highest hit <input type="checkbox"/> Run ____ oxy's on all hits				
2 Sample Identification		3 Composite																				
		Collected																				
		Date	Time	Grab	Composite	Soil	Water	Oil	Total	BTEX	8260	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx	WA VPH	Lead	Total	Diss.	Method			
R.A.		11.19.14					X		2	X		X	X	X		X	X	X	X	X	X	
B.1			1010	X			X		10	X		X	X	X		X	X	X	X	X	X	
B.2			0905	X			X		10	X		X	X	X		X	X	X	X	X	X	
B.3			1120	X			X		10	X		X	X	X		X	X	X	X	X	X	
NW. 103			1010	X			X		10	X		X	X	X		X	X	X	X	X	X	
NW. 112			1155	X			X		10	X		X	X	X		X	X	X	X	X	X	
NW. 115			0930	X			X		10	X		X	X	X		X	X	X	X	X	X	
NW. 116			1160	X			X		10	X		X	X	X		X	X	X	X	X	X	
NW. 117			1040	X			X		10	X		X	X	X		X	X	X	X	X	X	
NW. 119			0930	X			X		10	X		X	X	X		X	X	X	X	X	X	
7 Turnaround Time Requested (TAT) (please circle) Standard <input checked="" type="radio"/> 5 day <input type="radio"/> 4 day <input type="radio"/> EDF/EDD <input type="radio"/> 72-hour <input type="radio"/> 48 hour <input type="radio"/> 24 hour				Relinquished by Date <u>11.19.14</u> Time <u>1430</u>				Relinquished by _____ Date _____ Time _____				Received by _____ Date _____ Time _____				Received by _____ Date _____ Time _____						
8 Data Package (circle if required) Type I - Full <input type="checkbox"/> Type VI (Raw Data) <input type="checkbox"/>				EDD (circle if required) <input type="checkbox"/> CVX-RTBU-FL_05 (default) <input type="checkbox"/> Other: _____				Relinquished by Commercial Carrier: UPS <input checked="" type="checkbox"/> FedEx _____ Other _____				Received by Date <u>11.20.14</u> Time <u>940</u>				Temperature Upon Receipt <u>0.1-2.9°C</u> Custody Seals Intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No						

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 \geq 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 \geq 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.

ANALYTICAL RESULTS

Prepared by:

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

Prepared for:

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

December 10, 2014

Project: 211556

Submittal Date: 11/22/2014

Group Number: 1520705

PO Number: 0015146917

Release Number: HORNE

State of Sample Origin: WA

<u>Client Sample Description</u>	<u>Lancaster Labs (LL) #</u>
QA NA Water	7686494
B-4 Grab Groundwater	7686495
B-4 Filtered Grab Groundwater	7686496
MW-109 Grab Groundwater	7686497
MW-109 Filtered Grab Groundwater	7686498
MW-110 Grab Groundwater	7686499
MW-110 Filtered Grab Groundwater	7686500
MW-111 Grab Groundwater	7686501
MW-111 Filtered Grab Groundwater	7686502
MW-114 Grab Groundwater	7686503
MW-114 Filtered Grab Groundwater	7686504
MW-115 Grab Groundwater	7686505
MW-115 Filtered Grab Groundwater	7686506
MW-118 Grab Groundwater	7686507
MW-118 Filtered Grab Groundwater	7686508
MW-120 Grab Groundwater	7686509
MW-120 Filtered Grab Groundwater	7686510

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

ELECTRONIC Gettler-Ryan Inc.

Attn: Gettler Ryan

COPY TO

ELECTRONIC Leidos

Attn: Jamalyn Agyei

COPY TO

ELECTRONIC Leidos

Attn: Russ Shropshire

COPY TO

Respectfully Submitted,



Amek Carter
Specialist

(717) 556-7252

Sample Description: QA NA Water
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7686494
LL Group # 1520705
Account # 11260

Project Name: 211556

Collected: 11/20/2014

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 11/22/2014 08:45

San Ramon CA 94583

Reported: 12/10/2014 15:30

MRTTR

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles			SW-846 8260B	ug/l	
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles			ECY 97-602 NWTPH-Gx	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	D143332AA	11/29/2014 08:07	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D143332AA	11/29/2014 08:07	Anita M Dale	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	14336B20A	12/03/2014 00:24	Brett W Kenyon	1
01146	GC VOA Water Prep	SW-846 5030B	1	14336B20A	12/03/2014 00:24	Brett W Kenyon	1

Sample Description: B-4 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7686495
LL Group # 1520705
Account # 11260

Project Name: 211556

Collected: 11/20/2014 11:30 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 11/22/2014 08:45

Reported: 12/10/2014 15:30

MRTB4

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B ug/l					
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	2	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx ug/l					
08273	NWTPH-Gx water C7-C12	n.a.	1,300	50	1
GC Miscellaneous RSKSOP-175 modified ug/l					
07105	Methane	74-82-8	680	15	5
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	270	28	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	66	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	120	28	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	66	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0 ug/l					
00368	Nitrate Nitrogen	14797-55-8	N.D.	250	5
00228	Sulfate	14808-79-8	2,600	1,500	5
SM 4500-S2 D-2000 ug/l					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	D143332AA	11/29/2014 16:33	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D143332AA	11/29/2014 16:33	Anita M Dale	1
08273	NWTPH-Gx water C7-C12	ECY 97-602	1	14336B20A	12/03/2014 01:18	Brett W Kenyon	1
01146	GC VOA Water Prep	NWTPH-Gx SW-846 5030B	1	14336B20A	12/03/2014 01:18	Brett W Kenyon	1

Sample Description: B-4 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7686495
LL Group # 1520705
Account # 11260

Project Name: 211556

Collected: 11/20/2014 11:30 by JP

Chevron

6001 Bollinger Canyon Road

Submitted: 11/22/2014 08:45

L4310

Reported: 12/10/2014 15:30

San Ramon CA 94583

MRTB4

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	143360026A	12/03/2014 17:34	Elizabeth J Marin	5
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	143290016A	11/26/2014 12:08	Lisa A Reinert	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	143290015A	12/02/2014 13:56	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	143290015A	11/25/2014 18:30	Samantha L Bronder	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	143290016A	11/25/2014 18:30	Samantha L Bronder	1
00368	Nitrate Nitrogen	EPA 300.0	1	14326987151A	11/22/2014 14:02	Clinton M Wilson	5
00228	Sulfate	EPA 300.0	1	14326987151A	11/22/2014 14:02	Clinton M Wilson	5
00230	Sulfide	SM 4500-S2 D-2000	1	14328023001A	11/24/2014 14:30	Michele L Graham	1

Sample Description: B-4 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7686496
LL Group # 1520705
Account # 11260

Project Name: 211556

Collected: 11/20/2014 11:30 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 11/22/2014 08:45

Reported: 12/10/2014 15:30

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
	SW-846 6010B		ug/l	ug/l	
01754	Iron	7439-89-6	214	33.4	1
07058	Manganese	7439-96-5	5.2	0.83	1
	SW-846 6020		ug/l	ug/l	
06035	Lead	7439-92-1	2.4	0.082	1
Wet Chemistry					
	SM 2320 B-1997		ug/l as CaCO3	ug/l as CaCO3	
12150	Total Alkalinity	n.a.	143,000	700	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was field filtered.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	143301848001	12/01/2014 11:36	Joanne M Gates	1
07058	Manganese	SW-846 6010B	1	143301848001	12/01/2014 11:36	Joanne M Gates	1
06035	Lead	SW-846 6020	1	143306050003A	12/02/2014 02:24	Tara L Snyder	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	143301848001	11/30/2014 06:52	James L Mertz	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	143306050003	11/30/2014 07:48	James L Mertz	1
12150	Total Alkalinity	SM 2320 B-1997	1	14328002204A	11/25/2014 03:50	Kenneth A Bell	1

Sample Description: MW-109 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7686497
LL Group # 1520705
Account # 11260

Project Name: 211556

Collected: 11/20/2014 09:15 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 11/22/2014 08:45

Reported: 12/10/2014 15:30

MR109

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B			ug/l	ug/l	
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx			ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	29	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	67	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1
The reverse surrogate, capric acid, is present at <1%.					

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	D143332AA	11/29/2014 10:02	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D143332AA	11/29/2014 10:02	Anita M Dale	1
08273	NWTPH-Gx water C7-C12	ECY 97-602	1	14336B20A	12/03/2014 07:10	Brett W Kenyon	1
		NWTPH-Gx					
01146	GC VOA Water Prep	SW-846 5030B	1	14336B20A	12/03/2014 07:10	Brett W Kenyon	1
08271	NWTPH-Dx water	ECY 97-602	1	143290016A	12/02/2014 16:50	Christine E Dolman	1
		NWTPH-Dx modified					
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602	1	143290015A	12/02/2014 14:18	Christine E Dolman	1
		NWTPH-Dx modified					
12007	NW Dx water w/ 10g column	ECY 97-602	1	143290015A	11/25/2014 18:30	Samantha L Bronder	1
		NWTPH-Dx 06/97					
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602	1	143290016A	11/25/2014 18:30	Samantha L Bronder	1
		NWTPH-Dx 06/97					

Sample Description: MW-109 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7686498
LL Group # 1520705
Account # 11260

Project Name: 211556

Collected: 11/20/2014 09:15 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 11/22/2014 08:45

Reported: 12/10/2014 15:30

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
06035	Lead	SW-846 6020 7439-92-1	ug/l N.D.	ug/l 0.082	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was filtered in the lab for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	143306050003A	12/02/2014 02:26	Tara L Snyder	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	143306050003	11/30/2014 07:48	James L Mertz	1

Sample Description: MW-110 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7686499
LL Group # 1520705
Account # 11260

Project Name: 211556

Collected: 11/20/2014 09:30 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 11/22/2014 08:45

Reported: 12/10/2014 15:30

San Ramon CA 94583

MR110

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B			ug/l	ug/l	
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx			ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	29	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	67	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1
The reverse surrogate, capric acid, is present at <1%.					

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	D143332AA	11/29/2014 10:25	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D143332AA	11/29/2014 10:25	Anita M Dale	1
08273	NWTPH-Gx water C7-C12	ECY 97-602	1	14336B20A	12/03/2014 07:37	Brett W Kenyon	1
		NWTPH-Gx					
01146	GC VOA Water Prep	SW-846 5030B	1	14336B20A	12/03/2014 07:37	Brett W Kenyon	1
08271	NWTPH-Dx water	ECY 97-602	1	143290016A	11/26/2014 11:03	Lisa A Reinert	1
		NWTPH-Dx modified					
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602	1	143290015A	12/02/2014 14:40	Christine E Dolman	1
		NWTPH-Dx modified					
12007	NW Dx water w/ 10g column	ECY 97-602	1	143290015A	11/25/2014 18:30	Samantha L Bronder	1
		NWTPH-Dx 06/97					
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602	1	143290016A	11/25/2014 18:30	Samantha L Bronder	1
		NWTPH-Dx 06/97					

Sample Description: MW-110 Filtered Grab Groundwater
Facility# 211556 **Job#** 386773
 101 Mulford Road - Toledo, WA

LL Sample # WW 7686500
LL Group # 1520705
Account # 11260

Project Name: 211556

Collected: 11/20/2014 09:30 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 11/22/2014 08:45

Reported: 12/10/2014 15:30

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
06035	Lead	SW-846 6020 7439-92-1	ug/l 0.94	ug/l 0.082	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was filtered in the lab for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	143306050003A	12/02/2014 02:28	Tara L Snyder	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	143306050003	11/30/2014 07:48	James L Mertz	1

Sample Description: MW-111 Grab Groundwater
Facility# 211556 **Job#** 386773
 101 Mulford Road - Toledo, WA

LL Sample # WW 7686501
LL Group # 1520705
Account # 11260

Project Name: 211556

Collected: 11/20/2014 10:30 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 11/22/2014 08:45

Reported: 12/10/2014 15:30

MR111

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B			ug/l	ug/l	
10945	Benzene	71-43-2	2	0.5	1
10945	Ethylbenzene	100-41-4	120	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	11	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx			ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	6,000	250	5
GC Miscellaneous RSKSOP-175 modified			ug/l	ug/l	
07105	Methane	74-82-8	3,400	60	20
GC Petroleum Hydrocarbons ECY 97-602 NWTPH-Dx modified			ug/l	ug/l	
08271	Diesel Range Organics C12-C24	n.a.	1,800	30	1
08271	Heavy Range Organics C24-C40	n.a.	320	69	1
GC Petroleum Hydrocarbons w/Si ECY 97-602 NWTPH-Dx modified			ug/l	ug/l	
12005	DRO C12-C24 w/Si Gel	n.a.	430	30	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	69	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0			ug/l	ug/l	
00368	Nitrate Nitrogen	14797-55-8	N.D.	250	5
00228	Sulfate	14808-79-8	N.D.	1,500	5
SM 4500-S2 D-2000			ug/l	ug/l	
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	D143332AA	11/29/2014 10:48	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D143332AA	11/29/2014 10:48	Anita M Dale	1
08273	NWTPH-Gx water C7-C12	ECY 97-602	1	14337D20A	12/04/2014 15:26	Brett W Kenyon	5
01146	GC VOA Water Prep	NWTPH-Gx SW-846 5030B	1	14337D20A	12/04/2014 15:26	Brett W Kenyon	5

Sample Description: MW-111 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7686501
LL Group # 1520705
Account # 11260

Project Name: 211556

Collected: 11/20/2014 10:30 by JP

Chevron

6001 Bollinger Canyon Road

Submitted: 11/22/2014 08:45

L4310

Reported: 12/10/2014 15:30

San Ramon CA 94583

MR111

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	143360026A	12/03/2014 17:51	Elizabeth J Marin	20
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	143290016A	11/26/2014 12:51	Lisa A Reinert	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	143290015A	12/02/2014 15:02	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	143290015A	11/25/2014 18:30	Samantha L Bronder	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	143290016A	11/25/2014 18:30	Samantha L Bronder	1
00368	Nitrate Nitrogen	EPA 300.0	1	14326987151A	11/22/2014 13:07	Clinton M Wilson	5
00228	Sulfate	EPA 300.0	1	14326987151A	11/22/2014 13:07	Clinton M Wilson	5
00230	Sulfide	SM 4500-S2 D-2000	1	14328023001A	11/24/2014 14:30	Michele L Graham	1

Sample Description: MW-111 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7686502
LL Group # 1520705
Account # 11260

Project Name: 211556

Collected: 11/20/2014 10:30 by JP

Chevron

6001 Bollinger Canyon Road

Submitted: 11/22/2014 08:45

L4310

Reported: 12/10/2014 15:30

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
		SW-846 6010B	ug/l	ug/l	
01754	Iron	7439-89-6	14,500	33.4	1
07058	Manganese	7439-96-5	7,080	0.83	1
		SW-846 6020	ug/l	ug/l	
06035	Lead	7439-92-1	45.3	0.082	1
Wet Chemistry					
		SM 2320 B-1997	ug/l as CaCO3	ug/l as CaCO3	
12150	Total Alkalinity	n.a.	241,000	700	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was field filtered.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	143301848001	12/01/2014 11:40	Joanne M Gates	1
07058	Manganese	SW-846 6010B	1	143301848001	12/01/2014 11:40	Joanne M Gates	1
06035	Lead	SW-846 6020	1	143306050003A	12/02/2014 02:29	Tara L Snyder	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	143301848001	11/30/2014 06:52	James L Mertz	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	143306050003	11/30/2014 07:48	James L Mertz	1
12150	Total Alkalinity	SM 2320 B-1997	1	14328002204A	11/25/2014 05:05	Kenneth A Bell	1

Sample Description: MW-114 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7686503
LL Group # 1520705
Account # 11260

Project Name: 211556

Collected: 11/20/2014 10:25 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 11/22/2014 08:45

Reported: 12/10/2014 15:30

San Ramon CA 94583

MR114

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B			ug/l	ug/l	
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx			ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	28	1
08271	Heavy Range Organics C24-C40	n.a.	140	66	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	28	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	66	1
The reverse surrogate, capric acid, is present at <1%.					

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	D143332AA	11/29/2014 08:30	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D143332AA	11/29/2014 08:30	Anita M Dale	1
08273	NWTPH-Gx water C7-C12	ECY 97-602	1	14337D20A	12/04/2014 15:54	Brett W Kenyon	1
		NWTPH-Gx					
01146	GC VOA Water Prep	SW-846 5030B	1	14337D20A	12/04/2014 15:54	Brett W Kenyon	1
08271	NWTPH-Dx water	ECY 97-602	1	143290016A	12/02/2014 17:12	Christine E Dolman	1
		NWTPH-Dx modified					
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602	1	143290015A	12/02/2014 15:23	Christine E Dolman	1
		NWTPH-Dx modified					
12007	NW Dx water w/ 10g column	ECY 97-602	1	143290015A	11/25/2014 18:30	Samantha L Bronder	1
		NWTPH-Dx 06/97					
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602	1	143290016A	11/25/2014 18:30	Samantha L Bronder	1
		NWTPH-Dx 06/97					

Sample Description: MW-114 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7686504
LL Group # 1520705
Account # 11260

Project Name: 211556

Collected: 11/20/2014 10:25 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 11/22/2014 08:45

San Ramon CA 94583

Reported: 12/10/2014 15:30

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
06035	Lead	SW-846 6020 7439-92-1	ug/l 0.20	ug/l 0.082	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was filtered in the lab for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	143306050003A	12/02/2014 02:31	Tara L Snyder	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	143306050003	11/30/2014 07:48	James L Mertz	1

Sample Description: MW-115 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7686505
LL Group # 1520705
Account # 11260

Project Name: 211556

Collected: 11/20/2014 08:10 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 11/22/2014 08:45

Reported: 12/10/2014 15:30

MR115

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B			ug/l	ug/l	
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx			ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	28	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	66	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	28	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	66	1
The reverse surrogate, capric acid, is present at <1%.					

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	D143331AA	11/29/2014 07:56	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D143331AA	11/29/2014 07:56	Anita M Dale	1
08273	NWTPH-Gx water C7-C12	ECY 97-602	1	14337D20A	12/04/2014 16:21	Brett W Kenyon	1
		NWTPH-Gx					
01146	GC VOA Water Prep	SW-846 5030B	1	14337D20A	12/04/2014 16:21	Brett W Kenyon	1
08271	NWTPH-Dx water	ECY 97-602	1	143290016A	11/26/2014 11:25	Lisa A Reinert	1
		NWTPH-Dx modified					
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602	1	143290015A	12/02/2014 15:45	Christine E Dolman	1
		NWTPH-Dx modified					
12007	NW Dx water w/ 10g column	ECY 97-602	1	143290015A	11/25/2014 18:30	Samantha L Bronder	1
		NWTPH-Dx 06/97					
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602	1	143290016A	11/25/2014 18:30	Samantha L Bronder	1
		NWTPH-Dx 06/97					

Sample Description: MW-115 Filtered Grab Groundwater
Facility# 211556 **Job#** 386773
 101 Mulford Road - Toledo, WA

LL Sample # WW 7686506
LL Group # 1520705
Account # 11260

Project Name: 211556

Collected: 11/20/2014 08:10 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 11/22/2014 08:45

Reported: 12/10/2014 15:30

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
06035	Lead	SW-846 6020 7439-92-1	ug/l 0.28	ug/l 0.082	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was filtered in the lab for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	143306050003A	12/02/2014 02:33	Tara L Snyder	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	143306050003	11/30/2014 07:48	James L Mertz	1

Sample Description: MW-118 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7686507
LL Group # 1520705
Account # 11260

Project Name: 211556

Collected: 11/20/2014 08:25 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 11/22/2014 08:45

Reported: 12/10/2014 15:30

MR118

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B			ug/l	ug/l	
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx			ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	29	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	68	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	68	1
The reverse surrogate, capric acid, is present at <1%.					

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	D143331AA	11/29/2014 09:05	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D143331AA	11/29/2014 09:05	Anita M Dale	1
08273	NWTPH-Gx water C7-C12	ECY 97-602	1	14337D20A	12/04/2014 16:49	Brett W Kenyon	1
		NWTPH-Gx					
01146	GC VOA Water Prep	SW-846 5030B	1	14337D20A	12/04/2014 16:49	Brett W Kenyon	1
08271	NWTPH-Dx water	ECY 97-602	1	143370013A	12/05/2014 00:24	Lisa A Reinert	1
		NWTPH-Dx modified					
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602	1	143420008A	12/10/2014 11:44	Christine E Dolman	1
		NWTPH-Dx modified					
12007	NW Dx water w/ 10g column	ECY 97-602	2	143420008A	12/03/2014 00:00	Samantha L Bronder	1
		NWTPH-Dx 06/97					
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602	2	143370013A	12/03/2014 18:30	Samantha L Bronder	1
		NWTPH-Dx 06/97					

Sample Description: MW-118 Filtered Grab Groundwater
 Facility# 211556 Job# 386773
 101 Mulford Road - Toledo, WA

LL Sample # WW 7686508
 LL Group # 1520705
 Account # 11260

Project Name: 211556

Collected: 11/20/2014 08:25 by JP

Chevron

6001 Bollinger Canyon Road

Submitted: 11/22/2014 08:45

L4310

Reported: 12/10/2014 15:30

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
06035	Lead	SW-846 6020 7439-92-1	ug/l N.D.	ug/l 0.082	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was filtered in the lab for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	143306050005A	12/04/2014 10:21	Choon Y Tian	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	143306050005	12/01/2014 09:05	Micaela L Dishong	1

Sample Description: MW-120 Grab Groundwater
Facility# 211556 **Job#** 386773
 101 Mulford Road - Toledo, WA

LL Sample # WW 7686509
LL Group # 1520705
Account # 11260

Project Name: 211556

Collected: 11/20/2014 09:30 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 11/22/2014 08:45

Reported: 12/10/2014 15:30

MR120

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B			ug/l	ug/l	
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx			ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	29	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	67	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1
The reverse surrogate, capric acid, is present at <1%.					

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	D143331AA	11/29/2014 09:28	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D143331AA	11/29/2014 09:28	Anita M Dale	1
08273	NWTPH-Gx water C7-C12	ECY 97-602	1	14337D20A	12/04/2014 17:16	Brett W Kenyon	1
		NWTPH-Gx					
01146	GC VOA Water Prep	SW-846 5030B	1	14337D20A	12/04/2014 17:16	Brett W Kenyon	1
08271	NWTPH-Dx water	ECY 97-602	1	143290016A	11/26/2014 12:29	Lisa A Reinert	1
		NWTPH-Dx modified					
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602	1	143290015A	12/02/2014 16:29	Christine E Dolman	1
		NWTPH-Dx modified					
12007	NW Dx water w/ 10g column	ECY 97-602	1	143290015A	11/25/2014 18:30	Samantha L Bronder	1
		NWTPH-Dx 06/97					
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602	1	143290016A	11/25/2014 18:30	Samantha L Bronder	1
		NWTPH-Dx 06/97					

Sample Description: MW-120 Filtered Grab Groundwater
Facility# 211556 **Job#** 386773
 101 Mulford Road - Toledo, WA

LL Sample # WW 7686510
LL Group # 1520705
Account # 11260

Project Name: 211556

Collected: 11/20/2014 09:30 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 11/22/2014 08:45

Reported: 12/10/2014 15:30

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved		SW-846 6020	ug/l	ug/l	
06035	Lead	7439-92-1	N.D.	0.082	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was filtered in the lab for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	143306050005A	12/04/2014 10:23	Choon Y Tian	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	143306050005	12/01/2014 09:05	Micaela L Dishong	1

Quality Control Summary

Client Name: Chevron
Reported: 12/10/14 at 03:30 PM

Group Number: 1520705

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

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: D143331AA	Sample number(s): 7686505,7686507,7686509							
Benzene	N.D.	0.5	ug/l	88		78-120		
Ethylbenzene	N.D.	0.5	ug/l	94		79-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	91		75-120		
Toluene	N.D.	0.5	ug/l	92		80-120		
Xylene (Total)	N.D.	0.5	ug/l	97		80-120		
Batch number: D143332AA	Sample number(s): 7686494-7686495,7686497,7686499,7686501,7686503							
Benzene	N.D.	0.5	ug/l	88		78-120		
Ethylbenzene	N.D.	0.5	ug/l	93		79-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	90		75-120		
Toluene	N.D.	0.5	ug/l	91		80-120		
Xylene (Total)	N.D.	0.5	ug/l	98		80-120		
Batch number: 14336B20A	Sample number(s): 7686494-7686495,7686497,7686499							
NWTPH-Gx water C7-C12	N.D.	50.	ug/l	102	99	75-135	2	30
Batch number: 14337D20A	Sample number(s): 7686501,7686503,7686505,7686507,7686509							
NWTPH-Gx water C7-C12	N.D.	50.	ug/l	100	99	75-135	1	30
Batch number: 143360026A	Sample number(s): 7686495,7686501							
Methane	N.D.	3.0	ug/l	107		85-115		
Batch number: 143290016A	Sample number(s): 7686495,7686497,7686499,7686501,7686503,7686505,7686509							
Diesel Range Organics C12-C24	N.D.	30.	ug/l	68	77	50-113	12	20
Heavy Range Organics C24-C40	N.D.	70.	ug/l					
Batch number: 143370013A	Sample number(s): 7686507							
Diesel Range Organics C12-C24	N.D.	30.	ug/l	74	81	50-113	10	20
Heavy Range Organics C24-C40	N.D.	70.	ug/l					
Batch number: 143290015A	Sample number(s): 7686495,7686497,7686499,7686501,7686503,7686505,7686509							
DRO C12-C24 w/Si Gel	N.D.	30.	ug/l	66	62	32-117	7	20
HRO C24-C40 w/Si Gel	N.D.	70.	ug/l					
Batch number: 143420008A	Sample number(s): 7686507							
DRO C12-C24 w/Si Gel	N.D.	30.	ug/l	63	60	32-117	4	20
HRO C24-C40 w/Si Gel	N.D.	70.	ug/l					
Batch number: 143301848001	Sample number(s): 7686496,7686502							
Iron	N.D.	33.4	ug/l	105		80-120		
Manganese	N.D.	0.83	ug/l	105		80-120		
Batch number: 143306050003A	Sample number(s): 7686496,7686498,7686500,7686502,7686504,7686506							

*- 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: 1520705
Reported: 12/10/14 at 03:30 PM

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Lead	N.D.	0.082	ug/l	104		80-120		
Batch number: 143306050005A	Sample number(s): 7686508,7686510							
Lead	N.D.	0.082	ug/l	102		80-120		
Batch number: 14326987151A	Sample number(s): 7686495,7686501							
Nitrate Nitrogen	N.D.	50.	ug/l	100	99	90-110	0	20
Sulfate	N.D.	300.	ug/l	101	101	90-110	0	20
Batch number: 14328002204A	Sample number(s): 7686496,7686502							
Total Alkalinity	N.D.	700.	ug/l as CaCO3	98		90-110		
Batch number: 14328023001A	Sample number(s): 7686495,7686501							
Sulfide	N.D.	54.	ug/l	93		90-110		

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

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: D143331AA	Sample number(s): 7686505,7686507,7686509 UNSPK: 7686507								
Benzene	105	98	72-134	7	30				
Ethylbenzene	106	101	71-134	5	30				
Methyl Tertiary Butyl Ether	104	98	72-126	7	30				
Toluene	108	101	80-125	6	30				
Xylene (Total)	111	103	79-125	8	30				
Batch number: D143332AA	Sample number(s): 7686494-7686495,7686497,7686499,7686501,7686503 UNSPK: 7686503								
Benzene	87	106	72-134	19	30				
Ethylbenzene	91	107	71-134	16	30				
Methyl Tertiary Butyl Ether	83	103	72-126	21	30				
Toluene	91	109	80-125	18	30				
Xylene (Total)	96	111	79-125	14	30				
Batch number: 143360026A	Sample number(s): 7686495,7686501 UNSPK: P688940								
Methane	75	83	46-129	8	20				
Batch number: 143301848001	Sample number(s): 7686496,7686502 UNSPK: P688397 BKG: P688397								
Iron	125 (2)	142 (2)	75-125	3	20	4,050	3,990	1	20
Manganese	105	112	75-125	3	20	760	749	2	20
Batch number: 143306050003A	Sample number(s): 7686496,7686498,7686500,7686502,7686504,7686506 UNSPK: P687853								
Lead	102	103	75-125	1	20	0.98	0.88	12 (1)	20
Batch number: 143306050005A	Sample number(s): 7686508,7686510 UNSPK: P686372 BKG: P686372								
Lead	102	104	75-125	1	20	2.9	3.1	6 (1)	20
Batch number: 14326987151A	Sample number(s): 7686495,7686501 UNSPK: 7686495 BKG: 7686495								
Nitrate Nitrogen	102		90-110			N.D.	N.D.	0 (1)	20

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron Group Number: 1520705
Reported: 12/10/14 at 03:30 PM

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

<u>Analysis Name</u>	<u>MS</u> <u>%REC</u>	<u>MSD</u> <u>%REC</u>	<u>MS/MSD</u> <u>Limits</u>	<u>RPD</u> <u>RPD</u>	<u>RPD</u> <u>MAX</u>	<u>BKG</u> <u>Conc</u>	<u>DUP</u> <u>Conc</u>	<u>DUP</u> <u>RPD</u>	<u>Dup RPD</u> <u>Max</u>
Sulfate	100		90-110			2,600	2,400	7 (1)	20
Batch number: 14328002204A	Sample number(s): 7686496,7686502 UNSPK: P685978 BKG: P685978								
Total Alkalinity	66	63	17-146	1	5	225,000	223,000	1	5
Batch number: 14328023001A	Sample number(s): 7686495,7686501 UNSPK: P685603 BKG: P685603								
Sulfide	60	71	42-131	17*	16	N.D.	N.D.	0 (1)	5

Surrogate Quality Control

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

Analysis Name: BTEX/MTBE
Batch number: D143331AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7686505	110	104	102	91
7686507	111	102	99	91
7686509	112	105	99	92
Blank	108	102	98	93
LCS	104	103	98	103
MS	104	103	98	103
MSD	106	101	99	104
Limits:	80-116	77-113	80-113	78-113

Analysis Name: BTEX/MTBE
Batch number: D143332AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7686494	109	102	98	92
7686495	99	97	100	100
7686497	111	105	98	94
7686499	108	105	100	93
7686501	101	97	101	103
7686503	110	102	98	91
Blank	108	102	98	93
LCS	104	102	97	103
MS	103	101	97	104
MSD	103	101	96	103
Limits:	80-116	77-113	80-113	78-113

Analysis Name: NWTPH-Gx water C7-C12
Batch number: 14336B20A

	Trifluorotoluene-F
7686494	90
7686495	100
7686497	75
7686499	89
Blank	87

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 12/10/14 at 03:30 PM

Group Number: 1520705

Surrogate Quality Control

LCS 92
LCSD 92
Limits: 63-135

Analysis Name: NWTPH-Gx water C7-C12
Batch number: 14337D20A
Trifluorotoluene-F

7686501 90
7686503 88
7686505 90
7686507 87
7686509 82
Blank 89
LCS 93
LCSD 93

Limits: 63-135

Analysis Name: NWTPH-Dx water w/ 10g Si Gel
Batch number: 143290015A
Orthoterphenyl

7686495 100
7686497 87
7686499 83
7686501 96
7686503 83
7686505 92
7686509 86
Blank 84
LCS 94
LCSD 84

Limits: 50-150

Analysis Name: NWTPH-Dx water
Batch number: 143290016A
Orthoterphenyl

7686495 101
7686497 85
7686499 91
7686501 117
7686503 92
7686505 95
7686509 94
Blank 92
LCS 91
LCSD 98

Limits: 50-150

Analysis Name: Volatile Headspace Hydrocarbon
Batch number: 143360026A
Propene

7686495 90
7686501 102
Blank 108
LCS 109
MS 61

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 12/10/14 at 03:30 PM

Group Number: 1520705

Surrogate Quality Control

MSD 67
Limits: 47-116

Analysis Name: NWTPH-Dx water
Batch number: 143370013A
Orthoterphenyl

7686507 96
Blank 92
LCS 99
LCSD 106
Limits: 50-150

Analysis Name: NWTPH-Dx water w/ 10g Si Gel
Batch number: 143420008A
Orthoterphenyl

7686507 76
Blank 79
LCS 84
LCSD 78
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



Lancaster Laboratories

Acct. # 11260

For Eurofins Lancaster Laboratories use only
 Group # 1520705 Sample # 7686494-510
 Instructions on reverse side correspond with circled numbers.

1 Client Information				4 Matrix			5 Analyses Requested										6 Remarks				
Facility # SS#211556-OML G-R#386773 WBS Site Address 101 Mulford Road, TOLEDO, WA Chevron PM MHO LEIDOSRS Lead Consultant Russell Shropshire Consultant/Office Gettler-Ryan, Inc., 6805 Sierra Court, Suite G, Dublin, CA 94568 Consultant Project Mgr. Deanna L. Harding, (deanna@grinc.com) Consultant Phone # (925) 551-7444 x180 Sampler J. PAVNE / DILBERT / ALEX				<input type="checkbox"/> Sediment <input checked="" type="checkbox"/> Potable Ground <input type="checkbox"/> NPDES Surface <input type="checkbox"/> Air			Total Number of Containers BTEX + MTBE 8021 <input type="checkbox"/> 8260 <input checked="" type="checkbox"/> Naphth <input type="checkbox"/> 8260 full scan Oxygenates NWTPH-Gx NWTPH-Dx with Silica Gel Cleanup <input checked="" type="checkbox"/> NWTPH-Dx without Silica Gel Cleanup <input checked="" type="checkbox"/> WA VPH <input type="checkbox"/> WA EPH <input type="checkbox"/> Lead <input type="checkbox"/> Total <input type="checkbox"/> Diss. <input checked="" type="checkbox"/> Method <u>lab</u> DISSOLVED IRON / MANGANESE SULFIDE / METAL ALKALINITY NITRATE / SULFATE										SCR #: _____ <input type="checkbox"/> Results in Dry Weight <input type="checkbox"/> J value reporting needed <input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds <input type="checkbox"/> 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run _____ oxy's on highest hit <input type="checkbox"/> Run _____ oxy's on all hits				
2 Sample Identification		3 Collected		Grab	Composite	Soil	Water	Oil	Total	BTEX	8260	NWTPH	NWTPH-Dx	NWTPH-Dx	WA VPH	Lead	Diss.	Method	6 Remarks		
Date	Time	Soil	Water																Oil	BTEX	8260
																				Please report results for Dx with & without sgc. Dissolved Iron, Lead, and Manganese, as well as Alkalinity samples have been field filtered. Please forward lab results directly to the LC and cc: G-R. The TPW sample results should be forwarded directly to Deanna Harding	
	11-20-14			X			X		2												
		11:30		X			X		10	X		X	X	X		X			X		X
		0915		X			X		9	X		X	X	X		X			X		X
		0940		X			X		9	X		X	X	X		X			X		X
		1030		X			X		16	X		X	X	X		X			X		X
		1015		X			X		9	X		X	X	X		X			X		X
		0810		X			X		9	X		X	X	X		X			X		X
		0825		X			X		9	X		X	X	X		X			X		X
		0930		X			X		9	X		X	X	X		X			X	X	
7 Turnaround Time Requested (TAT) (please circle) Standard <u>72 hour</u> 5 day 4 day EDF/EDD 24 hour				Relinquished by <u>[Signature]</u> Date <u>11-20-14</u> Time <u>1600</u>			Received by _____ Date _____ Time _____		Relinquished by _____ Date _____ Time _____		Received by _____ Date _____ Time _____		Relinquished by Commercial Carrier: UPS <input checked="" type="checkbox"/> FedEx _____ Other _____		Received by <u>[Signature]</u> Date <u>11/22/14</u> Time <u>845</u>						
8 Data Package (circle if required) Type I - Full Type VI (Raw Data)				EDD (circle if required) CVX-RTBU-FL_05 (default) Other: _____			Temperature Upon Receipt <u>0.9-2.1</u> °C				Custody Seals Intact? <u>Yes</u> No										

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 \geq the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ).

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

- A** TIC is a possible aldol-condensation product
- B** Analyte was also detected in the blank
- C** Pesticide result confirmed by GC/MS
- D** Compound quantitated on a diluted sample
- E** Concentration exceeds the calibration range of the instrument
- N** Presumptive evidence of a compound (TICs only)
- P** Concentration difference between primary and confirmation columns $>25\%$
- U** Compound was not detected
- X,Y,Z** Defined in case narrative

Inorganic Qualifiers

- B** Value is $<$ CRDL, but \geq IDL
- E** Estimated due to interference
- M** Duplicate injection precision not met
- N** Spike sample not within control limits
- S** Method of standard additions (MSA) used for calculation
- U** Compound was not detected
- W** Post digestion spike out of control limits
- *** Duplicate analysis not within control limits
- +** 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.

ANALYTICAL RESULTS

Prepared by:

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

Prepared for:

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

February 27, 2015

Project: 211556

Submittal Date: 02/19/2015
Group Number: 1539587
PO Number: 0015146917
Release Number: HORNE
State of Sample Origin: WA

<u>Client Sample Description</u>	<u>Lancaster Labs (LL) #</u>
QA NA Water	7777523
B-1 Grab Groundwater	7777524
B-1 Filtered Grab Groundwater	7777525
B-2 Grab Groundwater	7777526
B-2 Filtered Grab Groundwater	7777527
MW-110 Grab Groundwater	7777528
MW-110 Filtered Grab Groundwater	7777529

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

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our scopes of accreditation can be viewed at <http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/>.

ELECTRONIC COPY TO	Gettler-Ryan Inc.	Attn: Gettler Ryan
ELECTRONIC COPY TO	Leidos	Attn: Jamalyn Agyei
ELECTRONIC COPY TO	Leidos	Attn: Russ Shropshire

Respectfully Submitted,



Amek Carter
Specialist

(717) 556-7252

Sample Description: QA NA Water
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7777523
LL Group # 1539587
Account # 11260

Project Name: 211556

Collected: 02/17/2015

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 02/19/2015 08:00

San Ramon CA 94583

Reported: 02/27/2015 14:22

MRTQA

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles			SW-846 8260B	ug/l	
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles			ECY 97-602 NWTPH-Gx	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	F150541AA	02/23/2015 07:29	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F150541AA	02/23/2015 07:29	Anita M Dale	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	15056A53A	02/25/2015 14:43	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	15056A53A	02/25/2015 14:43	Marie D Beamenderfer	1

Sample Description: B-1 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7777524
LL Group # 1539587
Account # 11260

Project Name: 211556

Collected: 02/17/2015 10:40 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 02/19/2015 08:00

Reported: 02/27/2015 14:22

MRTB1

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B					
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx					
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Miscellaneous RSKSOP-175 modified					
07105	Methane	74-82-8	N.D.	3.0	1
GC Petroleum ECY 97-602 NWTPH-Dx					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	28	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	66	1
GC Petroleum ECY 97-602 NWTPH-Dx					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	28	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	66	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0					
00368	Nitrate Nitrogen	14797-55-8	2,200	250	5
00228	Sulfate	14808-79-8	3,700	1,500	5
SM 2320 B-1997					
12150	Total Alkalinity to pH 4.5	n.a.	60,100	700	1
SM 4500-S2 D-2000					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	F150541AA	02/23/2015 07:51	Anita M Dale	1

Sample Description: B-1 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7777524
LL Group # 1539587
Account # 11260

Project Name: 211556

Collected: 02/17/2015 10:40 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 02/19/2015 08:00

Reported: 02/27/2015 14:22

San Ramon CA 94583

MRTB1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F150541AA	02/23/2015 07:51	Anita M Dale	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	15056A53A	02/25/2015 16:08	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	15056A53A	02/25/2015 16:08	Marie D Beamenderfer	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	150550015A	02/24/2015 17:53	Matthew S Listner	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	150550013A	02/25/2015 16:58	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	150550012A	02/26/2015 15:08	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	150550012A	02/24/2015 17:50	Samantha L Bronder	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	150550013A	02/24/2015 17:50	Samantha L Bronder	1
00368	Nitrate Nitrogen	EPA 300.0	1	15050667151A	02/19/2015 11:01	Drew M Gerhart	5
00228	Sulfate	EPA 300.0	1	15050667151A	02/19/2015 11:01	Drew M Gerhart	5
12150	Total Alkalinity to pH 4.5	SM 2320 B-1997	1	15051007203A	02/20/2015 22:12	Kenneth A Bell	1
00230	Sulfide	SM 4500-S2 D-2000	1	15054023001A	02/23/2015 08:30	Susan E Hibner	1

Sample Description: B-1 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7777525
LL Group # 1539587
Account # 11260

Project Name: 211556

Collected: 02/17/2015 10:40 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 02/19/2015 08:00

Reported: 02/27/2015 14:22

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
		SW-846 6010B	ug/l	ug/l	
01754	Iron	7439-89-6	N.D.	33.4	1
07058	Manganese	7439-96-5	9.8	0.83	1
		SW-846 6020	mg/l	mg/l	
06035	Lead	7439-92-1	N.D.	0.000082	1

General Sample Comments

State of Washington Lab Certification No. C457
This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	150511848005	02/24/2015 18:07	Suzanne M Will	1
07058	Manganese	SW-846 6010B	1	150511848005	02/24/2015 18:07	Suzanne M Will	1
06035	Lead	SW-846 6020	1	150516050009A	02/24/2015 07:51	Deborah A Krady	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	150511848005	02/23/2015 10:21	Christopher M Klumpp	1
06050	ICPMS-Water, 3020A - U3	SW-846 3020A	1	150516050009	02/23/2015 08:31	Christopher M Klumpp	1

Sample Description: B-2 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7777526
LL Group # 1539587
Account # 11260

Project Name: 211556

Collected: 02/17/2015 09:40 by JP

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

Submitted: 02/19/2015 08:00

Reported: 02/27/2015 14:22

MRTB2

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B ug/l					
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx ug/l					
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Miscellaneous RSKSOP-175 modified ug/l					
07105	Methane	74-82-8	N.D.	3.0	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	29	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	67	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0 ug/l					
00368	Nitrate Nitrogen	14797-55-8	2,200	100	2
The holding time was not met. The sample was submitted to the laboratory with insufficient time remaining in the holding time.					
00228	Sulfate	14808-79-8	3,200	600	2
SM 2320 B-1997 ug/l as CaCO3					
12150	Total Alkalinity to pH 4.5	n.a.	61,700	700	1
SM 4500-S2 D-2000 ug/l					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Sample Description: B-2 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7777526
LL Group # 1539587
Account # 11260

Project Name: 211556

Collected: 02/17/2015 09:40 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 02/19/2015 08:00

Reported: 02/27/2015 14:22

San Ramon CA 94583

MRTB2

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	F150542AA	02/23/2015 11:17	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F150542AA	02/23/2015 11:17	Anita M Dale	1
08273	NWTPH-Gx water C7-C12	ECY 97-602	1	15056A53A	02/25/2015 16:35	Marie D	1
01146	GC VOA Water Prep	NWTPH-Gx SW-846 5030B	1	15056A53A	02/25/2015 16:35	Beamenderfer Marie D	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	150550015A	02/24/2015 18:11	Matthew S Listner	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	150550013A	02/25/2015 17:20	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	150550012A	02/26/2015 15:31	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	150550012A	02/24/2015 17:50	Samantha L Bronder	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	150550013A	02/24/2015 17:50	Samantha L Bronder	1
00368	Nitrate Nitrogen	EPA 300.0	1	15050667151A	02/19/2015 13:16	Drew M Gerhart	2
00228	Sulfate	EPA 300.0	1	15050667151A	02/19/2015 13:16	Drew M Gerhart	2
12150	Total Alkalinity to pH 4.5	SM 2320 B-1997	1	15051007203A	02/21/2015 00:15	Kenneth A Bell	1
00230	Sulfide	SM 4500-S2 D-2000	1	15054023002A	02/23/2015 11:30	Susan E Hibner	1

Sample Description: B-2 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7777527
LL Group # 1539587
Account # 11260

Project Name: 211556

Collected: 02/17/2015 09:40 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 02/19/2015 08:00

Reported: 02/27/2015 14:22

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
		SW-846 6010B	ug/l	ug/l	
01754	Iron	7439-89-6	N.D.	33.4	1
07058	Manganese	7439-96-5	14.4	0.83	1
		SW-846 6020	mg/l	mg/l	
06035	Lead	7439-92-1	N.D.	0.000082	1

General Sample Comments

State of Washington Lab Certification No. C457
This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	150511848005	02/24/2015 18:11	Suzanne M Will	1
07058	Manganese	SW-846 6010B	1	150511848005	02/24/2015 18:11	Suzanne M Will	1
06035	Lead	SW-846 6020	1	150516050009A	02/24/2015 07:52	Deborah A Krady	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	150511848005	02/23/2015 10:21	Christopher M Klumpp	1
06050	ICPMS-Water, 3020A - U3	SW-846 3020A	1	150516050009	02/23/2015 08:31	Christopher M Klumpp	1

Sample Description: MW-110 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7777528
LL Group # 1539587
Account # 11260

Project Name: 211556

Collected: 02/17/2015 12:00 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 02/19/2015 08:00

Reported: 02/27/2015 14:22

MRT10

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B			ug/l	ug/l	
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx			ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	30	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	70	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	30	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	70	1
The reverse surrogate, capric acid, is present at <1%.					

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	F150542AA	02/23/2015 11:39	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F150542AA	02/23/2015 11:39	Anita M Dale	1
08273	NWTPH-Gx water C7-C12	ECY 97-602	1	15056A53A	02/25/2015 17:04	Marie D	1
		NWTPH-Gx				Beamenderfer	
01146	GC VOA Water Prep	SW-846 5030B	1	15056A53A	02/25/2015 17:04	Marie D	1
						Beamenderfer	
08271	NWTPH-Dx water	ECY 97-602	1	150550013A	02/25/2015 17:43	Christine E Dolman	1
		NWTPH-Dx modified					
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602	1	150550012A	02/26/2015 15:53	Christine E Dolman	1
		NWTPH-Dx modified					
12007	NW Dx water w/ 10g column	ECY 97-602	1	150550012A	02/24/2015 17:50	Samantha L Bronder	1
		NWTPH-Dx 06/97					
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602	1	150550013A	02/24/2015 17:50	Samantha L Bronder	1
		NWTPH-Dx 06/97					

Sample Description: MW-110 Filtered Grab Groundwater
 Facility# 211556 Job# 386773
 101 Mulford Rd - Toledo, WA

LL Sample # WW 7777529
 LL Group # 1539587
 Account # 11260

Project Name: 211556

Collected: 02/17/2015 12:00 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 02/19/2015 08:00

Reported: 02/27/2015 14:22

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
06035	Lead	SW-846 6020 7439-92-1	mg/l N.D.	mg/l 0.000082	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was filtered in the lab for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	150516050009A	02/24/2015 07:54	Deborah A Krady	1
06050	ICPMS-Water, 3020A - U3	SW-846 3020A	1	150516050009	02/23/2015 08:31	Christopher M Klumpp	1

Quality Control Summary

Client Name: Chevron
Reported: 02/27/15 at 02:22 PM

Group Number: 1539587

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

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: F150541AA	Sample number(s): 7777523-7777524							
Benzene	N.D.	0.5	ug/l	94		78-120		
Ethylbenzene	N.D.	0.5	ug/l	94		80-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	96		75-120		
Toluene	N.D.	0.5	ug/l	96		80-120		
Xylene (Total)	N.D.	0.5	ug/l	94		80-120		
Batch number: F150542AA	Sample number(s): 7777526,7777528							
Benzene	N.D.	0.5	ug/l	94		78-120		
Ethylbenzene	N.D.	0.5	ug/l	94		80-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	99		75-120		
Toluene	N.D.	0.5	ug/l	98		80-120		
Xylene (Total)	N.D.	0.5	ug/l	95		80-120		
Batch number: 15056A53A	Sample number(s): 7777523-7777524,7777526,7777528							
NWTPH-Gx water C7-C12	N.D.	50.	ug/l	108	108	80-123	0	30
Batch number: 150550015A	Sample number(s): 7777524,7777526							
Methane	N.D.	3.0	ug/l	101		85-115		
Batch number: 150550013A	Sample number(s): 7777524,7777526,7777528							
Diesel Range Organics C12-C24	N.D.	30.	ug/l	54	52	50-113	4	20
Heavy Range Organics C24-C40	N.D.	70.	ug/l					
Batch number: 150550012A	Sample number(s): 7777524,7777526,7777528							
DRO C12-C24 w/Si Gel	N.D.	30.	ug/l	65	65	32-117	1	20
HRO C24-C40 w/Si Gel	N.D.	70.	ug/l					
Batch number: 150511848005	Sample number(s): 7777525,7777527							
Iron	N.D.	33.4	ug/l	103		80-120		
Manganese	N.D.	0.83	ug/l	105		80-120		
Batch number: 150516050009A	Sample number(s): 7777525,7777527,7777529							
Lead	N.D.	0.00008	mg/l	109		80-120		
		2						
Batch number: 15050667151A	Sample number(s): 7777524,7777526							
Nitrate Nitrogen	N.D.	50.	ug/l	103	100	90-110	2	20
Sulfate	N.D.	300.	ug/l	105	103	90-110	2	20
Batch number: 15051007203A	Sample number(s): 7777524,7777526							
Total Alkalinity to pH 4.5	N.D.	700.	ug/l as CaCO3	98		90-110		

*- 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: 1539587
Reported: 02/27/15 at 02:22 PM

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 15054023001A Sulfide	N.D.	54.	ug/l	106		90-110		
Batch number: 15054023002A Sulfide	N.D.	54.	ug/l	107		90-110		

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

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: F150541AA	Sample number(s): 7777523-7777524 UNSPK: 7777524								
Benzene	99	99	72-134	0	30				
Ethylbenzene	97	98	71-134	0	30				
Methyl Tertiary Butyl Ether	95	94	72-126	1	30				
Toluene	100	100	80-125	0	30				
Xylene (Total)	97	97	79-125	0	30				
Batch number: F150542AA	Sample number(s): 7777526,7777528 UNSPK: P777531								
Benzene	97	95	72-134	2	30				
Ethylbenzene	97	95	71-134	1	30				
Methyl Tertiary Butyl Ether	98	96	72-126	2	30				
Toluene	100	98	80-125	2	30				
Xylene (Total)	98	98	79-125	0	30				
Batch number: 150550015A	Sample number(s): 7777524,7777526 UNSPK: P773201								
Methane	76	27*	46-129	14	20				
Batch number: 150511848005	Sample number(s): 7777525,7777527 UNSPK: P779370 BKG: P779370								
Iron	126*	98	75-125	6	20	3,710	3,700	0	20
Manganese	111	100	75-125	5	20	639	633	1	20
Batch number: 150516050009A	Sample number(s): 7777525,7777527,7777529 UNSPK: P773229 BKG: P773229								
Lead	106	112	75-125	5	20	0.00059	0.00061	4 (1)	20
Batch number: 15050667151A	Sample number(s): 7777524,7777526 UNSPK: 7777526 BKG: 7777526								
Nitrate Nitrogen	97		90-110			2,200	2,200	0	20
Sulfate	95		90-110			3,200	3,200	0 (1)	20
Batch number: 15051007203A	Sample number(s): 7777524,7777526 UNSPK: 7777524 BKG: 7777524								
Total Alkalinity to pH 4.5	96		17-146			60,100	61,000	1	5
Batch number: 15054023001A	Sample number(s): 7777524 UNSPK: P775844 BKG: P775844								
Sulfide	48	52	42-131	7	16	N.D.	N.D.	0 (1)	5
Batch number: 15054023002A	Sample number(s): 7777526 UNSPK: 7777526 BKG: 7777526								
Sulfide	91	101	42-131	10	16	N.D.	N.D.	0 (1)	5

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 02/27/15 at 02:22 PM

Group Number: 1539587

Surrogate Quality Control

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

Analysis Name: BTEX/MTBE
Batch number: F150541AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7777523	99	98	106	97
7777524	101	100	106	98
Blank	99	98	106	97
LCS	97	103	106	100
MS	99	100	106	98
MSD	101	102	107	101
Limits:	80-116	77-113	80-113	78-113

Analysis Name: BTEX/MTBE
Batch number: F150542AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7777526	101	99	104	98
7777528	100	99	103	96
Blank	101	103	104	98
LCS	99	104	106	100
MS	99	102	106	101
MSD	102	100	105	101
Limits:	80-116	77-113	80-113	78-113

Analysis Name: NWTPH-Gx water C7-C12
Batch number: 15056A53A

	Trifluorotoluene-F
7777523	114
7777524	98
7777526	97
7777528	97
Blank	115
LCS	105
LCSD	105
Limits:	63-135

Analysis Name: NWTPH-Dx water w/ 10g Si Gel
Batch number: 150550012A

	Orthoterphenyl
7777524	92
7777526	83
7777528	89
Blank	87
LCS	92
LCSD	93
Limits:	50-150

Analysis Name: NWTPH-Dx water
Batch number: 150550013A

	Orthoterphenyl
7777524	71
7777526	74
7777528	74
Blank	75

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 02/27/15 at 02:22 PM

Group Number: 1539587

Surrogate Quality Control

LCS	78
LCSD	73
Limits:	50-150

Analysis Name: Volatile Headspace Hydrocarbon
Batch number: 150550015A
Propene

7777524	86
7777526	83
Blank	101
LCS	90
MS	47
MSD	52
Limits:	47-116

*- 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



Lancaster Laboratories

Acct. # 11260

For Eurofins Lancaster Laboratories use only
 Group # 1539587 Sample # 7777523-29
 Instructions on reverse side correspond with circled numbers.

SCR #: _____

1 Client Information				4 Matrix				5 Analyses Requested													
Facility # SS#211556-OML G-R#386773 WBS				<input type="checkbox"/> Sediment <input checked="" type="checkbox"/> Ground <input type="checkbox"/> Surface				<input type="checkbox"/> Naphth <input checked="" type="checkbox"/> 8021 <input type="checkbox"/> 8260 Total Number of Containers BTEX + MTBE 8260 full scan Oxygenates NWTPH-Gx NWTPH-Dx with Silica Gel Cleanup NWTPH-Dx without Silica Gel Cleanup WA VPH Lead Total Diss. Method NITRATE / SULFATE DISSOLVED IRON / MANGANESE SULFIDE / METHANE ALKALINITY													
Site Address 101 Mulford Road, TOLEDO, WA				Chevron PM MHO LEIDOSRS Lead Consultant Russell Shropshire																	
Consultant/Office Gettler-Ryan, Inc., 6805 Sierra Court, Suite G, Dublin, CA 94568				Consultant Project Mgr. Deanna L. Harding, (deanna@grinc.com)																	
Consultant Phone # (925) 551-7444 x180				Sampler J. PAYNE																	
2 Sample Identification		Collected		3																	
Date	Time	Grab	Composite	Soil	Potable Water	NPDES	Air	Total Number of Containers	BTEX + MTBE	8021	8260	Oxygenates	NWTPH-Gx	NWTPH-Dx with Silica Gel Cleanup	NWTPH-Dx without Silica Gel Cleanup	WA VPH	Lead	Total	Diss.	Method	
QA	2.17.15	X			X			2	X				X								
B.1	↓	1040	X		X			16	X				X	X	X		X	X	X	X	X
B.2	↓	0940	X		X			16	X				X	X	X		X	X	X	X	X
MSD-110	↓	1100	X		X			8	X				X	X	X		X				

- 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

Please report results for Dx with & without sgc. Dissolved Iron, Lead, and Manganese, as well as Alkalinity samples have been field filtered.

Please forward lab results directly to the LC and cc: G-R. The TPW sample results should be forwarded directly to Deanna Harding

7 Turnaround Time Requested (TAT) (please circle)

Standard 5 day 4 day
 72 hour 48 hour **EDF/EDD**
 24 hour

Relinquished by 	Date 2.17.15	Time 1000	Received by	Date	Time
Relinquished by	Date	Time	Received by	Date	Time

8 Data Package (circle if required)

Type I - Full
 Type VI (Raw Data)

EDD (circle if required)
 CVX-RTBU-FL_05 (default)
 Other: _____

Relinquished by Commercial Carrier:

UPS FedEx _____ Other _____

Temperature Upon Receipt 05-100 °C

Received by
 Date **2/19/15** | Time **0950** **0800** || Custody Seals Intact? **(Yes)** No | | |

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		
>	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.		

Laboratory Data Qualifiers:

- B - Analyte detected in the blank
- C - Result confirmed by reanalysis
- E - Concentration exceeds the calibration range
- J (or G, I, X) - estimated value \geq the Method Detection Limit (MDL or DL) and the $<$ Limit of Quantitation (LOQ or RL)
- P - Concentration difference between the primary and confirmation column $>40\%$. The lower result is reported.
- U - Analyte was not detected at the value indicated
- V - Concentration difference between the primary and confirmation column $>100\%$. The reporting limit is raised due to this disparity and evident interference...

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

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, ISO17025) 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.

ANALYTICAL RESULTS

Prepared by:

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

Prepared for:

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

March 04, 2015

Project: 211556

Submittal Date: 02/20/2015
Group Number: 1540073
PO Number: 0015146917
Release Number: HORNE
State of Sample Origin: WA

<u>Client Sample Description</u>	<u>Lancaster Labs (LL) #</u>
QA NA Water	7779762
MW-103 Grab Groundwater	7779763
MW-103 Filtered Grab Groundwater	7779764
MW-109 Grab Groundwater	7779765
MW-109 Filtered Grab Groundwater	7779766
MW-112 Grab Groundwater	7779767
MW-112 Filtered Grab Groundwater	7779768
MW-113 Grab Groundwater	7779769
MW-113 Filtered Grab Groundwater	7779770
MW-114 Grab Groundwater	7779771
MW-114 Filtered Grab Groundwater	7779772
MW-115 Grab Groundwater	7779773
MW-115 Filtered Grab Groundwater	7779774
MW-116 Grab Groundwater	7779775
MW-116 Filtered Grab Groundwater	7779776
MW-117 Grab Groundwater	7779777
MW-117 Filtered Grab Groundwater	7779778
MW-118 Grab Groundwater	7779779
MW-118 Filtered Grab Groundwater	7779780
MW-119 Grab Groundwater	7779781
MW-119 Filtered Grab Groundwater	7779782
MW-120 Grab Groundwater	7779783
MW-120 Filtered Grab Groundwater	7779784

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

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our scopes of accreditation can be viewed at <http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/>.

ELECTRONIC COPY TO	Gettler-Ryan Inc.	Attn: Gettler Ryan
ELECTRONIC COPY TO	Leidos	Attn: Jamalyn Agyei
ELECTRONIC COPY TO	Leidos	Attn: Russ Shropshire

Respectfully Submitted,



Amek Carter
Specialist

(717) 556-7252

Sample Description: QA NA Water
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7779762
LL Group # 1540073
Account # 11260

Project Name: 211556

Collected: 02/19/2015

Chevron

Submitted: 02/20/2015 10:25

6001 Bollinger Canyon Road
L4310

Reported: 03/04/2015 10:54

San Ramon CA 94583

MT-QA

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles			SW-846 8260B	ug/l	
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles			ECY 97-602 NWTPH-Gx	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	F150553AA	02/24/2015 21:09	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F150553AA	02/24/2015 21:09	Kevin A Sposito	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	15056A53A	02/25/2015 15:11	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	15056A53A	02/25/2015 15:11	Marie D Beamenderfer	1

Sample Description: MW-103 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7779763
LL Group # 1540073
Account # 11260

Project Name: 211556

Collected: 02/19/2015 09:45 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 02/20/2015 10:25

San Ramon CA 94583

Reported: 03/04/2015 10:54

MT103

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B					
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx					
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Miscellaneous RSKSOP-175 modified					
07105	Methane	74-82-8	N.D.	3.0	1
GC Petroleum ECY 97-602 NWTPH-Dx					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	29	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	69	1
GC Petroleum ECY 97-602 NWTPH-Dx					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	69	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0					
00368	Nitrate Nitrogen	14797-55-8	1,700	250	5
00228	Sulfate	14808-79-8	5,300	1,500	5
SM 2320 B-1997					
12150	Total Alkalinity to pH 4.5	n.a.	44,400	700	1
SM 4500-S2 D-2000					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	F150553AA	02/24/2015 22:59	Kevin A Sposito	1

Sample Description: MW-103 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7779763
LL Group # 1540073
Account # 11260

Project Name: 211556

Collected: 02/19/2015 09:45 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 02/20/2015 10:25

Reported: 03/04/2015 10:54

San Ramon CA 94583

MT103

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F150553AA	02/24/2015 22:59	Kevin A Sposito	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	15056A53A	02/25/2015 18:27	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	15056A53A	02/25/2015 18:27	Marie D Beamenderfer	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	150560013A	02/25/2015 14:46	Matthew S Listner	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	150550013A	02/25/2015 18:05	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	150550012A	02/26/2015 16:15	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	150550012A	02/24/2015 17:50	Samantha L Bronder	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	150550013A	02/24/2015 17:50	Samantha L Bronder	1
00368	Nitrate Nitrogen	EPA 300.0	1	15051987151A	02/20/2015 19:25	Clinton M Wilson	5
00228	Sulfate	EPA 300.0	1	15051987151A	02/20/2015 19:25	Clinton M Wilson	5
12150	Total Alkalinity to pH 4.5	SM 2320 B-1997	1	15054011203A	02/23/2015 22:54	Michele L Graham	1
00230	Sulfide	SM 4500-S2 D-2000	1	15054023002A	02/23/2015 11:30	Susan E Hibner	1

Sample Description: MW-103 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7779764
LL Group # 1540073
Account # 11260

Project Name: 211556

Collected: 02/19/2015 09:45 by JP

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

Submitted: 02/20/2015 10:25

Reported: 03/04/2015 10:54

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
		SW-846 6010B	ug/l	ug/l	
01754	Iron	7439-89-6	161	33.4	1
07058	Manganese	7439-96-5	1.1	0.83	1
		SW-846 6020	ug/l	ug/l	
06035	Lead	7439-92-1	N.D.	0.082	1

General Sample Comments

State of Washington Lab Certification No. C457
This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	150541848003	02/27/2015 08:13	Joanne M Gates	1
07058	Manganese	SW-846 6010B	1	150541848003	02/27/2015 08:13	Joanne M Gates	1
06035	Lead	SW-846 6020	1	150616050002A	03/04/2015 06:25	Choon Y Tian	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	150541848003	02/23/2015 12:51	James L Mertz	1
06050	ICPMS-Water, 3020A - U3	SW-846 3010A modified	1	150546050003	02/25/2015 10:10	Christopher M Klumpp	1
06050	ICPMS-Water, 3020A - U3	SW-846 3010A modified	2	150616050002	03/03/2015 07:35	Christopher M Klumpp	1

Sample Description: MW-109 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7779765
LL Group # 1540073
Account # 11260

Project Name: 211556

Collected: 02/18/2015 09:20 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 02/20/2015 10:25

Reported: 03/04/2015 10:54

MT109

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B			ug/l	ug/l	
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx			ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	30	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	69	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	30	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	69	1
The reverse surrogate, capric acid, is present at <1%.					

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	F150553AA	02/24/2015 23:20	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F150553AA	02/24/2015 23:20	Kevin A Sposito	1
08273	NWTPH-Gx water C7-C12	ECY 97-602	1	15056A53A	02/25/2015 19:23	Marie D Beamenderfer	1
01146	GC VOA Water Prep	NWTPH-Gx SW-846 5030B	1	15056A53A	02/25/2015 19:23	Marie D Beamenderfer	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	150550013A	02/25/2015 18:27	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	150550012A	02/26/2015 16:37	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	150550012A	02/24/2015 17:50	Samantha L Bronder	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	150550013A	02/24/2015 17:50	Samantha L Bronder	1

Sample Description: MW-109 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7779766
LL Group # 1540073
Account # 11260

Project Name: 211556

Collected: 02/18/2015 09:20 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 02/20/2015 10:25

Reported: 03/04/2015 10:54

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved		SW-846 6020	ug/l	ug/l	
06035	Lead	7439-92-1	N.D.	0.082	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was filtered in the lab for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	150616050002A	03/04/2015 06:27	Choon Y Tian	1
06050	ICPMS-Water, 3020A - U3	SW-846 3010A modified	1	150546050003	02/25/2015 10:10	Christopher M Klumpp	1
06050	ICPMS-Water, 3020A - U3	SW-846 3010A modified	2	150616050002	03/03/2015 07:35	Christopher M Klumpp	1

Sample Description: MW-112 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7779767
LL Group # 1540073
Account # 11260

Project Name: 211556

Collected: 02/19/2015 12:05 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 02/20/2015 10:25

Reported: 03/04/2015 10:54

MT112

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B					
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx					
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Miscellaneous RSKSOP-175 modified					
07105	Methane	74-82-8	N.D.	3.0	1
GC Petroleum ECY 97-602 NWTPH-Dx					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	30	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	69	1
GC Petroleum ECY 97-602 NWTPH-Dx					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	30	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	69	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0					
00368	Nitrate Nitrogen	14797-55-8	N.D.	250	5
00228	Sulfate	14808-79-8	N.D.	1,500	5
SM 2320 B-1997					
12150	Total Alkalinity to pH 4.5	n.a.	17,300	700	1
SM 4500-S2 D-2000					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	F150553AA	02/24/2015 23:42	Kevin A Sposito	1

Sample Description: MW-112 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7779767
LL Group # 1540073
Account # 11260

Project Name: 211556

Collected: 02/19/2015 12:05 by JP

Chevron

6001 Bollinger Canyon Road

Submitted: 02/20/2015 10:25

L4310

Reported: 03/04/2015 10:54

San Ramon CA 94583

MT112

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F150553AA	02/24/2015 23:42	Kevin A Sposito	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	15056A53A	02/25/2015 19:50	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	15056A53A	02/25/2015 19:50	Marie D Beamenderfer	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	150560013A	02/25/2015 15:04	Matthew S Listner	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	150550013A	02/25/2015 18:49	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	150550012A	02/26/2015 16:59	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	150550012A	02/24/2015 17:50	Samantha L Bronder	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	150550013A	02/24/2015 17:50	Samantha L Bronder	1
00368	Nitrate Nitrogen	EPA 300.0	1	15051987151A	02/20/2015 19:41	Clinton M Wilson	5
00228	Sulfate	EPA 300.0	1	15051987151A	02/20/2015 19:41	Clinton M Wilson	5
12150	Total Alkalinity to pH 4.5	SM 2320 B-1997	1	15054011202B	02/23/2015 19:37	Michele L Graham	1
00230	Sulfide	SM 4500-S2 D-2000	1	15054023002A	02/23/2015 11:30	Susan E Hibner	1

Sample Description: MW-112 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7779768
LL Group # 1540073
Account # 11260

Project Name: 211556

Collected: 02/19/2015 12:05 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 02/20/2015 10:25

San Ramon CA 94583

Reported: 03/04/2015 10:54

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
		SW-846 6010B	ug/l	ug/l	
01754	Iron	7439-89-6	N.D.	33.4	1
07058	Manganese	7439-96-5	11.6	0.83	1
		SW-846 6020	ug/l	ug/l	
06035	Lead	7439-92-1	0.083	0.082	1

General Sample Comments

State of Washington Lab Certification No. C457
This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	150541848003	02/27/2015 08:17	Joanne M Gates	1
07058	Manganese	SW-846 6010B	1	150541848003	02/27/2015 08:17	Joanne M Gates	1
06035	Lead	SW-846 6020	1	150616050002A	03/04/2015 06:29	Choon Y Tian	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	150541848003	02/23/2015 12:51	James L Mertz	1
06050	ICPMS-Water, 3020A - U3	SW-846 3010A modified	1	150546050003	02/25/2015 10:10	Christopher M Klumpp	1
06050	ICPMS-Water, 3020A - U3	SW-846 3010A modified	2	150616050002	03/03/2015 07:35	Christopher M Klumpp	1

Sample Description: MW-113 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7779769
LL Group # 1540073
Account # 11260

Project Name: 211556

Collected: 02/19/2015 13:10 by JP

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

Submitted: 02/20/2015 10:25

Reported: 03/04/2015 10:54

MT113

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B					
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx					
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Miscellaneous RSKSOP-175 modified					
07105	Methane	74-82-8	N.D.	3.0	1
GC Petroleum ECY 97-602 NWTPH-Dx					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	30	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	70	1
GC Petroleum ECY 97-602 NWTPH-Dx					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	30	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	70	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0					
00368	Nitrate Nitrogen	14797-55-8	330	250	5
00228	Sulfate	14808-79-8	N.D.	1,500	5
SM 2320 B-1997					
12150	Total Alkalinity to pH 4.5	n.a.	8,600	700	1
SM 4500-S2 D-2000					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	F150553AA	02/25/2015 00:04	Kevin A Sposito	1

Sample Description: MW-113 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7779769
LL Group # 1540073
Account # 11260

Project Name: 211556

Collected: 02/19/2015 13:10 by JP

Chevron

6001 Bollinger Canyon Road

Submitted: 02/20/2015 10:25

L4310

Reported: 03/04/2015 10:54

San Ramon CA 94583

MT113

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F150553AA	02/25/2015 00:04	Kevin A Sposito	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	15056A53A	02/25/2015 20:18	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	15056A53A	02/25/2015 20:18	Marie D Beamenderfer	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	150560013A	02/25/2015 15:22	Matthew S Listner	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	150550013A	02/25/2015 19:11	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	150550012A	02/26/2015 17:21	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	150550012A	02/24/2015 17:50	Samantha L Bronder	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	150550013A	02/24/2015 17:50	Samantha L Bronder	1
00368	Nitrate Nitrogen	EPA 300.0	1	15051987151A	02/20/2015 19:56	Clinton M Wilson	5
00228	Sulfate	EPA 300.0	1	15051987151A	02/20/2015 19:56	Clinton M Wilson	5
12150	Total Alkalinity to pH 4.5	SM 2320 B-1997	1	15054011201A	02/23/2015 17:38	Michele L Graham	1
00230	Sulfide	SM 4500-S2 D-2000	1	15054023002A	02/23/2015 11:30	Susan E Hibner	1

Sample Description: MW-113 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7779770
LL Group # 1540073
Account # 11260

Project Name: 211556

Collected: 02/19/2015 13:10 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 02/20/2015 10:25

San Ramon CA 94583

Reported: 03/04/2015 10:54

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved			ug/l	ug/l	
01754	Iron	7439-89-6	106	33.4	1
07058	Manganese	7439-96-5	8.9	0.83	1
SW-846 6010B			ug/l	ug/l	
06035	Lead	7439-92-1	N.D.	0.082	1

General Sample Comments

State of Washington Lab Certification No. C457
This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	150541848003	02/27/2015 08:21	Joanne M Gates	1
07058	Manganese	SW-846 6010B	1	150541848003	02/27/2015 08:21	Joanne M Gates	1
06035	Lead	SW-846 6020	1	150616050002A	03/04/2015 05:58	Choon Y Tian	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	150541848003	02/23/2015 12:51	James L Mertz	1
06050	ICPMS-Water, 3020A - U3	SW-846 3010A modified	1	150546050003	02/25/2015 10:10	Christopher M Klumpp	1
06050	ICPMS-Water, 3020A - U3	SW-846 3010A modified	2	150616050002	03/03/2015 07:35	Christopher M Klumpp	1

Sample Description: MW-114 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7779771
LL Group # 1540073
Account # 11260

Project Name: 211556

Collected: 02/18/2015 08:20 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 02/20/2015 10:25

Reported: 03/04/2015 10:54

MT114

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B			ug/l	ug/l	
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx			ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	30	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	69	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	30	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	69	1
The reverse surrogate, capric acid, is present at <1%.					

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	F150553AA	02/25/2015 00:26	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F150553AA	02/25/2015 00:26	Kevin A Sposito	1
08273	NWTPH-Gx water C7-C12	ECY 97-602	1	15056A53A	02/25/2015 20:46	Marie D Beamenderfer	1
01146	GC VOA Water Prep	NWTPH-Gx SW-846 5030B	1	15056A53A	02/25/2015 20:46	Marie D Beamenderfer	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	150550013A	02/25/2015 19:34	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	150550012A	02/26/2015 17:43	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	150550012A	02/24/2015 17:50	Samantha L Bronder	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	150550013A	02/24/2015 17:50	Samantha L Bronder	1

Sample Description: MW-114 Filtered Grab Groundwater
Facility# 211556 **Job#** 386773
 101 Mulford Road - Toledo, WA

LL Sample # WW 7779772
LL Group # 1540073
Account # 11260

Project Name: 211556

Collected: 02/18/2015 08:20 by JP

Chevron

6001 Bollinger Canyon Road
 L4310

Submitted: 02/20/2015 10:25

San Ramon CA 94583

Reported: 03/04/2015 10:54

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved		SW-846 6020	ug/l	ug/l	
06035	Lead	7439-92-1	N.D.	0.082	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was filtered in the lab for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	150616050002A	03/04/2015 06:30	Choon Y Tian	1
06050	ICPMS-Water, 3020A - U3	SW-846 3010A modified	1	150546050003	02/25/2015 10:10	Christopher M Klumpp	1
06050	ICPMS-Water, 3020A - U3	SW-846 3010A modified	2	150616050002	03/03/2015 07:35	Christopher M Klumpp	1

Sample Description: MW-115 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7779773
LL Group # 1540073
Account # 11260

Project Name: 211556

Collected: 02/18/2015 13:00 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 02/20/2015 10:25

Reported: 03/04/2015 10:54

San Ramon CA 94583

MT115

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B			ug/l	ug/l	
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx			ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	29	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	67	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1
The reverse surrogate, capric acid, is present at <1%.					

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	F150553AA	02/25/2015 00:48	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F150553AA	02/25/2015 00:48	Kevin A Sposito	1
08273	NWTPH-Gx water C7-C12	ECY 97-602	1	15056A53A	02/25/2015 21:13	Marie D Beamenderfer	1
01146	GC VOA Water Prep	NWTPH-Gx SW-846 5030B	1	15056A53A	02/25/2015 21:13	Marie D Beamenderfer	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	150550013A	02/25/2015 19:56	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	150550012A	02/26/2015 18:06	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	150550012A	02/24/2015 17:50	Samantha L Bronder	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	150550013A	02/24/2015 17:50	Samantha L Bronder	1

Sample Description: MW-115 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7779774
LL Group # 1540073
Account # 11260

Project Name: 211556

Collected: 02/18/2015 13:00 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 02/20/2015 10:25

Reported: 03/04/2015 10:54

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
06035	Lead	SW-846 6020 7439-92-1	ug/l N.D.	ug/l 0.082	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was filtered in the lab for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	150616050002A	03/04/2015 06:35	Choon Y Tian	1
06050	ICPMS-Water, 3020A - U3	SW-846 3010A modified	1	150546050003	02/25/2015 10:10	Christopher M Klumpp	1
06050	ICPMS-Water, 3020A - U3	SW-846 3010A modified	2	150616050002	03/03/2015 07:35	Christopher M Klumpp	1

Sample Description: MW-116 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7779775
LL Group # 1540073
Account # 11260

Project Name: 211556

Collected: 02/19/2015 08:40 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 02/20/2015 10:25

Reported: 03/04/2015 10:54

San Ramon CA 94583

MT116

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B					
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx					
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Miscellaneous RSKSOP-175 modified					
07105	Methane	74-82-8	N.D.	3.0	1
GC Petroleum ECY 97-602 NWTPH-Dx					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	30	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	69	1
GC Petroleum ECY 97-602 NWTPH-Dx					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	30	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	69	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0					
00368	Nitrate Nitrogen	14797-55-8	510	250	5
00228	Sulfate	14808-79-8	N.D.	1,500	5
SM 2320 B-1997					
12150	Total Alkalinity to pH 4.5	n.a.	17,700	700	1
SM 4500-S2 D-2000					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	F150553AA	02/25/2015 01:10	Kevin A Sposito	1

Sample Description: MW-116 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7779775
LL Group # 1540073
Account # 11260

Project Name: 211556

Collected: 02/19/2015 08:40 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 02/20/2015 10:25

Reported: 03/04/2015 10:54

San Ramon CA 94583

MT116

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F150553AA	02/25/2015 01:10	Kevin A Sposito	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	15056A53A	02/25/2015 21:41	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	15056A53A	02/25/2015 21:41	Marie D Beamenderfer	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	150560013A	02/25/2015 15:39	Matthew S Listner	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	150550013A	02/25/2015 20:18	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	150550012A	02/26/2015 18:28	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	150550012A	02/24/2015 17:50	Samantha L Bronder	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	150550013A	02/24/2015 17:50	Samantha L Bronder	1
00368	Nitrate Nitrogen	EPA 300.0	1	15051987151A	02/20/2015 20:11	Clinton M Wilson	5
00228	Sulfate	EPA 300.0	1	15051987151A	02/20/2015 20:11	Clinton M Wilson	5
12150	Total Alkalinity to pH 4.5	SM 2320 B-1997	1	15054011203A	02/24/2015 00:01	Michele L Graham	1
00230	Sulfide	SM 4500-S2 D-2000	1	15054023002A	02/23/2015 11:30	Susan E Hibner	1

Sample Description: MW-116 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7779776
LL Group # 1540073
Account # 11260

Project Name: 211556

Collected: 02/19/2015 08:40 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 02/20/2015 10:25

San Ramon CA 94583

Reported: 03/04/2015 10:54

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved			ug/l	ug/l	
01754	Iron	7439-89-6	510	33.4	1
07058	Manganese	7439-96-5	40.5	0.83	1
SW-846 6010B			ug/l	ug/l	
06035	Lead	7439-92-1	0.17	0.082	1

General Sample Comments

State of Washington Lab Certification No. C457
This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	150541848003	02/27/2015 08:33	Joanne M Gates	1
07058	Manganese	SW-846 6010B	1	150541848003	02/27/2015 08:33	Joanne M Gates	1
06035	Lead	SW-846 6020	1	150616050002A	03/04/2015 06:37	Choon Y Tian	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	150541848003	02/23/2015 12:51	James L Mertz	1
06050	ICPMS-Water, 3020A - U3	SW-846 3010A modified	1	150546050003	02/25/2015 10:10	Christopher M Klumpp	1
06050	ICPMS-Water, 3020A - U3	SW-846 3010A modified	2	150616050002	03/03/2015 07:35	Christopher M Klumpp	1

Sample Description: MW-117 Grab Groundwater
Facility# 211556 **Job#** 386773
 101 Mulford Road - Toledo, WA

LL Sample # WW 7779777
LL Group # 1540073
Account # 11260

Project Name: 211556

Collected: 02/19/2015 07:40 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 02/20/2015 10:25

Reported: 03/04/2015 10:54

MT117

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B					
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx					
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Miscellaneous RSKSOP-175 modified					
07105	Methane	74-82-8	N.D.	3.0	1
GC Petroleum ECY 97-602 NWTPH-Dx					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	29	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	69	1
GC Petroleum ECY 97-602 NWTPH-Dx					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	69	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0					
00368	Nitrate Nitrogen	14797-55-8	N.D.	250	5
00228	Sulfate	14808-79-8	2,600	1,500	5
SM 2320 B-1997					
12150	Total Alkalinity to pH 4.5	n.a.	17,900	700	1
SM 4500-S2 D-2000					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	F150553AA	02/25/2015 01:31	Kevin A Sposito	1

Sample Description: MW-117 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7779777
LL Group # 1540073
Account # 11260

Project Name: 211556

Collected: 02/19/2015 07:40 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 02/20/2015 10:25

Reported: 03/04/2015 10:54

San Ramon CA 94583

MT117

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F150553AA	02/25/2015 01:31	Kevin A Sposito	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	15056B53A	02/26/2015 17:54	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	15056B53A	02/26/2015 17:54	Marie D Beamenderfer	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	150560013A	02/25/2015 15:57	Matthew S Listner	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	150560001A	02/26/2015 23:16	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	150560002A	02/26/2015 20:18	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	150560002A	02/25/2015 10:30	Denise L Trimby	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	150560001A	02/25/2015 10:30	Denise L Trimby	1
00368	Nitrate Nitrogen	EPA 300.0	1	15051987151A	02/20/2015 20:26	Clinton M Wilson	5
00228	Sulfate	EPA 300.0	1	15051987151A	02/20/2015 20:26	Clinton M Wilson	5
12150	Total Alkalinity to pH 4.5	SM 2320 B-1997	1	15054011203A	02/23/2015 21:48	Michele L Graham	1
00230	Sulfide	SM 4500-S2 D-2000	1	15054023002A	02/23/2015 11:30	Susan E Hibner	1

Sample Description: MW-117 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7779778
LL Group # 1540073
Account # 11260

Project Name: 211556

Collected: 02/19/2015 07:40 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 02/20/2015 10:25

San Ramon CA 94583

Reported: 03/04/2015 10:54

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
		SW-846 6010B	ug/l	ug/l	
01754	Iron	7439-89-6	37.5	33.4	1
07058	Manganese	7439-96-5	2.0	0.83	1
		SW-846 6020	ug/l	ug/l	
06035	Lead	7439-92-1	N.D.	0.082	1

General Sample Comments

State of Washington Lab Certification No. C457
This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	150541848003	02/27/2015 08:37	Joanne M Gates	1
07058	Manganese	SW-846 6010B	1	150541848003	02/27/2015 08:37	Joanne M Gates	1
06035	Lead	SW-846 6020	1	150616050002A	03/04/2015 06:39	Choon Y Tian	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	150541848003	02/23/2015 12:51	James L Mertz	1
06050	ICPMS-Water, 3020A - U3	SW-846 3010A modified	1	150546050003	02/25/2015 10:10	Christopher M Klumpp	1
06050	ICPMS-Water, 3020A - U3	SW-846 3010A modified	2	150616050002	03/03/2015 07:35	Christopher M Klumpp	1

Sample Description: MW-118 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7779779
LL Group # 1540073
Account # 11260

Project Name: 211556

Collected: 02/18/2015 10:25 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 02/20/2015 10:25

Reported: 03/04/2015 10:54

MT118

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B			ug/l	ug/l	
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx			ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	29	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	67	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1
The reverse surrogate, capric acid, is present at <1%.					

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	F150553AA	02/25/2015 01:53	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F150553AA	02/25/2015 01:53	Kevin A Sposito	1
08273	NWTPH-Gx water C7-C12	ECY 97-602	1	15056B53A	02/26/2015 18:23	Marie D Beamenderfer	1
01146	GC VOA Water Prep	NWTPH-Gx SW-846 5030B	1	15056B53A	02/26/2015 18:23	Marie D Beamenderfer	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	150560001A	02/26/2015 23:38	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	150560002A	02/26/2015 20:41	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	150560002A	02/25/2015 10:30	Denise L Trimby	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	150560001A	02/25/2015 10:30	Denise L Trimby	1

Sample Description: MW-118 Filtered Grab Groundwater
 Facility# 211556 Job# 386773
 101 Mulford Road - Toledo, WA

LL Sample # WW 7779780
 LL Group # 1540073
 Account # 11260

Project Name: 211556

Collected: 02/18/2015 10:25 by JP

Chevron

6001 Bollinger Canyon Road

Submitted: 02/20/2015 10:25

L4310

Reported: 03/04/2015 10:54

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
06035	Lead	SW-846 6020 7439-92-1	ug/l 0.083	ug/l 0.082	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was filtered in the lab for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	150546050002A	02/27/2015 09:19	Deborah A Krady	1
06050	ICPMS-Water, 3020A - U3	SW-846 3010A modified	1	150546050002	02/24/2015 08:10	Christopher M Klumpp	1

Sample Description: MW-119 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7779781
LL Group # 1540073
Account # 11260

Project Name: 211556

Collected: 02/19/2015 10:57 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 02/20/2015 10:25

Reported: 03/04/2015 10:54

MT119

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B					
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx					
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Miscellaneous RSKSOP-175 modified					
07105	Methane	74-82-8	N.D.	3.0	1
GC Petroleum ECY 97-602 NWTPH-Dx					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	28	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	66	1
GC Petroleum ECY 97-602 NWTPH-Dx					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	28	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	66	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0					
00368	Nitrate Nitrogen	14797-55-8	640	250	5
00228	Sulfate	14808-79-8	1,800	1,500	5
SM 2320 B-1997					
12150	Total Alkalinity to pH 4.5	n.a.	17,800	700	1
SM 4500-S2 D-2000					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	F150553AA	02/25/2015 02:15	Kevin A Sposito	1

Sample Description: MW-119 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7779781
LL Group # 1540073
Account # 11260

Project Name: 211556

Collected: 02/19/2015 10:57 by JP

Chevron

6001 Bollinger Canyon Road

Submitted: 02/20/2015 10:25

L4310

Reported: 03/04/2015 10:54

San Ramon CA 94583

MT119

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F150553AA	02/25/2015 02:15	Kevin A Sposito	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	15056B53A	02/26/2015 18:51	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	15056B53A	02/26/2015 18:51	Marie D Beamenderfer	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	150560013A	02/25/2015 16:15	Matthew S Listner	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	150560001A	02/27/2015 00:00	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	150560002A	02/26/2015 21:03	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	150560002A	02/25/2015 10:30	Denise L Trimby	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	150560001A	02/25/2015 10:30	Denise L Trimby	1
00368	Nitrate Nitrogen	EPA 300.0	1	15051987151A	02/20/2015 20:41	Clinton M Wilson	5
00228	Sulfate	EPA 300.0	1	15051987151A	02/20/2015 20:41	Clinton M Wilson	5
12150	Total Alkalinity to pH 4.5	SM 2320 B-1997	1	15054011203A	02/23/2015 23:00	Michele L Graham	1
00230	Sulfide	SM 4500-S2 D-2000	1	15054023002A	02/23/2015 11:30	Susan E Hibner	1

Sample Description: MW-119 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7779782
LL Group # 1540073
Account # 11260

Project Name: 211556

Collected: 02/19/2015 10:57 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 02/20/2015 10:25

Reported: 03/04/2015 10:54

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
		SW-846 6010B	ug/l	ug/l	
01754	Iron	7439-89-6	321	33.4	1
07058	Manganese	7439-96-5	24.2	0.83	1
		SW-846 6020	ug/l	ug/l	
06035	Lead	7439-92-1	0.18	0.082	1

General Sample Comments

State of Washington Lab Certification No. C457
This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	150541848003	02/27/2015 08:41	Joanne M Gates	1
07058	Manganese	SW-846 6010B	1	150541848003	02/27/2015 08:41	Joanne M Gates	1
06035	Lead	SW-846 6020	1	150546050002A	02/27/2015 09:20	Deborah A Krady	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	150541848003	02/23/2015 12:51	James L Mertz	1
06050	ICPMS-Water, 3020A - U3	SW-846 3010A modified	1	150546050002	02/24/2015 08:10	Christopher M Klump	1

Sample Description: MW-120 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7779783
LL Group # 1540073
Account # 11260

Project Name: 211556

Collected: 02/18/2015 11:30 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 02/20/2015 10:25

Reported: 03/04/2015 10:54

MT120

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B			ug/l	ug/l	
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx			ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	29	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	68	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	68	1
The reverse surrogate, capric acid, is present at <1%.					

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	F150553AA	02/25/2015 02:37	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F150553AA	02/25/2015 02:37	Kevin A Sposito	1
08273	NWTPH-Gx water C7-C12	ECY 97-602	1	15056B53A	02/26/2015 19:19	Marie D Beamenderfer	1
01146	GC VOA Water Prep	NWTPH-Gx SW-846 5030B	1	15056B53A	02/26/2015 19:19	Marie D Beamenderfer	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	150560001A	02/27/2015 00:22	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	150560002A	02/26/2015 21:25	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	150560002A	02/25/2015 10:30	Denise L Trimby	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	150560001A	02/25/2015 10:30	Denise L Trimby	1

Sample Description: MW-120 Filtered Grab Groundwater
 Facility# 211556 Job# 386773
 101 Mulford Road - Toledo, WA

LL Sample # WW 7779784
 LL Group # 1540073
 Account # 11260

Project Name: 211556

Collected: 02/18/2015 11:30 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 02/20/2015 10:25

Reported: 03/04/2015 10:54

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
06035	Lead	SW-846 6020 7439-92-1	ug/l 0.22	ug/l 0.082	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was filtered in the lab for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	150546050002A	02/27/2015 09:22	Deborah A Krady	1
06050	ICPMS-Water, 3020A - U3	SW-846 3010A modified	1	150546050002	02/24/2015 08:10	Christopher M Klumpp	1

Quality Control Summary

Client Name: Chevron
Reported: 03/04/15 at 10:54 AM

Group Number: 1540073

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

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: F150553AA	Sample number(s): 7779762-7779763,7779765,7779767,7779769,7779771,7779773,7779775,7779777,7779779,7779781,7779783							
Benzene	N.D.	0.5	ug/l	94	93	78-120	1	30
Ethylbenzene	N.D.	0.5	ug/l	93	95	80-120	2	30
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	95	93	75-120	2	30
Toluene	N.D.	0.5	ug/l	95	96	80-120	1	30
Xylene (Total)	N.D.	0.5	ug/l	92	92	80-120	0	30
Batch number: 15056A53A	Sample number(s): 7779762-7779763,7779765,7779767,7779769,7779771,7779773,7779775							
NWTPH-Gx water C7-C12	N.D.	50.	ug/l	108	108	80-123	0	30
Batch number: 15056B53A	Sample number(s): 7779777,7779779,7779781,7779783							
NWTPH-Gx water C7-C12	N.D.	50.	ug/l	110	109	80-123	1	30
Batch number: 150560013A	Sample number(s): 7779763,7779767,7779769,7779775,7779777,7779781							
Methane	N.D.	3.0	ug/l	96		85-115		
Batch number: 150550013A	Sample number(s): 7779763,7779765,7779767,7779769,7779771,7779773,7779775							
Diesel Range Organics C12-C24	N.D.	30.	ug/l	54	52	50-113	4	20
Heavy Range Organics C24-C40	N.D.	70.	ug/l					
Batch number: 150560001A	Sample number(s): 7779777,7779779,7779781,7779783							
Diesel Range Organics C12-C24	N.D.	30.	ug/l	68	64	50-113	6	20
Heavy Range Organics C24-C40	N.D.	70.	ug/l					
Batch number: 150550012A	Sample number(s): 7779763,7779765,7779767,7779769,7779771,7779773,7779775							
DRO C12-C24 w/Si Gel	N.D.	30.	ug/l	65	65	32-117	1	20
HRO C24-C40 w/Si Gel	N.D.	70.	ug/l					
Batch number: 150560002A	Sample number(s): 7779777,7779779,7779781,7779783							
DRO C12-C24 w/Si Gel	N.D.	30.	ug/l	56	69	32-117	21*	20
HRO C24-C40 w/Si Gel	N.D.	70.	ug/l					
Batch number: 150541848003	Sample number(s): 7779764,7779768,7779770,7779776,7779778,7779782							
Iron	N.D.	33.4	ug/l	105		80-120		
Manganese	N.D.	0.83	ug/l	102		80-120		
Batch number: 150546050002A	Sample number(s): 7779780,7779782,7779784							
Lead	N.D.	0.082	ug/l	108		80-120		
Batch number: 150616050002A	Sample number(s): 7779764,7779766,7779768,7779770,7779772,7779774,7779776,7779778							

*- 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: 1540073
Reported: 03/04/15 at 10:54 AM

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Lead	N.D.	0.082	ug/l	104		80-120		
Batch number: 15051987151A	Sample number(s): 7779763,7779767,7779769,7779775,7779777,7779781							
Nitrate Nitrogen	N.D.	50.	ug/l	101	102	90-110	1	20
Sulfate	N.D.	300.	ug/l	100	100	90-110	0	20
Batch number: 15054011201A	Sample number(s): 7779769							
Total Alkalinity to pH 4.5	N.D.	700.	ug/l as CaCO3	99		90-110		
Batch number: 15054011202B	Sample number(s): 7779767							
Total Alkalinity to pH 4.5	N.D.	700.	ug/l as CaCO3	98		90-110		
Batch number: 15054011203A	Sample number(s): 7779763,7779775,7779777,7779781							
Total Alkalinity to pH 4.5	N.D.	700.	ug/l as CaCO3	99		90-110		
Batch number: 15054023002A	Sample number(s): 7779763,7779767,7779769,7779775,7779777,7779781							
Sulfide	N.D.	54.	ug/l	107		90-110		

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

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 150560013A	Sample number(s): 7779763,7779767,7779769,7779775,7779777,7779781 UNSPK: P782570								
Methane	85	76	46-129	8	20				
Batch number: 150541848003	Sample number(s): 7779764,7779768,7779770,7779776,7779778,7779782 UNSPK: P780249								
Iron	391 (2)	212 (2)	75-125	7	20	23,600	24,400	3	20
Manganese	113	104	75-125	6	20	175	179	2	20
Batch number: 150546050002A	Sample number(s): 7779780,7779782,7779784 UNSPK: P779577 BKG: P779577								
Lead	136*	119	75-125	13	20	0.10	0.12	13 (1)	20
Batch number: 150616050002A	Sample number(s): 7779764,7779766,7779768,7779770,7779772,7779774,7779776,7779778 UNSPK: 7779770								
Lead	98	83	75-125	17	20	N.D.	N.D.	0 (1)	20
Batch number: 15051987151A	Sample number(s): 7779763,7779767,7779769,7779775,7779777,7779781 UNSPK: P779337								
Nitrate Nitrogen	98		90-110			96	98	2 (1)	20
Sulfate	99		90-110			6,200	6,100	2	20
Batch number: 15054011201A	Sample number(s): 7779769 UNSPK: P780784 BKG: P780784								
Total Alkalinity to pH 4.5	93		17-146			134,000	132,000	2	5
Batch number: 15054011202B	Sample number(s): 7779767 UNSPK: P781029 BKG: 7779767								

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Quality Control Summary

Client Name: Chevron Group Number: 1540073
Reported: 03/04/15 at 10:54 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

<u>Analysis Name</u>	<u>MS</u> <u>%REC</u>	<u>MSD</u> <u>%REC</u>	<u>MS/MSD</u> <u>Limits</u>	<u>RPD</u> <u>RPD</u>	<u>RPD</u> <u>MAX</u>	<u>BKG</u> <u>Conc</u>	<u>DUP</u> <u>Conc</u>	<u>DUP</u> <u>RPD</u>	<u>Dup RPD</u> <u>Max</u>
Total Alkalinity to pH 4.5	88	88	17-146	1	5	17,300	20,100	15*	5
Batch number: 15054011203A	Sample number(s): 7779763,7779775,7779777,7779781 UNSPK: P781047 BKG: P781047								
Total Alkalinity to pH 4.5	86	93	17-146	5	5	116,000	116,000	0	5
Batch number: 15054023002A	Sample number(s): 7779763,7779767,7779769,7779775,7779777,7779781 UNSPK: P777526								
Sulfide	91	101	42-131	10	16	N.D.	N.D.	0 (1)	5

Surrogate Quality Control

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

Analysis Name: BTEX/MTBE
Batch number: F150553AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7779762	100	99	105	97
7779763	101	100	106	97
7779765	101	100	105	99
7779767	99	100	104	97
7779769	98	100	106	98
7779771	100	102	105	98
7779773	99	97	105	100
7779775	99	97	104	98
7779777	100	100	103	97
7779779	100	98	104	98
7779781	100	100	104	97
7779783	100	97	105	100
Blank	99	99	106	97
LCS	98	100	106	100
LCSD	97	98	106	100
Limits:	80-116	77-113	80-113	78-113

Analysis Name: NWTPH-Gx water C7-C12
Batch number: 15056A53A

	Trifluorotoluene-F
7779762	124
7779763	112
7779765	116
7779767	115
7779769	105
7779771	111
7779773	104
7779775	112
Blank	115
LCS	105
LCSD	105

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
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Quality Control Summary

Client Name: Chevron
Reported: 03/04/15 at 10:54 AM

Group Number: 1540073

Surrogate Quality Control

Limits: 63-135

Analysis Name: NWT PH-Gx water C7-C12
Batch number: 15056B53A

Trifluorotoluene-F

7779777	115
7779779	115
7779781	106
7779783	111
Blank	116
LCS	106
LCSD	104

Limits: 63-135

Analysis Name: NWT PH-Dx water w/ 10g Si Gel
Batch number: 150550012A

Orthoterphenyl

7779763	88
7779765	87
7779767	82
7779769	86
7779771	89
7779773	86
7779775	89
Blank	87
LCS	92
LCSD	93

Limits: 50-150

Analysis Name: NWT PH-Dx water
Batch number: 150550013A

Orthoterphenyl

7779763	71
7779765	69
7779767	78
7779769	74
7779771	77
7779773	76
7779775	70
Blank	75
LCS	78
LCSD	73

Limits: 50-150

Analysis Name: NWT PH-Dx water
Batch number: 150560001A

Orthoterphenyl

7779777	82
7779779	89
7779781	94
7779783	85
Blank	80
LCS	88
LCSD	88

Limits: 50-150

*- Outside of specification

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Quality Control Summary

Client Name: Chevron
Reported: 03/04/15 at 10:54 AM

Group Number: 1540073

Surrogate Quality Control

Analysis Name: NWTPH-Dx water w/ 10g Si Gel
Batch number: 150560002A

Orthoterphenyl

7779777	86
7779779	97
7779781	85
7779783	91
Blank	91
LCS	86
LCSD	94

Limits: 50-150

Analysis Name: Volatile Headspace Hydrocarbon
Batch number: 150560013A

Propene

7779763	76
7779767	1*
7779769	1*
7779775	7*
7779777	0*
7779781	0*
Blank	86
LCS	89
MS	74
MSD	70

Limits: 47-116

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
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Chevron Northwest Region Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # 11260

For Eurofins Lancaster Laboratories use only
 Group # 1531540073 Sample # 1779762-84
Instructions on reverse side correspond with circled numbers.

1 Client Information Facility # <u>SS#211556-OML G-R#386773</u> WBS Site Address <u>101 Mulford Road, TOLEDO, WA</u> Chevron PM <u>MHO LEIDOSRS</u> Lead Consultant <u>Russell Shroshnick</u> Consultant/Office <u>Gettler-Ryan, Inc., 6805 Sierra Court, Suite G, Dublin, CA 94568</u> Consultant Project Mgr. <u>Deanna L. Harding, (deanna@grinc.com)</u> Consultant Phone # <u>(925) 551-7444 x180</u> Sampler <u>J. Payne</u>	4 Matrix Sediment <input type="checkbox"/> Potable <input checked="" type="checkbox"/> Ground <input type="checkbox"/> Surface <input type="checkbox"/> NPDES <input type="checkbox"/> Air <input type="checkbox"/>	5 Analyses Requested Total Number of Containers BTEX + MTBE <input type="checkbox"/> 8021 <input type="checkbox"/> 8260 <input type="checkbox"/> Naphth <input type="checkbox"/> 8260 full scan Oxygenates NWTPH-Gx NWTPH-Dx with Silica Gel Cleanup <input checked="" type="checkbox"/> NWTPH-Dx without Silica Gel Cleanup <input checked="" type="checkbox"/> WA VPH <input type="checkbox"/> WA EPH <input type="checkbox"/> Lead <input type="checkbox"/> Total <input type="checkbox"/> Diss. <input checked="" type="checkbox"/> Method NITRATE / SULFATE DISSOLVED IRON / MANGANESE SULFIDE / METHANE ALKALINITY
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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	Collected		3 Grab Composite	4 Matrix			Total Number of Containers	5 Analyses Requested										6 Remarks							
	Date	Time		Soil	Water	Oil		BTEX + MTBE	8021	8260	8260 full scan	Oxygenates	NWTPH-Gx	NWTPH-Dx with Silica Gel Cleanup	NWTPH-Dx without Silica Gel Cleanup	WA VPH	WA EPH		Lead	Total	Diss.	Method	NITRATE / SULFATE	DISSOLVED IRON / MANGANESE	SULFIDE / METHANE
<u>QA</u>	<u>2.19</u>		X		X		<u>2</u>	X			X														
<u>MW-103-</u>	<u>2.19</u>	<u>0945</u>	X		X		<u>16</u>	X			X	X	X			X	X	X	X	X	X	X	X	X	
<u>MW-109-</u>	<u>2.19</u>	<u>0920</u>	X		X		<u>9</u>	X			X	X	X			X	X	X	X	X	X	X	X	X	
<u>MW-112-</u>	<u>2.19</u>	<u>1005</u>	X		X		<u>16</u>	X			X	X	X			X	X	X	X	X	X	X	X	X	
<u>MW-113-</u>	<u>2.19</u>	<u>1310</u>	X		X		<u>16</u>	X			X	X	X			X	X	X	X	X	X	X	X	X	
<u>MW-114-</u>	<u>2.19</u>	<u>0820</u>	X		X		<u>9</u>	X			X	X	X			X	X	X	X	X	X	X	X	X	
<u>MW-115-</u>	<u>2.19</u>	<u>1300</u>	X		X		<u>9</u>	X			X	X	X			X	X	X	X	X	X	X	X	X	
<u>MW-116-</u>	<u>2.19</u>	<u>0840</u>	X		X		<u>16</u>	X			X	X	X			X	X	X	X	X	X	X	X	X	
<u>MW-117-</u>	<u>2.19</u>	<u>0740</u>	X		X		<u>16</u>	X			X	X	X			X	X	X	X	X	X	X	X	X	
<u>MW-118-</u>	<u>2.19</u>	<u>0915</u>	X		X		<u>9</u>	X			X	X	X			X	X	X	X	X	X	X	X	X	
<u>MW-119-</u>	<u>2.19</u>	<u>1007</u>	X		X		<u>16</u>	X			X	X	X			X	X	X	X	X	X	X	X	X	
<u>MW-120-</u>	<u>2.19</u>	<u>1130</u>	X		X		<u>9</u>	X			X	X	X			X	X	X	X	X	X	X	X	X	

6 Remarks

Please report results for Dx with & without sgc. Dissolved Iron, Lead, and Manganese, as well as Alkalinity samples have been field filtered.

Please forward lab results directly to the LC and cc: G-R. The TPW sample results should be forwarded directly to Deanna Harding

7 Turnaround Time Requested (TAT) (please circle) (Standard) 5 day 72 hour 4 day 48 hour EDF/EDD 24 hour	Relinquished by <u>[Signature]</u>	Date <u>2.19.15</u>	Time <u>1700</u>	Received by _____	Date _____	Time _____
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8 Data Package (circle if required) Type I - Full Type VI (Raw Data)	EDD (circle if required) CVX-RTBU-FL_05 (default) Other: _____	Relinquished by Commercial Carrier: UPS <input checked="" type="checkbox"/> FedEx _____ Other _____ Temperature Upon Receipt <u>0.2 - 1.3 C</u>	Received by <u>[Signature]</u> Custody Seals Intact? <u>(Yes)</u>	Date <u>2.20.15</u>	Time <u>1025</u>
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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		
>	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.		

Laboratory Data Qualifiers:

- B - Analyte detected in the blank
- C - Result confirmed by reanalysis
- E - Concentration exceeds the calibration range
- J (or G, I, X) - estimated value \geq the Method Detection Limit (MDL or DL) and the $<$ Limit of Quantitation (LOQ or RL)
- P - Concentration difference between the primary and confirmation column $>40\%$. The lower result is reported.
- U - Analyte was not detected at the value indicated
- V - Concentration difference between the primary and confirmation column $>100\%$. The reporting limit is raised due to this disparity and evident interference...

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

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, ISO17025) 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.

ANALYTICAL RESULTS

Prepared by:

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

Prepared for:

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

March 04, 2015

Project: 211556

Submittal Date: 02/21/2015
Group Number: 1540259
PO Number: 0015146917
Release Number: HORNE
State of Sample Origin: WA

<u>Client Sample Description</u>	<u>Lancaster Labs (LL) #</u>
B-3 Grab Water	7780821
B-3 Filtered Grab Water	7780822
B-4 Grab Water	7780823
B-4 Filtered Grab Water	7780824
MW-111 Grab Water	7780825
MW-111 Filtered Grab Water	7780826

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

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our scopes of accreditation can be viewed at <http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/> .

ELECTRONIC COPY TO	Gettler-Ryan Inc.	Attn: Gettler Ryan
ELECTRONIC COPY TO	Leidos	Attn: Jamalyn Agyei
ELECTRONIC COPY TO	Leidos	Attn: Russ Shropshire

Respectfully Submitted,



Amek Carter
Specialist

(717) 556-7252

Sample Description: B-3 Grab Water
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7780821
LL Group # 1540259
Account # 11260

Project Name: 211556

Collected: 02/20/2015 11:10 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 02/21/2015 10:00

Reported: 03/04/2015 10:56

MRTB3

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B ug/l					
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx ug/l					
08273	NWTPH-Gx water C7-C12	n.a.	650	50	1
GC Miscellaneous RSKSOP-175 modified ug/l					
07105	Methane	74-82-8	44	3.0	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	490	28	1
08271	Heavy Range Organics C24-C40	n.a.	180	66	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	150	28	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	66	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0 ug/l					
00368	Nitrate Nitrogen	14797-55-8	N.D.	250	5
00228	Sulfate	14808-79-8	14,700	1,500	5
SM 2320 B-1997 ug/l as CaCO3					
12150	Total Alkalinity to pH 4.5	n.a.	29,600	700	1
SM 4500-S2 D-2000 ug/l					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457
 Trip blank vials were not received by the laboratory for this sample group.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial# Batch#	Analysis Date and Time	Analyst	Dilution Factor
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Sample Description: B-3 Grab Water
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7780821
LL Group # 1540259
Account # 11260

Project Name: 211556

Collected: 02/20/2015 11:10 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 02/21/2015 10:00

Reported: 03/04/2015 10:56

San Ramon CA 94583

MRTB3

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	D150551AA	02/24/2015 10:59	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D150551AA	02/24/2015 10:59	Daniel H Heller	1
08273	NWTPH-Gx water C7-C12	ECY 97-602	1	15057A53A	02/27/2015 08:55	Brett W Kenyon	1
01146	GC VOA Water Prep	NWTPH-Gx SW-846 5030B	1	15057A53A	02/27/2015 08:55	Brett W Kenyon	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	150560013A	02/25/2015 18:20	Matthew S Listner	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	150560001A	02/27/2015 00:44	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	150560002A	02/26/2015 21:47	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	150560002A	02/25/2015 10:30	Denise L Trimby	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	150560001A	02/25/2015 10:30	Denise L Trimby	1
00368	Nitrate Nitrogen	EPA 300.0	1	15052667601A	02/21/2015 13:25	Drew M Gerhart	5
00228	Sulfate	EPA 300.0	1	15052667601A	02/21/2015 13:25	Drew M Gerhart	5
12150	Total Alkalinity to pH 4.5	SM 2320 B-1997	1	15054011203A	02/24/2015 00:06	Michele L Graham	1
00230	Sulfide	SM 4500-S2 D-2000	1	15054023002A	02/23/2015 11:30	Susan E Hibner	1

Sample Description: B-3 Filtered Grab Water
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7780822
LL Group # 1540259
Account # 11260

Project Name: 211556

Collected: 02/20/2015 11:10 by JP

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

Submitted: 02/21/2015 10:00

Reported: 03/04/2015 10:56

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
		SW-846 6010B	ug/l	ug/l	
01754	Iron	7439-89-6	86.7	33.4	1
07058	Manganese	7439-96-5	2,530	0.83	1
		SW-846 6020	ug/l	ug/l	
06035	Lead	7439-92-1	2.9	0.082	1

General Sample Comments

State of Washington Lab Certification No. C457
This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	150541848003	02/27/2015 08:44	Joanne M Gates	1
07058	Manganese	SW-846 6010B	1	150541848003	02/27/2015 08:44	Joanne M Gates	1
06035	Lead	SW-846 6020	1	150616050002A	03/04/2015 06:41	Choon Y Tian	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	150541848003	02/23/2015 12:51	James L Mertz	1
06050	ICPMS-Water, 3020A - U3	SW-846 3010A modified	1	150546050003	02/25/2015 10:10	Christopher M Klumpp	1
06050	ICPMS-Water, 3020A - U3	SW-846 3010A modified	2	150616050002	03/03/2015 07:35	Christopher M Klumpp	1

Sample Description: B-4 Grab Water
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7780823
LL Group # 1540259
Account # 11260

Project Name: 211556

Collected: 02/20/2015 10:10 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 02/21/2015 10:00

Reported: 03/04/2015 10:56

MRTB4

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B ug/l					
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx ug/l					
08273	NWTPH-Gx water C7-C12	n.a.	550	50	1
GC Miscellaneous RSKSOP-175 modified ug/l					
07105	Methane	74-82-8	46	3.0	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	290	28	1
08271	Heavy Range Organics C24-C40	n.a.	470	66	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	95	28	1
12005	HRO C24-C40 w/Si Gel	n.a.	240	66	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0 ug/l					
00368	Nitrate Nitrogen	14797-55-8	N.D.	250	5
00228	Sulfate	14808-79-8	4,000	1,500	5
SM 2320 B-1997 ug/l as CaCO3					
12150	Total Alkalinity to pH 4.5	n.a.	101,000	700	1
SM 4500-S2 D-2000 ug/l					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457
 Trip blank vials were not received by the laboratory for this sample group.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial# Batch#	Analysis Date and Time	Analyst	Dilution Factor
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Sample Description: B-4 Grab Water
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7780823
LL Group # 1540259
Account # 11260

Project Name: 211556

Collected: 02/20/2015 10:10 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 02/21/2015 10:00

Reported: 03/04/2015 10:56

San Ramon CA 94583

MRTB4

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	D150551AA	02/24/2015 12:08	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D150551AA	02/24/2015 12:08	Daniel H Heller	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	15057A53A	02/27/2015 09:22	Brett W Kenyon	1
01146	GC VOA Water Prep	SW-846 5030B	1	15057A53A	02/27/2015 09:22	Brett W Kenyon	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	150560013A	02/25/2015 18:38	Matthew S Listner	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	150560001A	02/27/2015 01:05	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	150560002A	02/26/2015 22:54	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	150560002A	02/25/2015 10:30	Denise L Trimby	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	150560001A	02/25/2015 10:30	Denise L Trimby	1
00368	Nitrate Nitrogen	EPA 300.0	1	15052667151A	02/21/2015 12:42	Drew M Gerhart	5
00228	Sulfate	EPA 300.0	1	15052667151A	02/21/2015 12:42	Drew M Gerhart	5
12150	Total Alkalinity to pH 4.5	SM 2320 B-1997	1	15054011203B	02/23/2015 23:18	Michele L Graham	1
00230	Sulfide	SM 4500-S2 D-2000	1	15054023002A	02/23/2015 11:30	Susan E Hibner	1

Sample Description: B-4 Filtered Grab Water
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7780824
LL Group # 1540259
Account # 11260

Project Name: 211556

Collected: 02/20/2015 10:10 by JP

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

Submitted: 02/21/2015 10:00

Reported: 03/04/2015 10:56

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
		SW-846 6010B	ug/l	ug/l	
01754	Iron	7439-89-6	1,170	33.4	1
07058	Manganese	7439-96-5	1,280	0.83	1
		SW-846 6020	ug/l	ug/l	
06035	Lead	7439-92-1	0.73	0.082	1

General Sample Comments

State of Washington Lab Certification No. C457
This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	150541848003	02/27/2015 08:48	Joanne M Gates	1
07058	Manganese	SW-846 6010B	1	150541848003	02/27/2015 08:48	Joanne M Gates	1
06035	Lead	SW-846 6020	1	150616050002A	03/04/2015 06:42	Choon Y Tian	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	150541848003	02/23/2015 12:51	James L Mertz	1
06050	ICPMS-Water, 3020A - U3	SW-846 3010A modified	1	150546050003	02/25/2015 10:10	Christopher M Klumpp	1
06050	ICPMS-Water, 3020A - U3	SW-846 3010A modified	2	150616050002	03/03/2015 07:35	Christopher M Klumpp	1

Sample Description: MW-111 Grab Water
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7780825
LL Group # 1540259
Account # 11260

Project Name: 211556

Collected: 02/20/2015 09:09 by JP

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

Submitted: 02/21/2015 10:00

Reported: 03/04/2015 10:56

MR111

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B ug/l					
10945	Benzene	71-43-2	1	0.5	1
10945	Ethylbenzene	100-41-4	44	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	3	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx ug/l					
08273	NWTPH-Gx water C7-C12	n.a.	3,600	250	5
GC Miscellaneous RSKSOP-175 modified ug/l					
07105	Methane	74-82-8	2,700	60	20
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	730	29	1
08271	Heavy Range Organics C24-C40	n.a.	180	68	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	230	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	68	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0 ug/l					
00368	Nitrate Nitrogen	14797-55-8	N.D.	250	5
00228	Sulfate	14808-79-8	1,800	1,500	5
SM 2320 B-1997 ug/l as CaCO3					
12150	Total Alkalinity to pH 4.5	n.a.	206,000	700	1
SM 4500-S2 D-2000 ug/l					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457
Trip blank vials were not received by the laboratory for this sample group.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial# Batch#	Analysis Date and Time	Analyst	Dilution Factor
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Sample Description: MW-111 Grab Water
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7780825
LL Group # 1540259
Account # 11260

Project Name: 211556

Collected: 02/20/2015 09:09 by JP

Chevron

6001 Bollinger Canyon Road

Submitted: 02/21/2015 10:00

L4310

Reported: 03/04/2015 10:56

San Ramon CA 94583

MR111

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	D150551AA	02/24/2015 12:32	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D150551AA	02/24/2015 12:32	Daniel H Heller	1
08273	NWTPH-Gx water C7-C12	ECY 97-602	1	15057A53A	02/27/2015 10:46	Brett W Kenyon	5
		NWTPH-Gx					
01146	GC VOA Water Prep	SW-846 5030B	1	15057A53A	02/27/2015 10:46	Brett W Kenyon	5
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	150570002A	02/27/2015 12:54	Matthew S Listner	20
08271	NWTPH-Dx water	ECY 97-602	1	150560001A	02/27/2015 01:27	Christine E Dolman	1
		NWTPH-Dx modified					
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602	1	150560002A	02/26/2015 22:09	Christine E Dolman	1
		NWTPH-Dx modified					
12007	NW Dx water w/ 10g column	ECY 97-602	1	150560002A	02/25/2015 10:30	Denise L Trimby	1
		NWTPH-Dx 06/97					
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602	1	150560001A	02/25/2015 10:30	Denise L Trimby	1
		NWTPH-Dx 06/97					
00368	Nitrate Nitrogen	EPA 300.0	1	15052667601A	02/21/2015 13:08	Drew M Gerhart	5
00228	Sulfate	EPA 300.0	1	15052667601A	02/21/2015 13:08	Drew M Gerhart	5
12150	Total Alkalinity to pH 4.5	SM 2320 B-1997	1	15054011202A	02/23/2015 18:56	Michele L Graham	1
00230	Sulfide	SM 4500-S2 D-2000	1	15056023001A	02/25/2015 08:05	Susan E Hibner	1

Sample Description: MW-111 Filtered Grab Water
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7780826
LL Group # 1540259
Account # 11260

Project Name: 211556

Collected: 02/20/2015 09:09 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 02/21/2015 10:00

San Ramon CA 94583

Reported: 03/04/2015 10:56

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved					
		SW-846 6010B	ug/l	ug/l	
01754	Iron	7439-89-6	14,500	33.4	1
07058	Manganese	7439-96-5	6,370	0.83	1
		SW-846 6020	ug/l	ug/l	
06035	Lead	7439-92-1	14.3	0.082	1

General Sample Comments

State of Washington Lab Certification No. C457
This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	150541848003	02/27/2015 08:52	Joanne M Gates	1
07058	Manganese	SW-846 6010B	1	150541848003	02/27/2015 08:52	Joanne M Gates	1
06035	Lead	SW-846 6020	1	150616050002A	03/04/2015 06:44	Choon Y Tian	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	150541848003	02/23/2015 12:51	James L Mertz	1
06050	ICPMS-Water, 3020A - U3	SW-846 3010A modified	1	150546050003	02/25/2015 10:10	Christopher M Klumpp	1
06050	ICPMS-Water, 3020A - U3	SW-846 3010A modified	2	150616050002	03/03/2015 07:35	Christopher M Klumpp	1

Quality Control Summary

Client Name: Chevron
Reported: 03/04/15 at 10:56 AM

Group Number: 1540259

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

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: D150551AA	Sample number(s): 7780821,7780823,7780825							
Benzene	N.D.	0.5	ug/l	93		78-120		
Ethylbenzene	N.D.	0.5	ug/l	93		80-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	89		75-120		
Toluene	N.D.	0.5	ug/l	93		80-120		
Xylene (Total)	N.D.	0.5	ug/l	94		80-120		
Batch number: 15057A53A	Sample number(s): 7780821,7780823,7780825							
NWTPH-Gx water C7-C12	N.D.	50.	ug/l	109	107	80-123	2	30
Batch number: 150560013A	Sample number(s): 7780821,7780823							
Methane	N.D.	3.0	ug/l	96		85-115		
Batch number: 150570002A	Sample number(s): 7780825							
Methane	N.D.	3.0	ug/l	98		85-115		
Batch number: 150560001A	Sample number(s): 7780821,7780823,7780825							
Diesel Range Organics C12-C24	N.D.	30.	ug/l	68	64	50-113	6	20
Heavy Range Organics C24-C40	N.D.	70.	ug/l					
Batch number: 150560002A	Sample number(s): 7780821,7780823,7780825							
DRO C12-C24 w/Si Gel	N.D.	30.	ug/l	56	69	32-117	21*	20
HRO C24-C40 w/Si Gel	N.D.	70.	ug/l					
Batch number: 150541848003	Sample number(s): 7780822,7780824,7780826							
Iron	N.D.	33.4	ug/l	105		80-120		
Manganese	N.D.	0.83	ug/l	102		80-120		
Batch number: 150616050002A	Sample number(s): 7780822,7780824,7780826							
Lead	N.D.	0.082	ug/l	104		80-120		
Batch number: 15052667151A	Sample number(s): 7780823							
Nitrate Nitrogen	N.D.	50.	ug/l	99	98	90-110	1	20
Sulfate	N.D.	300.	ug/l	98	97	90-110	2	20
Batch number: 15052667601A	Sample number(s): 7780821,7780825							
Nitrate Nitrogen	N.D.	50.	ug/l	99	98	90-110	0	20
Sulfate	N.D.	300.	ug/l	106	102	90-110	4	20
Batch number: 15054011202A	Sample number(s): 7780825							
Total Alkalinity to pH 4.5	N.D.	700.	ug/l as CaCO3	98		90-110		
Batch number: 15054011203A	Sample number(s): 7780821							

*- 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: 1540259
Reported: 03/04/15 at 10:56 AM

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Total Alkalinity to pH 4.5	N.D.	700.	ug/l as CaCO3	99		90-110		
Batch number: 15054011203B Total Alkalinity to pH 4.5	N.D.	700.	ug/l as CaCO3	99		90-110		
Batch number: 15054023002A Sulfide	N.D.	54.	ug/l	107		90-110		
Batch number: 15056023001A Sulfide	N.D.	54.	ug/l	109		90-110		

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

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: D150551AA	Sample number(s): 7780821,7780823,7780825 UNSPK: 7780821								
Benzene	106	94	72-134	12	30				
Ethylbenzene	107	94	71-134	12	30				
Methyl Tertiary Butyl Ether	102	90	72-126	13	30				
Toluene	104	94	80-125	11	30				
Xylene (Total)	106	93	79-125	13	30				
Batch number: 150560013A Methane	Sample number(s): 7780821,7780823 UNSPK: P782570								
	85	76	46-129	8	20				
Batch number: 150570002A Methane	Sample number(s): 7780825 UNSPK: P781658								
	83 (2)	62 (2)	46-129	3	20				
Batch number: 150541848003 Iron	Sample number(s): 7780822,7780824,7780826 UNSPK: P780249 BKG: P780249								
	391 (2)	212 (2)	75-125	7	20	23,600	24,400	3	20
Manganese	113	104	75-125	6	20	175	179	2	20
Batch number: 150616050002A Lead	Sample number(s): 7780822,7780824,7780826 UNSPK: P779770 BKG: P779770								
	98	83	75-125	17	20	N.D.	N.D.	0 (1)	20
Batch number: 15052667151A Nitrate Nitrogen	Sample number(s): 7780823 UNSPK: P780786 BKG: P780786								
	99		90-110			N.D.	N.D.	0 (1)	20
Sulfate	97		90-110			10,100	10,000	1 (1)	20
Batch number: 15052667601A Nitrate Nitrogen	Sample number(s): 7780821,7780825 UNSPK: P780784 BKG: P780784								
	105		90-110			N.D.	N.D.	0 (1)	20
Sulfate	96		90-110			8,900	8,900	1 (1)	20
Batch number: 15054011202A Total Alkalinity to pH 4.5	Sample number(s): 7780825 UNSPK: P781029 BKG: P781029								
	88	88	17-146	1	5	76,800	77,100	0	5
Batch number: 15054011203A Total Alkalinity to pH 4.5	Sample number(s): 7780821 UNSPK: P781047 BKG: P781047								
	86	93	17-146	5	5	116,000	116,000	0	5

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 03/04/15 at 10:56 AM

Group Number: 1540259

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

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 15054011203B Total Alkalinity to pH 4.5	86	93	17-146	5	5	101,000	101,000	1	5
Batch number: 15054023002A Sulfide	91	101	42-131	10	16	N.D.	N.D.	0 (1)	5
Batch number: 15056023001A Sulfide	106	97	42-131	8	16	91	84	8* (1)	5

Surrogate Quality Control

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

Analysis Name: BTEX/MTBE
Batch number: D150551AA

	<u>Dibromofluoromethane</u>	<u>1,2-Dichloroethane-d4</u>	<u>Toluene-d8</u>	<u>4-Bromofluorobenzene</u>
7780821	95	95	96	99
7780823	95	99	96	98
7780825	94	96	97	102
Blank	98	101	96	98
LCS	93	97	95	100
MS	95	100	97	102
MSD	94	101	96	102
Limits:	80-116	77-113	80-113	78-113

Analysis Name: NWT PH-Gx water C7-C12
Batch number: 15057A53A

	<u>Trifluorotoluene-F</u>
7780821	98
7780823	104
7780825	100
Blank	112
LCS	104
LCSD	104
Limits:	63-135

Analysis Name: NWT PH-Dx water
Batch number: 150560001A

	<u>Orthoterphenyl</u>
7780821	94
7780823	81
7780825	95
Blank	80
LCS	88
LCSD	88
Limits:	50-150

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 03/04/15 at 10:56 AM

Group Number: 1540259

Surrogate Quality Control

Analysis Name: NWTPH-Dx water w/ 10g Si Gel
Batch number: 150560002A

Orthoterphenyl

7780821	95
7780823	83
7780825	92
Blank	91
LCS	86
LCSD	94

Limits: 50-150

Analysis Name: Volatile Headspace Hydrocarbon
Batch number: 150560013A

Propene

7780821	71
7780823	70
Blank	86
LCS	89
MS	74
MSD	70

Limits: 47-116

Analysis Name: Volatile Headspace Hydrocarbon
Batch number: 150570002A

Propene

7780825	93
Blank	90
LCS	91
MS	66
MSD	67

Limits: 47-116

*- 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



Lancaster Laboratories

Acct. # 11260

For Eurofins Lancaster Laboratories use only
 Group # 1540259 Sample # 1180820-26

Instructions on reverse side correspond with circled numbers.

① Client Information				④ Matrix				⑤ Analyses Requested												⑥ Remarks									
Facility # SS#211556-OML G-R#386773 WBS Site Address 101 Mulford Road, TOLEDO, WA Chevron PM MHO LEIDOSRS Lead Consultant Russell Shropshire Consultant/Office Gettler-Ryan, Inc., 6805 Sierra Court, Suite G, Dublin, CA 94568 Consultant Project Mgr. Deanna L. Harding, (deanna@grinc.com) Consultant Phone # (925) 551-7444 x180 Sampler J. Payne				<input type="checkbox"/> Sediment <input type="checkbox"/> Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Air <input type="checkbox"/> Ground <input type="checkbox"/> Surface <input type="checkbox"/> Oil				Total Number of Containers BTEX + MTBE 8021 <input type="checkbox"/> 8260 <input checked="" type="checkbox"/> Naphth <input type="checkbox"/> 8260 full scan Oxygenates NWTPH-Gx NWTPH-Dx with Silica Gel Cleanup <input checked="" type="checkbox"/> NWTPH-Dx without Silica Gel Cleanup <input checked="" type="checkbox"/> WA VPH <input type="checkbox"/> WA EPH <input type="checkbox"/> Lead Total <input type="checkbox"/> Diss. <input checked="" type="checkbox"/> Method NITRATE / SULFATE DISSOLVED IRON / MANGANESE SULFIDE / METHANE ALKALINITY												SCR #: _____ <input type="checkbox"/> Results in Dry Weight <input type="checkbox"/> J value reporting needed <input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds <input type="checkbox"/> 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run ____ oxy's on highest hit <input type="checkbox"/> Run ____ oxy's on all hits									
② Sample Identification		Collected		③														⑥											
Date	Time	Grab	Composite	Soil	Water	Oil	Total Number of Containers	BTEX + MTBE	8021	8260	Naphth	Oxygenates	NWTPH-Gx	NWTPH-Dx with Silica Gel Cleanup	NWTPH-Dx without Silica Gel Cleanup	WA VPH	WA EPH	Lead	Total	Diss.	Method	NITRATE / SULFATE	DISSOLVED IRON / MANGANESE	SULFIDE / METHANE	ALKALINITY				
<i>RA</i>	<i>2:20</i>	<i>X</i>			<i>X</i>		<i>2</i>	<i>X</i>					<i>X</i>																
<i>B-3</i>	<i>11:10</i>	<i>X</i>			<i>X</i>		<i>16</i>	<i>X</i>					<i>X</i>	<i>X</i>	<i>X</i>			<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>				
<i>B-4</i>	<i>10:10</i>	<i>X</i>			<i>X</i>		<i>16</i>	<i>X</i>					<i>X</i>	<i>X</i>	<i>X</i>			<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>				
<i>RAW-111</i>	<i>09:09</i>	<i>X</i>			<i>X</i>		<i>16</i>	<i>X</i>					<i>X</i>	<i>X</i>	<i>X</i>			<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>				
⑦ Turnaround Time Requested (TAT) (please circle) Standard <input checked="" type="radio"/> 5 day 4 day 72 hour 48 hour EDF/EDD 24 hour				Relinquished by <i>[Signature]</i> Date <i>2-20-15</i> Time <i>17:00</i>				Received by _____ Date _____ Time _____				Relinquished by _____ Date _____ Time _____				Received by _____ Date _____ Time _____													
⑧ Data Package (circle if required) Type I - Full Type VI (Raw Data)				EDD (circle if required) CVX-RTBU-FL_05 (default) Other: _____				Relinquished by Commercial Carrier: UPS _____ FedEx _____ Other _____ Temperature Upon Receipt _____ °C				Received by <i>[Signature]</i> Date <i>2/21</i> Time <i>10:00</i> Custody Seals Intact? <input checked="" type="radio"/> Yes <input type="radio"/> No																	

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		
>	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.		

Laboratory Data Qualifiers:

- B - Analyte detected in the blank
- C - Result confirmed by reanalysis
- E - Concentration exceeds the calibration range
- J (or G, I, X) - estimated value \geq the Method Detection Limit (MDL or DL) and the $<$ Limit of Quantitation (LOQ or RL)
- P - Concentration difference between the primary and confirmation column $>40\%$. The lower result is reported.
- U - Analyte was not detected at the value indicated
- V - Concentration difference between the primary and confirmation column $>100\%$. The reporting limit is raised due to this disparity and evident interference...

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

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, ISO17025) 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.

ANALYTICAL RESULTS

Prepared by:

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

Prepared for:

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

May 22, 2015

Project: 211556

Submittal Date: 05/12/2015

Group Number: 1560347

PO Number: 0015146917

Release Number: HORNE

State of Sample Origin: WA

<u>Client Sample Description</u>	<u>Lancaster Labs (LL) #</u>
QA NA Water	7883474
MW-103 Grab Water	7883475
MW-103 Filtered Grab Water	7883476
MW-103 Filtered Grab Water	7883477
MW-110 Grab Water	7883478
MW-110 Filtered Grab Water	7883479
MW-112 Grab Water	7883480
MW-112 Filtered Grab Water	7883481
MW-112 Filtered Grab Water	7883482
MW-119 Grab Water	7883483
MW-119 Filtered Grab Water	7883484
MW-119 Filtered Grab Water	7883485

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

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our scopes of accreditation can be viewed at <http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/>.

ELECTRONIC COPY TO	Leidos	Attn: Russ Shropshire
ELECTRONIC COPY TO	Leidos	Attn: Jamalyn Agyei
ELECTRONIC COPY TO	Gettler-Ryan Inc.	Attn: Gettler Ryan

Respectfully Submitted,



Amek Carter
Specialist

(717) 556-7252

Sample Description: QA NA Water
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7883474
LL Group # 1560347
Account # 11260

Project Name: 211556

Collected: 05/11/2015

Chevron

Submitted: 05/12/2015 09:45

6001 Bollinger Canyon Road
L4310

Reported: 05/22/2015 17:35

San Ramon CA 94583

TL-QA

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles				ug/l	
	SW-846 8260B		ug/l		
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles				ug/l	
	ECY 97-602 NWTPH-Gx		ug/l		
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	Z151412AA	05/21/2015 12:57	Amanda K Richards	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z151412AA	05/21/2015 12:57	Amanda K Richards	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	15133C20A	05/13/2015 22:48	Brett W Kenyon	1
01146	GC VOA Water Prep	SW-846 5030B	1	15133C20A	05/13/2015 22:48	Brett W Kenyon	1

Sample Description: MW-103 Grab Water
Facility# 211556 **Job#** 386773
 101 Mulford Rd - Toledo, WA

LL Sample # WW 7883475
LL Group # 1560347
Account # 11260

Project Name: 211556

Collected: 05/11/2015 12:30 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 05/12/2015 09:45

Reported: 05/22/2015 17:35

TL103

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B ug/l					
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx ug/l					
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Miscellaneous RSKSOP-175 modified ug/l					
07105	Methane	74-82-8	N.D.	3.0	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	28	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	66	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	28	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	66	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0 ug/l					
00368	Nitrate Nitrogen	14797-55-8	N.D.	250	5
00228	Sulfate	14808-79-8	4,100	1,500	5
SM 2320 B-1997 ug/l as CaCO3					
12150	Total Alkalinity to pH 4.5	n.a.	98,400	700	1
SM 4500-S2 D-2000 ug/l					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	Z151412AA	05/21/2015 14:43	Amanda K Richards	1

Sample Description: MW-103 Grab Water
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7883475
LL Group # 1560347
Account # 11260

Project Name: 211556

Collected: 05/11/2015 12:30 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 05/12/2015 09:45

Reported: 05/22/2015 17:35

San Ramon CA 94583

TL103

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z151412AA	05/21/2015 14:43	Amanda K Richards	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	15133C20A	05/14/2015 02:27	Brett W Kenyon	1
01146	GC VOA Water Prep	SW-846 5030B	1	15133C20A	05/14/2015 02:27	Brett W Kenyon	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	151340025A	05/14/2015 18:48	Nicholas R Rossi	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	151330011A	05/14/2015 11:13	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	151330010A	05/19/2015 13:25	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	151330010A	05/13/2015 18:00	Samantha L Bronder	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	151330011A	05/13/2015 18:00	Samantha L Bronder	1
00368	Nitrate Nitrogen	EPA 300.0	1	15132667601A	05/12/2015 13:16	Drew M Gerhart	5
00228	Sulfate	EPA 300.0	1	15132667601A	05/12/2015 13:16	Drew M Gerhart	5
12150	Total Alkalinity to pH 4.5	SM 2320 B-1997	1	15133002201A	05/13/2015 12:00	Michele L Graham	1
00230	Sulfide	SM 4500-S2 D-2000	1	15135023001A	05/15/2015 09:40	Michele L Graham	1

Sample Description: MW-103 Filtered Grab Water
 Facility# 211556 Job# 386773
 101 Mulford Rd - Toledo, WA

LL Sample # WW 7883476
 LL Group # 1560347
 Account # 11260

Project Name: 211556

Collected: 05/11/2015 12:30 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 05/12/2015 09:45

Reported: 05/22/2015 17:35

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
Metals Dissolved					
		SW-846 6010B	ug/l	ug/l	
01754	Iron	7439-89-6	N.D.	33.4	1
07058	Manganese	7439-96-5	21.0	0.83	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	151341848004	05/18/2015 01:36	Tara L Snyder	1
07058	Manganese	SW-846 6010B	1	151341848004	05/18/2015 01:36	Tara L Snyder	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	151341848004	05/15/2015 13:29	Katlin N Cataldi	1

Sample Description: MW-103 Filtered Grab Water
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7883477
LL Group # 1560347
Account # 11260

Project Name: 211556

Collected: 05/11/2015 12:30 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 05/12/2015 09:45

San Ramon CA 94583

Reported: 05/22/2015 17:35

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
Metals Dissolved					
06035	Lead	SW-846 6020 7439-92-1	ug/l 0.12	ug/l 0.082	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was lab filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	151336050001A	05/15/2015 16:25	Choon Y Tian	1
06050	ICPMS-Water, 3020A - U3	SW-846 3010A modified	1	151336050001	05/14/2015 23:00	Annamaria Kuhns	1

Sample Description: MW-110 Grab Water
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7883478
LL Group # 1560347
Account # 11260

Project Name: 211556

Collected: 05/11/2015 10:00 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 05/12/2015 09:45

Reported: 05/22/2015 17:35

TL110

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles		SW-846 8260B	ug/l	ug/l	
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles		ECY 97-602 NWTPH-Gx	ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Petroleum Hydrocarbons		ECY 97-602 NWTPH-Dx modified	ug/l	ug/l	
08271	Diesel Range Organics C12-C24	n.a.	N.D.	29	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	68	1
GC Petroleum Hydrocarbons w/Si		ECY 97-602 NWTPH-Dx modified	ug/l	ug/l	
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	68	1
The reverse surrogate, capric acid, is present at <1%.					

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	Z151412AA	05/21/2015 15:07	Amanda K Richards	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z151412AA	05/21/2015 15:07	Amanda K Richards	1
08273	NWTPH-Gx water C7-C12	ECY 97-602	1	15133C20A	05/14/2015 02:55	Brett W Kenyon	1
		NWTPH-Gx					
01146	GC VOA Water Prep	SW-846 5030B	1	15133C20A	05/14/2015 02:55	Brett W Kenyon	1
08271	NWTPH-Dx water	ECY 97-602	1	151330011A	05/14/2015 11:35	Christine E Dolman	1
		NWTPH-Dx modified					
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602	1	151330010A	05/19/2015 13:47	Christine E Dolman	1
		NWTPH-Dx modified					
12007	NW Dx water w/ 10g column	ECY 97-602	1	151330010A	05/13/2015 18:00	Samantha L Bronder	1
		NWTPH-Dx 06/97					
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602	1	151330011A	05/13/2015 18:00	Samantha L Bronder	1
		NWTPH-Dx 06/97					

Sample Description: MW-110 Filtered Grab Water
 Facility# 211556 Job# 386773
 101 Mulford Rd - Toledo, WA

LL Sample # WW 7883479
 LL Group # 1560347
 Account # 11260

Project Name: 211556

Collected: 05/11/2015 10:00 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 05/12/2015 09:45

Reported: 05/22/2015 17:35

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
Metals Dissolved					
06035	Lead	SW-846 6020 7439-92-1	ug/l 0.28	ug/l 0.082	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was lab filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	151336050001A	05/15/2015 16:26	Choon Y Tian	1
06050	ICPMS-Water, 3020A - U3	SW-846 3010A modified	1	151336050001	05/14/2015 23:00	Annamaria Kuhns	1

Sample Description: MW-112 Grab Water
Facility# 211556 **Job#** 386773
 101 Mulford Rd - Toledo, WA

LL Sample # WW 7883480
LL Group # 1560347
Account # 11260

Project Name: 211556

Collected: 05/11/2015 13:50 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 05/12/2015 09:45

Reported: 05/22/2015 17:35

TL112

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B					
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx					
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Miscellaneous RSKSOP-175 modified					
07105	Methane	74-82-8	270	3.0	1
GC Petroleum ECY 97-602 NWTPH-Dx					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	28	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	66	1
GC Petroleum ECY 97-602 NWTPH-Dx					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	28	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	66	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0					
00368	Nitrate Nitrogen	14797-55-8	1,000	250	5
00228	Sulfate	14808-79-8	3,800	1,500	5
SM 2320 B-1997					
12150	Total Alkalinity to pH 4.5	n.a.	85,700	700	1
SM 4500-S2 D-2000					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	Z151412AA	05/21/2015 14:19	Amanda K Richards	1

Sample Description: MW-112 Grab Water
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7883480
LL Group # 1560347
Account # 11260

Project Name: 211556

Collected: 05/11/2015 13:50 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 05/12/2015 09:45

Reported: 05/22/2015 17:35

San Ramon CA 94583

TL112

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z151412AA	05/21/2015 14:19	Amanda K Richards	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	15133C20A	05/14/2015 03:49	Brett W Kenyon	1
01146	GC VOA Water Prep	SW-846 5030B	1	15133C20A	05/14/2015 03:49	Brett W Kenyon	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	151340025A	05/14/2015 19:24	Nicholas R Rossi	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	151330011A	05/14/2015 11:56	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	151330010A	05/19/2015 14:09	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	151330010A	05/13/2015 18:00	Samantha L Bronder	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	151330011A	05/13/2015 18:00	Samantha L Bronder	1
00368	Nitrate Nitrogen	EPA 300.0	1	15132667601A	05/12/2015 13:32	Drew M Gerhart	5
00228	Sulfate	EPA 300.0	1	15132667601A	05/12/2015 13:32	Drew M Gerhart	5
12150	Total Alkalinity to pH 4.5	SM 2320 B-1997	1	15133002201A	05/13/2015 13:58	Michele L Graham	1
00230	Sulfide	SM 4500-S2 D-2000	1	15135023001A	05/15/2015 09:40	Michele L Graham	1

Sample Description: MW-112 Filtered Grab Water
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7883481
LL Group # 1560347
Account # 11260

Project Name: 211556

Collected: 05/11/2015 13:50 by JP

Chevron

6001 Bollinger Canyon Road

Submitted: 05/12/2015 09:45

L4310

Reported: 05/22/2015 17:35

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
Metals Dissolved					
		SW-846 6010B	ug/l	ug/l	
01754	Iron	7439-89-6	2,190	33.4	1
07058	Manganese	7439-96-5	1,680	0.83	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	151341848004	05/18/2015 01:39	Tara L Snyder	1
07058	Manganese	SW-846 6010B	1	151341848004	05/18/2015 01:39	Tara L Snyder	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	151341848004	05/15/2015 13:29	Katlin N Cataldi	1

Sample Description: MW-112 Filtered Grab Water
 Facility# 211556 Job# 386773
 101 Mulford Rd - Toledo, WA

LL Sample # WW 7883482
 LL Group # 1560347
 Account # 11260

Project Name: 211556

Collected: 05/11/2015 13:50 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 05/12/2015 09:45

Reported: 05/22/2015 17:35

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
Metals Dissolved					
06035	Lead	SW-846 6020 7439-92-1	ug/l 0.46	ug/l 0.082	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was lab filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	151336050001A	05/15/2015 16:28	Choon Y Tian	1
06050	ICPMS-Water, 3020A - U3	SW-846 3010A modified	1	151336050001	05/14/2015 23:00	Annamaria Kuhns	1

Sample Description: MW-119 Grab Water
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7883483
LL Group # 1560347
Account # 11260

Project Name: 211556

Collected: 05/11/2015 11:15 by JP

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

Submitted: 05/12/2015 09:45

Reported: 05/22/2015 17:35

TL119

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B ug/l					
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx ug/l					
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Miscellaneous RSKSOP-175 modified ug/l					
07105	Methane	74-82-8	N.D.	3.0	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	28	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	66	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	28	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	66	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0 ug/l					
00368	Nitrate Nitrogen	14797-55-8	2,300	250	5
00228	Sulfate	14808-79-8	4,700	1,500	5
SM 2320 B-1997 ug/l as CaCO3					
12150	Total Alkalinity to pH 4.5	n.a.	71,700	700	1
SM 4500-S2 D-2000 ug/l					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	Z151412AA	05/21/2015 15:31	Amanda K Richards	1

Sample Description: MW-119 Grab Water
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7883483
LL Group # 1560347
Account # 11260

Project Name: 211556

Collected: 05/11/2015 11:15 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 05/12/2015 09:45

Reported: 05/22/2015 17:35

San Ramon CA 94583

TL119

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z151412AA	05/21/2015 15:31	Amanda K Richards	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	15133C20A	05/14/2015 04:17	Brett W Kenyon	1
01146	GC VOA Water Prep	SW-846 5030B	1	15133C20A	05/14/2015 04:17	Brett W Kenyon	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	151340025A	05/14/2015 19:41	Nicholas R Rossi	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	151330011A	05/14/2015 12:18	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	151330010A	05/19/2015 14:31	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	151330010A	05/13/2015 18:00	Samantha L Bronder	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	151330011A	05/13/2015 18:00	Samantha L Bronder	1
00368	Nitrate Nitrogen	EPA 300.0	1	15132667601A	05/12/2015 13:48	Drew M Gerhart	5
00228	Sulfate	EPA 300.0	1	15132667601A	05/12/2015 13:48	Drew M Gerhart	5
12150	Total Alkalinity to pH 4.5	SM 2320 B-1997	1	15133002201A	05/13/2015 14:04	Michele L Graham	1
00230	Sulfide	SM 4500-S2 D-2000	1	15135023001A	05/15/2015 09:40	Michele L Graham	1

Sample Description: MW-119 Filtered Grab Water
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7883484
LL Group # 1560347
Account # 11260

Project Name: 211556

Collected: 05/11/2015 11:15 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 05/12/2015 09:45

San Ramon CA 94583

Reported: 05/22/2015 17:35

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
Metals Dissolved					
		SW-846 6010B	ug/l	ug/l	
01754	Iron	7439-89-6	N.D.	33.4	1
07058	Manganese	7439-96-5	6.6	0.83	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	151341848004	05/18/2015 01:42	Tara L Snyder	1
07058	Manganese	SW-846 6010B	1	151341848004	05/18/2015 01:42	Tara L Snyder	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	151341848004	05/15/2015 13:29	Katlin N Cataldi	1

Sample Description: MW-119 Filtered Grab Water
 Facility# 211556 Job# 386773
 101 Mulford Rd - Toledo, WA

LL Sample # WW 7883485
 LL Group # 1560347
 Account # 11260

Project Name: 211556

Collected: 05/11/2015 11:15 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 05/12/2015 09:45

Reported: 05/22/2015 17:35

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
Metals Dissolved					
06035	Lead	SW-846 6020 7439-92-1	ug/l 0.24	ug/l 0.082	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was lab filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	151336050001A	05/15/2015 16:30	Choon Y Tian	1
06050	ICPMS-Water, 3020A - U3	SW-846 3010A modified	1	151336050001	05/14/2015 23:00	Annamaria Kuhns	1

Quality Control Summary

Client Name: Chevron
Reported: 05/22/2015 17:35

Group Number: 1560347

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

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: Z151412AA	Sample number(s): 7883474-7883475,7883478,7883480,7883483							
Benzene	N.D.	0.5	ug/l	90	92	78-120	1	30
Ethylbenzene	N.D.	0.5	ug/l	94	95	80-120	1	30
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	103	103	75-120	0	30
Toluene	N.D.	0.5	ug/l	94	94	80-120	0	30
Xylene (Total)	N.D.	0.5	ug/l	98	98	80-120	0	30
Batch number: 15133C20A	Sample number(s): 7883474-7883475,7883478,7883480,7883483							
NWTPH-Gx water C7-C12	N.D.	50.	ug/l	94	95	80-123	1	30
Batch number: 151340025A	Sample number(s): 7883475,7883480,7883483							
Methane	N.D.	3.0	ug/l	109		85-115		
Batch number: 151330011A	Sample number(s): 7883475,7883478,7883480,7883483							
Diesel Range Organics C12-C24	N.D.	30.	ug/l	66	64	50-113	3	20
Heavy Range Organics C24-C40	N.D.	70.	ug/l					
Batch number: 151330010A	Sample number(s): 7883475,7883478,7883480,7883483							
DRO C12-C24 w/Si Gel	N.D.	30.	ug/l	61	56	32-117	10	20
HRO C24-C40 w/Si Gel	N.D.	70.	ug/l					
Batch number: 151336050001A	Sample number(s): 7883477,7883479,7883482,7883485							
Lead	N.D.	0.082	ug/l	102		80-120		
Batch number: 151341848004	Sample number(s): 7883476,7883481,7883484							
Iron	N.D.	33.4	ug/l	102		80-120		
Manganese	N.D.	0.83	ug/l	102		80-120		
Batch number: 15132667601A	Sample number(s): 7883475,7883480,7883483							
Nitrate Nitrogen	N.D.	50.	ug/l	101		90-110		
Sulfate	N.D.	300.	ug/l	99		90-110		
Batch number: 15133002201A	Sample number(s): 7883475,7883480,7883483							
Total Alkalinity to pH 4.5	N.D.	700.	ug/l as CaCO3	99	99	90-110	0	5
Batch number: 15135023001A	Sample number(s): 7883475,7883480,7883483							
Sulfide	N.D.	54.	ug/l	106		90-110		

Sample Matrix Quality Control

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron Group Number: 1560347

Reported: 05/22/2015 17:35

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

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

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD RPD</u>	<u>BKG MAX</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 151340025A Methane	98	99	46-129	1	20			
Sample number(s): 7883475,7883480,7883483 UNSPK: P879550								
Batch number: 151336050001A Lead	106	103	75-125	2	20	0.25	0.22	11 (1) 20
Sample number(s): 7883477,7883479,7883482,7883485 UNSPK: P882627 BKG: P882627								
Batch number: 151341848004 Iron	99	99	75-125	0	20	264	266	1 (1) 20
Manganese	101	102	75-125	1	20	32.3	31.8	1 20
Sample number(s): 7883476,7883481,7883484 UNSPK: P886892 BKG: P886892								
Batch number: 15132667601A Nitrate Nitrogen	103		90-110			680	680	1 (1) 20
Sulfate	102		90-110			9,800	9,700	1 (1) 20
Sample number(s): 7883475,7883480,7883483 UNSPK: P882933 BKG: P882933								
Batch number: 15133002201A Total Alkalinity to pH 4.5	96		90-110			35,300	35,700	1 5
Sample number(s): 7883475,7883480,7883483 UNSPK: P882919 BKG: P882919								
Batch number: 15135023001A Sulfide	92	79*	90-110	15	16	N.D.	N.D.	0 (1) 5
Sample number(s): 7883475,7883480,7883483 UNSPK: P883184 BKG: P883184								

Surrogate Quality Control

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

Analysis Name: BTEX/MTBE

Batch number: Z151412AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7883474	104	101	100	98
7883475	105	99	100	96
7883478	104	101	101	98
7883480	104	99	102	100
7883483	105	102	100	97
Blank	105	98	100	96
LCS	104	100	100	104
LCSD	102	100	100	104
Limits:	80-116	77-113	80-113	78-113

Analysis Name: NWTPH-Gx water C7-C12

Batch number: 15133C20A

	Trifluorotoluene-F
7883474	109
7883475	114
7883478	113
7883480	117
7883483	107
Blank	116
LCS	119
LCSD	127

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 05/22/2015 17:35

Group Number: 1560347

Surrogate Quality Control

Limits: 63-135

Analysis Name: NWTPH-Dx water w/ 10g Si Gel
Batch number: 151330010A

Orthoterphenyl

7883475	68
7883478	89
7883480	97
7883483	82
Blank	77
LCS	86
LCSD	84

Limits: 50-150

Analysis Name: NWTPH-Dx water
Batch number: 151330011A

Orthoterphenyl

7883475	68
7883478	81
7883480	89
7883483	75
Blank	81
LCS	91
LCSD	93

Limits: 50-150

Analysis Name: Volatile Headspace Hydrocarbon
Batch number: 151340025A

Propene

7883475	84
7883480	87
7883483	92
Blank	105
LCS	107
MS	85
MSD	90

Limits: 47-116

*- 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



Lancaster Laboratories

Acct. # 11260 For Eurofins Lancaster Laboratories use only
 Group # 1560347 Sample # 7883474-85
Instructions on reverse side correspond with circled numbers.

1 Client Information			4 Matrix			5 Analyses Requested										6 Remarks										
Facility # SS#211556-OML G-R#386773 WBS Site Address 101 Mulford Road, TOLEDO, WA Chevron PM MHO LEIDOSRS Lead Consultant Russell Shroeder Consultant/Office Gettler-Ryan, Inc., 6805 Sierra Court, Suite G, Dublin, CA 94568 Consultant Project Mgr. Deanna L. Harding, (deanna@grinc.com) Consultant Phone # (925) 551-7444 x180 Sampler J. Payne			<input type="checkbox"/> Sediment <input checked="" type="checkbox"/> Groundwater <input type="checkbox"/> Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Surface <input type="checkbox"/> Oil <input type="checkbox"/> Air			Total Number of Containers BTEX + MTBE 8021 <input type="checkbox"/> 8260 <input type="checkbox"/> Naphth <input type="checkbox"/> 8260 full scan Oxygenates NWTPH-Gx NWTPH-DX with Silica Gel Cleanup <input checked="" type="checkbox"/> NWTPH-DX without Silica Gel Cleanup <input checked="" type="checkbox"/> WA VPH <input type="checkbox"/> WA EPH <input type="checkbox"/> Lead <input type="checkbox"/> Total <input type="checkbox"/> Diss <input checked="" type="checkbox"/> Method 6020 NITRATE SULFATE DISSOLVED IRON & MANGANESE SULFIDE SW20 4500 S20 METHANE / ALKALINITY										SCR #: _____ <input type="checkbox"/> Results in Dry Weight <input type="checkbox"/> J value reporting needed <input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds <input type="checkbox"/> 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run _____ oxy's on highest hit <input type="checkbox"/> Run _____ oxy's on all hits										
2 Sample Identification		3 Collected		Grab	Composite	Soil	Water	Oil	Total Number of Containers	BTEX + MTBE	8021	8260	Naphth	Oxygenates	NWTPH-Gx	NWTPH-DX with Silica Gel Cleanup	NWTPH-DX without Silica Gel Cleanup	WA VPH	WA EPH	Lead	Total	Diss	Method	Remarks		
Date	Time																									
Q.A		5.11.15		X			X		16	X					X	X	X								Please report results for Dx with & without sgc. Dissolved Iron, Lead, and Manganese, as well as Alkalinity samples have been field filtered. Please forward lab results directly to the LC and cc: G-R. The TPW sample results should be forwarded directly to Deanna Harding	
M.W. 103		1230		X			X		9	X					X	X	X									
M.W. 110		1000		X			X		16	X					X	X	X									
M.W. 112		1360		X			X		16	X					X	X	X									
M.W. 119		1115		X			X		16	X					X	X	X									
7 Turnaround Time Requested (TAT) (please circle) Standard <u>72 hour</u> 5 day 4 day EDF/EDD 24 hour				Relinquished by <i>[Signature]</i> Date <u>5.11.15</u> Time <u>1500</u>				Relinquished by _____ Date _____ Time _____				Received by _____ Date _____ Time _____				Received by <u>Branch Branch</u> Date <u>5.12.15</u> Time <u>945</u>										
8 Data Package (circle if required) Type I - Full Type VI (Raw Data)				EDD (circle if required) CVX-RTBU-FL_05 (default) Other: _____				Relinquished by Commercial Carrier: UPS <input checked="" type="checkbox"/> FedEx _____ Other _____				Received by _____ Temperature Upon Receipt <u>16.22</u> °C Custody Seals Intact? <u>Yes</u> No				Received by _____ Date _____ Time _____										

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		
>	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.		

Laboratory Data Qualifiers:

- B - Analyte detected in the blank
- C - Result confirmed by reanalysis
- E - Concentration exceeds the calibration range
- J (or G, I, X) - estimated value \geq the Method Detection Limit (MDL or DL) and the $<$ Limit of Quantitation (LOQ or RL)
- P - Concentration difference between the primary and confirmation column $>40\%$. The lower result is reported.
- U - Analyte was not detected at the value indicated
- V - Concentration difference between the primary and confirmation column $>100\%$. The reporting limit is raised due to this disparity and evident interference...

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

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, ISO17025) 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.

ANALYTICAL RESULTS

Prepared by:

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

Prepared for:

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

May 26, 2015

Project: 211556Submittal Date: 05/13/2015
Group Number: 1560744
PO Number: 0015146917
Release Number: HORNE
HORNE
State of Sample Origin: WA

<u>Client Sample Description</u>	<u>Lancaster Labs (LL) #</u>
QA NA Water	7885404
MW-109 Grab Groundwater	7885405
MW-109 Filtered Grab Groundwater	7885406
MW-114 Grab Groundwater	7885407
MW-114 Filtered Grab Groundwater	7885408
MW-115 Grab Groundwater	7885409
MW-115 Filtered Grab Groundwater	7885410
MW-116 Grab Groundwater	7885411
MW-116 Filtered Grab Groundwater	7885412
MW-116 Filtered Grab Groundwater	7885413
MW-117 Grab Groundwater	7885414
MW-117 Filtered Grab Groundwater	7885415
MW-117 Filtered Grab Groundwater	7885416
MW-118 Grab Groundwater	7885417
MW-118 Filtered Grab Groundwater	7885418
MW-120 Grab Groundwater	7885419
MW-120 Filtered Grab Groundwater	7885420

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

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our scopes of accreditation can be viewed at <http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/> .

ELECTRONIC Leidos
COPY TO

Attn: Russ Shropshire

ELECTRONIC Leidos

COPY TO

ELECTRONIC Gettler-Ryan Inc.

COPY TO

Attn: Jamalyn Agyei

Attn: Gettler Ryan

Respectfully Submitted,



Amek Carter
Specialist

(717) 556-7252

Sample Description: QA NA Water
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7885404
LL Group # 1560744
Account # 11260

Project Name: 211556

Collected: 05/12/2015

Chevron

Submitted: 05/13/2015 09:50

6001 Bollinger Canyon Road
L4310

Reported: 05/26/2015 14:24

San Ramon CA 94583

1556T

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles			SW-846 8260B	ug/l	
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles			ECY 97-602 NWTPH-Gx	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	F151422AA	05/22/2015 08:12	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F151422AA	05/22/2015 08:12	Anita M Dale	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	15134A20A	05/14/2015 19:43	Brett W Kenyon	1
01146	GC VOA Water Prep	SW-846 5030B	1	15134A20A	05/14/2015 19:43	Brett W Kenyon	1

Sample Description: MW-109 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7885405
LL Group # 1560744
Account # 11260

Project Name: 211556

Collected: 05/12/2015 15:25 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 05/13/2015 09:50

Reported: 05/26/2015 14:24

56109

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B ug/l					
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx ug/l					
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	29	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	67	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1
The reverse surrogate, capric acid, is present at <1%.					

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	F151422AA	05/22/2015 08:34	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F151422AA	05/22/2015 08:34	Anita M Dale	1
08273	NWTPH-Gx water C7-C12	ECY 97-602	1	15134A20A	05/14/2015 21:33	Brett W Kenyon	1
		NWTPH-Gx					
01146	GC VOA Water Prep	SW-846 5030B	1	15134A20A	05/14/2015 21:33	Brett W Kenyon	1
08271	NWTPH-Dx water	ECY 97-602	1	151340009A	05/15/2015 22:05	Christine E Dolman	1
		NWTPH-Dx modified					
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602	1	151340010A	05/20/2015 15:17	Christine E Dolman	1
		NWTPH-Dx modified					
12007	NW Dx water w/ 10g column	ECY 97-602	1	151340010A	05/14/2015 18:30	Samantha L Bronder	1
		NWTPH-Dx 06/97					
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602	1	151340009A	05/14/2015 18:30	Samantha L Bronder	1
		NWTPH-Dx 06/97					

Sample Description: MW-109 Filtered Grab Groundwater
 Facility# 211556 Job# 386773
 101 Mulford Rd - Toledo, WA

LL Sample # WW 7885406
 LL Group # 1560744
 Account # 11260

Project Name: 211556

Collected: 05/12/2015 15:25 by JP

Chevron

6001 Bollinger Canyon Road
 L4310

Submitted: 05/13/2015 09:50

Reported: 05/26/2015 14:24

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
Metals Dissolved					
06035	Lead	SW-846 6020 7439-92-1	ug/l 0.12	ug/l 0.082	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was lab filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	151406050007A	05/26/2015 09:14	Choon Y Tian	1
06050	ICPMS-Water, 3020A - U3	SW-846 3010A modified	1	151406050007	05/24/2015 08:25	Christopher M Klumpp	1

Sample Description: MW-114 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7885407
LL Group # 1560744
Account # 11260

Project Name: 211556

Collected: 05/12/2015 16:30 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 05/13/2015 09:50

Reported: 05/26/2015 14:24

56114

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B ug/l					
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx ug/l					
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	29	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	67	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1
The reverse surrogate, capric acid, is present at <1%.					

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	F151422AA	05/22/2015 09:38	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F151422AA	05/22/2015 09:38	Anita M Dale	1
08273	NWTPH-Gx water C7-C12	ECY 97-602	1	15134A20A	05/14/2015 22:00	Brett W Kenyon	1
		NWTPH-Gx					
01146	GC VOA Water Prep	SW-846 5030B	1	15134A20A	05/14/2015 22:00	Brett W Kenyon	1
08271	NWTPH-Dx water	ECY 97-602	1	151340009A	05/15/2015 22:27	Christine E Dolman	1
		NWTPH-Dx modified					
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602	1	151340010A	05/20/2015 15:38	Christine E Dolman	1
		NWTPH-Dx modified					
12007	NW Dx water w/ 10g column	ECY 97-602	1	151340010A	05/14/2015 18:30	Samantha L Bronder	1
		NWTPH-Dx 06/97					
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602	1	151340009A	05/14/2015 18:30	Samantha L Bronder	1
		NWTPH-Dx 06/97					

Sample Description: MW-114 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7885408
LL Group # 1560744
Account # 11260

Project Name: 211556

Collected: 05/12/2015 16:30 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 05/13/2015 09:50

Reported: 05/26/2015 14:24

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
Metals Dissolved		SW-846 6020	ug/l	ug/l	
06035	Lead	7439-92-1	0.55	0.082	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was lab filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	151406050007A	05/26/2015 09:16	Choon Y Tian	1
06050	ICPMS-Water, 3020A - U3	SW-846 3010A modified	1	151406050007	05/24/2015 08:25	Christopher M Klumpp	1

Sample Description: MW-115 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7885409
LL Group # 1560744
Account # 11260

Project Name: 211556

Collected: 05/12/2015 14:10 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 05/13/2015 09:50

Reported: 05/26/2015 14:24

56115

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B ug/l					
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx ug/l					
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	29	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	68	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	68	1
The reverse surrogate, capric acid, is present at <1%.					

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	Z151411AA	05/21/2015 15:43	Amanda K Richards	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z151411AA	05/21/2015 15:43	Amanda K Richards	1
08273	NWTPH-Gx water C7-C12	ECY 97-602	1	15134A20A	05/14/2015 22:28	Brett W Kenyon	1
		NWTPH-Gx					
01146	GC VOA Water Prep	SW-846 5030B	1	15134A20A	05/14/2015 22:28	Brett W Kenyon	1
08271	NWTPH-Dx water	ECY 97-602	1	151340009A	05/15/2015 22:49	Christine E Dolman	1
		NWTPH-Dx modified					
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602	1	151340010A	05/20/2015 16:00	Christine E Dolman	1
		NWTPH-Dx modified					
12007	NW Dx water w/ 10g column	ECY 97-602	1	151340010A	05/14/2015 18:30	Samantha L Bronder	1
		NWTPH-Dx 06/97					
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602	1	151340009A	05/14/2015 18:30	Samantha L Bronder	1
		NWTPH-Dx 06/97					

Sample Description: MW-115 Filtered Grab Groundwater
 Facility# 211556 Job# 386773
 101 Mulford Rd - Toledo, WA

LL Sample # WW 7885410
 LL Group # 1560744
 Account # 11260

Project Name: 211556

Collected: 05/12/2015 14:10 by JP

Chevron

6001 Bollinger Canyon Road
 L4310

Submitted: 05/13/2015 09:50

Reported: 05/26/2015 14:24

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
Metals Dissolved					
06035	Lead	SW-846 6020 7439-92-1	ug/l 0.60	ug/l 0.082	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was lab filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	151406050007A	05/26/2015 09:18	Choon Y Tian	1
06050	ICPMS-Water, 3020A - U3	SW-846 3010A modified	1	151406050007	05/24/2015 08:25	Christopher M Klumpp	1

Sample Description: MW-116 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7885411
LL Group # 1560744
Account # 11260

Project Name: 211556

Collected: 05/12/2015 10:10 by JP

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

Submitted: 05/13/2015 09:50

Reported: 05/26/2015 14:24

56116

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B ug/l					
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx ug/l					
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Miscellaneous RSKSOP-175 modified ug/l					
07105	Methane	74-82-8	N.D.	3.0	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	29	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	68	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	68	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0 ug/l					
00368	Nitrate Nitrogen	14797-55-8	420	250	5
00228	Sulfate	14808-79-8	7,000	1,500	5
SM 2320 B-1997 ug/l as CaCO3					
12150	Total Alkalinity to pH 4.5	n.a.	26,200	700	1
SM 4500-S2 D-2000 ug/l					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	Z151411AA	05/21/2015 16:07	Amanda K Richards	1

Sample Description: MW-116 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7885411
LL Group # 1560744
Account # 11260

Project Name: 211556

Collected: 05/12/2015 10:10 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 05/13/2015 09:50

Reported: 05/26/2015 14:24

San Ramon CA 94583

56116

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z151411AA	05/21/2015 16:07	Amanda K Richards	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	15134A20A	05/14/2015 23:22	Brett W Kenyon	1
01146	GC VOA Water Prep	SW-846 5030B	1	15134A20A	05/14/2015 23:22	Brett W Kenyon	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	151340025A	05/14/2015 19:59	Nicholas R Rossi	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	151340009A	05/15/2015 23:11	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	151340010A	05/20/2015 16:22	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	151340010A	05/14/2015 18:30	Samantha L Bronder	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	151340009A	05/14/2015 18:30	Samantha L Bronder	1
00368	Nitrate Nitrogen	EPA 300.0	1	15133667152A	05/13/2015 15:23	Drew M Gerhart	5
00228	Sulfate	EPA 300.0	1	15133667152A	05/16/2015 11:06	Clinton M Wilson	5
12150	Total Alkalinity to pH 4.5	SM 2320 B-1997	1	15134003105A	05/15/2015 03:11	Michele L Graham	1
00230	Sulfide	SM 4500-S2 D-2000	1	15135023002A	05/15/2015 11:40	Michele L Graham	1

Sample Description: MW-116 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7885412
LL Group # 1560744
Account # 11260

Project Name: 211556

Collected: 05/12/2015 10:10 by JP

Chevron

6001 Bollinger Canyon Road

Submitted: 05/13/2015 09:50

L4310

Reported: 05/26/2015 14:24

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
Metals Dissolved					
		SW-846 6010B	ug/l	ug/l	
01754	Iron	7439-89-6	N.D.	33.4	1
07058	Manganese	7439-96-5	1.4	0.83	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	151351848003	05/19/2015 12:53	Joanne M Gates	1
07058	Manganese	SW-846 6010B	1	151351848003	05/19/2015 12:53	Joanne M Gates	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	151351848003	05/18/2015 21:30	Annamaria Kuhns	1

Sample Description: MW-116 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7885413
LL Group # 1560744
Account # 11260

Project Name: 211556

Collected: 05/12/2015 10:10 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 05/13/2015 09:50

Reported: 05/26/2015 14:24

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
Metals Dissolved		SW-846 6020	ug/l	ug/l	
06035	Lead	7439-92-1	N.D.	0.082	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was lab filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	151406050007A	05/26/2015 09:20	Choon Y Tian	1
06050	ICPMS-Water, 3020A - U3	SW-846 3010A modified	1	151406050007	05/24/2015 08:25	Christopher M Klumpp	1

Sample Description: MW-117 Grab Groundwater
Facility# 211556 **Job#** 386773
 101 Mulford Rd - Toledo, WA

LL Sample # WW 7885414
LL Group # 1560744
Account # 11260

Project Name: 211556

Collected: 05/12/2015 08:50 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 05/13/2015 09:50

Reported: 05/26/2015 14:24

56117

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B ug/l					
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx ug/l					
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Miscellaneous RSKSOP-175 modified ug/l					
07105	Methane	74-82-8	N.D.	3.0	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	29	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	67	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0 ug/l					
00368	Nitrate Nitrogen	14797-55-8	450	250	5
00228	Sulfate	14808-79-8	7,600	1,500	5
SM 2320 B-1997 ug/l as CaCO3					
12150	Total Alkalinity to pH 4.5	n.a.	26,300	700	1
SM 4500-S2 D-2000 ug/l					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	Z151411AA	05/21/2015 16:31	Amanda K Richards	1

Sample Description: MW-117 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7885414
LL Group # 1560744
Account # 11260

Project Name: 211556

Collected: 05/12/2015 08:50 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 05/13/2015 09:50

Reported: 05/26/2015 14:24

San Ramon CA 94583

56117

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z151411AA	05/21/2015 16:31	Amanda K Richards	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	15134A20A	05/14/2015 23:50	Brett W Kenyon	1
01146	GC VOA Water Prep	SW-846 5030B	1	15134A20A	05/14/2015 23:50	Brett W Kenyon	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	151340025A	05/14/2015 20:17	Nicholas R Rossi	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	151340009A	05/15/2015 23:32	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	151340010A	05/20/2015 16:44	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	151340010A	05/14/2015 18:30	Samantha L Bronder	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	151340009A	05/14/2015 18:30	Samantha L Bronder	1
00368	Nitrate Nitrogen	EPA 300.0	1	15133667152A	05/13/2015 16:09	Drew M Gerhart	5
00228	Sulfate	EPA 300.0	1	15133667152A	05/16/2015 11:52	Clinton M Wilson	5
12150	Total Alkalinity to pH 4.5	SM 2320 B-1997	1	15134003104A	05/15/2015 02:28	Michele L Graham	1
00230	Sulfide	SM 4500-S2 D-2000	1	15135023002A	05/15/2015 11:40	Michele L Graham	1

Sample Description: MW-117 Filtered Grab Groundwater
 Facility# 211556 Job# 386773
 101 Mulford Rd - Toledo, WA

LL Sample # WW 7885415
 LL Group # 1560744
 Account # 11260

Project Name: 211556

Collected: 05/12/2015 08:50 by JP

Chevron

6001 Bollinger Canyon Road
 L4310

Submitted: 05/13/2015 09:50

Reported: 05/26/2015 14:24

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
Metals Dissolved					
		SW-846 6010B	ug/l	ug/l	
01754	Iron	7439-89-6	N.D.	33.4	1
07058	Manganese	7439-96-5	N.D.	0.83	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	151351848003	05/19/2015 13:26	Joanne M Gates	1
07058	Manganese	SW-846 6010B	1	151351848003	05/19/2015 13:26	Joanne M Gates	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	151351848003	05/18/2015 21:30	Annamaria Kuhns	1

Sample Description: MW-117 Filtered Grab Groundwater
 Facility# 211556 Job# 386773
 101 Mulford Rd - Toledo, WA

LL Sample # WW 7885416
 LL Group # 1560744
 Account # 11260

Project Name: 211556

Collected: 05/12/2015 08:50 by JP

Chevron

6001 Bollinger Canyon Road
 L4310

Submitted: 05/13/2015 09:50

Reported: 05/26/2015 14:24

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
Metals Dissolved					
06035	Lead	SW-846 6020 7439-92-1	ug/l N.D.	ug/l 0.082	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was lab filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	151406050007A	05/26/2015 09:21	Choon Y Tian	1
06050	ICPMS-Water, 3020A - U3	SW-846 3010A modified	1	151406050007	05/24/2015 08:25	Christopher M Klumpp	1

Sample Description: MW-118 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7885417
LL Group # 1560744
Account # 11260

Project Name: 211556

Collected: 05/12/2015 11:50 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 05/13/2015 09:50

Reported: 05/26/2015 14:24

56118

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B ug/l					
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx ug/l					
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	69	29	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	67	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	75	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1
The reverse surrogate, capric acid, is present at <1%.					

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	Z151411AA	05/21/2015 16:55	Amanda K Richards	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z151411AA	05/21/2015 16:55	Amanda K Richards	1
08273	NWTPH-Gx water C7-C12	ECY 97-602	1	15134A20A	05/15/2015 00:17	Brett W Kenyon	1
		NWTPH-Gx					
01146	GC VOA Water Prep	SW-846 5030B	1	15134A20A	05/15/2015 00:17	Brett W Kenyon	1
08271	NWTPH-Dx water	ECY 97-602	1	151340009A	05/15/2015 23:54	Christine E Dolman	1
		NWTPH-Dx modified					
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602	1	151340010A	05/20/2015 17:06	Christine E Dolman	1
		NWTPH-Dx modified					
12007	NW Dx water w/ 10g column	ECY 97-602	1	151340010A	05/14/2015 18:30	Samantha L Bronder	1
		NWTPH-Dx 06/97					
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602	1	151340009A	05/14/2015 18:30	Samantha L Bronder	1
		NWTPH-Dx 06/97					

Sample Description: MW-118 Filtered Grab Groundwater
 Facility# 211556 Job# 386773
 101 Mulford Rd - Toledo, WA

LL Sample # WW 7885418
 LL Group # 1560744
 Account # 11260

Project Name: 211556

Collected: 05/12/2015 11:50 by JP

Chevron

6001 Bollinger Canyon Road
 L4310

Submitted: 05/13/2015 09:50

Reported: 05/26/2015 14:24

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
Metals Dissolved					
06035	Lead	SW-846 6020 7439-92-1	ug/l 0.17	ug/l 0.082	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was lab filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	151406050007A	05/26/2015 09:28	Choon Y Tian	1
06050	ICPMS-Water, 3020A - U3	SW-846 3010A modified	1	151406050007	05/24/2015 08:25	Christopher M Klumpp	1

Sample Description: MW-120 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Rd - Toledo, WA

LL Sample # WW 7885419
LL Group # 1560744
Account # 11260

Project Name: 211556

Collected: 05/12/2015 13:05 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 05/13/2015 09:50

Reported: 05/26/2015 14:24

56120

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B ug/l					
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx ug/l					
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	29	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	68	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	68	1
The reverse surrogate, capric acid, is present at <1%.					

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	Z151411AA	05/21/2015 17:19	Amanda K Richards	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z151411AA	05/21/2015 17:19	Amanda K Richards	1
08273	NWTPH-Gx water C7-C12	ECY 97-602	1	15134A20A	05/15/2015 00:44	Brett W Kenyon	1
		NWTPH-Gx					
01146	GC VOA Water Prep	SW-846 5030B	1	15134A20A	05/15/2015 00:44	Brett W Kenyon	1
08271	NWTPH-Dx water	ECY 97-602	1	151340009A	05/16/2015 00:16	Christine E Dolman	1
		NWTPH-Dx modified					
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602	1	151340010A	05/20/2015 17:28	Christine E Dolman	1
		NWTPH-Dx modified					
12007	NW Dx water w/ 10g column	ECY 97-602	1	151340010A	05/14/2015 18:30	Samantha L Bronder	1
		NWTPH-Dx 06/97					
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602	1	151340009A	05/14/2015 18:30	Samantha L Bronder	1
		NWTPH-Dx 06/97					

Sample Description: MW-120 Filtered Grab Groundwater
 Facility# 211556 Job# 386773
 101 Mulford Rd - Toledo, WA

LL Sample # WW 7885420
 LL Group # 1560744
 Account # 11260

Project Name: 211556

Collected: 05/12/2015 13:05 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 05/13/2015 09:50

Reported: 05/26/2015 14:24

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
Metals Dissolved					
06035	Lead	SW-846 6020 7439-92-1	ug/l 0.10	ug/l 0.082	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was lab filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	151406050007A	05/26/2015 09:30	Choon Y Tian	1
06050	ICPMS-Water, 3020A - U3	SW-846 3010A modified	1	151406050007	05/24/2015 08:25	Christopher M Klumpp	1

Quality Control Summary

Client Name: Chevron
Reported: 05/26/2015 14:24

Group Number: 1560744

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

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: F151422AA	Sample number(s): 7885404-7885405,7885407							
Benzene	N.D.	0.5	ug/l	98		78-120		
Ethylbenzene	N.D.	0.5	ug/l	95		80-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	93		75-120		
Toluene	N.D.	0.5	ug/l	97		80-120		
Xylene (Total)	N.D.	0.5	ug/l	97		80-120		
Batch number: Z151411AA	Sample number(s): 7885409,7885411,7885414,7885417,7885419							
Benzene	N.D.	0.5	ug/l	89	90	78-120	2	30
Ethylbenzene	N.D.	0.5	ug/l	93	94	80-120	1	30
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	100	101	75-120	2	30
Toluene	N.D.	0.5	ug/l	94	96	80-120	3	30
Xylene (Total)	N.D.	0.5	ug/l	96	97	80-120	1	30
Batch number: 15134A20A	Sample number(s): 7885404-7885405,7885407,7885411,7885414,7885417,7885419							
NWTPH-Gx water C7-C12	N.D.	50.	ug/l	94	94	80-123	1	30
Batch number: 151340025A	Sample number(s): 7885411,7885414							
Methane	N.D.	3.0	ug/l	109		85-115		
Batch number: 151340009A	Sample number(s): 7885405,7885407,7885409,7885411,7885414,7885417,7885419							
Diesel Range Organics C12-C24	N.D.	30.	ug/l	68	60	50-113	13	20
Heavy Range Organics C24-C40	N.D.	70.	ug/l					
Batch number: 151340010A	Sample number(s): 7885405,7885407,7885409,7885411,7885414,7885417,7885419							
DRO C12-C24 w/Si Gel	N.D.	30.	ug/l	57	56	32-117	2	20
HRO C24-C40 w/Si Gel	N.D.	70.	ug/l					
Batch number: 151351848003	Sample number(s): 7885412,7885415							
Iron	N.D.	33.4	ug/l	99		80-120		
Manganese	N.D.	0.83	ug/l	98		80-120		
Batch number: 151406050007A	Sample number(s): 7885406,7885408,7885410,7885413,7885416,7885418,7885420							
Lead	N.D.	0.082	ug/l	104		80-120		
Batch number: 15133667152A	Sample number(s): 7885411,7885414							
Nitrate Nitrogen	N.D.	50.	ug/l	100		90-110		
Sulfate	N.D.	300.	ug/l	98		90-110		
Batch number: 15134003104A	Sample number(s): 7885414							
Total Alkalinity to pH 4.5	930	700.	ug/l as CaCO3	97		90-110		

*- 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: 1560744
Reported: 05/26/2015 14:24

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 15134003105A Total Alkalinity to pH 4.5	N.D.	700.	Sample number(s): 7885411 ug/l as CaCO3	96		90-110		
Batch number: 15135023002A Sulfide	N.D.	54.	Sample number(s): 7885411,7885414 ug/l	106		90-110		

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

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: F151422AA	Sample number(s): 7885404-7885405,7885407 UNSPK: 7885405								
Benzene	100	97	72-134	3	30				
Ethylbenzene	99	95	71-134	4	30				
Methyl Tertiary Butyl Ether	89	88	72-126	2	30				
Toluene	100	97	80-125	3	30				
Xylene (Total)	99	95	79-125	4	30				
Batch number: 151340025A	Sample number(s): 7885411,7885414 UNSPK: P879550								
Methane	98	99	46-129	1	20				
Batch number: 151351848003	Sample number(s): 7885412,7885415 UNSPK: 7885412 BKG: 7885412								
Iron	98	99	75-125	1	20	N.D.	N.D.	0 (1)	20
Manganese	98	99	75-125	1	20	1.4	1.5	6 (1)	20
Batch number: 151406050007A	Sample number(s): 7885406,7885408,7885410,7885413,7885416,7885418,7885420 UNSPK: P893283 BKG: P893283								
Lead	107	109	75-125	1	20	0.21	0.19	8 (1)	20
Batch number: 15133667152A	Sample number(s): 7885411,7885414 UNSPK: 7885411 BKG: 7885411								
Nitrate Nitrogen	105		90-110			420	420	1 (1)	20
Sulfate	98		90-110			7,000	7,100	1 (1)	20
Batch number: 15134003104A	Sample number(s): 7885414 UNSPK: P884709 BKG: P884709								
Total Alkalinity to pH 4.5	62*		90-110			106,000	107,000	1	5
Batch number: 15134003105A	Sample number(s): 7885411 UNSPK: 7885411 BKG: 7885411								
Total Alkalinity to pH 4.5	91		90-110			26,200	27,000	3	5
Batch number: 15135023002A	Sample number(s): 7885411,7885414 UNSPK: P884709 BKG: P884709								
Sulfide	93	93	90-110	0	16	300	320	6* (1)	5

Surrogate Quality Control

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

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 05/26/2015 14:24

Group Number: 1560744

Surrogate Quality Control

Analysis Name: BTEX/MTBE
Batch number: F151422AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7885404	97	100	98	90
7885405	97	100	99	93
7885407	98	104	99	91
Blank	97	101	98	90
LCS	95	101	99	94
MS	96	106	98	94
MSD	97	104	98	93
Limits:	80-116	77-113	80-113	78-113

Analysis Name: BTEX/MTBE
Batch number: Z151411AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7885409	105	99	101	98
7885411	105	100	101	98
7885414	105	100	102	97
7885417	106	98	99	96
7885419	105	99	101	98
Blank	103	98	101	98
LCS	102	97	101	104
LCSD	101	100	101	103
Limits:	80-116	77-113	80-113	78-113

Analysis Name: NWTPH-Gx water C7-C12
Batch number: 15134A20A

	Trifluorotoluene-F
7885404	117
7885405	104
7885407	117
7885409	106
7885411	105
7885414	113
7885417	113
7885419	107
Blank	107
LCS	122
LCSD	126
Limits:	63-135

Analysis Name: NWTPH-Dx water
Batch number: 151340009A

	Orthoterphenyl
7885405	77
7885407	98
7885409	89
7885411	92
7885414	99
7885417	92
7885419	94
Blank	94
LCS	98
LCSD	89
Limits:	50-150

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 05/26/2015 14:24

Group Number: 1560744

Surrogate Quality Control

Analysis Name: NWTPH-Dx water w/ 10g Si Gel

Batch number: 151340010A

Orthoterphenyl

7885405	68
7885407	76
7885409	86
7885411	81
7885414	79
7885417	81
7885419	86
Blank	82
LCS	83
LCSD	84

Limits: 50-150

Analysis Name: Volatile Headspace Hydrocarbon

Batch number: 151340025A

Propene

7885411	93
7885414	93
Blank	105
LCS	107
MS	85
MSD	90

Limits: 47-116

*- 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



Lancaster Laboratories

Acct. # 11260

For Eurofins Lancaster Laboratories use only
 Group # 1560744 Sample # 7885404-20
 Instructions on reverse side correspond with circled numbers.

1 Client Information				4 Matrix			5 Analyses Requested										6 Remarks					
Facility # SS#211556-OML G-R#386773 WBS Site Address 101 Mulford Road, TOLEDO, WA Chevron PM MHO LEIDOSRS Lead Consultant Russell Shropshire Consultant/Office Gettler-Ryan, Inc., 6805 Sierra Court, Suite G, Dublin, CA 94568 Consultant Project Mgr. Deanna L. Harding, (deanna@grinc.com) Consultant Phone # (925) 551-7444 x180 Sampler J. Payne				<input type="checkbox"/> Sediment <input checked="" type="checkbox"/> Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Surface <input type="checkbox"/> Air			Total Number of Containers BTEX + MTBE 8021 <input type="checkbox"/> 8260 <input type="checkbox"/> Naphth <input type="checkbox"/> 8260 full scan Oxygenates NWTPH-Gx NWTPH-Dx with Silica Gel Cleanup <input checked="" type="checkbox"/> NWTPH-Dx without Silica Gel Cleanup <input checked="" type="checkbox"/> WA VPH <input type="checkbox"/> WA EPH <input type="checkbox"/> Lead <input type="checkbox"/> Total <input type="checkbox"/> Diss. <input checked="" type="checkbox"/> Method 6020 NITRATE / SULFATE DISSOLVED IRON / MANGANESE SULFIDE / METHANE ALKALINITY										SCR #: _____ <input type="checkbox"/> Results in Dry Weight <input type="checkbox"/> J value reporting needed <input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds <input type="checkbox"/> 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run _____ oxy's on highest hit <input type="checkbox"/> Run _____ oxy's on all hits					
2 Sample Identification		3 Collected		Grab	Composite	Soil	Water	Oil	Total	BTEX	8260	NWTPH	NWTPH-Dx	NWTPH-Dx	WA VPH	Lead	NITRATE	DISSOLVED IRON	SULFIDE	ALKALINITY		
Date	Time																					
<i>RA</i>	<i>5-12-15</i>	<i>X</i>		<i>X</i>					<i>90</i>	<i>X</i>		<i>X</i>										
<i>AW-109</i>	<i>1525</i>	<i>X</i>		<i>X</i>					<i>9</i>	<i>X</i>		<i>X</i>	<i>X</i>	<i>X</i>								
<i>AW-114</i>	<i>1630</i>	<i>X</i>		<i>X</i>					<i>9</i>	<i>X</i>		<i>X</i>	<i>X</i>	<i>X</i>								
<i>AW-115</i>	<i>1410</i>	<i>X</i>		<i>X</i>					<i>9</i>	<i>X</i>		<i>X</i>	<i>X</i>	<i>X</i>								
<i>AW-116</i>	<i>1010</i>	<i>X</i>		<i>X</i>					<i>16</i>	<i>X</i>		<i>X</i>	<i>X</i>	<i>X</i>			<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	
<i>AW-117</i>	<i>0850</i>	<i>X</i>		<i>X</i>					<i>16</i>	<i>X</i>		<i>X</i>	<i>X</i>	<i>X</i>			<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	
<i>AW-118</i>	<i>1150</i>	<i>X</i>		<i>X</i>					<i>9</i>	<i>X</i>		<i>X</i>	<i>X</i>	<i>X</i>			<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	
<i>AW-120</i>	<i>1305</i>	<i>X</i>		<i>X</i>					<i>9</i>	<i>X</i>		<i>X</i>	<i>X</i>	<i>X</i>			<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	
7 Turnaround Time Requested (TAT) (please circle) Standard <input checked="" type="radio"/> 5 day 4 day 72-hour 48 hour EDF/EDD 24 hour				Relinquished by <i>[Signature]</i> Date <i>5-12-15</i> Time <i>1700</i> Received by _____ Date _____ Time _____			Relinquished by _____ Date _____ Time _____ Received by _____ Date _____ Time _____		Relinquished by Commercial Carrier: UPS <input checked="" type="checkbox"/> FedEx _____ Other _____ Temperature Upon Receipt <i>04-3.4 °C</i> Custody Seals Intact? <input checked="" type="checkbox"/> Yes No		Received by <i>[Signature]</i> Date <i>5/13/15</i> Time <i>0950</i>		Date _____ Time _____									
8 Data Package (circle if required) Type I - Full Type VI (Raw Data)				EDD (circle if required) CVX-RTBU-FL_05 (default) Other: _____			Relinquished by Commercial Carrier: UPS <input checked="" type="checkbox"/> FedEx _____ Other _____ Temperature Upon Receipt <i>04-3.4 °C</i> Custody Seals Intact? <input checked="" type="checkbox"/> Yes No		Received by <i>[Signature]</i> Date <i>5/13/15</i> Time <i>0950</i>		Date _____ Time _____											

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		
>	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.		

Laboratory Data Qualifiers:

- B - Analyte detected in the blank
- C - Result confirmed by reanalysis
- E - Concentration exceeds the calibration range
- J (or G, I, X) - estimated value \geq the Method Detection Limit (MDL or DL) and the $<$ Limit of Quantitation (LOQ or RL)
- P - Concentration difference between the primary and confirmation column $>40\%$. The lower result is reported.
- U - Analyte was not detected at the value indicated
- V - Concentration difference between the primary and confirmation column $>100\%$. The reporting limit is raised due to this disparity and evident interference...

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

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, ISO17025) 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.

ANALYTICAL RESULTS

Prepared by:

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

Prepared for:

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

May 27, 2015

Project: 211556

Submittal Date: 05/14/2015

Group Number: 1561253

PO Number: 0015146917

Release Number: HORNE

State of Sample Origin: WA

<u>Client Sample Description</u>	<u>Lancaster Labs (LL) #</u>
QA NA Water	7888167
B-1 Grab Groundwater	7888168
B-1 Filtered Grab Groundwater	7888169
B-2 Grab Groundwater	7888170
B-2 Filtered Grab Groundwater	7888171
B-3 Grab Groundwater	7888172
B-3 Filtered Grab Groundwater	7888173
B-4 Grab Groundwater	7888174
B-4 Filtered Grab Groundwater	7888175
MW-111 Grab Groundwater	7888176
MW-111 Filtered Grab Groundwater	7888177
MW-113 Grab Groundwater	7888178
MW-113 Filtered Grab Groundwater	7888179

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

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our scopes of accreditation can be viewed at <http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/>.

ELECTRONIC COPY TO
Leidos

Attn: Russ Shropshire

ELECTRONIC COPY TO
Leidos

Attn: Jamalyn Agyei

ELECTRONIC COPY TO
Gettler-Ryan Inc.

Attn: Gettler Ryan

Respectfully Submitted,

A handwritten signature in black ink that reads "Amek Carter". The signature is written in a cursive style with a large initial 'A' and a long horizontal stroke at the end.

Amek Carter
Specialist

(717) 556-7252

Sample Description: QA NA Water
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7888167
LL Group # 1561253
Account # 11260

Project Name: 211556

Collected: 05/13/2015

Chevron

Submitted: 05/14/2015 09:35

6001 Bollinger Canyon Road
L4310

Reported: 05/27/2015 12:41

San Ramon CA 94583

MRTQA

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles		SW-846 8260B	ug/l	ug/l	
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles		ECY 97-602 NWTPH-Gx	ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	Z151421AA	05/22/2015 11:02	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z151421AA	05/22/2015 11:02	Daniel H Heller	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	15141A53A	05/22/2015 11:35	Jeremy C Giffin	1
01146	GC VOA Water Prep	SW-846 5030B	1	15141A53A	05/22/2015 11:35	Jeremy C Giffin	1

Sample Description: B-1 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7888168
LL Group # 1561253
Account # 11260

Project Name: 211556

Collected: 05/13/2015 11:30 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 05/14/2015 09:35

San Ramon CA 94583

Reported: 05/27/2015 12:41

MRT01

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles		SW-846 8260B	ug/l	ug/l	
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles		ECY 97-602 NWTPH-Gx	ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Miscellaneous		RSKSOP-175 modified	ug/l	ug/l	
07105	Methane	74-82-8	N.D.	3.0	1
GC Petroleum Hydrocarbons		ECY 97-602 NWTPH-Dx modified	ug/l	ug/l	
08271	Diesel Range Organics C12-C24	n.a.	N.D.	28	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	66	1
GC Petroleum Hydrocarbons w/Si		ECY 97-602 NWTPH-Dx modified	ug/l	ug/l	
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	28	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	66	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry		EPA 300.0	ug/l	ug/l	
00368	Nitrate Nitrogen	14797-55-8	1,400	250	5
00228	Sulfate	14808-79-8	3,600	1,500	5
		SM 2320 B-1997	ug/l as CaCO3	ug/l as CaCO3	
12150	Total Alkalinity to pH 4.5	n.a.	65,200	700	1
		SM 4500-S2 D-2000	ug/l	ug/l	
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	Z151421AA	05/22/2015 11:50	Daniel H Heller	1

Sample Description: B-1 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7888168
LL Group # 1561253
Account # 11260

Project Name: 211556

Collected: 05/13/2015 11:30 by JP

Chevron

6001 Bollinger Canyon Road

Submitted: 05/14/2015 09:35

L4310

Reported: 05/27/2015 12:41

San Ramon CA 94583

MRT01

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z151421AA	05/22/2015 11:50	Daniel H Heller	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	15141A53A	05/22/2015 13:54	Jeremy C Giffin	1
01146	GC VOA Water Prep	SW-846 5030B	1	15141A53A	05/22/2015 13:54	Jeremy C Giffin	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	151380026A	05/19/2015 04:35	Kristen N Brandt	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	151360014A	05/18/2015 15:59	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	151360015A	05/21/2015 19:40	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	151360015A	05/17/2015 07:55	Samantha L Bronder	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	151360014A	05/17/2015 07:55	Samantha L Bronder	1
00368	Nitrate Nitrogen	EPA 300.0	1	15134667601B	05/14/2015 20:46	Drew M Gerhart	5
00228	Sulfate	EPA 300.0	1	15134667601B	05/14/2015 20:46	Drew M Gerhart	5
12150	Total Alkalinity to pH 4.5	SM 2320 B-1997	1	15138002102A	05/18/2015 18:14	Michele L Graham	1
00230	Sulfide	SM 4500-S2 D-2000	1	15139023001A	05/19/2015 12:05	Michele L Graham	1

Sample Description: B-1 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7888169
LL Group # 1561253
Account # 11260

Project Name: 211556

Collected: 05/13/2015 11:30 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 05/14/2015 09:35

Reported: 05/27/2015 12:41

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
Metals Dissolved					
		SW-846 6010B	ug/l	ug/l	
01754	Iron	7439-89-6	N.D.	33.4	1
07058	Manganese	7439-96-5	9.7	0.83	1
		SW-846 6020	mg/l	mg/l	
06035	Lead	7439-92-1	N.D.	0.000082	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	151351848004	05/19/2015 19:26	Elaine F Stoltzfus	1
07058	Manganese	SW-846 6010B	1	151351848004	05/19/2015 19:26	Elaine F Stoltzfus	1
06035	Lead	SW-846 6020	1	151396050003A	05/21/2015 20:30	Deborah A Krady	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	151351848004	05/19/2015 08:14	James L Mertz	1
06050	ICPMS-Water, 3020A - U3	SW-846 3020A	1	151396050003	05/20/2015 09:40	James L Mertz	1

Sample Description: B-2 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7888170
LL Group # 1561253
Account # 11260

Project Name: 211556

Collected: 05/13/2015 08:45 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 05/14/2015 09:35

San Ramon CA 94583

Reported: 05/27/2015 12:41

MRT02

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B ug/l					
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx ug/l					
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Miscellaneous RSKSOP-175 modified ug/l					
07105	Methane	74-82-8	N.D.	3.0	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	28	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	66	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	28	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	66	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0 ug/l					
00368	Nitrate Nitrogen	14797-55-8	1,400	250	5
00228	Sulfate	14808-79-8	3,800	1,500	5
SM 2320 B-1997 ug/l as CaCO3					
12150	Total Alkalinity to pH 4.5	n.a.	66,400	700	1
SM 4500-S2 D-2000 ug/l					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	Z151421AA	05/22/2015 13:02	Daniel H Heller	1

Sample Description: B-2 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7888170
LL Group # 1561253
Account # 11260

Project Name: 211556

Collected: 05/13/2015 08:45 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 05/14/2015 09:35

Reported: 05/27/2015 12:41

San Ramon CA 94583

MRT02

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z151421AA	05/22/2015 13:02	Daniel H Heller	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	15141A53A	05/22/2015 14:21	Jeremy C Giffin	1
01146	GC VOA Water Prep	SW-846 5030B	1	15141A53A	05/22/2015 14:21	Jeremy C Giffin	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	151380026A	05/19/2015 04:53	Kristen N Brandt	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	151360014A	05/18/2015 16:21	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	151360015A	05/21/2015 20:02	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	151360015A	05/17/2015 07:55	Samantha L Bronder	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	151360014A	05/17/2015 07:55	Samantha L Bronder	1
00368	Nitrate Nitrogen	EPA 300.0	1	15134667601B	05/14/2015 19:08	Drew M Gerhart	5
00228	Sulfate	EPA 300.0	1	15134667601B	05/14/2015 19:08	Drew M Gerhart	5
12150	Total Alkalinity to pH 4.5	SM 2320 B-1997	1	15138002103A	05/18/2015 19:14	Michele L Graham	1
00230	Sulfide	SM 4500-S2 D-2000	1	15139023001A	05/19/2015 12:05	Michele L Graham	1

Sample Description: B-2 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7888171
LL Group # 1561253
Account # 11260

Project Name: 211556

Collected: 05/13/2015 08:45 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 05/14/2015 09:35

Reported: 05/27/2015 12:41

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
Metals Dissolved					
		SW-846 6010B	ug/l	ug/l	
01754	Iron	7439-89-6	N.D.	33.4	1
07058	Manganese	7439-96-5	11.4	0.83	1
		SW-846 6020	mg/l	mg/l	
06035	Lead	7439-92-1	N.D.	0.000082	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	151351848004	05/19/2015 19:09	Elaine F Stoltzfus	1
07058	Manganese	SW-846 6010B	1	151351848004	05/19/2015 19:09	Elaine F Stoltzfus	1
06035	Lead	SW-846 6020	1	151396050003A	05/21/2015 20:20	Deborah A Krady	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	151351848004	05/19/2015 08:14	James L Mertz	1
06050	ICPMS-Water, 3020A - U3	SW-846 3020A	1	151396050003	05/20/2015 09:40	James L Mertz	1

Sample Description: B-3 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7888172
LL Group # 1561253
Account # 11260

Project Name: 211556

Collected: 05/13/2015 15:10 by JP

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 05/14/2015 09:35

Reported: 05/27/2015 12:41

MRT03

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B ug/l					
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	33	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	0.9	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx ug/l					
08273	NWTPH-Gx water C7-C12	n.a.	1,400	50	1
GC Miscellaneous RSKSOP-175 modified ug/l					
07105	Methane	74-82-8	440	3.0	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	690	28	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	66	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	120	28	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	66	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0 ug/l					
00368	Nitrate Nitrogen	14797-55-8	5,300	250	5
00228	Sulfate	14808-79-8	7,600	1,500	5
SM 2320 B-1997 ug/l as CaCO3					
12150	Total Alkalinity to pH 4.5	n.a.	132,000	700	1
SM 4500-S2 D-2000 ug/l					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	Z151421AA	05/22/2015 13:26	Daniel H Heller	1

Sample Description: B-3 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7888172
LL Group # 1561253
Account # 11260

Project Name: 211556

Collected: 05/13/2015 15:10 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 05/14/2015 09:35

San Ramon CA 94583

Reported: 05/27/2015 12:41

MRT03

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z151421AA	05/22/2015 13:26	Daniel H Heller	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	15141A53A	05/22/2015 15:17	Jeremy C Giffin	1
01146	GC VOA Water Prep	SW-846 5030B	1	15141A53A	05/22/2015 15:17	Jeremy C Giffin	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	151380026A	05/19/2015 05:10	Kristen N Brandt	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	151360014A	05/18/2015 17:27	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	151360015A	05/21/2015 20:24	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	151360015A	05/17/2015 07:55	Samantha L Bronder	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	151360014A	05/17/2015 07:55	Samantha L Bronder	1
00368	Nitrate Nitrogen	EPA 300.0	1	15134667601B	05/14/2015 21:35	Drew M Gerhart	5
00228	Sulfate	EPA 300.0	1	15134667601B	05/14/2015 21:35	Drew M Gerhart	5
12150	Total Alkalinity to pH 4.5	SM 2320 B-1997	1	15138002103A	05/18/2015 19:08	Michele L Graham	1
00230	Sulfide	SM 4500-S2 D-2000	1	15139023001A	05/19/2015 12:05	Michele L Graham	1

Sample Description: B-3 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7888173
LL Group # 1561253
Account # 11260

Project Name: 211556

Collected: 05/13/2015 15:10 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 05/14/2015 09:35

San Ramon CA 94583

Reported: 05/27/2015 12:41

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
Metals Dissolved					
		SW-846 6010B	ug/l	ug/l	
01754	Iron	7439-89-6	6,750	33.4	1
07058	Manganese	7439-96-5	4,080	0.83	1
		SW-846 6020	mg/l	mg/l	
06035	Lead	7439-92-1	0.0081	0.000082	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	151351848004	05/19/2015 19:29	Elaine F Stoltzfus	1
07058	Manganese	SW-846 6010B	1	151351848004	05/19/2015 19:29	Elaine F Stoltzfus	1
06035	Lead	SW-846 6020	1	151396050003A	05/21/2015 20:32	Deborah A Krady	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	151351848004	05/19/2015 08:14	James L Mertz	1
06050	ICPMS-Water, 3020A - U3	SW-846 3020A	1	151396050003	05/20/2015 09:40	James L Mertz	1

Sample Description: B-4 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7888174
LL Group # 1561253
Account # 11260

Project Name: 211556

Collected: 05/13/2015 12:50 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 05/14/2015 09:35

San Ramon CA 94583

Reported: 05/27/2015 12:41

MRT04

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B ug/l					
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	1	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx ug/l					
08273	NWTPH-Gx water C7-C12	n.a.	940	50	1
GC Miscellaneous RSKSOP-175 modified ug/l					
07105	Methane	74-82-8	690	6.0	2
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	210	28	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	66	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	130	28	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	66	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0 ug/l					
00368	Nitrate Nitrogen	14797-55-8	N.D.	250	5
00228	Sulfate	14808-79-8	3,900	1,500	5
SM 2320 B-1997 ug/l as CaCO3					
12150	Total Alkalinity to pH 4.5	n.a.	118,000	700	1
SM 4500-S2 D-2000 ug/l					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	Z151421AA	05/22/2015 13:50	Daniel H Heller	1

Sample Description: B-4 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7888174
LL Group # 1561253
Account # 11260

Project Name: 211556

Collected: 05/13/2015 12:50 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 05/14/2015 09:35

Reported: 05/27/2015 12:41

San Ramon CA 94583

MRT04

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z151421AA	05/22/2015 13:50	Daniel H Heller	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	15141A53A	05/22/2015 15:45	Jeremy C Giffin	1
01146	GC VOA Water Prep	SW-846 5030B	1	15141A53A	05/22/2015 15:45	Jeremy C Giffin	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	151380026A	05/19/2015 14:39	Kristen N Brandt	2
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	151360014A	05/18/2015 17:49	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	151360015A	05/21/2015 20:45	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	151360015A	05/17/2015 07:55	Samantha L Bronder	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	151360014A	05/17/2015 07:55	Samantha L Bronder	1
00368	Nitrate Nitrogen	EPA 300.0	1	15134667601B	05/14/2015 21:02	Drew M Gerhart	5
00228	Sulfate	EPA 300.0	1	15134667601B	05/14/2015 21:02	Drew M Gerhart	5
12150	Total Alkalinity to pH 4.5	SM 2320 B-1997	1	15138002103A	05/18/2015 20:59	Michele L Graham	1
00230	Sulfide	SM 4500-S2 D-2000	1	15139023001A	05/19/2015 12:05	Michele L Graham	1

Sample Description: B-4 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7888175
LL Group # 1561253
Account # 11260

Project Name: 211556

Collected: 05/13/2015 12:50 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 05/14/2015 09:35

Reported: 05/27/2015 12:41

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
Metals Dissolved					
		SW-846 6010B	ug/l	ug/l	
01754	Iron	7439-89-6	10,000	33.4	1
07058	Manganese	7439-96-5	2,110	0.83	1
		SW-846 6020	mg/l	mg/l	
06035	Lead	7439-92-1	0.0016	0.000082	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	151351848004	05/19/2015 19:37	Elaine F Stoltzfus	1
07058	Manganese	SW-846 6010B	1	151351848004	05/19/2015 19:37	Elaine F Stoltzfus	1
06035	Lead	SW-846 6020	1	151396050003A	05/21/2015 20:37	Deborah A Krady	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	151351848004	05/19/2015 08:14	James L Mertz	1
06050	ICPMS-Water, 3020A - U3	SW-846 3020A	1	151396050003	05/20/2015 09:40	James L Mertz	1

Sample Description: MW-111 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7888176
LL Group # 1561253
Account # 11260

Project Name: 211556

Collected: 05/13/2015 14:00 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 05/14/2015 09:35

Reported: 05/27/2015 12:41

San Ramon CA 94583

MR111

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B ug/l					
10945	Benzene	71-43-2	1	0.5	1
10945	Ethylbenzene	100-41-4	71	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	5	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx ug/l					
08273	NWTPH-Gx water C7-C12	n.a.	4,400	50	1
GC Miscellaneous RSKSOP-175 modified ug/l					
07105	Methane	74-82-8	5,600	60	20
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	1,000	28	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	66	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	320	28	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	66	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0 ug/l					
00368	Nitrate Nitrogen	14797-55-8	N.D.	250	5
00228	Sulfate	14808-79-8	N.D.	1,500	5
SM 2320 B-1997 ug/l as CaCO3					
12150	Total Alkalinity to pH 4.5	n.a.	198,000	700	1
SM 4500-S2 D-2000 ug/l					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	Z151421AA	05/22/2015 14:14	Daniel H Heller	1

Sample Description: MW-111 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7888176
LL Group # 1561253
Account # 11260

Project Name: 211556

Collected: 05/13/2015 14:00 by JP

Chevron

6001 Bollinger Canyon Road

Submitted: 05/14/2015 09:35

L4310

Reported: 05/27/2015 12:41

San Ramon CA 94583

MR111

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z151421AA	05/22/2015 14:14	Daniel H Heller	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	15141A53A	05/22/2015 16:13	Jeremy C Giffin	1
01146	GC VOA Water Prep	SW-846 5030B	1	15141A53A	05/22/2015 16:13	Jeremy C Giffin	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	151390013A	05/20/2015 18:01	Kristen N Brandt	20
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	151360014A	05/18/2015 18:10	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	151360015A	05/21/2015 21:07	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	151360015A	05/17/2015 07:55	Samantha L Bronder	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	151360014A	05/17/2015 07:55	Samantha L Bronder	1
00368	Nitrate Nitrogen	EPA 300.0	1	15134667601B	05/14/2015 21:18	Drew M Gerhart	5
00228	Sulfate	EPA 300.0	1	15134667601B	05/14/2015 21:18	Drew M Gerhart	5
12150	Total Alkalinity to pH 4.5	SM 2320 B-1997	1	15138002103A	05/18/2015 19:01	Michele L Graham	1
00230	Sulfide	SM 4500-S2 D-2000	1	15139023001A	05/19/2015 12:05	Michele L Graham	1

Sample Description: MW-111 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7888177
LL Group # 1561253
Account # 11260

Project Name: 211556

Collected: 05/13/2015 14:00 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 05/14/2015 09:35

Reported: 05/27/2015 12:41

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
Metals Dissolved					
		SW-846 6010B	ug/l	ug/l	
01754	Iron	7439-89-6	12,100	33.4	1
07058	Manganese	7439-96-5	5,050	0.83	1
		SW-846 6020	mg/l	mg/l	
06035	Lead	7439-92-1	0.0202	0.000082	1

General Sample Comments

State of Washington Lab Certification No. C457
This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	151391848005	05/20/2015 16:35	Suzanne M Will	1
07058	Manganese	SW-846 6010B	1	151391848005	05/20/2015 16:35	Suzanne M Will	1
06035	Lead	SW-846 6020	1	151396050003A	05/21/2015 20:38	Deborah A Krady	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	151391848005	05/20/2015 08:08	James L Mertz	1
06050	ICPMS-Water, 3020A - U3	SW-846 3020A	1	151396050003	05/20/2015 09:40	James L Mertz	1

Sample Description: MW-113 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7888178
LL Group # 1561253
Account # 11260

Project Name: 211556

Collected: 05/13/2015 10:10 by JP

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 05/14/2015 09:35

San Ramon CA 94583

Reported: 05/27/2015 12:41

MR113

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B					
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx					
08273	NWTPH-Gx water C7-C12	n.a.	75	50	1
GC Miscellaneous RSKSOP-175 modified					
07105	Methane	74-82-8	N.D.	3.0	1
GC Petroleum ECY 97-602 NWTPH-Dx					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	29	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	67	1
GC Petroleum ECY 97-602 NWTPH-Dx					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0					
00368	Nitrate Nitrogen	14797-55-8	1,200	250	5
00228	Sulfate	14808-79-8	3,400	1,500	5
SM 2320 B-1997					
12150	Total Alkalinity to pH 4.5	n.a.	66,400	700	1
SM 4500-S2 D-2000					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	Z151421AA	05/22/2015 14:38	Daniel H Heller	1

Sample Description: MW-113 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 7888178
LL Group # 1561253
Account # 11260

Project Name: 211556

Collected: 05/13/2015 10:10 by JP

Chevron

6001 Bollinger Canyon Road

Submitted: 05/14/2015 09:35

L4310

Reported: 05/27/2015 12:41

San Ramon CA 94583

MR113

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z151421AA	05/22/2015 14:38	Daniel H Heller	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	15141A53A	05/22/2015 16:40	Jeremy C Giffin	1
01146	GC VOA Water Prep	SW-846 5030B	1	15141A53A	05/22/2015 16:40	Jeremy C Giffin	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	151390013A	05/19/2015 22:40	Kristen N Brandt	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	151360014A	05/18/2015 16:43	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	151360015A	05/21/2015 21:29	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	151360015A	05/17/2015 07:55	Samantha L Bronder	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	151360014A	05/17/2015 07:55	Samantha L Bronder	1
00368	Nitrate Nitrogen	EPA 300.0	1	15134667601B	05/14/2015 20:29	Drew M Gerhart	5
00228	Sulfate	EPA 300.0	1	15134667601B	05/14/2015 20:29	Drew M Gerhart	5
12150	Total Alkalinity to pH 4.5	SM 2320 B-1997	1	15138002103A	05/18/2015 21:39	Michele L Graham	1
00230	Sulfide	SM 4500-S2 D-2000	1	15139023001A	05/19/2015 12:05	Michele L Graham	1

Sample Description: MW-113 Filtered Grab Groundwater
 Facility# 211556 Job# 386773
 101 Mulford Road - Toledo, WA

LL Sample # WW 7888179
 LL Group # 1561253
 Account # 11260

Project Name: 211556

Collected: 05/13/2015 10:10 by JP

Chevron

6001 Bollinger Canyon Road
 L4310

Submitted: 05/14/2015 09:35

Reported: 05/27/2015 12:41

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
Metals Dissolved					
		SW-846 6010B	ug/l	ug/l	
01754	Iron	7439-89-6	N.D.	33.4	1
07058	Manganese	7439-96-5	9.4	0.83	1
		SW-846 6020	mg/l	mg/l	
06035	Lead	7439-92-1	N.D.	0.000082	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	151391848005	05/20/2015 17:43	Suzanne M Will	1
07058	Manganese	SW-846 6010B	1	151391848005	05/20/2015 17:43	Suzanne M Will	1
06035	Lead	SW-846 6020	1	151396050003A	05/21/2015 20:40	Deborah A Krady	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	151391848005	05/20/2015 08:08	James L Mertz	1
06050	ICPMS-Water, 3020A - U3	SW-846 3020A	1	151396050003	05/20/2015 09:40	James L Mertz	1

Quality Control Summary

Client Name: Chevron
Reported: 05/27/2015 12:41

Group Number: 1561253

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

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: Z151421AA	Sample number(s): 7888167-7888168,7888170,7888172,7888174,7888176,7888178							
Benzene	N.D.	0.5	ug/l	89		78-120		
Ethylbenzene	N.D.	0.5	ug/l	93		80-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	98		75-120		
Toluene	N.D.	0.5	ug/l	95		80-120		
Xylene (Total)	N.D.	0.5	ug/l	96		80-120		
Batch number: 15141A53A	Sample number(s): 7888167-7888168,7888170,7888172,7888174,7888176,7888178							
NWTPH-Gx water C7-C12	N.D.	50.	ug/l	97	98	80-123	1	30
Batch number: 151380026A	Sample number(s): 7888168,7888170,7888172,7888174							
Methane	N.D.	3.0	ug/l	106		85-115		
Batch number: 151390013A	Sample number(s): 7888176,7888178							
Methane	N.D.	3.0	ug/l	106		85-115		
Batch number: 151360014A	Sample number(s): 7888168,7888170,7888172,7888174,7888176,7888178							
Diesel Range Organics C12-C24	N.D.	30.	ug/l	64	62	50-113	3	20
Heavy Range Organics C24-C40	N.D.	70.	ug/l					
Batch number: 151360015A	Sample number(s): 7888168,7888170,7888172,7888174,7888176,7888178							
DRO C12-C24 w/Si Gel	N.D.	30.	ug/l	59	57	32-117	2	20
HRO C24-C40 w/Si Gel	N.D.	70.	ug/l					
Batch number: 151351848004	Sample number(s): 7888169,7888171,7888173,7888175							
Iron	N.D.	33.4	ug/l	104		80-120		
Manganese	1.2	0.83	ug/l	104		80-120		
Batch number: 151391848005	Sample number(s): 7888177,7888179							
Iron	N.D.	33.4	ug/l	103		80-120		
Manganese	N.D.	0.83	ug/l	106		80-120		
Batch number: 151396050003A	Sample number(s): 7888169,7888171,7888173,7888175,7888177,7888179							
Lead	N.D.	0.00008	mg/l	108		80-120		
		2						
Batch number: 15134667601B	Sample number(s): 7888168,7888170,7888172,7888174,7888176,7888178							
Nitrate Nitrogen	N.D.	50.	ug/l	100		90-110		
Sulfate	N.D.	300.	ug/l	98		90-110		
Batch number: 15138002102A	Sample number(s): 7888168							
Total Alkalinity to pH 4.5	750	700.	ug/l as CaCO3	97		90-110		

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 05/27/2015 12:41

Group Number: 1561253

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 15138002103A	Sample number(s): 7888170,7888172,7888174,7888176,7888178							
Total Alkalinity to pH 4.5	N.D.	700.	ug/l as CaCO3	96		90-110		
Batch number: 15139023001A	Sample number(s): 7888168,7888170,7888172,7888174,7888176,7888178							
Sulfide	N.D.	54.	ug/l	101		90-110		

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

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: Z151421AA	Sample number(s): 7888167-7888168,7888170,7888172,7888174,7888176,7888178 UNSPK: 7888168								
Benzene	89	88	72-134	1	30				
Ethylbenzene	95	94	71-134	1	30				
Methyl Tertiary Butyl Ether	93	93	72-126	0	30				
Toluene	96	95	80-125	1	30				
Xylene (Total)	98	96	79-125	2	30				
Batch number: 151380026A	Sample number(s): 7888168,7888170,7888172,7888174 UNSPK: P888659								
Methane	101	108	46-129	6	20				
Batch number: 151390013A	Sample number(s): 7888176,7888178 UNSPK: P885296								
Methane	89	89	46-129	0	20				
Batch number: 151351848004	Sample number(s): 7888169,7888171,7888173,7888175 UNSPK: 7888171 BKG: 7888171								
Iron	103	101	75-125	2	20	N.D.	N.D.	0 (1)	20
Manganese	103	101	75-125	3	20	11.4	11.4	1 (1)	20
Batch number: 151391848005	Sample number(s): 7888177,7888179 UNSPK: 7888177 BKG: 7888177								
Iron	103 (2)	97 (2)	75-125	0	20	12,100	12,200	1	20
Manganese	92 (2)	91 (2)	75-125	0	20	5,050	5,110	1	20
Batch number: 151396050003A	Sample number(s): 7888169,7888171,7888173,7888175,7888177,7888179 UNSPK: 7888171 BKG: 7888171								
Lead	103	104	75-125	1	20	N.D.	N.D.	0 (1)	20
Batch number: 15134667601B	Sample number(s): 7888168,7888170,7888172,7888174,7888176,7888178 UNSPK: 7888170 BKG: 7888170								
Nitrate Nitrogen	102		90-110			1,400	1,400	0 (1)	20
Sulfate	99		90-110			3,800	3,700	1 (1)	20
Batch number: 15138002102A	Sample number(s): 7888168 UNSPK: P887472 BKG: P887472								
Total Alkalinity to pH 4.5	87*		90-110			85,300	85,200	0	5
Batch number: 15138002103A	Sample number(s): 7888170,7888172,7888174,7888176,7888178 UNSPK: P888659 BKG: P888659								
Total Alkalinity to pH 4.5	96	95	90-110	0	5	81,700	81,700	0	5
Batch number: 15139023001A	Sample number(s): 7888168,7888170,7888172,7888174,7888176,7888178 UNSPK: 7888178								

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 05/27/2015 12:41

Group Number: 1561253

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

<u>Analysis Name</u>	<u>MS</u> <u>%REC</u>	<u>MSD</u> <u>%REC</u>	<u>MS/MSD</u> <u>Limits</u>	<u>RPD</u>	<u>RPD</u> <u>MAX</u>	<u>BKG</u> <u>Conc</u>	<u>DUP</u> <u>Conc</u>	<u>DUP</u> <u>RPD</u>	<u>Dup RPD</u> <u>Max</u>
Sulfide	85*	80*	90-110	6	16	N.D.	N.D.	0 (1)	5

Surrogate Quality Control

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

Analysis Name: BTEX/MTBE
Batch number: Z151421AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7888167	104	100	101	98
7888168	106	99	101	98
7888170	104	99	100	96
7888172	102	95	102	103
7888174	102	96	102	103
7888176	101	96	100	102
7888178	105	98	99	97
Blank	104	99	100	98
LCS	101	98	100	103
MS	103	97	100	105
MSD	102	99	100	105
Limits:	80-116	77-113	80-113	78-113

Analysis Name: NWTPH-Gx water C7-C12
Batch number: 15141A53A

	Trifluorotoluene-F
7888167	107
7888168	99
7888170	99
7888172	119
7888174	112
7888176	125
7888178	107
Blank	108
LCS	110
LCSD	108
Limits:	63-135

Analysis Name: NWTPH-Dx water
Batch number: 151360014A

	Orthoterphenyl
7888168	88
7888170	80
7888172	90
7888174	92
7888176	99
7888178	84

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 05/27/2015 12:41

Group Number: 1561253

Surrogate Quality Control

Blank 84
LCS 88
LCSD 89
Limits: 50-150

Analysis Name: NWTPH-Dx water w/ 10g Si Gel
Batch number: 151360015A
Orthoterphenyl

7888168 90
7888170 83
7888172 85
7888174 88
7888176 92
7888178 80
Blank 84
LCS 83
LCSD 86

Limits: 50-150

Analysis Name: Volatile Headspace Hydrocarbon
Batch number: 151380026A
Propene

7888168 78
7888170 85
7888172 83
7888174 93
Blank 103
LCS 97
MS 81
MSD 86

Limits: 47-116

Analysis Name: Volatile Headspace Hydrocarbon
Batch number: 151390013A
Propene

7888176 92
7888178 85
Blank 100
LCS 103
MS 93
MSD 89

Limits: 47-116

*- 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



Lancaster Laboratories

Acct. # 11260 For Eurofins Lancaster Laboratories use only
 Group # 1561253 Sample # 7888167-79
Instructions on reverse side correspond with circled numbers.

1 Client Information			4 Matrix			5 Analyses Requested						6 Remarks															
Facility # SS#211556-OML G-R#386773 WBS Site Address 101 Mulford Road, TOLEDO, WA Chevron PM MHO LEIDOSRS Lead Consultant Russell Shroeder Consultant/Office Gettler-Ryan, Inc., 6805 Sierra Court, Suite G, Dublin, CA 94568 Consultant Project Mgr. Deanna L. Harding, (deanna@grinc.com) Consultant Phone # (925) 551-7444 x180 Sampler J. PAINE			<input type="checkbox"/> Sediment <input checked="" type="checkbox"/> Groundwater <input type="checkbox"/> Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Surface <input type="checkbox"/> Air			<input type="checkbox"/> BTEX + MTBE <input type="checkbox"/> 8260 full scan <input type="checkbox"/> Oxygenates <input type="checkbox"/> NMTPH-Cx <input checked="" type="checkbox"/> NMTPH-Dx with Silica Gel Cleanup <input checked="" type="checkbox"/> NMTPH-Dx without Silica Gel Cleanup <input type="checkbox"/> WA VPH <input type="checkbox"/> WA EPH <input type="checkbox"/> Lead <input type="checkbox"/> Total <input type="checkbox"/> Diss. <input checked="" type="checkbox"/> Method 8220						SCR #: <input type="checkbox"/> Results in Dry Weight <input type="checkbox"/> J value reporting needed <input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds <input type="checkbox"/> 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run ___ olys on highest hit <input type="checkbox"/> Run ___ olys on all hits															
2 Sample Identification		3 Collected		Grab	Composite	Soil	Water	Oil	Total Number of Containers	BTEX + MTBE	8021	8260	Naphth	Oxygenates	NMTPH-Cx	NMTPH-Dx with Silica Gel Cleanup	NMTPH-Dx without Silica Gel Cleanup	WA VPH	WA EPH	Lead	Total	Diss.	Method	6 Remarks			
Date	Time	Date	Time																								
B-1	5-13-15	1130		X			X		2	X				X	X	X	X	X	X	X	X	X	X	Please report results for Dx with & without sgc. Dissolved Iron, Lead, and Manganese, as well as Alkalinity samples have been field filtered. AMEND COC: PLEASE ADD BTEX & MTBE TO B-3, B-4 MW-111 & MW-113 Please forward lab results directly to the LC and co: G-R. The TPW sample results should be forwarded directly to Deanna Harding.			
B-2		1245		X			X		2	X				X	X	X	X	X	X	X	X	X	X		05-14-15 JPMC		
B-3		1510		X			X		2	X				X	X	X	X	X	X	X	X	X	05-14-15 JPMC				
B-4		1300		X			X		2	X				X	X	X	X	X	X	X	X	X				05-14-15 JPMC	
MW-111		1400		X			X		2	X				X	X	X	X	X	X	X	X	X					05-14-15 JPMC
MW-113		1010		X			X		2	X				X	X	X	X	X	X	X	X	X					
7 Turnaround Time Requested (TAT) (please circle) Standard 5 day 72 hour 48 hour 4 day EDF/EDD 24 hour			Relinquished by <i>[Signature]</i> Date <u>5-13-15</u> Time <u>1700</u>			Relinquished by _____ Date _____ Time _____			Received by _____ Date _____ Time _____			Received by _____ Date _____ Time _____															
8 Data Package (circle if required) Type I - Full Type VI (Raw Data)			EDD (circle if required) CVX-RTBU-FL_05 (default) Other: _____			Relinquished by Commercial Carrier: UPS <input checked="" type="checkbox"/> FedEx _____ Other _____			Received by <i>[Signature]</i> Date <u>5/14/15</u> Time <u>0935</u>			Temperature Upon Receipt <u>0.3 - 2.1</u> °C Custody Seals Intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No															

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		
>	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.		

Laboratory Data Qualifiers:

- B - Analyte detected in the blank
- C - Result confirmed by reanalysis
- E - Concentration exceeds the calibration range
- J (or G, I, X) - estimated value \geq the Method Detection Limit (MDL or DL) and the $<$ Limit of Quantitation (LOQ or RL)
- P - Concentration difference between the primary and confirmation column $>40\%$. The lower result is reported.
- U - Analyte was not detected at the value indicated
- V - Concentration difference between the primary and confirmation column $>100\%$. The reporting limit is raised due to this disparity and evident interference...

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

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, ISO17025) 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.

ANALYTICAL RESULTS

Prepared by:

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

Prepared for:

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

October 18, 2015

Project: 211556

Submittal Date: 08/11/2015

Group Number: 1583699

PO Number: 0015183585

Release Number: HORNE

State of Sample Origin: WA

<u>Client Sample Description</u>	<u>Lancaster Labs (LL) #</u>
QA NA Water	8000939
MW-103 Grab Groundwater	8000940
MW-103 Filtered Grab Groundwater	8000941
MW-112 Grab Groundwater	8000942
MW-112 Filtered Grab Groundwater	8000943
MW-113 Grab Groundwater	8000944
MW-113 Filtered Grab Groundwater	8000945
MW-115 Grab Groundwater	8000946
MW-115 Filtered Grab Groundwater	8000947
MW-116 Grab Groundwater	8000948
MW-116 Filtered Grab Groundwater	8000949
MW-117 Grab Groundwater	8000950
MW-117 Filtered Grab Groundwater	8000951
MW-118 Grab Groundwater	8000952
MW-118 Filtered Grab Groundwater	8000953
MW-119 Grab Groundwater	8000954
MW-119 Filtered Grab Groundwater	8000955
MW-120 Grab Groundwater	8000956
MW-120 Filtered Grab Groundwater	8000957

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

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our scopes of accreditation can be viewed at <http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/>.

ELECTRONIC Leidos

Attn: Russ Shropshire

COPY TO
ELECTRONIC
COPY TO
ELECTRONIC
COPY TO

Leidos

Attn: Jamalyn Agyei

Gettler-Ryan Inc.

Attn: Gettler Ryan

Respectfully Submitted,



Amek Carter
Specialist

(717) 556-7252

Sample Description: QA NA Water
Facility# 211553 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 8000939
LL Group # 1583699
Account # 11260

Project Name: 211556

Collected: 08/10/2015

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 08/11/2015 09:50

San Ramon CA 94583

Reported: 10/18/2015 16:55

MRTQA

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles			SW-846 8260B	ug/l	
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles			ECY 97-602 NWTPH-Gx	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	P152251AA	08/13/2015 12:10	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P152251AA	08/13/2015 12:10	Hu Yang	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	15224A94A	08/13/2015 19:38	Brett W Kenyon	1
01146	GC VOA Water Prep	SW-846 5030B	1	15224A94A	08/13/2015 19:38	Brett W Kenyon	1

Sample Description: MW-103 Grab Groundwater
Facility# 211553 **Job#** 386773
 101 Mulford Road - Toledo, WA

LL Sample # WW 8000940
LL Group # 1583699
Account # 11260

Project Name: 211556

Collected: 08/10/2015 08:20 by GM

Chevron

6001 Bollinger Canyon Road
 L4310

Submitted: 08/11/2015 09:50

San Ramon CA 94583

Reported: 10/18/2015 16:55

MR103

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B ug/l					
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx ug/l					
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Miscellaneous RSKSOP-175 modified ug/l					
07105	Methane	74-82-8	N.D.	3.0	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	28	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	66	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	28	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	66	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0 ug/l					
00368	Nitrate Nitrogen	14797-55-8	N.D.	250	5
00228	Sulfate	14808-79-8	3,400	1,500	5
SM 2320 B-1997 ug/l as CaCO3					
12150	Total Alkalinity to pH 4.5	n.a.	113,000	700	1
SM 4500-S2 D-2000 ug/l					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	P152251AA	08/13/2015 17:01	Hu Yang	1

Sample Description: MW-103 Grab Groundwater
Facility# 211553 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 8000940
LL Group # 1583699
Account # 11260

Project Name: 211556

Collected: 08/10/2015 08:20 by GM

Chevron

6001 Bollinger Canyon Road

Submitted: 08/11/2015 09:50

L4310

Reported: 10/18/2015 16:55

San Ramon CA 94583

MR103

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P152251AA	08/13/2015 17:01	Hu Yang	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	15224A94A	08/13/2015 22:36	Brett W Kenyon	1
01146	GC VOA Water Prep	SW-846 5030B	1	15224A94A	08/13/2015 22:36	Brett W Kenyon	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	152260019A	08/14/2015 10:50	Kristen N Brandt	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	152290012A	08/18/2015 14:02	Heather E Williams	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	152290011A	08/22/2015 21:16	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	152290011A	08/17/2015 20:00	Samantha L Bronder	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	152290012A	08/17/2015 20:00	Samantha L Bronder	1
00368	Nitrate Nitrogen	EPA 300.0	1	15223667121B	08/11/2015 18:01	Drew M Gerhart	5
00228	Sulfate	EPA 300.0	1	15223667121B	08/11/2015 18:01	Drew M Gerhart	5
12150	Total Alkalinity to pH 4.5	SM 2320 B-1997	1	15225005202A	08/13/2015 19:13	Michele L Graham	1
00230	Sulfide	SM 4500-S2 D-2000	1	15225023002A	08/13/2015 12:55	Susan E Hibner	1

Sample Description: MW-103 Filtered Grab Groundwater
Facility# 211553 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 8000941
LL Group # 1583699
Account # 11260

Project Name: 211556

Collected: 08/10/2015 08:20 by GM

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 08/11/2015 09:50

San Ramon CA 94583

Reported: 10/18/2015 16:55

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
Metals Dissolved					
		SW-846 6010B	ug/l	ug/l	
01754	Iron	7439-89-6	34.8	33.3	1
07058	Manganese	7439-96-5	145	0.80	1
		SW-846 6020	ug/l	ug/l	
06035	Lead	7439-92-1	N.D.	0.13	1

General Sample Comments

State of Washington Lab Certification No. C457
This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	152241848004	08/15/2015 00:07	Elaine F Stoltzfus	1
07058	Manganese	SW-846 6010B	1	152241848004	08/15/2015 00:07	Elaine F Stoltzfus	1
06035	Lead	SW-846 6020	1	152246050005A	08/17/2015 15:30	Mallory L Clark	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	152241848004	08/14/2015 09:06	Katlin N Cataldi	1
06050	ICPMS-Water, 3020A - U3	SW-846 3020A	1	152246050005	08/13/2015 23:00	Annamaria Kuhns	1

Sample Description: MW-112 Grab Groundwater
Facility# 211553 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 8000942
LL Group # 1583699
Account # 11260

Project Name: 211556

Collected: 08/10/2015 09:25 by GM

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 08/11/2015 09:50

Reported: 10/18/2015 16:55

San Ramon CA 94583

MR112

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B ug/l					
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx ug/l					
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Miscellaneous RSKSOP-175 modified ug/l					
07105	Methane	74-82-8	15	3.0	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	28	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	66	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	28	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	66	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0 ug/l					
00368	Nitrate Nitrogen	14797-55-8	530	250	5
00228	Sulfate	14808-79-8	3,800	1,500	5
SM 2320 B-1997 ug/l as CaCO3					
12150	Total Alkalinity to pH 4.5	n.a.	97,500	700	1
SM 4500-S2 D-2000 ug/l					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	P152251AA	08/13/2015 17:28	Hu Yang	1

Sample Description: MW-112 Grab Groundwater
Facility# 211553 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 8000942
LL Group # 1583699
Account # 11260

Project Name: 211556

Collected: 08/10/2015 09:25 by GM

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 08/11/2015 09:50

Reported: 10/18/2015 16:55

San Ramon CA 94583

MR112

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P152251AA	08/13/2015 17:28	Hu Yang	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	15224A94A	08/13/2015 23:02	Brett W Kenyon	1
01146	GC VOA Water Prep	SW-846 5030B	1	15224A94A	08/13/2015 23:02	Brett W Kenyon	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	152260019A	08/14/2015 11:07	Kristen N Brandt	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	152290012A	08/18/2015 14:24	Heather E Williams	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	152290011A	08/22/2015 21:38	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	152290011A	08/17/2015 20:00	Samantha L Bronder	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	152290012A	08/17/2015 20:00	Samantha L Bronder	1
00368	Nitrate Nitrogen	EPA 300.0	1	15223667121B	08/11/2015 18:46	Drew M Gerhart	5
00228	Sulfate	EPA 300.0	1	15223667121B	08/11/2015 18:46	Drew M Gerhart	5
12150	Total Alkalinity to pH 4.5	SM 2320 B-1997	1	15225005202A	08/13/2015 18:18	Michele L Graham	1
00230	Sulfide	SM 4500-S2 D-2000	1	15225023002A	08/13/2015 12:55	Susan E Hibner	1

Sample Description: MW-112 Filtered Grab Groundwater
Facility# 211553 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 8000943
LL Group # 1583699
Account # 11260

Project Name: 211556

Collected: 08/10/2015 09:25 by GM

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 08/11/2015 09:50

Reported: 10/18/2015 16:55

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
Metals Dissolved					
		SW-846 6010B	ug/l	ug/l	
01754	Iron	7439-89-6	2,720	33.3	1
07058	Manganese	7439-96-5	2,050	0.80	1
		SW-846 6020	ug/l	ug/l	
06035	Lead	7439-92-1	0.20	0.13	1

General Sample Comments

State of Washington Lab Certification No. C457
This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	152241848004	08/15/2015 00:16	Elaine F Stoltzfus	1
07058	Manganese	SW-846 6010B	1	152241848004	08/15/2015 00:16	Elaine F Stoltzfus	1
06035	Lead	SW-846 6020	1	152246050005A	08/17/2015 15:35	Mallory L Clark	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	152241848004	08/14/2015 09:06	Katlin N Cataldi	1
06050	ICPMS-Water, 3020A - U3	SW-846 3020A	1	152246050005	08/13/2015 23:00	Annamaria Kuhns	1

Sample Description: MW-113 Grab Groundwater
Facility# 211553 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 8000944
LL Group # 1583699
Account # 11260

Project Name: 211556

Collected: 08/10/2015 10:37 by GM

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 08/11/2015 09:50

San Ramon CA 94583

Reported: 10/18/2015 16:55

MR113

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B ug/l					
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx ug/l					
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Miscellaneous RSKSOP-175 modified ug/l					
07105	Methane	74-82-8	N.D.	3.0	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	28	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	66	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	28	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	66	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0 ug/l					
00368	Nitrate Nitrogen	14797-55-8	N.D.	250	5
00228	Sulfate	14808-79-8	3,300	1,500	5
SM 2320 B-1997 ug/l as CaCO3					
12150	Total Alkalinity to pH 4.5	n.a.	43,700	700	1
SM 4500-S2 D-2000 ug/l					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	P152251AA	08/13/2015 17:54	Hu Yang	1

Sample Description: MW-113 Grab Groundwater
Facility# 211553 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 8000944
LL Group # 1583699
Account # 11260

Project Name: 211556

Collected: 08/10/2015 10:37 by GM

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 08/11/2015 09:50

Reported: 10/18/2015 16:55

San Ramon CA 94583

MR113

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P152251AA	08/13/2015 17:54	Hu Yang	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	15224A94A	08/13/2015 23:27	Brett W Kenyon	1
01146	GC VOA Water Prep	SW-846 5030B	1	15224A94A	08/13/2015 23:27	Brett W Kenyon	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	152260019A	08/14/2015 11:26	Kristen N Brandt	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	152290012A	08/18/2015 14:46	Heather E Williams	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	152290011A	08/22/2015 21:59	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	152290011A	08/17/2015 20:00	Samantha L Bronder	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	152290012A	08/17/2015 20:00	Samantha L Bronder	1
00368	Nitrate Nitrogen	EPA 300.0	1	15223667121B	08/11/2015 19:01	Drew M Gerhart	5
00228	Sulfate	EPA 300.0	1	15223667121B	08/11/2015 19:01	Drew M Gerhart	5
12150	Total Alkalinity to pH 4.5	SM 2320 B-1997	1	15225005202A	08/13/2015 18:00	Michele L Graham	1
00230	Sulfide	SM 4500-S2 D-2000	1	15225023002A	08/13/2015 12:55	Susan E Hibner	1

Sample Description: MW-113 Filtered Grab Groundwater
Facility# 211553 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 8000945
LL Group # 1583699
Account # 11260

Project Name: 211556

Collected: 08/10/2015 10:37 by GM

Chevron

6001 Bollinger Canyon Road

Submitted: 08/11/2015 09:50

L4310

Reported: 10/18/2015 16:55

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
Metals Dissolved					
		SW-846 6010B		ug/l	
01754	Iron	7439-89-6	61.5	33.3	1
07058	Manganese	7439-96-5	14.1	0.80	1
		SW-846 6020		ug/l	
06035	Lead	7439-92-1	N.D.	0.13	1

General Sample Comments

State of Washington Lab Certification No. C457
This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	152241848004	08/15/2015 00:19	Elaine F Stoltzfus	1
07058	Manganese	SW-846 6010B	1	152241848004	08/15/2015 00:19	Elaine F Stoltzfus	1
06035	Lead	SW-846 6020	1	152246050005A	08/17/2015 15:37	Mallory L Clark	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	152241848004	08/14/2015 09:06	Katlin N Cataldi	1
06050	ICPMS-Water, 3020A - U3	SW-846 3020A	1	152246050005	08/13/2015 23:00	Annamaria Kuhns	1

Sample Description: MW-115 Grab Groundwater
Facility# 211553 **Job#** 386773
 101 Mulford Road - Toledo, WA

LL Sample # WW 8000946
LL Group # 1583699
Account # 11260

Project Name: 211556

Collected: 08/10/2015 11:33 by GM

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 08/11/2015 09:50

Reported: 10/18/2015 16:55

MR115

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B ug/l					
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx ug/l					
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	33	28	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	66	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	28	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	66	1
The reverse surrogate, capric acid, is present at <1%.					

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	P152252AA	08/13/2015 17:14	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P152252AA	08/13/2015 17:14	Hu Yang	1
08273	NWTPH-Gx water C7-C12	ECY 97-602	1	15224A94A	08/14/2015 00:17	Brett W Kenyon	1
		NWTPH-Gx					
01146	GC VOA Water Prep	SW-846 5030B	1	15224A94A	08/14/2015 00:17	Brett W Kenyon	1
08271	NWTPH-Dx water	ECY 97-602	1	152290012A	08/18/2015 15:07	Heather E Williams	1
		NWTPH-Dx modified					
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602	1	152290011A	08/22/2015 22:21	Christine E Dolman	1
		NWTPH-Dx modified					
12007	NW Dx water w/ 10g column	ECY 97-602	1	152290011A	08/17/2015 20:00	Samantha L Bronder	1
		NWTPH-Dx 06/97					
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602	1	152290012A	08/17/2015 20:00	Samantha L Bronder	1
		NWTPH-Dx 06/97					

Sample Description: MW-115 Filtered Grab Groundwater
 Facility# 211553 Job# 386773
 101 Mulford Road - Toledo, WA

LL Sample # WW 8000947
 LL Group # 1583699
 Account # 11260

Project Name: 211556

Collected: 08/10/2015 11:33 by GM

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 08/11/2015 09:50

Reported: 10/18/2015 16:55

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
Metals Dissolved					
06035	Lead	SW-846 6020 7439-92-1	ug/l 0.71	ug/l 0.13	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was filtered in the lab for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	152246050005A	08/17/2015 15:38	Mallory L Clark	1
06050	ICPMS-Water, 3020A - U3	SW-846 3020A	1	152246050005	08/13/2015 23:00	Annamaria Kuhns	1

Sample Description: MW-116 Grab Groundwater
Facility# 211553 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 8000948
LL Group # 1583699
Account # 11260

Project Name: 211556

Collected: 08/10/2015 09:25 by GM

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 08/11/2015 09:50

San Ramon CA 94583

Reported: 10/18/2015 16:55

MR116

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B ug/l					
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx ug/l					
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Miscellaneous RSKSOP-175 modified ug/l					
07105	Methane	74-82-8	70	3.0	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	28	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	66	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	28	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	66	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0 ug/l					
00368	Nitrate Nitrogen	14797-55-8	890	250	5
00228	Sulfate	14808-79-8	5,000	1,500	5
SM 2320 B-1997 ug/l as CaCO3					
12150	Total Alkalinity to pH 4.5	n.a.	50,100	700	1
SM 4500-S2 D-2000 ug/l					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	P152252AA	08/13/2015 17:41	Hu Yang	1

Sample Description: MW-116 Grab Groundwater
Facility# 211553 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 8000948
LL Group # 1583699
Account # 11260

Project Name: 211556

Collected: 08/10/2015 09:25 by GM

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 08/11/2015 09:50

Reported: 10/18/2015 16:55

San Ramon CA 94583

MR116

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P152252AA	08/13/2015 17:41	Hu Yang	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	15224A94A	08/14/2015 00:42	Brett W Kenyon	1
01146	GC VOA Water Prep	SW-846 5030B	1	15224A94A	08/14/2015 00:42	Brett W Kenyon	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	152260019A	08/14/2015 11:44	Kristen N Brandt	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	152290012A	08/18/2015 15:29	Heather E Williams	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	152290011A	08/22/2015 22:43	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	152290011A	08/17/2015 20:00	Samantha L Bronder	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	152290012A	08/17/2015 20:00	Samantha L Bronder	1
00368	Nitrate Nitrogen	EPA 300.0	1	15223667121B	08/11/2015 19:16	Drew M Gerhart	5
00228	Sulfate	EPA 300.0	1	15223667121B	08/11/2015 19:16	Drew M Gerhart	5
12150	Total Alkalinity to pH 4.5	SM 2320 B-1997	1	15225005202A	08/13/2015 16:55	Michele L Graham	1
00230	Sulfide	SM 4500-S2 D-2000	1	15225023002A	08/13/2015 12:55	Susan E Hibner	1

Sample Description: MW-116 Filtered Grab Groundwater
Facility# 211553 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 8000949
LL Group # 1583699
Account # 11260

Project Name: 211556

Collected: 08/10/2015 09:25 by GM

Chevron

6001 Bollinger Canyon Road

Submitted: 08/11/2015 09:50

L4310

Reported: 10/18/2015 16:55

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
Metals Dissolved					
		SW-846 6010B	ug/l	ug/l	
01754	Iron	7439-89-6	1,910	33.3	1
07058	Manganese	7439-96-5	120	0.80	1
		SW-846 6020	ug/l	ug/l	
06035	Lead	7439-92-1	0.42	0.13	1

General Sample Comments

State of Washington Lab Certification No. C457
This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	152241848004	08/15/2015 00:22	Elaine F Stoltzfus	1
07058	Manganese	SW-846 6010B	1	152241848004	08/15/2015 00:22	Elaine F Stoltzfus	1
06035	Lead	SW-846 6020	1	152246050005A	08/17/2015 15:40	Mallory L Clark	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	152241848004	08/14/2015 09:06	Katlin N Cataldi	1
06050	ICPMS-Water, 3020A - U3	SW-846 3020A	1	152246050005	08/13/2015 23:00	Annamaria Kuhns	1

Sample Description: MW-117 Grab Groundwater
Facility# 211553 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 8000950
LL Group # 1583699
Account # 11260

Project Name: 211556

Collected: 08/10/2015 12:30 by GM

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 08/11/2015 09:50

Reported: 10/18/2015 16:55

MR117

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B					
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx					
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Miscellaneous RSKSOP-175 modified					
07105	Methane	74-82-8	N.D.	3.0	1
GC Petroleum ECY 97-602 NWTPH-Dx					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	28	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	66	1
GC Petroleum ECY 97-602 NWTPH-Dx					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	28	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	66	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0					
00368	Nitrate Nitrogen	14797-55-8	N.D.	250	5
00228	Sulfate	14808-79-8	7,900	1,500	5
SM 2320 B-1997					
12150	Total Alkalinity to pH 4.5	n.a.	59,600	700	1
SM 4500-S2 D-2000					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	P152252AA	08/13/2015 18:08	Hu Yang	1

Sample Description: MW-117 Grab Groundwater
Facility# 211553 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 8000950
LL Group # 1583699
Account # 11260

Project Name: 211556

Collected: 08/10/2015 12:30 by GM

Chevron

6001 Bollinger Canyon Road

Submitted: 08/11/2015 09:50

L4310

Reported: 10/18/2015 16:55

San Ramon CA 94583

MR117

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P152252AA	08/13/2015 18:08	Hu Yang	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	15224A94A	08/14/2015 01:07	Brett W Kenyon	1
01146	GC VOA Water Prep	SW-846 5030B	1	15224A94A	08/14/2015 01:07	Brett W Kenyon	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	152260019A	08/14/2015 12:03	Kristen N Brandt	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	152290012A	08/18/2015 15:51	Heather E Williams	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	152290011A	08/22/2015 23:04	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	152290011A	08/17/2015 20:00	Samantha L Bronder	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	152290012A	08/17/2015 20:00	Samantha L Bronder	1
00368	Nitrate Nitrogen	EPA 300.0	1	15223667121B	08/11/2015 20:02	Drew M Gerhart	5
00228	Sulfate	EPA 300.0	1	15223667121B	08/11/2015 20:02	Drew M Gerhart	5
12150	Total Alkalinity to pH 4.5	SM 2320 B-1997	1	15225005202A	08/13/2015 17:23	Michele L Graham	1
00230	Sulfide	SM 4500-S2 D-2000	1	15225023002A	08/13/2015 12:55	Susan E Hibner	1

Sample Description: MW-117 Filtered Grab Groundwater
Facility# 211553 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 8000951
LL Group # 1583699
Account # 11260

Project Name: 211556

Collected: 08/10/2015 12:30 by GM

Chevron

6001 Bollinger Canyon Road

Submitted: 08/11/2015 09:50

L4310

Reported: 10/18/2015 16:55

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
Metals Dissolved					
		SW-846 6010B	ug/l	ug/l	
01754	Iron	7439-89-6	2,760	33.3	1
07058	Manganese	7439-96-5	98.1	0.80	1
		SW-846 6020	ug/l	ug/l	
06035	Lead	7439-92-1	1.1	0.13	1

General Sample Comments

State of Washington Lab Certification No. C457
This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	152241848004	08/15/2015 00:25	Elaine F Stoltzfus	1
07058	Manganese	SW-846 6010B	1	152241848004	08/15/2015 00:25	Elaine F Stoltzfus	1
06035	Lead	SW-846 6020	1	152246050005A	08/17/2015 15:42	Mallory L Clark	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	152241848004	08/14/2015 09:06	Katlin N Cataldi	1
06050	ICPMS-Water, 3020A - U3	SW-846 3020A	1	152246050005	08/13/2015 23:00	Annamaria Kuhns	1

Sample Description: MW-118 Grab Groundwater
Facility# 211553 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 8000952
LL Group # 1583699
Account # 11260

Project Name: 211556

Collected: 08/10/2015 10:20 by GM

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 08/11/2015 09:50

San Ramon CA 94583

Reported: 10/18/2015 16:55

MR118

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles		SW-846 8260B	ug/l	ug/l	
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles		ECY 97-602 NWTPH-Gx	ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Petroleum Hydrocarbons		ECY 97-602 NWTPH-Dx modified	ug/l	ug/l	
08271	Diesel Range Organics C12-C24	n.a.	N.D.	28	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	66	1
GC Petroleum Hydrocarbons w/Si		ECY 97-602 NWTPH-Dx modified	ug/l	ug/l	
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	28	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	66	1
The reverse surrogate, capric acid, is present at <1%.					

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	P152252AA	08/13/2015 18:34	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P152252AA	08/13/2015 18:34	Hu Yang	1
08273	NWTPH-Gx water C7-C12	ECY 97-602	1	15225A94A	08/14/2015 18:54	Marie D	1
		NWTPH-Gx				Beamenderfer	
01146	GC VOA Water Prep	SW-846 5030B	1	15225A94A	08/14/2015 18:54	Marie D	1
						Beamenderfer	
08271	NWTPH-Dx water	ECY 97-602	1	152290012A	08/18/2015 16:13	Heather E Williams	1
		NWTPH-Dx modified					
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602	1	152290011A	08/22/2015 23:26	Christine E Dolman	1
		NWTPH-Dx modified					
12007	NW Dx water w/ 10g column	ECY 97-602	1	152290011A	08/17/2015 20:00	Samantha L Bronder	1
		NWTPH-Dx 06/97					
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602	1	152290012A	08/17/2015 20:00	Samantha L Bronder	1
		NWTPH-Dx 06/97					

Sample Description: MW-118 Filtered Grab Groundwater
 Facility# 211553 Job# 386773
 101 Mulford Road - Toledo, WA

LL Sample # WW 8000953
 LL Group # 1583699
 Account # 11260

Project Name: 211556

Collected: 08/10/2015 10:20 by GM

Chevron

6001 Bollinger Canyon Road
 L4310

Submitted: 08/11/2015 09:50

Reported: 10/18/2015 16:55

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
Metals Dissolved					
06035	Lead	SW-846 6020 7439-92-1	ug/l N.D.	ug/l 0.13	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was filtered in the lab for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	152246050005A	08/17/2015 15:43	Mallory L Clark	1
06050	ICPMS-Water, 3020A - U3	SW-846 3020A	1	152246050005	08/13/2015 23:00	Annamaria Kuhns	1

Sample Description: MW-119 Grab Groundwater
Facility# 211553 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 8000954
LL Group # 1583699
Account # 11260

Project Name: 211556

Collected: 08/10/2015 08:23 by GM

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 08/11/2015 09:50

San Ramon CA 94583

Reported: 10/18/2015 16:55

MR119

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B ug/l					
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx ug/l					
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Miscellaneous RSKSOP-175 modified ug/l					
07105	Methane	74-82-8	N.D.	3.0	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	28	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	66	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	28	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	66	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0 ug/l					
00368	Nitrate Nitrogen	14797-55-8	N.D.	250	5
00228	Sulfate	14808-79-8	3,400	1,500	5
SM 2320 B-1997 ug/l as CaCO3					
12150	Total Alkalinity to pH 4.5	n.a.	98,500	700	1
SM 4500-S2 D-2000 ug/l					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	P152252AA	08/13/2015 19:01	Hu Yang	1

Sample Description: MW-119 Grab Groundwater
Facility# 211553 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 8000954
LL Group # 1583699
Account # 11260

Project Name: 211556

Collected: 08/10/2015 08:23 by GM

Chevron

6001 Bollinger Canyon Road

Submitted: 08/11/2015 09:50

L4310

Reported: 10/18/2015 16:55

San Ramon CA 94583

MR119

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P152252AA	08/13/2015 19:01	Hu Yang	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	15225A94A	08/14/2015 19:20	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	15225A94A	08/14/2015 19:20	Marie D Beamenderfer	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	152260019A	08/14/2015 12:21	Kristen N Brandt	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	152290012A	08/18/2015 16:34	Heather E Williams	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	152290011A	08/22/2015 23:48	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	152290011A	08/17/2015 20:00	Samantha L Bronder	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	152290012A	08/17/2015 20:00	Samantha L Bronder	1
00368	Nitrate Nitrogen	EPA 300.0	1	15223667121B	08/11/2015 20:17	Drew M Gerhart	5
00228	Sulfate	EPA 300.0	1	15223667121B	08/11/2015 20:17	Drew M Gerhart	5
12150	Total Alkalinity to pH 4.5	SM 2320 B-1997	1	15225005202A	08/13/2015 19:03	Michele L Graham	1
00230	Sulfide	SM 4500-S2 D-2000	1	15225023002A	08/13/2015 12:55	Susan E Hibner	1

Sample Description: MW-119 Filtered Grab Groundwater
Facility# 211553 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 8000955
LL Group # 1583699
Account # 11260

Project Name: 211556

Collected: 08/10/2015 08:23 by GM

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 08/11/2015 09:50

Reported: 10/18/2015 16:55

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
Metals Dissolved					
		SW-846 6010B	ug/l	ug/l	
01754	Iron	7439-89-6	66.3	33.3	1
07058	Manganese	7439-96-5	15.0	0.80	1
		SW-846 6020	ug/l	ug/l	
06035	Lead	7439-92-1	N.D.	0.13	1

General Sample Comments

State of Washington Lab Certification No. C457
This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	152241848004	08/15/2015 00:28	Elaine F Stoltzfus	1
07058	Manganese	SW-846 6010B	1	152241848004	08/15/2015 00:28	Elaine F Stoltzfus	1
06035	Lead	SW-846 6020	1	152246050005A	08/17/2015 15:18	Mallory L Clark	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	152241848004	08/14/2015 09:06	Katlin N Cataldi	1
06050	ICPMS-Water, 3020A - U3	SW-846 3020A	1	152246050005	08/13/2015 23:00	Annamaria Kuhns	1

Sample Description: MW-120 Grab Groundwater
Facility# 211553 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 8000956
LL Group # 1583699
Account # 11260

Project Name: 211556

Collected: 08/10/2015 11:25 by GM

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 08/11/2015 09:50

Reported: 10/18/2015 16:55

MR120

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B ug/l					
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx ug/l					
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	28	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	66	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	28	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	66	1
The reverse surrogate, capric acid, is present at <1%.					

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	P152252AA	08/13/2015 19:27	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P152252AA	08/13/2015 19:27	Hu Yang	1
08273	NWTPH-Gx water C7-C12	ECY 97-602	1	15225A94A	08/14/2015 19:45	Marie D Beamenderfer	1
01146	GC VOA Water Prep	NWTPH-Gx SW-846 5030B	1	15225A94A	08/14/2015 19:45	Marie D Beamenderfer	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	152290012A	08/18/2015 16:56	Heather E Williams	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	152290011A	08/23/2015 00:10	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	152290011A	08/17/2015 20:00	Samantha L Bronder	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	152290012A	08/17/2015 20:00	Samantha L Bronder	1

Sample Description: MW-120 Filtered Grab Groundwater
 Facility# 211553 Job# 386773
 101 Mulford Road - Toledo, WA

LL Sample # WW 8000957
 LL Group # 1583699
 Account # 11260

Project Name: 211556

Collected: 08/10/2015 11:25 by GM

Chevron

6001 Bollinger Canyon Road
 L4310

Submitted: 08/11/2015 09:50

Reported: 10/18/2015 16:55

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
Metals Dissolved					
06035	Lead	SW-846 6020 7439-92-1	ug/l N.D.	ug/l 0.13	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was filtered in the lab for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	152246050005A	08/17/2015 15:45	Mallory L Clark	1
06050	ICPMS-Water, 3020A - U3	SW-846 3020A	1	152246050005	08/13/2015 23:00	Annamaria Kuhns	1

Quality Control Summary

Client Name: Chevron
Reported: 10/18/2015 16:55

Group Number: 1583699

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

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: P152251AA	Sample number(s): 8000939-8000940,8000942,8000944							
Benzene	N.D.	0.5	ug/l	100		78-120		
Ethylbenzene	N.D.	0.5	ug/l	100		80-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	107		75-120		
Toluene	N.D.	0.5	ug/l	98		80-120		
Xylene (Total)	N.D.	0.5	ug/l	101		80-120		
Batch number: P152252AA	Sample number(s): 8000946,8000948,8000950,8000952,8000954,8000956							
Benzene	N.D.	0.5	ug/l	103	101	78-120	2	30
Ethylbenzene	N.D.	0.5	ug/l	101	99	80-120	2	30
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	105	97	75-120	7	30
Toluene	N.D.	0.5	ug/l	103	100	80-120	2	30
Xylene (Total)	N.D.	0.5	ug/l	103	101	80-120	2	30
Batch number: 15224A94A	Sample number(s): 8000939-8000940,8000942,8000944,8000946,8000948,8000950							
NWTPH-Gx water C7-C12	N.D.	50.	ug/l	93		80-123		
Batch number: 15225A94A	Sample number(s): 8000952,8000954,8000956							
NWTPH-Gx water C7-C12	N.D.	50.	ug/l	88	91	80-123	4	30
Batch number: 152260019A	Sample number(s): 8000940,8000942,8000944,8000948,8000950,8000954							
Methane	N.D.	3.0	ug/l	102		85-115		
Batch number: 152290012A	Sample number(s): 8000940,8000942,8000944,8000946,8000948,8000950,8000952,8000954,8000956							
Diesel Range Organics C12-C24	N.D.	30.	ug/l	63	61	50-113	4	20
Heavy Range Organics C24-C40	N.D.	70.	ug/l					
Batch number: 152290011A	Sample number(s): 8000940,8000942,8000944,8000946,8000948,8000950,8000952,8000954,8000956							
DRO C12-C24 w/Si Gel	N.D.	30.	ug/l	53	65	32-117	21*	20
HRO C24-C40 w/Si Gel	N.D.	70.	ug/l					
Batch number: 152241848004	Sample number(s): 8000941,8000943,8000945,8000949,8000951,8000955							
Iron	N.D.	33.3	ug/l	114		80-120		
Manganese	0.82	0.80	ug/l	101		80-120		
Batch number: 152246050005A	Sample number(s): 8000941,8000943,8000945,8000947,8000949,8000951,8000953,8000955,8000957							
Lead	N.D.	0.13	ug/l	101		80-120		
Batch number: 15223667121B	Sample number(s): 8000940,8000942,8000944,8000948,8000950,8000954							
Nitrate Nitrogen	N.D.	50.	ug/l	94		90-111		
Sulfate	N.D.	300.	ug/l	97		90-110		

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 10/18/2015 16:55

Group Number: 1583699

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 15225005202A Total Alkalinity to pH 4.5	Sample number(s): 8000940,8000942,8000944,8000948,8000950,8000954 N.D.	700.	ug/l as CaCO3	100		90-110		
Batch number: 15225023002A Sulfide	Sample number(s): 8000940,8000942,8000944,8000948,8000950,8000954 N.D.	54.	ug/l	100		90-110		

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

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: P152251AA	Sample number(s): 8000939-8000940,8000942,8000944 UNSPK: P001567								
Benzene	107	109	72-134	2	30				
Ethylbenzene	107	107	71-134	0	30				
Methyl Tertiary Butyl Ether	109	111	72-126	2	30				
Toluene	105	105	80-125	1	30				
Xylene (Total)	107	109	79-125	1	30				
Batch number: 15224A94A	Sample number(s): 8000939-8000940,8000942,8000944,8000946,8000948,8000950 UNSPK: P998826								
NWTPH-Gx water C7-C12	99	99	75-135	0	30				
Batch number: 152260019A	Sample number(s): 8000940,8000942,8000944,8000948,8000950,8000954 UNSPK: P002318								
Methane	101	103	46-129	2	20				
Batch number: 152241848004	Sample number(s): 8000941,8000943,8000945,8000949,8000951,8000955 UNSPK: P998159 BKG: P998159								
Iron	88	87	75-125	1	20	110	36.7	100* (1)	20
Manganese	98	96	75-125	1	20	3.7	2.7	32* (1)	20
Batch number: 152246050005A	Sample number(s): 8000941,8000943,8000945,8000947,8000949,8000951,8000953,8000955,8000957 UNSPK: 8000955 BKG: 8000955								
Lead	102	103	75-125	1	20	N.D.	N.D.	0 (1)	20
Batch number: 15223667121B	Sample number(s): 8000940,8000942,8000944,8000948,8000950,8000954 UNSPK: 8000940 BKG: 8000940								
Nitrate Nitrogen	97		90-110			N.D.	N.D.	0 (1)	15
Sulfate	99		90-110			3,400	3,600	7 (1)	15
Batch number: 15225005202A	Sample number(s): 8000940,8000942,8000944,8000948,8000950,8000954 UNSPK: 8000948 BKG: 8000948								
Total Alkalinity to pH 4.5	96		90-110			50,100	51,500	3	5
Batch number: 15225023002A	Sample number(s): 8000940,8000942,8000944,8000948,8000950,8000954 UNSPK: P000516 BKG: P000516								
Sulfide	88*	62*	90-110	34*	16	N.D.	N.D.	0 (1)	5

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 10/18/2015 16:55

Group Number: 1583699

Surrogate Quality Control

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

Analysis Name: BTEX/MTBE
Batch number: P152251AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
8000939	99	96	99	100
8000940	100	97	99	99
8000942	100	95	99	99
8000944	101	95	98	99
Blank	98	97	98	99
LCS	100	99	100	101
MS	100	98	98	100
MSD	99	99	99	100
Limits:	80-116	77-113	80-113	78-113

Analysis Name: BTEX/MTBE
Batch number: P152252AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
8000946	100	97	99	98
8000948	100	97	100	99
8000950	100	96	99	99
8000952	100	97	100	100
8000954	99	97	99	99
8000956	99	97	100	99
Blank	100	97	100	100
LCS	101	101	100	99
LCSD	99	98	99	100
Limits:	80-116	77-113	80-113	78-113

Analysis Name: NWTPH-Gx water C7-C12
Batch number: 15224A94A

	Trifluorotoluene-F
8000939	77
8000940	76
8000942	77
8000944	77
8000946	81
8000948	76
8000950	85
Blank	78
LCS	95
MS	104
MSD	104
Limits:	63-135

Analysis Name: NWTPH-Gx water C7-C12
Batch number: 15225A94A

	Trifluorotoluene-F
8000952	75
8000954	75
8000956	76

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 10/18/2015 16:55

Group Number: 1583699

Surrogate Quality Control

Blank 91
LCS 92
LCSD 93
Limits: 63-135

Analysis Name: Volatile Headspace Hydrocarbon
Batch number: 152260019A
Propene

8000940 71
8000942 86
8000944 85
8000948 85
8000950 85
8000954 79
Blank 91
LCS 93
MS 86
MSD 89
Limits: 47-116

Analysis Name: NWT PH-Dx water w/ 10g Si Gel
Batch number: 152290011A
Orthoterphenyl

8000940 74
8000942 76
8000944 83
8000946 86
8000948 79
8000950 83
8000952 74
8000954 90
8000956 84
Blank 90
LCS 70
LCSD 90
Limits: 50-150

Analysis Name: NWT PH-Dx water
Batch number: 152290012A
Orthoterphenyl

8000940 96
8000942 84
8000944 94
8000946 84
8000948 81
8000950 88
8000952 86
8000954 95
8000956 92
Blank 81
LCS 87
LCSD 88
Limits: 50-150

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 10/18/2015 16:55

Group Number: 1583699

*- 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



**Lancaster
Laboratories**

Acct. # 11260 Group # 1583699 Sample # 7-8000939-57
For Eurofins Lancaster Laboratories use only
 Instructions on reverse side correspond with circled numbers.

JA 8/11/15 (2)

① Client Information				④ Matrix				⑤ Analyses Requested									
Facility # SS#211556-OML G-R#386773 WBS				<input type="checkbox"/> Sediment <input checked="" type="checkbox"/> Ground <input type="checkbox"/> Surface				<input type="checkbox"/> 8260 <input checked="" type="checkbox"/> 8261 <input type="checkbox"/> 8262 <input type="checkbox"/> 8263 <input type="checkbox"/> 8264 <input type="checkbox"/> 8265 <input type="checkbox"/> 8266 <input type="checkbox"/> 8267 <input type="checkbox"/> 8268 <input type="checkbox"/> 8269 <input type="checkbox"/> 8270 <input type="checkbox"/> 8271 <input type="checkbox"/> 8272 <input type="checkbox"/> 8273 <input type="checkbox"/> 8274 <input type="checkbox"/> 8275 <input type="checkbox"/> 8276 <input type="checkbox"/> 8277 <input type="checkbox"/> 8278 <input type="checkbox"/> 8279 <input type="checkbox"/> 8280 <input type="checkbox"/> 8281 <input type="checkbox"/> 8282 <input type="checkbox"/> 8283 <input type="checkbox"/> 8284 <input type="checkbox"/> 8285 <input type="checkbox"/> 8286 <input type="checkbox"/> 8287 <input type="checkbox"/> 8288 <input type="checkbox"/> 8289 <input type="checkbox"/> 8290 <input type="checkbox"/> 8291 <input type="checkbox"/> 8292 <input type="checkbox"/> 8293 <input type="checkbox"/> 8294 <input type="checkbox"/> 8295 <input type="checkbox"/> 8296 <input type="checkbox"/> 8297 <input type="checkbox"/> 8298 <input type="checkbox"/> 8299 <input type="checkbox"/> 8300 <input type="checkbox"/> 8301 <input type="checkbox"/> 8302 <input type="checkbox"/> 8303 <input type="checkbox"/> 8304 <input type="checkbox"/> 8305 <input type="checkbox"/> 8306 <input type="checkbox"/> 8307 <input type="checkbox"/> 8308 <input type="checkbox"/> 8309 <input type="checkbox"/> 8310 <input type="checkbox"/> 8311 <input type="checkbox"/> 8312 <input type="checkbox"/> 8313 <input type="checkbox"/> 8314 <input type="checkbox"/> 8315 <input type="checkbox"/> 8316 <input type="checkbox"/> 8317 <input type="checkbox"/> 8318 <input type="checkbox"/> 8319 <input type="checkbox"/> 8320 <input type="checkbox"/> 8321 <input type="checkbox"/> 8322 <input type="checkbox"/> 8323 <input type="checkbox"/> 8324 <input type="checkbox"/> 8325 <input type="checkbox"/> 8326 <input type="checkbox"/> 8327 <input type="checkbox"/> 8328 <input type="checkbox"/> 8329 <input type="checkbox"/> 8330 <input type="checkbox"/> 8331 <input type="checkbox"/> 8332 <input type="checkbox"/> 8333 <input type="checkbox"/> 8334 <input type="checkbox"/> 8335 <input type="checkbox"/> 8336 <input type="checkbox"/> 8337 <input type="checkbox"/> 8338 <input type="checkbox"/> 8339 <input type="checkbox"/> 8340 <input type="checkbox"/> 8341 <input type="checkbox"/> 8342 <input type="checkbox"/> 8343 <input type="checkbox"/> 8344 <input type="checkbox"/> 8345 <input type="checkbox"/> 8346 <input type="checkbox"/> 8347 <input type="checkbox"/> 8348 <input type="checkbox"/> 8349 <input type="checkbox"/> 8350 <input type="checkbox"/> 8351 <input type="checkbox"/> 8352 <input type="checkbox"/> 8353 <input type="checkbox"/> 8354 <input type="checkbox"/> 8355 <input type="checkbox"/> 8356 <input type="checkbox"/> 8357 <input type="checkbox"/> 8358 <input type="checkbox"/> 8359 <input type="checkbox"/> 8360 <input type="checkbox"/> 8361 <input type="checkbox"/> 8362 <input type="checkbox"/> 8363 <input type="checkbox"/> 8364 <input type="checkbox"/> 8365 <input type="checkbox"/> 8366 <input type="checkbox"/> 8367 <input type="checkbox"/> 8368 <input type="checkbox"/> 8369 <input type="checkbox"/> 8370 <input type="checkbox"/> 8371 <input type="checkbox"/> 8372 <input type="checkbox"/> 8373 <input type="checkbox"/> 8374 <input type="checkbox"/> 8375 <input type="checkbox"/> 8376 <input type="checkbox"/> 8377 <input type="checkbox"/> 8378 <input type="checkbox"/> 8379 <input type="checkbox"/> 8380 <input type="checkbox"/> 8381 <input type="checkbox"/> 8382 <input type="checkbox"/> 8383 <input type="checkbox"/> 8384 <input type="checkbox"/> 8385 <input type="checkbox"/> 8386 <input type="checkbox"/> 8387 <input type="checkbox"/> 8388 <input type="checkbox"/> 8389 <input type="checkbox"/> 8390 <input type="checkbox"/> 8391 <input type="checkbox"/> 8392 <input type="checkbox"/> 8393 <input type="checkbox"/> 8394 <input type="checkbox"/> 8395 <input type="checkbox"/> 8396 <input type="checkbox"/> 8397 <input type="checkbox"/> 8398 <input type="checkbox"/> 8399 <input type="checkbox"/> 8400									
Site Address 101 Mulford Road, TOLEDO, WA				Total Number of Containers				<input type="checkbox"/> Lead <input type="checkbox"/> Total <input type="checkbox"/> Diss. Method <u>G022M</u> <input checked="" type="checkbox"/> Nitrate/Sulfate (EPA 300.0) <input checked="" type="checkbox"/> Methane Creskop - 175 <input checked="" type="checkbox"/> Dissolved Iron <input checked="" type="checkbox"/> Dissolved Manganese (G0105) <input checked="" type="checkbox"/> Sulfide (SM20 4500 S2D) <input checked="" type="checkbox"/> ALKALINITY SM20 (2-3205)									
Chevron PM MHO LEIDOSRS Lead Consultant Russell Shroyer				Soil <input type="checkbox"/>				<input type="checkbox"/> Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Air <input type="checkbox"/> Water <input type="checkbox"/> Oil <input type="checkbox"/> BTEX + MTBE <input type="checkbox"/> 8260 full scan <input type="checkbox"/> Oxygenates <input type="checkbox"/> NWTPH-Gx <input checked="" type="checkbox"/> NWTPH-Dx with Silica Gel Cleanup <input checked="" type="checkbox"/> NWTPH-Dx without Silica Gel Cleanup <input type="checkbox"/> WA VPH <input type="checkbox"/> WA EPH									
Consultant/Office Gettler-Ryan Inc., 6805 Sierra Court, Suite G, Dublin, CA 94568				Composite				<input type="checkbox"/> Lead <input type="checkbox"/> Total <input type="checkbox"/> Diss. Method <u>G022M</u> <input checked="" type="checkbox"/> Nitrate/Sulfate (EPA 300.0) <input checked="" type="checkbox"/> Methane Creskop - 175 <input checked="" type="checkbox"/> Dissolved Iron <input checked="" type="checkbox"/> Dissolved Manganese (G0105) <input checked="" type="checkbox"/> Sulfide (SM20 4500 S2D) <input checked="" type="checkbox"/> ALKALINITY SM20 (2-3205)									
Consultant Project Mgr. Deanna L. Harding, (deanna@grinc.com)				Grab				<input type="checkbox"/> Lead <input type="checkbox"/> Total <input type="checkbox"/> Diss. Method <u>G022M</u> <input checked="" type="checkbox"/> Nitrate/Sulfate (EPA 300.0) <input checked="" type="checkbox"/> Methane Creskop - 175 <input checked="" type="checkbox"/> Dissolved Iron <input checked="" type="checkbox"/> Dissolved Manganese (G0105) <input checked="" type="checkbox"/> Sulfide (SM20 4500 S2D) <input checked="" type="checkbox"/> ALKALINITY SM20 (2-3205)									
Consultant Phone # (925) 551-7444 x180				Composite				<input type="checkbox"/> Lead <input type="checkbox"/> Total <input type="checkbox"/> Diss. Method <u>G022M</u> <input checked="" type="checkbox"/> Nitrate/Sulfate (EPA 300.0) <input checked="" type="checkbox"/> Methane Creskop - 175 <input checked="" type="checkbox"/> Dissolved Iron <input checked="" type="checkbox"/> Dissolved Manganese (G0105) <input checked="" type="checkbox"/> Sulfide (SM20 4500 S2D) <input checked="" type="checkbox"/> ALKALINITY SM20 (2-3205)									
Sampler GM/AW				Composite				<input type="checkbox"/> Lead <input type="checkbox"/> Total <input type="checkbox"/> Diss. Method <u>G022M</u> <input checked="" type="checkbox"/> Nitrate/Sulfate (EPA 300.0) <input checked="" type="checkbox"/> Methane Creskop - 175 <input checked="" type="checkbox"/> Dissolved Iron <input checked="" type="checkbox"/> Dissolved Manganese (G0105) <input checked="" type="checkbox"/> Sulfide (SM20 4500 S2D) <input checked="" type="checkbox"/> ALKALINITY SM20 (2-3205)									

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	Collected		③ Grab	Composite	Soil	Water	Oil	Total Number of Containers	BTEX + MTBE	8260 full scan	Oxygenates	NWTPH-Gx	NWTPH-Dx with Silica Gel Cleanup	NWTPH-Dx without Silica Gel Cleanup	WA VPH	WA EPH	Lead	Total	Diss.	Method	Nitrate/Sulfate (EPA 300.0)	Methane Creskop - 175	Dissolved Iron	Dissolved Manganese (G0105)	Sulfide (SM20 4500 S2D)	ALKALINITY SM20 (2-3205)
	Date	Time																								
QA	8/10/15	-	X			W		16	X			X	X	X			X	X	X	X	X	X	X	X	X	X
MW-103		0820											X	X			X	X	X	X	X	X	X	X	X	X
MW-112		0925																								
MW-113		1037																								
MW-115		1133																								
MW-116		0925																								
MW-117		1230																								
MW-118		1020																								
MW-119		0823																								
MW-120		1125																								

⑥ Remarks

Please report results for Dx with & without sgc. Dissolved Iron, Lead, and Manganese, as well as Alkalinity samples have been field filtered.

Please forward lab results directly to the LC and cc: G-R. The TPW sample results should be forwarded directly to Deanna Harding

⑦ Turnaround Time Requested (TAT) (please circle)					Relinquished by		Date	Time	Received by		Date	Time
<input checked="" type="checkbox"/> Standard 5 day 4 day 72 hour 48 hour EDF/EDD 24 hour					<i>[Signature]</i>		8/10/15		<i>[Signature]</i>			
⑧ Data Package (circle if required)					Relinquished by Commercial Carrier:		Date	Time	Received by		Date	Time
<input type="checkbox"/> Type I - Full <input type="checkbox"/> EDD (circle if required) <input type="checkbox"/> Type VI (Raw Data) CVX-RTBU-FI_05 (default) Other: _____					UPS <input checked="" type="checkbox"/> FedEx _____ Other _____				<i>[Signature]</i>		8-11-15	950
					Temperature Upon Receipt <u>2.3 - 4.7</u> °C				Custody Seals Intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			

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		
>	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.		

Laboratory Data Qualifiers:

- B - Analyte detected in the blank
- C - Result confirmed by reanalysis
- E - Concentration exceeds the calibration range
- J (or G, I, X) - estimated value \geq the Method Detection Limit (MDL or DL) and the $<$ Limit of Quantitation (LOQ or RL)
- P - Concentration difference between the primary and confirmation column $>40\%$. The lower result is reported.
- U - Analyte was not detected at the value indicated
- V - Concentration difference between the primary and confirmation column $>100\%$. The reporting limit is raised due to this disparity and evident interference...

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

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, ISO17025) 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.

ANALYTICAL RESULTS

Prepared by:

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

Prepared for:

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

October 18, 2015

Project: 211556

Submittal Date: 08/12/2015
Group Number: 1584022
PO Number: 0015183585
Release Number: HORNE

State of Sample Origin: WA

<u>Client Sample Description</u>	<u>Lancaster Labs (LL) #</u>
QA NA Water	8002757
MW-109 Grab Groundwater	8002758
MW-109 Filtered Grab Groundwater	8002759
MW-110 Grab Groundwater	8002760
MW-110 Filtered Grab Groundwater	8002761
MW-111 Grab Groundwater	8002762
MW-111 Filtered Grab Groundwater	8002763
MW-114 Grab Groundwater	8002764
MW-114 Filtered Grab Groundwater	8002765
B-1 Grab Groundwater	8002766
B-1 Filtered Grab Groundwater	8002767
B-2 Grab Groundwater	8002768
B-2 Filtered Grab Groundwater	8002769
B-3 Grab Groundwater	8002770
B-3 Filtered Grab Groundwater	8002771
B-4 Grab Groundwater	8002772
B-4 Filtered Grab Groundwater	8002773

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

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our scopes of accreditation can be viewed at <http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/>.

ELECTRONIC Leidos
COPY TO

Attn: Russ Shropshire

ELECTRONIC Leidos

Attn: Jamalyn Agyei

COPY TO

ELECTRONIC Gettler-Ryan Inc.

Attn: Gettler Ryan

COPY TO

Respectfully Submitted,



Amek Carter
Specialist

(717) 556-7252

Sample Description: QA NA Water
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 8002757
LL Group # 1584022
Account # 11260

Project Name: 211556

Collected: 08/11/2015

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 08/12/2015 09:50

San Ramon CA 94583

Reported: 10/18/2015 16:55

TL-QA

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles			SW-846 8260B	ug/l	
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles			ECY 97-602 NWTPH-Gx	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	P152252AA	08/13/2015 13:42	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P152252AA	08/13/2015 13:42	Hu Yang	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	15225A94A	08/14/2015 18:03	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	15225A94A	08/14/2015 18:03	Marie D Beamenderfer	1

Sample Description: MW-109 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 8002758
LL Group # 1584022
Account # 11260

Project Name: 211556

Collected: 08/11/2015 07:45 by GM

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 08/12/2015 09:50

Reported: 10/18/2015 16:55

San Ramon CA 94583

TL109

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles		SW-846 8260B	ug/l	ug/l	
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles		ECY 97-602 NWTPH-Gx	ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Petroleum Hydrocarbons		ECY 97-602 NWTPH-Dx modified	ug/l	ug/l	
08271	Diesel Range Organics C12-C24	n.a.	130	29	1
08271	Heavy Range Organics C24-C40	n.a.	640	67	1
GC Petroleum Hydrocarbons w/Si		ECY 97-602 NWTPH-Dx modified	ug/l	ug/l	
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	210	67	1
The reverse surrogate, capric acid, is present at <1%.					

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	P152272AA	08/15/2015 13:50	Amanda K Richards	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P152272AA	08/15/2015 13:50	Amanda K Richards	1
08273	NWTPH-Gx water C7-C12	ECY 97-602	1	15225A94A	08/14/2015 22:18	Marie D	1
		NWTPH-Gx				Beamenderfer	
01146	GC VOA Water Prep	SW-846 5030B	1	15225A94A	08/14/2015 22:18	Marie D	1
						Beamenderfer	
08271	NWTPH-Dx water	ECY 97-602	1	152360018A	08/26/2015 14:36	Christine E Dolman	1
		NWTPH-Dx modified					
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602	1	152360019A	08/27/2015 21:54	Christine E Dolman	1
		NWTPH-Dx modified					
12007	NW Dx water w/ 10g column	ECY 97-602	1	152360019A	08/24/2015 21:00	David V Hershey Jr	1
		NWTPH-Dx 06/97					
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602	1	152360018A	08/24/2015 21:00	David V Hershey Jr	1
		NWTPH-Dx 06/97					

Sample Description: MW-109 Filtered Grab Groundwater
 Facility# 211556 Job# 386773
 101 Mulford Road - Toledo, WA

LL Sample # WW 8002759
 LL Group # 1584022
 Account # 11260

Project Name: 211556

Collected: 08/11/2015 07:45 by GM

Chevron

6001 Bollinger Canyon Road
 L4310

Submitted: 08/12/2015 09:50

Reported: 10/18/2015 16:55

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
Metals Dissolved					
06035	Lead	SW-846 6020 7439-92-1	ug/l 136	ug/l 0.13	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	152256050001A	08/18/2015 01:55	Tara L Snyder	1
06050	ICPMS-Water, 3020A - U3	SW-846 3020A	1	152256050001	08/16/2015 23:00	Annamaria Kuhns	1

Sample Description: MW-110 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 8002760
LL Group # 1584022
Account # 11260

Project Name: 211556

Collected: 08/11/2015 10:18 by GM

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 08/12/2015 09:50

Reported: 10/18/2015 16:55

TL110

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles		SW-846 8260B	ug/l	ug/l	
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles		ECY 97-602 NWTPH-Gx	ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Petroleum Hydrocarbons		ECY 97-602 NWTPH-Dx modified	ug/l	ug/l	
08271	Diesel Range Organics C12-C24	n.a.	N.D.	28	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	66	1
GC Petroleum Hydrocarbons w/Si		ECY 97-602 NWTPH-Dx modified	ug/l	ug/l	
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	28	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	66	1
The reverse surrogate, capric acid, is present at <1%.					

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	P152272AA	08/15/2015 15:09	Amanda K Richards	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P152272AA	08/15/2015 15:09	Amanda K Richards	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	15225A94A	08/14/2015 22:44	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	15225A94A	08/14/2015 22:44	Marie D Beamenderfer	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	152360018A	08/26/2015 12:28	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	152360019A	08/27/2015 19:18	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	152360019A	08/24/2015 21:00	David V Hershey Jr	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	152360018A	08/24/2015 21:00	David V Hershey Jr	1

Sample Description: MW-110 Filtered Grab Groundwater
 Facility# 211556 Job# 386773
 101 Mulford Road - Toledo, WA

LL Sample # WW 8002761
 LL Group # 1584022
 Account # 11260

Project Name: 211556

Collected: 08/11/2015 10:18 by GM

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 08/12/2015 09:50

Reported: 10/18/2015 16:55

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
Metals Dissolved					
06035	Lead	SW-846 6020 7439-92-1	ug/l 0.88	ug/l 0.13	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	152256050001A	08/18/2015 01:57	Tara L Snyder	1
06050	ICPMS-Water, 3020A - U3	SW-846 3020A	1	152256050001	08/16/2015 23:00	Annamaria Kuhns	1

Sample Description: MW-111 Grab Groundwater
Facility# 211556 **Job#** 386773
 101 Mulford Road - Toledo, WA

LL Sample # WW 8002762
LL Group # 1584022
Account # 11260

Project Name: 211556

Collected: 08/11/2015 10:00 by GM

Chevron
 6001 Bollinger Canyon Road
 L4310
 San Ramon CA 94583

Submitted: 08/12/2015 09:50

Reported: 10/18/2015 16:55

TL111

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B					
10945	Benzene	71-43-2	N.D.	3	5
10945	Ethylbenzene	100-41-4	31	3	5
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	3	5
10945	Toluene	108-88-3	N.D.	3	5
10945	Xylene (Total)	1330-20-7	6	3	5
GC Volatiles ECY 97-602 NWTPH-Gx					
08273	NWTPH-Gx water C7-C12	n.a.	4,500	50	1
GC Miscellaneous RSKSOP-175 modified					
07105	Methane	74-82-8	1,700	30	10
GC Petroleum ECY 97-602 NWTPH-Dx					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	2,700	29	1
08271	Heavy Range Organics C24-C40	n.a.	93	67	1
GC Petroleum ECY 97-602 NWTPH-Dx					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	470	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0					
00368	Nitrate Nitrogen	14797-55-8	N.D.	250	5
00228	Sulfate	14808-79-8	1,800	1,500	5
SM 2320 B-1997					
12150	Total Alkalinity to pH 4.5	n.a.	169,000	700	1
SM 4500-S2 D-2000					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	P152272AA	08/15/2015 18:42	Amanda K Richards	5

Sample Description: MW-111 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 8002762
LL Group # 1584022
Account # 11260

Project Name: 211556

Collected: 08/11/2015 10:00 by GM

Chevron

6001 Bollinger Canyon Road

Submitted: 08/12/2015 09:50

L4310

Reported: 10/18/2015 16:55

San Ramon CA 94583

TL111

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P152272AA	08/15/2015 18:42	Amanda K Richards	5
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	15225A94A	08/14/2015 23:09	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	15225A94A	08/14/2015 23:09	Marie D Beamenderfer	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	152300001A	08/19/2015 09:16	Kristen N Brandt	10
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	152360018A	08/26/2015 12:49	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	152360019A	08/27/2015 19:40	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	152360019A	08/24/2015 21:00	David V Hershey Jr	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	152360018A	08/24/2015 21:00	David V Hershey Jr	1
00368	Nitrate Nitrogen	EPA 300.0	1	15224667152B	08/13/2015 00:47	Drew M Gerhart	5
00228	Sulfate	EPA 300.0	1	15224667152B	08/13/2015 00:47	Drew M Gerhart	5
12150	Total Alkalinity to pH 4.5	SM 2320 B-1997	1	15225005203A	08/13/2015 21:51	Michele L Graham	1
00230	Sulfide	SM 4500-S2 D-2000	1	15229023001A	08/17/2015 10:45	Susan E Hibner	1

Sample Description: MW-111 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 8002763
LL Group # 1584022
Account # 11260

Project Name: 211556

Collected: 08/11/2015 10:00 by GM

Chevron

6001 Bollinger Canyon Road

Submitted: 08/12/2015 09:50

L4310

Reported: 10/18/2015 16:55

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
Metals Dissolved					
		SW-846 6010B	ug/l	ug/l	
01754	Iron	7439-89-6	9,920	33.3	1
07058	Manganese	7439-96-5	3,740	0.80	1
		SW-846 6020	ug/l	ug/l	
06035	Lead	7439-92-1	12.5	0.13	1

General Sample Comments

State of Washington Lab Certification No. C457
This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	152291848001	08/18/2015 11:36	Eric L Eby	1
07058	Manganese	SW-846 6010B	1	152291848001	08/18/2015 11:36	Eric L Eby	1
06035	Lead	SW-846 6020	1	152256050001A	08/18/2015 02:00	Tara L Snyder	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	152291848001	08/17/2015 23:00	Annamaria Kuhns	1
06050	ICPMS-Water, 3020A - U3	SW-846 3020A	1	152256050001	08/16/2015 23:00	Annamaria Kuhns	1

Sample Description: MW-114 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 8002764
LL Group # 1584022
Account # 11260

Project Name: 211556

Collected: 08/11/2015 11:08 by GM

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 08/12/2015 09:50

Reported: 10/18/2015 16:55

San Ramon CA 94583

TL114

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles		SW-846 8260B	ug/l	ug/l	
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles		ECY 97-602 NWTPH-Gx	ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Petroleum Hydrocarbons		ECY 97-602 NWTPH-Dx modified	ug/l	ug/l	
08271	Diesel Range Organics C12-C24	n.a.	130	29	1
08271	Heavy Range Organics C24-C40	n.a.	570	67	1
GC Petroleum Hydrocarbons w/Si		ECY 97-602 NWTPH-Dx modified	ug/l	ug/l	
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	170	67	1
The reverse surrogate, capric acid, is present at <1%.					

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	P152272AA	08/15/2015 15:36	Amanda K Richards	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P152272AA	08/15/2015 15:36	Amanda K Richards	1
08273	NWTPH-Gx water C7-C12	ECY 97-602	1	15229D20A	08/18/2015 12:02	Brett W Kenyon	1
		NWTPH-Gx					
01146	GC VOA Water Prep	SW-846 5030B	1	15229D20A	08/18/2015 12:02	Brett W Kenyon	1
08271	NWTPH-Dx water	ECY 97-602	1	152360018A	08/26/2015 15:19	Christine E Dolman	1
		NWTPH-Dx modified					
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602	1	152360019A	08/27/2015 22:16	Christine E Dolman	1
		NWTPH-Dx modified					
12007	NW Dx water w/ 10g column	ECY 97-602	1	152360019A	08/24/2015 21:00	David V Hershey Jr	1
		NWTPH-Dx 06/97					
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602	1	152360018A	08/24/2015 21:00	David V Hershey Jr	1
		NWTPH-Dx 06/97					

Sample Description: MW-114 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 8002765
LL Group # 1584022
Account # 11260

Project Name: 211556

Collected: 08/11/2015 11:08 by GM

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 08/12/2015 09:50

San Ramon CA 94583

Reported: 10/18/2015 16:55

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
Metals Dissolved					
06035	Lead	SW-846 6020 7439-92-1	ug/l 39.2	ug/l 0.13	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	152256050001A	08/18/2015 02:02	Tara L Snyder	1
06050	ICPMS-Water, 3020A - U3	SW-846 3020A	1	152256050001	08/16/2015 23:00	Annamaria Kuhns	1

Sample Description: B-1 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 8002766
LL Group # 1584022
Account # 11260

Project Name: 211556

Collected: 08/11/2015 07:45 by GM

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 08/12/2015 09:50

San Ramon CA 94583

Reported: 10/18/2015 16:55

TLB01

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B					
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx					
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Miscellaneous RSKSOP-175 modified					
07105	Methane	74-82-8	N.D.	3.0	1
GC Petroleum ECY 97-602 NWTPH-Dx					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	89	28	1
08271	Heavy Range Organics C24-C40	n.a.	74	66	1
GC Petroleum ECY 97-602 NWTPH-Dx					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	28	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	66	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0					
00368	Nitrate Nitrogen	14797-55-8	510	250	5
00228	Sulfate	14808-79-8	4,800	1,500	5
SM 2320 B-1997					
12150	Total Alkalinity to pH 4.5	n.a.	71,200	700	1
SM 4500-S2 D-2000					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	P152272AA	08/15/2015 16:03	Amanda K Richards	1

Sample Description: B-1 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 8002766
LL Group # 1584022
Account # 11260

Project Name: 211556

Collected: 08/11/2015 07:45 by GM

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 08/12/2015 09:50

Reported: 10/18/2015 16:55

San Ramon CA 94583

TLB01

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P152272AA	08/15/2015 16:03	Amanda K Richards	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	15225A94A	08/15/2015 00:00	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	15225A94A	08/15/2015 00:00	Marie D Beamenderfer	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	152300001A	08/18/2015 14:04	Kristen N Brandt	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	152360018A	08/26/2015 13:54	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	152360019A	08/27/2015 20:03	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	152360019A	08/24/2015 21:00	David V Hershey Jr	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	152360018A	08/24/2015 21:00	David V Hershey Jr	1
00368	Nitrate Nitrogen	EPA 300.0	1	15224667152B	08/13/2015 01:02	Drew M Gerhart	5
00228	Sulfate	EPA 300.0	1	15224667152B	08/13/2015 01:02	Drew M Gerhart	5
12150	Total Alkalinity to pH 4.5	SM 2320 B-1997	1	15225005203A	08/13/2015 20:26	Michele L Graham	1
00230	Sulfide	SM 4500-S2 D-2000	1	15229023001A	08/17/2015 10:45	Susan E Hibner	1

Sample Description: B-1 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 8002767
LL Group # 1584022
Account # 11260

Project Name: 211556

Collected: 08/11/2015 07:45 by GM

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 08/12/2015 09:50

Reported: 10/18/2015 16:55

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
Metals Dissolved					
		SW-846 6010B	ug/l	ug/l	
01754	Iron	7439-89-6	131	33.3	1
07058	Manganese	7439-96-5	138	0.80	1
		SW-846 6020	ug/l	ug/l	
06035	Lead	7439-92-1	N.D.	0.13	1

General Sample Comments

State of Washington Lab Certification No. C457
This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	152291848001	08/18/2015 11:40	Eric L Eby	1
07058	Manganese	SW-846 6010B	1	152291848001	08/18/2015 11:40	Eric L Eby	1
06035	Lead	SW-846 6020	1	152296050003A	08/19/2015 04:25	Choon Y Tian	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	152291848001	08/17/2015 23:00	Annamaria Kuhns	1
06050	ICPMS-Water, 3020A - U3	SW-846 3020A	1	152296050003	08/18/2015 07:58	Katlin N Cataldi	1

Sample Description: B-2 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 8002768
LL Group # 1584022
Account # 11260

Project Name: 211556

Collected: 08/11/2015 08:43 by GM

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 08/12/2015 09:50

San Ramon CA 94583

Reported: 10/18/2015 16:55

TLB02

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B					
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx					
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Miscellaneous RSKSOP-175 modified					
07105	Methane	74-82-8	N.D.	3.0	1
GC Petroleum ECY 97-602 NWTPH-Dx					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	N.D.	29	1
08271	Heavy Range Organics C24-C40	n.a.	N.D.	67	1
GC Petroleum ECY 97-602 NWTPH-Dx					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0					
00368	Nitrate Nitrogen	14797-55-8	610	250	5
00228	Sulfate	14808-79-8	4,000	1,500	5
SM 2320 B-1997					
12150	Total Alkalinity to pH 4.5	n.a.	90,100	700	1
SM 4500-S2 D-2000					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	P152272AA	08/15/2015 16:29	Amanda K Richards	1

Sample Description: B-2 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 8002768
LL Group # 1584022
Account # 11260

Project Name: 211556

Collected: 08/11/2015 08:43 by GM

Chevron

6001 Bollinger Canyon Road

Submitted: 08/12/2015 09:50

L4310

Reported: 10/18/2015 16:55

San Ramon CA 94583

TLB02

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P152272AA	08/15/2015 16:29	Amanda K Richards	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	15225A94A	08/15/2015 00:26	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	15225A94A	08/15/2015 00:26	Marie D Beamenderfer	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	152300001A	08/18/2015 14:22	Kristen N Brandt	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	152360018A	08/26/2015 13:10	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	152360019A	08/27/2015 20:25	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	152360019A	08/24/2015 21:00	David V Hershey Jr	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	152360018A	08/24/2015 21:00	David V Hershey Jr	1
00368	Nitrate Nitrogen	EPA 300.0	1	15224667152B	08/13/2015 01:47	Drew M Gerhart	5
00228	Sulfate	EPA 300.0	1	15224667152B	08/13/2015 01:47	Drew M Gerhart	5
12150	Total Alkalinity to pH 4.5	SM 2320 B-1997	1	15225005203A	08/13/2015 21:07	Michele L Graham	1
00230	Sulfide	SM 4500-S2 D-2000	1	15229023001A	08/17/2015 10:45	Susan E Hibner	1

Sample Description: B-2 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 8002769
LL Group # 1584022
Account # 11260

Project Name: 211556

Collected: 08/11/2015 08:43 by GM

Chevron

6001 Bollinger Canyon Road

Submitted: 08/12/2015 09:50

L4310

Reported: 10/18/2015 16:55

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
Metals Dissolved					
		SW-846 6010B	ug/l	ug/l	
01754	Iron	7439-89-6	1,770	33.3	1
07058	Manganese	7439-96-5	357	0.80	1
		SW-846 6020	ug/l	ug/l	
06035	Lead	7439-92-1	1.2	0.13	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	152291848001	08/18/2015 11:49	Eric L Eby	1
07058	Manganese	SW-846 6010B	1	152291848001	08/18/2015 11:49	Eric L Eby	1
06035	Lead	SW-846 6020	1	152296050003A	08/19/2015 04:27	Choon Y Tian	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	152291848001	08/17/2015 23:00	Annamaria Kuhns	1
06050	ICPMS-Water, 3020A - U3	SW-846 3020A	1	152296050003	08/18/2015 07:58	Katlin N Cataldi	1

Sample Description: B-3 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 8002770
LL Group # 1584022
Account # 11260

Project Name: 211556

Collected: 08/11/2015 09:22 by GM

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 08/12/2015 09:50

San Ramon CA 94583

Reported: 10/18/2015 16:55

TLB03

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B ug/l					
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	5	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	0.5	0.5	1
GC Volatiles ECY 97-602 NWT PH-Gx ug/l					
08273	NWT PH-Gx water C7-C12	n.a.	660	50	1
GC Miscellaneous RSKSOP-175 modified ug/l					
07105	Methane	74-82-8	450	3.0	1
GC Petroleum ECY 97-602 NWT PH-Dx ug/l					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	2,000	29	1
08271	Heavy Range Organics C24-C40	n.a.	550	67	1
GC Petroleum ECY 97-602 NWT PH-Dx ug/l					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	130	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0 ug/l					
00368	Nitrate Nitrogen	14797-55-8	N.D.	250	5
00228	Sulfate	14808-79-8	9,800	1,500	5
SM 2320 B-1997 ug/l as CaCO3					
12150	Total Alkalinity to pH 4.5	n.a.	161,000	700	1
SM 4500-S2 D-2000 ug/l					
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	P152272AA	08/15/2015 16:56	Amanda K Richards	1

Sample Description: B-3 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 8002770
LL Group # 1584022
Account # 11260

Project Name: 211556

Collected: 08/11/2015 09:22 by GM

Chevron

6001 Bollinger Canyon Road

Submitted: 08/12/2015 09:50

L4310

Reported: 10/18/2015 16:55

San Ramon CA 94583

TLB03

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P152272AA	08/15/2015 16:56	Amanda K Richards	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	15225A94A	08/15/2015 00:52	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	15225A94A	08/15/2015 00:52	Marie D Beamenderfer	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	152300001A	08/18/2015 14:59	Kristen N Brandt	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	152360018A	08/26/2015 14:58	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	152360019A	08/27/2015 20:47	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	152360019A	08/24/2015 21:00	David V Hershey Jr	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	152360018A	08/24/2015 21:00	David V Hershey Jr	1
00368	Nitrate Nitrogen	EPA 300.0	1	15224667152B	08/13/2015 02:03	Drew M Gerhart	5
00228	Sulfate	EPA 300.0	1	15224667152B	08/13/2015 02:03	Drew M Gerhart	5
12150	Total Alkalinity to pH 4.5	SM 2320 B-1997	1	15225005203A	08/13/2015 21:45	Michele L Graham	1
00230	Sulfide	SM 4500-S2 D-2000	1	15229023001A	08/17/2015 10:45	Susan E Hibner	1

Sample Description: B-3 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 8002771
LL Group # 1584022
Account # 11260

Project Name: 211556

Collected: 08/11/2015 09:22 by GM

Chevron

6001 Bollinger Canyon Road

Submitted: 08/12/2015 09:50

L4310

Reported: 10/18/2015 16:55

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
Metals Dissolved					
		SW-846 6010B	ug/l	ug/l	
01754	Iron	7439-89-6	12,800	33.3	1
07058	Manganese	7439-96-5	4,440	0.80	1
		SW-846 6020	ug/l	ug/l	
06035	Lead	7439-92-1	9.5	0.13	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	152291848001	08/18/2015 11:52	Eric L Eby	1
07058	Manganese	SW-846 6010B	1	152291848001	08/18/2015 11:52	Eric L Eby	1
06035	Lead	SW-846 6020	1	152296050003A	08/19/2015 04:32	Choon Y Tian	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	152291848001	08/17/2015 23:00	Annamaria Kuhns	1
06050	ICPMS-Water, 3020A - U3	SW-846 3020A	1	152296050003	08/18/2015 07:58	Katlin N Cataldi	1

Sample Description: B-4 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 8002772
LL Group # 1584022
Account # 11260

Project Name: 211556

Collected: 08/11/2015 08:50 by GM

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 08/12/2015 09:50

San Ramon CA 94583

Reported: 10/18/2015 16:55

TLB04

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B ug/l					
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	0.6	0.5	1
GC Volatiles ECY 97-602 NWTPH-Gx ug/l					
08273	NWTPH-Gx water C7-C12	n.a.	600	50	1
GC Miscellaneous RSKSOP-175 modified ug/l					
07105	Methane	74-82-8	570	15	5
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons modified					
08271	Diesel Range Organics C12-C24	n.a.	500	28	1
08271	Heavy Range Organics C24-C40	n.a.	340	66	1
GC Petroleum ECY 97-602 NWTPH-Dx ug/l					
Hydrocarbons w/Si modified					
12005	DRO C12-C24 w/Si Gel	n.a.	66	28	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	66	1
The reverse surrogate, capric acid, is present at <1%.					
Wet Chemistry EPA 300.0 ug/l					
00368	Nitrate Nitrogen	14797-55-8	N.D.	250	5
00228	Sulfate	14808-79-8	2,500	1,500	5
SM 2320 B-1997 ug/l as CaCO3					
12150	Total Alkalinity to pH 4.5	n.a.	126,000	700	1
SM 4500-S2 D-2000 ug/l					
00230	Sulfide	18496-25-8	71	54	1

General Sample Comments

State of Washington Lab Certification No. C457

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	P152272AA	08/15/2015 17:22	Amanda K Richards	1

Sample Description: B-4 Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 8002772
LL Group # 1584022
Account # 11260

Project Name: 211556

Collected: 08/11/2015 08:50 by GM

Chevron

6001 Bollinger Canyon Road

Submitted: 08/12/2015 09:50

L4310

Reported: 10/18/2015 16:55

San Ramon CA 94583

TLB04

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P152272AA	08/15/2015 17:22	Amanda K Richards	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	15225A94A	08/15/2015 01:17	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	15225A94A	08/15/2015 01:17	Marie D Beamenderfer	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	152300001A	08/19/2015 10:10	Kristen N Brandt	5
08271	NWTPH-Dx water	ECY 97-602 NWTPH-Dx modified	1	152360018A	08/26/2015 14:15	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	152360019A	08/27/2015 21:09	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	152360019A	08/24/2015 21:00	David V Hershey Jr	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	152360018A	08/24/2015 21:00	David V Hershey Jr	1
00368	Nitrate Nitrogen	EPA 300.0	1	15224667152B	08/13/2015 02:18	Drew M Gerhart	5
00228	Sulfate	EPA 300.0	1	15224667152B	08/13/2015 02:18	Drew M Gerhart	5
12150	Total Alkalinity to pH 4.5	SM 2320 B-1997	1	15225005203A	08/13/2015 21:13	Michele L Graham	1
00230	Sulfide	SM 4500-S2 D-2000	1	15229023001A	08/17/2015 10:45	Susan E Hibner	1

Sample Description: B-4 Filtered Grab Groundwater
Facility# 211556 Job# 386773
101 Mulford Road - Toledo, WA

LL Sample # WW 8002773
LL Group # 1584022
Account # 11260

Project Name: 211556

Collected: 08/11/2015 08:50 by GM

Chevron

6001 Bollinger Canyon Road
L4310

Submitted: 08/12/2015 09:50

San Ramon CA 94583

Reported: 10/18/2015 16:55

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
Metals Dissolved					
		SW-846 6010B	ug/l	ug/l	
01754	Iron	7439-89-6	9,340	33.3	1
07058	Manganese	7439-96-5	2,050	0.80	1
		SW-846 6020	ug/l	ug/l	
06035	Lead	7439-92-1	0.89	0.13	1

General Sample Comments

State of Washington Lab Certification No. C457
 This sample was field filtered for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	152291848001	08/18/2015 11:55	Eric L Eby	1
07058	Manganese	SW-846 6010B	1	152291848001	08/18/2015 11:55	Eric L Eby	1
06035	Lead	SW-846 6020	1	152296050003A	08/19/2015 04:15	Choon Y Tian	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	152291848001	08/17/2015 23:00	Annamaria Kuhns	1
06050	ICPMS-Water, 3020A - U3	SW-846 3020A	1	152296050003	08/18/2015 07:58	Katlin N Cataldi	1

Quality Control Summary

Client Name: Chevron
Reported: 10/18/2015 16:55

Group Number: 1584022

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

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: P152252AA	Sample number(s): 8002757							
Benzene	N.D.	0.5	ug/l	103	101	78-120	2	30
Ethylbenzene	N.D.	0.5	ug/l	101	99	80-120	2	30
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	105	97	75-120	7	30
Toluene	N.D.	0.5	ug/l	103	100	80-120	2	30
Xylene (Total)	N.D.	0.5	ug/l	103	101	80-120	2	30
Batch number: P152272AA	Sample number(s): 8002758,8002760,8002762,8002764,8002766,8002768,8002770,8002772							
Benzene	N.D.	0.5	ug/l	100		78-120		
Ethylbenzene	N.D.	0.5	ug/l	98		80-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	101		75-120		
Toluene	N.D.	0.5	ug/l	99		80-120		
Xylene (Total)	N.D.	0.5	ug/l	100		80-120		
Batch number: 15225A94A	Sample number(s): 8002757-8002758,8002760,8002762,8002766,8002768,8002770,8002772							
NWTPH-Gx water C7-C12	N.D.	50.	ug/l	88	91	80-123	4	30
Batch number: 15229D20A	Sample number(s): 8002764							
NWTPH-Gx water C7-C12	N.D.	50.	ug/l	89		80-123		
Batch number: 152300001A	Sample number(s): 8002762,8002766,8002768,8002770,8002772							
Methane	N.D.	3.0	ug/l	102		85-115		
Batch number: 152360018A	Sample number(s): 8002758,8002760,8002762,8002764,8002766,8002768,8002770,8002772							
Diesel Range Organics C12-C24	N.D.	30.	ug/l	93	96	50-113	2	20
Heavy Range Organics C24-C40	N.D.	70.	ug/l					
Batch number: 152360019A	Sample number(s): 8002758,8002760,8002762,8002764,8002766,8002768,8002770,8002772							
DRO C12-C24 w/Si Gel	N.D.	30.	ug/l	62	41	32-117	42*	20
HRO C24-C40 w/Si Gel	N.D.	70.	ug/l					
Batch number: 152256050001A	Sample number(s): 8002759,8002761,8002763,8002765							
Lead	N.D.	0.13	ug/l	103		80-120		
Batch number: 152291848001	Sample number(s): 8002763,8002767,8002769,8002771,8002773							
Iron	N.D.	33.3	ug/l	96		80-120		
Manganese	N.D.	0.80	ug/l	96		80-120		
Batch number: 152296050003A	Sample number(s): 8002767,8002769,8002771,8002773							
Lead	N.D.	0.13	ug/l	103		80-120		

*- 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: 1584022
Reported: 10/18/2015 16:55

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 15224667152B	Sample number(s): 8002762,8002766,8002768,8002770,8002772							
Nitrate Nitrogen	N.D.	50.	ug/l	92		90-111		
Sulfate	N.D.	300.	ug/l	97		90-110		
Batch number: 15225005203A	Sample number(s): 8002762,8002766,8002768,8002770,8002772							
Total Alkalinity to pH 4.5	N.D.	700.	ug/l as CaCO3	100		90-110		
Batch number: 15229023001A	Sample number(s): 8002762,8002766,8002768,8002770,8002772							
Sulfide	N.D.	54.	ug/l	104		90-110		

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

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: P152272AA	Sample number(s): 8002758,8002760,8002762,8002764,8002766,8002768,8002770,8002772 UNSPK: 8002758								
Benzene	108	106	72-134	2	30				
Ethylbenzene	106	105	71-134	1	30				
Methyl Tertiary Butyl Ether	104	103	72-126	1	30				
Toluene	107	106	80-125	1	30				
Xylene (Total)	107	106	79-125	1	30				
Batch number: 15229D20A	Sample number(s): 8002764 UNSPK: P007981								
NWTPH-Gx water C7-C12	121	119	80-123	1	30				
Batch number: 152300001A	Sample number(s): 8002762,8002766,8002768,8002770,8002772 UNSPK: 8002762								
Methane	-283	-204	46-129	3	20				
	(2)	(2)							
Batch number: 152256050001A	Sample number(s): 8002759,8002761,8002763,8002765 UNSPK: P998753 BKG: P998753								
Lead	107	107	75-125	0	20	N.D.	N.D.	0 (1)	20
Batch number: 152291848001	Sample number(s): 8002763,8002767,8002769,8002771,8002773 UNSPK: P003784 BKG: P003784								
Iron	-768	-559	75-125	17	20	18,900	16,700	13	20
	(2)	(2)							
Manganese	53*	73*	75-125	14	20	432	412	5	20
Batch number: 152296050003A	Sample number(s): 8002767,8002769,8002771,8002773 UNSPK: 8002773 BKG: 8002773								
Lead	102	102	75-125	0	20	0.89	0.89	1 (1)	20
Batch number: 15224667152B	Sample number(s): 8002762,8002766,8002768,8002770,8002772 UNSPK: P001839 BKG: P001839								
Nitrate Nitrogen	100		90-110			N.D.	N.D.	0 (1)	15
Sulfate	92		90-110			12,800	12,100	5 (1)	15
Batch number: 15225005203A	Sample number(s): 8002762,8002766,8002768,8002770,8002772 UNSPK: P003874 BKG: P003874								

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 10/18/2015 16:55

Group Number: 1584022

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

<u>Analysis Name</u>	<u>MS</u> <u>%REC</u>	<u>MSD</u> <u>%REC</u>	<u>MS/MSD</u> <u>Limits</u>	<u>RPD</u> <u>RPD</u>	<u>BKG</u> <u>Conc</u>	<u>DUP</u> <u>Conc</u>	<u>DUP</u> <u>RPD</u>	<u>Dup</u> <u>RPD</u> <u>Max</u>
Total Alkalinity to pH 4.5	83*		90-110		65,600	66,100	1	5
Batch number: 15229023001A	Sample number(s): 8002762,8002766,8002768,8002770,8002772 UNSPK: P001566 BKG: P001566							
Sulfide	42*	45*	90-110	7	16	N.D.	N.D.	0 (1) 5

Surrogate Quality Control

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

Analysis Name: BTEX/MTBE
Batch number: P152252AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
8002757	100	94	98	98
Blank	100	97	100	100
LCS	101	101	100	99
LCSD	99	98	99	100
Limits:	80-116	77-113	80-113	78-113

Analysis Name: BTEX/MTBE
Batch number: P152272AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
8002758	100	95	99	98
8002760	100	97	99	98
8002762	100	97	98	98
8002764	100	97	99	100
8002766	100	95	99	99
8002768	99	96	99	99
8002770	100	95	99	103
8002772	99	95	99	101
Blank	100	97	99	100
LCS	100	98	100	100
MS	100	98	100	100
MSD	99	97	98	99
Limits:	80-116	77-113	80-113	78-113

Analysis Name: NWTPH-Gx water C7-C12
Batch number: 15225A94A

	Trifluorotoluene-F
8002757	76
8002758	76
8002760	82
8002762	125
8002766	76
8002768	75
8002770	99
8002772	92

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 10/18/2015 16:55

Group Number: 1584022

Surrogate Quality Control

Blank 91
LCS 92
LCSD 93
Limits: 63-135

Analysis Name: NWTTPH-Gx water C7-C12
Batch number: 15229D20A
Trifluorotoluene-F

8002764 90
Blank 90
LCS 96
MS 103
MSD 105
Limits: 63-135

Analysis Name: Volatile Headspace Hydrocarbon
Batch number: 152300001A
Propene

8002762 95
8002766 78
8002768 81
8002770 75
8002772 83
Blank 94
LCS 94
MS 77
MSD 72
Limits: 47-116

Analysis Name: NWTTPH-Dx water
Batch number: 152360018A
Orthoterphenyl

8002758 101
8002760 130
8002762 125
8002764 104
8002766 128
8002768 121
8002770 132
8002772 128
Blank 121
LCS 126
LCSD 122
Limits: 50-150

Analysis Name: NWTTPH-Dx water w/ 10g Si Gel
Batch number: 152360019A
Orthoterphenyl

8002758 62
8002760 77
8002762 73
8002764 69
8002766 79
8002768 76
8002770 77

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 10/18/2015 16:55

Group Number: 1584022

Surrogate Quality Control

8002772	72
Blank	64
LCS	83
LCSD	63

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



Lancaster Laboratories

Acct. # 11260

For Eurofins Lancaster Laboratories use only
 Group # 1584022 Sample # 8007757-73
Instructions on reverse side correspond with circled numbers.

1 Client Information				4 Matrix				5 Analyses Requested												6 Remarks						
Facility # SS#211556-OML G-R#386773 WBS Site Address 101 Mulford Road, TOLEDO, WA Chevron PM MHO Lead Consultant LEIDOSRS Consultant/Office Russell Shropshire Consultant Project Mgr. Gettler-Ryan Inc., 6805 Sierra Court, Suite G, Dublin, CA 94568 Consultant Phone # Deanna L. Harding, (deanna@grinc.com) (925) 551-7444 x180 Sampler GIM/AW				Sediment <input type="checkbox"/> Ground <input checked="" type="checkbox"/> Surface <input type="checkbox"/> Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Air <input type="checkbox"/> Oil <input type="checkbox"/> Total Number of Containers _____				BTEX + MTBE <input type="checkbox"/> 8021 <input type="checkbox"/> 8260 <input checked="" type="checkbox"/> Naphth <input type="checkbox"/> 8260 full scan _____ Oxygenates _____ NWTPH-Gx _____ NWTPH-Dx with Silica Gel Cleanup <input checked="" type="checkbox"/> NWTPH-Dx without Silica Gel Cleanup <input checked="" type="checkbox"/> WA VPH <input type="checkbox"/> WA EPH <input type="checkbox"/> Lead <input type="checkbox"/> Total <input type="checkbox"/> Diss. <input checked="" type="checkbox"/> Method <u>6020</u> <u>15 mg/L</u> DISSOLVED IRON/DISSOLVED MANGANESE (6010B) SULFIDE (SM20 4500 S2D) NITRATE/SULFATE (BA 300.0) METHANE (RISK-175) ALKALINITY SM20 (6320B)												SCR #: _____ <input type="checkbox"/> Results in Dry Weight <input type="checkbox"/> J value reporting needed <input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds <input type="checkbox"/> 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run _____ oxy's on highest hit <input type="checkbox"/> Run _____ oxy's on all hits						
2 Sample Identification				3 Composite																						
		Collected		Grab		Composite																				
		Date	Time																							
QA		8/11/15	-	X				2	X															Please report results for Dx with & without sgc. Dissolved Iron, Lead, and Manganese, as well as Alkalinity samples have been field filtered. Please forward lab results directly to the LC and cc: G-R. The TPW sample results should be forwarded directly to Deanna Harding		
MW-109			0745					9																		
MW-110			1018					9																		
MW-111			1000					16																		
MW-114			1108					9																		
B-1			0745					16																		
B-2			0843																							
B-3			0922																							
B-4			0850																							
7 Turnaround Time Requested (TAT) (please circle)				Relinquished by				Date		Time		Received by				Date		Time								
Standard <input checked="" type="radio"/> 5 day 4 day <input type="radio"/> 72 hour <input type="radio"/> 48 hour <input type="radio"/> EDF/EDD 24 hour <input type="radio"/>				Relinquished by <i>[Signature]</i> Date _____ Time _____ Received by _____ Date _____ Time _____																						
8 Data Package (circle if required)				Relinquished by Commercial Carrier:				Date		Time		Received by				Date		Time								
Type I - Full <input type="radio"/> Type VI (Raw Data) <input type="radio"/> EDD (circle if required) _____ CVX-RTBU-FL_05 (default) _____ Other: _____				UPS <input checked="" type="checkbox"/> FedEx _____ Other _____ Temperature Upon Receipt <u>0.4-1.7</u> °C Custody Seals Intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				Date <u>8/12/15</u> Time <u>0950</u>																		

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		
>	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.		

Laboratory Data Qualifiers:

- B - Analyte detected in the blank
- C - Result confirmed by reanalysis
- E - Concentration exceeds the calibration range
- J (or G, I, X) - estimated value \geq the Method Detection Limit (MDL or DL) and the $<$ Limit of Quantitation (LOQ or RL)
- P - Concentration difference between the primary and confirmation column $>40\%$. The lower result is reported.
- U - Analyte was not detected at the value indicated
- V - Concentration difference between the primary and confirmation column $>100\%$. The reporting limit is raised due to this disparity and evident interference...

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

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, ISO17025) unless otherwise noted under the individual analysis.

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

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

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

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

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Appendix C:
Input/Output of Natural Attenuation Analysis Tool Package – Module 2

Module 2: Temporal Analysis: Concentration of contaminant vs. time (Regression Analysis at each well)

Site Name: FORMER TEXACO SERVICE STATION NO. 211556

Site Address: 101 Mulford Road, Toledo, WA

Additional Description: COWLITZ BP / COWLITZ FOOD AND FUEL

Hazardous Substance TPH-GRO

1. Level of Confidence (Decision Criteria)?	85%
--	------------

2. Prediction: Calculation of Restoration Time and Predicted Concentration at Wells

Well Location	B-4	B-3	MW-111	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
A. Cleanup Level (Criterion) to be achieved? ug/L	800	800	800													
A.1 Average (@50% CL¹ best-fitting values)																
Time to reach the criterion yr	19.68	20.37	44.52	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Date when the Criterion to be achieved date	4/21/15	12/29/15	2/18/40	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
A.2 Boundary (@85% CL)																
Time to reach the criterion ² yr	23.67	22.21	53.41	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Date when the Criterion to be achieved date	4/15/19	10/29/17	1/6/49	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B Date of Prediction?																
B.1 Average conc predicted (@50% CL) ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B.2 Boundary conc predicted (@85% CL) ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

3. Log-Linear Regression Results

Coefficient of Determination r^2	0.690	0.902	0.695	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Correlation Coefficient r	-0.830	-0.950	-0.834	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Number of data points n	20	20	20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

4. Statistical Inference on the Slope of the Log-Linear Regression Line with t-statistics

One-tailed Confidence Level calculated, %	99.999%	100.000%	99.999%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sufficient evidence to support that the slope of the regression line is significantly different from zero?	YES!	YES!	YES!	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Coefficient of Variation?	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Plume Stability?	Shrinking	Shrinking	Shrinking	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

5. Calculation of Point Decay Rate Constant (k_{point})

Slope: Point decay rate constant (k_{point})	@50% CL yr ⁻¹	0.142	0.209	0.073	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	@85% CL yr ⁻¹	0.118	0.192	0.061	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Half Life for (k_{point})	@50% CL yr	4.886	3.320	9.496	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	@85% CL yr	5.876	3.619	11.392	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Note: 1. CL : Confidence Level; UD= Undetermined

2. The length of time that will actually be required is estimated to be no more than years calculated (@ 85% of confidence level.)

APPENDIX C

Alternative Cost Estimates for Disproportionate Cost Analysis



Summary of Alternative Costs		
Alternative 1 (Air Sparge/SVE, MNA, and Institutional Controls)		
Cost Components		Cost
Task 1	Air Sparge/SVE System Design and Permitting	\$53,950
Task 2	Air Sparge/SVE System Equipment Procurement/Construction	\$299,964
Task 3	Air Sparge/SVE Well Installation	\$138,860
Task 4	Site Construction	\$235,210
Task 5	System Startup	\$38,740
Task 6	Air Sparge/SVE Operation, Maintenance, and Monitoring (2 Years)	\$177,560
Task 7	System Installation Documentation and OMM Manual Preparation	\$23,760
Task 8	Monitoring of Natural Attenuation (10 Years)	\$196,000
Task 9	Coordination/Management/Maintenance of Institutional Controls (15 Years)	\$66,570
Task 10	Post-Remedy Confirmation Sampling and Closure Management	\$55,240
Total + 25% for taxes and contingency		\$1,607,318

Notes: See task-specific cost estimates for additional details regarding each of the cost components for this alternative.

Alternative 1 (Air Sparge/SVE, MNA, and Institutional Controls)**Task 1 Air Sparge/SVE System Design and Permitting**

Includes:

- Air discharge permit application and coordination
- Construction permit and utility connection coordination
- Preparation of preliminary, pre-final, and final design drawings and specifications packages
- Preparation of equipment construction and site-work contractor bid packages
- Evaluation of bids and award of equipment construction and site-work subcontracts

Item	Notes	Unit	Quantity	Unit Cost	Total
Consultant Labor					
Principal Level Eng/Geo/Sci		Hour	40	\$130.00	\$5,200
Senior Level Eng/Geo/Sci		Hour	200	\$110.00	\$22,000
Project Level Eng/Geo/Sci		Hour	200	\$85.00	\$17,000
Drafter		Hour	100	\$70.00	\$7,000
Consultant Equipment					
Field Vehicle		Day	2	\$125.00	\$250
Other Costs					
Air Discharge Permit Fee	Assumed project considered "Basic" by Ecology	Lump Sum	1	\$1,500.00	\$1,500
Misc. Permit Fees		Lump Sum	1	\$1,000.00	\$1,000
Total					\$53,950

Alternative 1 (Air Sparge/SVE, MNA, and Institutional Controls)**Task 2 Air Sparge/SVE System Equipment Procurement/Construction**

Includes:

- Consultant subcontractor expenses for construction and shipping of container mounted air sparge/SVE system for 26 air sparge injection wells and 8 SVE wells
- Consultant labor associated with system build coordination and shop drawing review
- Consultant labor, travel, and expenses to attend final system testing and inspection at manufacturer's facility prior to shipment

Item	Notes	Unit	Quantity	Unit Cost	Total
Consultant Labor					\$13,480.00
Principal Level Eng/Geo/Sci		Hour	16	\$130.00	\$2,080.00
Senior Level Eng/Geo/Sci		Hour	80	\$110.00	\$8,800.00
Associate Level Eng/Geo/Sci		Hour	40	\$65.00	\$2,600.00
Consultant Travel					\$1,484.00
Air Fare		Trip	1	\$800.00	\$800.00
Lodging		Night	2	\$125.00	\$250.00
Per Diem		Day	3	\$40.00	\$120.00
Car Rental		Day	2	\$55.00	\$110.00
Fuel for Rental Car		Gallon	30	\$4.00	\$120.00
Airport Parking		Day	3	\$28.00	\$84.00
Consultant Subcontractor Costs					\$285,000.00
System Construction		Lump Sum	1	\$275,000.00	\$275,000.00
System Shipping		Lump Sum	1	\$10,000.00	\$10,000.00
Total					\$299,964.00

Alternative 1 (Air Sparge/SVE, MNA, and Institutional Controls)

Task 3 Air Sparge/SVE Well Installation

Includes:

- HASP and work plan preparation, pre-project planning, and subcontractor coordination
- Consultant labor, equipment, travel, and subcontractor costs to install approximately 26 air sparge injection wells and 8 SVE wells
- Boring log preparation, and data management and evaluation
- Laboratory analysis for soil samples
- Waste coordination, transport and disposal

Assumptions:

- Costs assume a 10-day field effort to install all wells, with continuous oversight by two consultant staff
- All boring locations cleared to 8 feet bgs using air-knife/vac-truck rig

Item	Notes	Unit	Quantity	Unit Cost	Total
Consultant Labor					\$42,720.00
Principal Level Eng/Geo/Sci		Hour	24	\$130.00	\$3,120.00
Senior Level Eng/Geo/Sci		Hour	80	\$110.00	\$8,800.00
Project Level Eng/Geo/Sci		Hour	240	\$85.00	\$20,400.00
Associate Level Eng/Geo/Sci		Hour	160	\$65.00	\$10,400.00
Consultant Travel					\$3,540.00
Lodging	2x8 nights oversight crew + 4 nights supervisor	Night	20	\$125.00	\$2,500.00
Per Diem	2x10 days oversight crew + 6 days supervisor	Day	26	\$40.00	\$1,040.00
Consultant Equipment					\$3,800.00
Field Vehicle		Day	6	\$125.00	\$750.00
Sampling Truck		Day	10	\$230.00	\$2,300.00
PID		Day	10	\$75.00	\$750.00
Consultant Subcontractor Costs					\$69,800.00
Driller - Vac Truck Mobilization		Mile	300	\$3.50	\$1,050.00
Driller - Vac Truck Daily Rate	Includes per diem for 2 man crew	Day	10	\$1,750.00	\$17,500.00
Driller - HSA Drill Rig Mobilization		Mile	300	\$5.50	\$1,650.00
Driller - HSA Drill Rig Daily Rate	Includes per diem for 2 man crew	Day	10	\$3,250.00	\$32,500.00
Driller - Start Cards		Each	32	\$65.00	\$2,080.00
Driller- 4" Well Materials	(8) 4"-diameter wells to 10 feet bgs	Foot	80	\$18.00	\$1,440.00
Driller- 2" Well Materials	(24) 2"-diameter wells to 15 feet bgs	Foot	360	\$12.00	\$4,320.00
Driller - Surface Hole Patch		Each	32	\$50.00	\$1,600.00
Construction Trailer Rental		Week	2	\$500.00	\$1,000.00
Surveyor		Lump Sum	1	\$2,500.00	\$2,500.00
Chevron Direct-Bill Subcontractor Costs					\$19,000.00
Waste Disposal Coordination		Lump Sum	1	\$3,000.00	\$3,000.00
Waste Transport and Disposal		Drum	64	\$100.00	\$6,400.00
Laboratory Analytical Services		Sample	64	\$150.00	\$9,600.00
Total					\$138,860.00

Alternative 1 (Air Sparge/SVE, MNA, and Institutional Controls)

Task 4 Site Construction

Includes:

- Pre-project planning and subcontractor coordination
- Consultant labor, equipment, travel, and materials associated with field oversight of system construction
- Consultant subcontractor costs associated with site construction tasks, including;
 - Site clearing and grading
 - Trenching and piping installation
 - System pad and security fence installation
 - Unloading, placement and assembly of remediation system equipment containers
 - Electrical system installation

Assumptions:

- System installation assumed to occur over four 60-hour weeks

Item	Notes	Unit	Quantity	Unit Cost	Total
Consultant Labor					\$48,200.00
Senior Level Eng/Geo/Sci		Hour	120	\$110.00	\$13,200.00
Project Level Eng/Geo/Sci	80 hours planning + four 60-hour weeks in field	Hour	320	\$85.00	\$27,200.00
Associate Level Eng/Geo/Sci	Two 60-hour weeks in field	Hour	120	\$65.00	\$7,800.00
Consultant Travel					\$5,020.00
Lodging		Night	28	\$125.00	\$3,500.00
Per Diem		Day	38	\$40.00	\$1,520.00
Consultant Equipment					\$6,250.00
Field Vehicle		Day	38	\$125.00	\$4,750.00
PID		Day	20	\$75.00	\$1,500.00
Consultant Subcontractor Costs					\$166,740.00
Project Manager		Hour	24	\$105.00	\$2,520.00
Health and Safety Manager		Hour	24	\$85.00	\$2,040.00
Foreman	4 weeks @ 60 hours per week	Hour	240	\$90.00	\$21,600.00
Operator	4 weeks @ 60 hours per week	Hour	240	\$85.00	\$20,400.00
Laborer	4 weeks @ 60 hours per week	Hour	240	\$70.00	\$16,800.00
Administrative Assistant		Hour	12	\$65.00	\$780.00
Per Diem - Meals		Day	60	\$40.00	\$2,400.00
Per Diem - Lodging		Night	48	\$125.00	\$6,000.00
Light Truck		Day	20	\$200.00	\$4,000.00
Service Truck		Day	20	\$300.00	\$6,000.00
Excavator - Mini		Day	15	\$500.00	\$7,500.00
Subcontractor - Crane		Lump Sum	1	\$4,000.00	\$4,000.00
Subcontractor - Electrical		Lump Sum	1	\$15,000.00	\$15,000.00
Temporary Fence		Linear Ft.	600	\$3.00	\$1,800.00
Portable Toilet and Hand Wash		Week	4	\$100.00	\$400.00
Materials - Piping		Lump Sum	1	\$20,000.00	\$20,000.00
Materials - Backfill		Lump Sum	1	\$5,000.00	\$5,000.00
Materials - Crushed Rock		Lump Sum	1	\$5,000.00	\$5,000.00
Materials - Concrete		Lump Sum	1	\$7,500.00	\$7,500.00
Materials - Well vaults		Each	32	\$500.00	\$16,000.00
Construction Trailer Rental		Week	4	\$500.00	\$2,000.00
Chevron Direct-Bill Subcontractor Costs					\$9,000.00
Waste Disposal Coordination		Lump Sum	1	\$3,000.00	\$3,000.00
Waste Transport and Disposal	Transport and dispose of non-hazardous soil waste	Cubic Yard	40	\$100.00	\$4,000.00
Laboratory Analytical Services	Waste characterization samples	Sample	8	\$250.00	\$2,000.00
Total					\$235,210.00

Alternative 1 (Air Sparge/SVE, MNA, and Institutional Controls)**Task 5 System Startup**

Includes:

- Consultant labor, equipment, travel, and materials associated with remediation system startup
- Laboratory costs for vapor sample analysis

Assumptions:

- System startup is assumed to be a two week field effort

Item	Notes	Unit	Quantity	Unit Cost	Total
Consultant Labor					\$29,640.00
Senior Level Eng/Geo/Sci	24 hours planning + two 60-hour weeks in field	Hour	144	\$110.00	\$15,840.00
Project Level Eng/Geo/Sci	24 hours planning + two 60-hour weeks in field	Hour	144	\$85.00	\$12,240.00
Associate Level Eng/Geo/Sci	Office support of field activities	Hour	24	\$65.00	\$1,560.00
Drafter		Hour		\$70.00	\$0.00
Consultant Travel					\$2,800.00
Lodging	8 nights lodging for 2 staff	Night	16	\$125.00	\$2,000.00
Per Diem	10 days per diem for 2 staff	Day	20	\$40.00	\$800.00
Consultant Equipment					\$3,800.00
Sampling Truck		Day	10	\$230.00	\$2,300.00
PID		Day		\$75.00	\$0.00
FID		Day		\$85.00	\$0.00
4-Gas Meter		Day	10	\$150.00	\$1,500.00
Consultant Subcontractor Costs					\$1,000.00
Equipment Supplier Field Support	Operator training and troubleshooting	Lump Sum	1	\$5,500.00	\$5,500.00
Construction Trailer Rental		Week	2	\$500.00	\$1,000.00
Chevron Direct-Bill Subcontractor Costs					\$1,500.00
Laboratory Analytical Services	Air samples	Sample	10	\$150.00	\$1,500.00
Total					\$38,740.00

Alternative 1 (Air Sparge/SVE, MNA, and Institutional Controls)

Task 6 Air Sparge/SVE Operation, Maintenance, and Monitoring (2 Years)

Includes:

- Consultant labor, equipment, and materials associated with operation, maintenance, and monitoring of the Air Sparge/SVE remediation system, including quarterly reporting for permit compliance

Item	Notes	Unit	Annual Quantity	# of Years	Unit Cost	Annual Total	Project Total
Consultant Labor						\$49,600.00	\$99,200.00
Principal Level Eng/Geo/Sci	Annual site visit	Hour	8	2	\$130.00	\$1,040.00	\$2,080.00
Senior Level Eng/Geo/Sci	4 site visits (12 hrs. ea.) + 4 hrs/mo reporting	Hour	96	2	\$110.00	\$10,560.00	\$21,120.00
Project Level Eng/Geo/Sci	6 site visits (12 hrs ea)	Hour	72	2	\$85.00	\$6,120.00	\$12,240.00
Associate Level Eng/Geo/Sci	26 site visits (12 hrs ea) + 12 hrs/mo reporting	Hour	456	2	\$65.00	\$29,640.00	\$59,280.00
Drafter	8 hours per quarter - reporting	Hour	32	2	\$70.00	\$2,240.00	\$4,480.00
Consultant Equipment						\$9,880.00	\$19,760.00
Sampling Truck		Day	26	2	\$230.00	\$5,980.00	\$11,960.00
4-Gas Meter		Day	26	2	\$150.00	\$3,900.00	\$7,800.00
Consultant Material Costs						\$1,000.00	\$2,000.00
Misc. Materials		Lump Sum	1	2	\$1,000.00	\$1,000.00	\$2,000.00
Consultant Subcontractor Costs						\$5,000.00	\$10,000.00
Specialty OMM visits		Event	1	2	\$5,000.00	\$5,000.00	\$10,000.00
Other Costs						\$6,700.00	\$13,400.00
Utilities - Electric		KWH	100,000	2	\$0.07	\$6,700.00	\$13,400.00
Chevron Direct-Bill Subcontractor Costs						\$16,600.00	\$33,200.00
Waste Disposal Coordination	Coordinate condensate disposal	Lump Sum	1	2	\$3,000.00	\$3,000.00	\$6,000.00
Waste Transport and Disposal	Condensate disposal (once per quarter)	Event	4	2	\$1,000.00	\$4,000.00	\$8,000.00
Lab - Groundwater Samples	10 quarterly samples	Sample	40	2	\$150.00	\$6,000.00	\$12,000.00
Lab - Air Samples	Monthly air discharge samples	Sample	24	2	\$150.00	\$3,600.00	\$7,200.00
Total						\$88,780.00	\$177,560.00

Alternative 1 (Air Sparge/SVE, MNA, and Institutional Controls)

Task 7 System Installation Documentation and OMM Manual Preparation

Includes:

- Preparation of system installation summary report
- Preparation of OMM manual with system specific maintenance procedures
- Preparation of system as-built documentation

Item	Notes	Unit	Quantity	Unit Cost	Total
Consultant Labor					\$23,760.00
Principal Level Eng/Geo/Sci		Hour	24	\$130.00	\$3,120.00
Senior Level Eng/Geo/Sci		Hour	48	\$110.00	\$5,280.00
Project Level Eng/Geo/Sci		Hour	80	\$85.00	\$6,800.00
Associate Level Eng/Geo/Sci		Hour	80	\$65.00	\$5,200.00
Drafter		Hour	48	\$70.00	\$3,360.00
Total					\$23,760.00

Alternative 1 (Air Sparge/SVE, MNA, and Institutional Controls)

Task 8 Monitoring of Natural Attenuation (10 Years)

Includes:

- Consultant labor, equipment, and materials associated with groundwater sampling to monitor natural attenuation processes
- Consultant labor for groundwater monitoring coordination, data evaluation, report preparation, and project management

Assumptions:

Monitoring will be required for a period of 10 years

Item	Notes	Unit	Annual Quantity	# of Years	Unit Cost	Annual Total	Project Total
Consultant Labor						\$9,600.00	\$96,000.00
Principal Level Eng/Geo/Sci		Hour	8	10	\$130.00	\$1,040.00	\$10,400.00
Senior Level Eng/Geo/Sci		Hour	24	10	\$110.00	\$2,640.00	\$26,400.00
Project Level Eng/Geo/Sci		Hour	32	10	\$85.00	\$2,720.00	\$27,200.00
Associate Level Eng/Geo/Sci		Hour	32	10	\$65.00	\$2,080.00	\$20,800.00
Drafter		Hour	16	10	\$70.00	\$1,120.00	\$11,200.00
Chevron Direct-Bill Subcontractor Costs						\$10,000.00	\$100,000.00
Groundwater Sampling Subcontractor		Event	2	10	\$2,500.00	\$5,000.00	\$50,000.00
Lab - Groundwater Samples	10 semiannual samples	Sample	20	10	\$250.00	\$5,000.00	\$50,000.00
Total						\$19,600.00	\$196,000.00

Alternative 1 (Air Sparge/SVE, MNA, and Institutional Controls)**Task 9 Coordination/Management/Maintenance of Institutional Controls (15 Years)**

Includes:

- Coordination of a restrictive covenant to prohibit groundwater use and place controls on subsurface activities on the active station property
- Coordination of soil management plans to establish soil handling measures for utility or other subsurface work in the adjacent right-of-ways

Assumptions:

- Costs assume one event to repair/replace damaged asphalt or concrete surface cover on the active station property
- Semiannual inspections and maintenance of asphalt and/or concrete surface cover on the active station property for a period of 15 years

Item	Notes	Unit	Quantity	Unit Cost	Annual Total
Consultant Labor					\$37,820.00
Principal Level Eng/Geo/Sci		Hour	24	\$130.00	\$3,120.00
Senior Level Eng/Geo/Sci		Hour	64	\$110.00	\$7,040.00
Project Level Eng/Geo/Sci		Hour	96	\$85.00	\$8,160.00
Associate Level Eng/Geo/Sci		Hour	300	\$65.00	\$19,500.00
Consultant Equipment					\$3,750.00
Field Vehicle		Day	30	\$125.00	\$3,750.00
Consultant Subcontractor Costs					\$25,000.00
Paving Subcontractor		Lump Sum	1	\$25,000.00	\$25,000.00
Total					\$66,570.00

Alternative 1 (Air Sparge/SVE, MNA, and Institutional Controls)

Task 10 Post-Remedy Confirmation Sampling and Closure Management

Includes:

- Consultant labor, equipment, travel, and subcontractor costs to collect post remedy soil and soil-vapor confirmation samples
- HASP and work plan preparation, pre-project planning, and subcontractor coordination
- Data evaluation and summary report preparation
- Laboratory analysis for soil and soil-vapor samples
- Waste coordination, transport and disposal

Assumptions:

- Costs assume soil samples are collected during a 3-day field effort with continuous oversight by two consultant staff
- All soil boring locations cleared to 8 feet bgs using air-knife/vac-truck rig
- Soil-vapor samples to be collected at existing soil-vapor sampling probe locations (one-time event)

Item	Notes	Unit	Quantity	Unit Cost	Total
Consultant Labor					\$31,040.00
Principal Level Eng/Geo/Sci		Hour	24	\$130.00	\$3,120.00
Senior Level Eng/Geo/Sci		Hour	80	\$110.00	\$8,800.00
Project Level Eng/Geo/Sci		Hour	120	\$85.00	\$10,200.00
Associate Level Eng/Geo/Sci		Hour	120	\$65.00	\$7,800.00
Drafter		Hour	16	\$70.00	\$1,120.00
Consultant Travel					\$740.00
Lodging	2x8 nights oversight crew + 4 nights supervisor	Night	4	\$125.00	\$500.00
Per Diem	2x10 days oversight crew + 6 days supervisor	Day	6	\$40.00	\$240.00
Consultant Equipment					\$1,670.00
Field Vehicle		Day	3	\$125.00	\$375.00
Sampling Truck		Day	4	\$230.00	\$920.00
PID		Day	3	\$75.00	\$225.00
Helium Meter		Day	1	\$150.00	\$150.00
Consultant Subcontractor Costs					\$12,390.00
Driller - Vac Truck Mobilization		Mile	300	\$3.50	\$1,050.00
Driller - Vac Truck Daily Rate	Includes per diem for 2 man crew	Day	1	\$1,750.00	\$1,750.00
Driller - HSA Drill Rig Mobilization		Mile	300	\$5.50	\$1,650.00
Driller - HSA Drill Rig Daily Rate	Includes per diem for 2 man crew	Day	2	\$3,250.00	\$6,500.00
Driller - Start Cards		Each	8	\$65.00	\$520.00
Driller - Surface Hole Patch		Each	8	\$50.00	\$400.00
Driller - Soil/Water Drums		Each	8	\$65.00	\$520.00
Chevron Direct-Bill Subcontractor Costs					\$9,400.00
Waste Disposal Coordination		Lump Sum	1	\$3,000.00	\$3,000.00
Waste Transport and Disposal		Drum	8	\$100.00	\$800.00
Laboratory Analytical Services	Soil samples	Sample	24	\$150.00	\$3,600.00
Laboratory Analytical Services	4 Soil-vapor samples + 1 equipment blank	Sample	5	\$400.00	\$2,000.00
Total					\$55,240.00

Summary of Alternative Costs		
Alternative 2 (Partial Excavation, MNA, and Institutional Controls)		
Cost Components		Cost
Task 1	Excavation Planning and Permitting	\$47,090
Task 2	Excavation Implementation	\$511,885
Task 3	Reporting	\$12,480
Task 4	Monitoring of Natural Attenuation (10 Years)	\$196,000
Task 5	Coordination/Management/Maintenance of Institutional Controls (15 Years)	\$63,820
Task 6	Post Remedy Confirmation Sampling and Closure Management	\$55,240
Total + 25% for taxes and contingency		\$1,108,144

Notes: See task-specific cost estimates for additional details regarding each of the cost components for this alternative.

Alternative 2 (Partial Excavation, MNA, and Institutional Controls)**Task 1 Excavation Planning and Permitting**

Includes:

- Preparation of work plan, contractor specifications, and HASP
- Preparation of SEPA and soil/erosion control permits
- Subcontractor coordination and pre-project safety planning

Item	Notes	Unit	Quantity	Unit Cost	Total
Consultant Labor					\$45,840
Principal Level Eng/Geo/Sci		Hour	32	\$130.00	\$4,160
Senior Level Eng/Geo/Sci		Hour	120	\$110.00	\$13,200
Project Level Eng/Geo/Sci		Hour	160	\$85.00	\$13,600
Associate Level Eng/Geo/Sci		Hour	160	\$65.00	\$10,400
Drafter		Hour	64	\$70.00	\$4,480
Consultant Equipment					\$250
Field Vehicle		Day	2	\$125.00	\$250
Other Costs					\$1,000
Permit Fees		Lump Sum	1	\$1,000.00	\$1,000
Total					\$47,090

Alternative 2 (Partial Excavation, MNA, and Institutional Controls)

Task 2 Excavation Implementation

Includes:

- Consultant labor, equipment, travel, and materials associated with field oversight of excavation activities
- Subcontractor costs associated with excavation tasks, including;
 - Mobilization and site setup costs
 - Excavation and loading of overburden and impacted soil to the extent practicable
 - Labor, equipment, materials and subcontractors to backfill, compact and restore site to pre-existing condition
 - Application of 2,000 pounds of ORC or equivalent product to be placed in excavation bottom
- Waste disposal coordination, transportation, and disposal by Chevron direct-bill subcontractors

Assumptions:

- Area to be excavated is approximately 7,500 square feet
- Clean overburden soils from ground surface to 5 feet bgs
- Petroleum contaminated soil from 5 feet bgs to maximum excavation depth (12 feet bgs)
- Assume 1.6 tons per cubic yard of soil (in place)
- Estimated excavation and disposal of 2,000 cy or 3,200 tons of petroleum contaminated soil
- Estimated excavation and disposal of 1,400 cy or 2,200 tons of clean overburden soil
- Excavation to be performed during (3) 5-day weeks in the field

Item	Notes	Unit	Quantity	Unit Cost	Total
Consultant Labor					\$49,580.00
Principal Level Eng/Geo/Sci		Hour	16	\$130.00	\$2,080.00
Senior Level Eng/Geo/Sci		Hour	80	\$110.00	\$8,800.00
Project Level Eng/Geo/Sci	Three 60-hour weeks in field	Hour	180	\$85.00	\$15,300.00
Associate Level Eng/Geo/Sci	Three 60-hour weeks in field for 2 staff	Hour	360	\$65.00	\$23,400.00
Drafter		Hour		\$70.00	\$0.00
Consultant Travel					\$6,915.00
Lodging		Night	39	\$125.00	\$4,875.00
Per Diem		Day	51	\$40.00	\$2,040.00
Consultant Equipment					\$7,200.00
Field Vehicle		Day	21	\$125.00	\$2,625.00
Sampling Truck		Day	15	\$230.00	\$3,450.00
PID		Day	15	\$75.00	\$1,125.00
Consultant Subcontractor Costs					\$251,190.00
Project Manager		Hour	64	\$105.00	\$6,720.00
Health and Safety Manager		Hour	64	\$85.00	\$5,440.00
Foreman	3 weeks @ 60 hours per week + 20 hours planning	Hour	200	\$90.00	\$18,000.00
Operator	3 weeks @ 60 hours per week	Hour	180	\$85.00	\$15,300.00
Laborer	3 weeks @ 60 hours per week	Hour	180	\$70.00	\$12,600.00
Administrative Assistant		Hour	12	\$65.00	\$780.00
Per Diem - Meals		Day	45	\$40.00	\$1,800.00
Per Diem - Lodging		Night	36	\$125.00	\$4,500.00
Light Truck		Day	15	\$200.00	\$3,000.00
Service Truck		Day	15	\$300.00	\$4,500.00
Water Truck		Day	10	\$375.00	\$3,750.00
Excavator - 50,000 lb		Day	15	\$1,250.00	\$18,750.00
Excavator - 28,000 lb		Day	15	\$850.00	\$12,750.00
Compaction Plate Excavator		Day	5	\$250.00	\$1,250.00
Subcontractor - Compaction Testing		Lump Sum	1	\$5,000.00	\$5,000.00
Subcontractor - Paving		Sq. Foot	7,500	\$1.50	\$11,250.00
Temporary Fence		Linear Ft.	600	\$3.00	\$1,800.00
Portable Toilet and Hand Wash		Week	3	\$100.00	\$300.00
Materials - Structural Fill (Delivered)		Ton	3,400	\$12.00	\$40,800.00
Materials - Crushed Rock (Delivered)		Ton	2,000	\$14.00	\$28,000.00
Materials - ORC		Pound	2,000	\$9.00	\$18,000.00
Overburden Transport & Disposal		Ton	2,200	\$7.00	\$15,400.00
Construction Trailer Rental		Week	3	\$500.00	\$1,500.00
Mobile Laboratory		Day	10	\$2,000.00	\$20,000.00
Chevron Direct-Bill Subcontractor Costs					\$197,000.00
Waste Disposal Coordination		Lump Sum	1	\$5,000.00	\$5,000.00
Waste Transport and Disposal	Transport and dispose of non-hazardous soil waste	Ton	3,200	\$60.00	\$192,000.00
Total					\$511,885.00

Alternative 2 (Partial Excavation, MNA, and Institutional Controls)**Task 3 Reporting**

Includes:

- Preparation of excavation summary report

Item	Notes	Unit	Quantity	Unit Cost	Total
Consultant Labor					\$12,480.00
Principal Level Eng/Geo/Sci		Hour	8	\$130.00	\$1,040.00
Senior Level Eng/Geo/Sci		Hour	24	\$110.00	\$2,640.00
Project Level Eng/Geo/Sci		Hour	40	\$85.00	\$3,400.00
Associate Level Eng/Geo/Sci		Hour	40	\$65.00	\$2,600.00
Drafter		Hour	40	\$70.00	\$2,800.00
Total					\$12,480.00

Alternative 2 (Partial Excavation, MNA, and Institutional Controls)**Task 4 Monitoring of Natural Attenuation (10 Years)**

Includes:

- Consultant labor, equipment, and materials associated with groundwater sampling to monitor natural attenuation processes
- Consultant labor for groundwater monitoring coordination, data evaluation, report preparation, and project management

Assumptions:

Monitoring will be required for a period of 10 years

Item	Notes	Unit	Annual Quantity	# of Years	Unit Cost	Annual Total	Project Total
Consultant Labor						\$9,600.00	\$96,000.00
Principal Level Eng/Geo/Sci		Hour	8	10	\$130.00	\$1,040.00	\$10,400.00
Senior Level Eng/Geo/Sci		Hour	24	10	\$110.00	\$2,640.00	\$26,400.00
Project Level Eng/Geo/Sci		Hour	32	10	\$85.00	\$2,720.00	\$27,200.00
Associate Level Eng/Geo/Sci		Hour	32	10	\$65.00	\$2,080.00	\$20,800.00
Drafter		Hour	16	10	\$70.00	\$1,120.00	\$11,200.00
Chevron Direct-Bill Subcontractor Costs						\$10,000.00	\$100,000.00
Groundwater Sampling Subcontractor		Event	2	10	\$2,500.00	\$5,000.00	\$50,000.00
Lab - Groundwater Samples	10 semiannual samples	Sample	20	10	\$250.00	\$5,000.00	\$50,000.00
Total						\$19,600.00	\$196,000.00

Alternative 2 (Partial Excavation, MNA, and Institutional Controls)						
Task 5 Coordination/Management/Maintenance of Institutional Controls (15 Years)						
Includes:						
- Coordination of a restrictive covenant to prohibit groundwater use and place controls on subsurface activities on the active station property						
- Coordination of soil management plans to establish soil handling measures for utility or other subsurface work in the adjacent right-of-ways						
Assumptions:						
- Costs assume one event to repair/replace damaged asphalt or concrete surface cover on the active station property						
- Semiannual inspections and maintenance of asphalt and/or concrete surface cover on the active station property for a period of 15 years						
Item	Notes	Unit	Quantity	Unit Cost	Annual Total	
Consultant Labor						\$37,820.00
Principal Level Eng/Geo/Sci		Hour	24	\$130.00	\$3,120.00	
Senior Level Eng/Geo/Sci		Hour	64	\$110.00	\$7,040.00	
Project Level Eng/Geo/Sci		Hour	96	\$85.00	\$8,160.00	
Associate Level Eng/Geo/Sci		Hour	300	\$65.00	\$19,500.00	
Consultant Equipment						\$1,000.00
Field Vehicle		Day	8	\$125.00	\$1,000.00	
Consultant Subcontractor Costs						\$25,000.00
Paving Subcontractor		Lump Sum	1	\$25,000.00	\$25,000.00	
						\$0.00
Total						\$63,820.00

Alternative 2 (Partial Excavation, MNA, and Institutional Controls)

Task 6 Post Remedy Confirmation Sampling and Closure Management

Includes:

- Consultant labor, equipment, travel, and subcontractor costs to collect post remedy soil and soil-vapor confirmation samples
- HASP and work plan preparation, pre-project planning, and subcontractor coordination
- Data evaluation and summary report preparation
- Laboratory analysis for soil and soil-vapor samples
- Waste coordination, transport and disposal

Assumptions:

- Costs assume soil samples are collected during a 3-day field effort with continuous oversight by two consultant staff
- All boring locations cleared to 8 feet bgs using air-knife/vac-truck rig
- Soil-vapor samples to be collected at existing soil-vapor sampling probe locations (one-time event)

Item	Notes	Unit	Quantity	Unit Cost	Total
Consultant Labor					\$31,040.00
Principal Level Eng/Geo/Sci		Hour	24	\$130.00	\$3,120.00
Senior Level Eng/Geo/Sci		Hour	80	\$110.00	\$8,800.00
Project Level Eng/Geo/Sci		Hour	120	\$85.00	\$10,200.00
Associate Level Eng/Geo/Sci		Hour	120	\$65.00	\$7,800.00
Drafter		Hour	16	\$70.00	\$1,120.00
Consultant Travel					\$740.00
Lodging	2x8 nights oversight crew + 4 nights supervisor	Night	4	\$125.00	\$500.00
Per Diem	2x10 days oversight crew + 6 days supervisor	Day	6	\$40.00	\$240.00
Consultant Equipment					\$1,670.00
Field Vehicle		Day	3	\$125.00	\$375.00
Sampling Truck		Day	4	\$230.00	\$920.00
PID		Day	3	\$75.00	\$225.00
Helium Meter		Day	1	\$150.00	\$150.00
Consultant Subcontractor Costs					\$12,390.00
Driller - Vac Truck Mobilization		Mile	300	\$3.50	\$1,050.00
Driller - Vac Truck Daily Rate	Includes per diem for 2 man crew	Day	1	\$1,750.00	\$1,750.00
Driller - HSA Drill Rig Mobilization		Mile	300	\$5.50	\$1,650.00
Driller - HSA Drill Rig Daily Rate	Includes per diem for 2 man crew	Day	2	\$3,250.00	\$6,500.00
Driller - Start Cards		Each	8	\$65.00	\$520.00
Driller - Surface Hole Patch		Each	8	\$50.00	\$400.00
Driller - Soil/Water Drums		Each	8	\$65.00	\$520.00
Chevron Direct-Bill Subcontractor Costs					\$9,400.00
Waste Disposal Coordination		Lump Sum	1	\$3,000.00	\$3,000.00
Waste Transport and Disposal		Drum	8	\$100.00	\$800.00
Laboratory Analytical Services	Soil samples	Sample	24	\$150.00	\$3,600.00
Laboratory Analytical Services	4 Soil-vapor samples + 1 equipment blank	Sample	5	\$400.00	\$2,000.00
Total					\$55,240.00

Summary of Alternative Costs	
Alternative 3 (Partial Ecavation, Air Sparge/SVE, MNA, and Institutional Controls)	
Cost Components	Cost
Task 1 Excavation Planning and Permitting	\$41,770
Task 2 Excavation Implementation	\$511,885
Task 3 Reporting	\$12,480
Task 4 Air Sparge/SVE System Design and Permitting	\$53,950
Task 5 Air Sparge/SVE System Equipment Procurement/Construction	\$250,464
Task 6 Air Sparge/SVE Well Installation	\$80,140
Task 7 Site Construction	\$174,605
Task 8 System Startup	\$38,740
Task 9 Air Sparge/SVE Operation, Maintenance, and Monitoring (2 Years)	\$177,560
Task 10 System Installation Documentation and OMM Manual Preparation	\$23,760
Task 11 Monitoring of Natural Attenuation (5 Years)	\$98,000
Task 12 Coordination/Management/Maintenance of Institutional Controls (10 Years)	\$55,560
Task 13 Post Remedy Confirmation Sampling and Closure Management	\$55,240
Total + 25% for taxes and contingency	\$1,967,693

Notes: See task-specific cost estimates for additional details regarding each of the cost components for this alternative.

Alternative 3 (Partial Excavation, Air Sparge/SVE, MNA, and Institutional Controls)**Task 1 Excavation Planning and Permitting**

Includes:

- Preparation of work plan, contractor specifications, and HASP
- Preparation of SEPA and soil/erosion control permits
- Subcontractor coordination and pre-project safety planning

Item	Notes	Unit	Quantity	Unit Cost	Total
Consultant Labor					\$40,520
Principal Level Eng/Geo/Sci		Hour	24	\$130.00	\$3,120
Senior Level Eng/Geo/Sci		Hour	120	\$110.00	\$13,200
Project Level Eng/Geo/Sci		Hour	160	\$85.00	\$13,600
Associate Level Eng/Geo/Sci		Hour	120	\$65.00	\$7,800
Drafter		Hour	40	\$70.00	\$2,800
Consultant Equipment					\$250
Field Vehicle		Day	2	\$125.00	\$250
Other Costs					\$1,000
Permit Fees		Lump Sum	1	\$1,000.00	\$1,000
Total					\$41,770

Alternative 3 (Partial Excavation, Air Sparge/SVE, MNA, and Institutional Controls)

Task 2 Excavation Implementation

Includes:

- Consultant labor, equipment, travel, and materials associated with field oversight of excavation activities
- Subcontractor costs associated with excavation tasks, including;
 - Mobilization and site setup costs
 - Excavation and loading of overburden and impacted soil to the extent practicable
 - Labor, equipment, materials and subcontractors to backfill, compact and restore site to pre-existing condition
 - Application of 2,000 pounds of ORC or equivalent product to be placed in excavation bottom
- Waste disposal coordination, transportation, and disposal by Chevron direct-bill subcontractors

Assumptions:

- Area to be excavated is approximately 7,500 square feet
- Clean overburden soils from ground surface to 5 feet bgs
- Petroleum contaminated soil from 5 feet bgs to maximum excavation depth (12 feet bgs)
- Assume 1.6 tons per cubic yard of soil (in place)
- Estimated excavation and disposal of 2,000 cy or 3,200 tons of petroleum contaminated soil
- Estimated excavation and disposal of 1,400 cy or 2,200 tons of clean overburden soil
- Excavation to be performed during (3) 5-day weeks in the field

Item	Notes	Unit	Quantity	Unit Cost	Total
Consultant Labor					\$49,580.00
Principal Level Eng/Geo/Sci		Hour	16	\$130.00	\$2,080.00
Senior Level Eng/Geo/Sci		Hour	80	\$110.00	\$8,800.00
Project Level Eng/Geo/Sci	Three 60-hour weeks in field	Hour	180	\$85.00	\$15,300.00
Associate Level Eng/Geo/Sci	Three 60-hour weeks in field for 2 staff	Hour	360	\$65.00	\$23,400.00
Drafter		Hour		\$70.00	\$0.00
Consultant Travel					\$6,915.00
Lodging		Night	39	\$125.00	\$4,875.00
Per Diem		Day	51	\$40.00	\$2,040.00
Consultant Equipment					\$7,200.00
Field Vehicle		Day	21	\$125.00	\$2,625.00
Sampling Truck		Day	15	\$230.00	\$3,450.00
PID		Day	15	\$75.00	\$1,125.00
Consultant Subcontractor Costs					\$251,190.00
Project Manager		Hour	64	\$105.00	\$6,720.00
Health and Safety Manager		Hour	64	\$85.00	\$5,440.00
Foreman	3 weeks @ 60 hours per week + 20 hours planning	Hour	200	\$90.00	\$18,000.00
Operator	3 weeks @ 60 hours per week	Hour	180	\$85.00	\$15,300.00
Laborer	3 weeks @ 60 hours per week	Hour	180	\$70.00	\$12,600.00
Administrative Assistant		Hour	12	\$65.00	\$780.00
Per Diem - Meals		Day	45	\$40.00	\$1,800.00
Per Diem - Lodging		Night	36	\$125.00	\$4,500.00
Light Truck		Day	15	\$200.00	\$3,000.00
Service Truck		Day	15	\$300.00	\$4,500.00
Water Truck		Day	10	\$375.00	\$3,750.00
Excavator - 50,000 lb		Day	15	\$1,250.00	\$18,750.00
Excavator - 28,000 lb		Day	15	\$850.00	\$12,750.00
Compaction Plate Excavator		Day	5	\$250.00	\$1,250.00
Subcontractor - Compaction Testing		Lump Sum	1	\$5,000.00	\$5,000.00
Subcontractor - Paving		Sq. Foot	7,500	\$1.50	\$11,250.00
Temporary Fence		Linear Ft.	600	\$3.00	\$1,800.00
Portable Toilet and Hand Wash		Week	3	\$100.00	\$300.00
Materials - Structural Fill (Delivered)		Ton	3,400	\$12.00	\$40,800.00
Materials - Crushed Rock (Delivered)		Ton	2,000	\$14.00	\$28,000.00
Materials - ORC		Pound	2,000	\$9.00	\$18,000.00
Overburden Transport & Disposal		Ton	2,200	\$7.00	\$15,400.00
Construction Trailer Rental		Week	3	\$500.00	\$1,500.00
Mobile Laboratory		Day	10	\$2,000.00	\$20,000.00
Chevron Direct-Bill Subcontractor Costs					\$197,000.00
Waste Disposal Coordination		Lump Sum	1	\$5,000.00	\$5,000.00
Waste Transport and Disposal	Transport and dispose of non-hazardous soil waste	Ton	3,200	\$60.00	\$192,000.00
Total					\$511,885.00

Alternative 3 (Partial Ecavation, Air Sparge/SVE, MNA, and Institutional Controls)

Task 3 Reporting

Includes:

- Preparation of excavation summary report

Item	Notes	Unit	Quantity	Unit Cost	Total
Consultant Labor					\$12,480.00
Principal Level Eng/Geo/Sci		Hour	8	\$130.00	\$1,040.00
Senior Level Eng/Geo/Sci		Hour	24	\$110.00	\$2,640.00
Project Level Eng/Geo/Sci		Hour	40	\$85.00	\$3,400.00
Associate Level Eng/Geo/Sci		Hour	40	\$65.00	\$2,600.00
Drafter		Hour	40	\$70.00	\$2,800.00
Total					\$12,480.00

Alternative 3 (Partial Excavation, Air Sparge/SVE, MNA, and Institutional Controls)

Task 4 Air Sparge/SVE System Design and Permitting

Includes:

- Air discharge permit application and coordination
- Construction permit and utility connection coordination
- Preparation of preliminary, pre-final, and final design drawings and specifications packages
- Preparation of equipment construction and site-work contractor bid packages
- Evaluation of bids and award of equipment construction and site-work subcontracts

Assumptions:

System design and permitting costs are assumed to be essentially the same as for Alternative 1

Item	Notes	Unit	Quantity	Unit Cost	Total
Consultant Labor					\$51,200
Principal Level Eng/Geo/Sci		Hour	40	\$130.00	\$5,200
Senior Level Eng/Geo/Sci		Hour	200	\$110.00	\$22,000
Project Level Eng/Geo/Sci		Hour	200	\$85.00	\$17,000
Drafter		Hour	100	\$70.00	\$7,000
Consultant Equipment					\$250
Field Vehicle		Day	2	\$125.00	\$250
Other Costs					\$2,500
Air Discharge Permit Fee	Assumed project considered "Basic" by Ecology	Lump Sum	1	\$1,500.00	\$1,500
Misc. Permit Fees		Lump Sum	1	\$1,000.00	\$1,000
Total					\$53,950

Alternative 3 (Partial Excavation, Air Sparge/SVE, MNA, and Institutional Controls)**Task 5 Air Sparge/SVE System Equipment Procurement/Construction**

Includes:

- Consultant subcontractor expenses for construction and shipping of container mounted air sparge/SVE system for 12 air sparge injection wells and 4 SVE wells
- Consultant labor associated with system build coordination and shop drawing review
- Consultant labor, travel, and expenses to attend final system testing and inspection at manufacturer's facility prior to shipment

Item	Notes	Unit	Quantity	Unit Cost	Total
Consultant Labor					\$13,480.00
Principal Level Eng/Geo/Sci		Hour	16	\$130.00	\$2,080.00
Senior Level Eng/Geo/Sci		Hour	80	\$110.00	\$8,800.00
Associate Level Eng/Geo/Sci		Hour	40	\$65.00	\$2,600.00
Consultant Travel					\$1,484.00
Air Fare		Trip	1	\$800.00	\$800.00
Lodging		Night	2	\$125.00	\$250.00
Per Diem		Day	3	\$40.00	\$120.00
Car Rental		Day	2	\$55.00	\$110.00
Fuel for Rental Car		Gallon	30	\$4.00	\$120.00
Airport Parking		Day	3	\$28.00	\$84.00
Consultant Subcontractor Costs					\$235,500.00
System Construction		Lump Sum	1	\$225,000.00	\$225,000.00
System Shipping		Lump Sum	1	\$10,000.00	\$10,500.00
Total					\$250,464.00

Alternative 3 (Partial Excavation, Air Sparge/SVE, MNA, and Institutional Controls)

Task 6 Air Sparge/SVE Well Installation

Includes:

- HASP and work plan preparation, pre-project planning, and subcontractor coordination
- Consultant labor, equipment, travel, and subcontractor costs to install approximately 12 air sparge injection wells and 4 SVE wells
- Boring log preparation, and data management and evaluation
- Laboratory analysis for soil samples
- Waste coordination, transport and disposal

Assumptions:

- Costs assume a 5-day field effort to install all wells, with continuous oversight by two consultant staff
- All boring locations cleared to 8 feet bgs using air-knife/vac-truck rig

Item	Notes	Unit	Quantity	Unit Cost	Total
Consultant Labor					\$28,760.00
Principal Level Eng/Geo/Sci		Hour	16	\$130.00	\$2,080.00
Senior Level Eng/Geo/Sci		Hour	48	\$110.00	\$5,280.00
Project Level Eng/Geo/Sci		Hour	160	\$85.00	\$13,600.00
Associate Level Eng/Geo/Sci		Hour	120	\$65.00	\$7,800.00
Consultant Travel					\$1,605.00
Lodging	2x4 nights oversight crew + 1 night supervisor	Night	9	\$125.00	\$1,125.00
Per Diem	2x5 days oversight crew + 2 days supervisor	Day	12	\$40.00	\$480.00
Consultant Equipment					\$1,775.00
Field Vehicle		Day	2	\$125.00	\$250.00
Sampling Truck		Day	5	\$230.00	\$1,150.00
PID		Day	5	\$75.00	\$375.00
Consultant Subcontractor Costs					\$37,000.00
Driller - Vac Truck Mobilization		Mile	300	\$3.50	\$1,050.00
Driller - Vac Truck Daily Rate	Includes per diem for 2 man crew	Day	5	\$1,750.00	\$8,750.00
Driller - HSA Drill Rig Mobilization		Mile	300	\$5.50	\$1,650.00
Driller - HSA Drill Rig Daily Rate	Includes per diem for 2 man crew	Day	5	\$3,250.00	\$16,250.00
Driller - Start Cards		Each	16	\$65.00	\$1,040.00
Driller- 4" Well Materials	(4) 4"-diameter wells to 10 feet bgs	Foot	40	\$18.00	\$720.00
Driller- 2" Well Materials	(12) 2"-diameter wells to 15 feet bgs	Foot	180	\$12.00	\$2,160.00
Driller - Surface Hole Patch		Each	16	\$50.00	\$800.00
Driller - Soil/Water Drums	2 soil drums per well	Each	32	\$65.00	\$2,080.00
Surveyor		Lump Sum	1	\$2,500.00	\$2,500.00
Chevron Direct-Bill Subcontractor Costs					\$11,000.00
Waste Disposal Coordination		Lump Sum	1	\$3,000.00	\$3,000.00
Waste Transport and Disposal		Drum	32	\$100.00	\$3,200.00
Laboratory Analytical Services		Sample	32	\$150.00	\$4,800.00
Total					\$80,140.00

Alternative 3 (Partial Excavation, Air Sparge/SVE, MNA, and Institutional Controls)

Task 7 Site Construction

Includes:

- Pre-project planning and subcontractor coordination
- Consultant labor, equipment, travel, and materials associated with field oversight of system construction
- Consultant subcontractor costs associated with site construction tasks, including;
 - Site clearing and grading
 - Trenching and piping installation
 - System pad and security fence installation
 - Unloading, placement and assembly of remediation system equipment containers
 - Electrical system installation

Assumptions:

- System installation assumed to occur over three 60-hour weeks

Item	Notes	Unit	Quantity	Unit Cost	Total
Consultant Labor					\$40,900.00
Senior Level Eng/Geo/Sci		Hour	100	\$110.00	\$11,000.00
Project Level Eng/Geo/Sci	80 hours planning + three 60-hour weeks in field	Hour	260	\$85.00	\$22,100.00
Associate Level Eng/Geo/Sci	Two 60-hour weeks in field	Hour	120	\$65.00	\$7,800.00
Consultant Travel					\$4,115.00
Lodging		Night	23	\$125.00	\$2,875.00
Per Diem		Day	31	\$40.00	\$1,240.00
Consultant Equipment					\$5,000.00
Field Vehicle		Day	31	\$125.00	\$3,875.00
PID		Day	15	\$75.00	\$1,125.00
Consultant Subcontractor Costs					\$117,590.00
Project Manager		Hour	24	\$105.00	\$2,520.00
Health and Safety Manager		Hour	24	\$85.00	\$2,040.00
Foreman	3 weeks @ 60 hours per week	Hour	180	\$90.00	\$16,200.00
Operator	3 weeks @ 60 hours per week	Hour	180	\$85.00	\$15,300.00
Laborer	3 weeks @ 60 hours per week	Hour	180	\$70.00	\$12,600.00
Administrative Assistant		Hour	12	\$65.00	\$780.00
Per Diem - Meals		Day	45	\$40.00	\$1,800.00
Per Diem - Lodging		Night	36	\$125.00	\$4,500.00
Light Truck		Day	15	\$200.00	\$3,000.00
Service Truck		Day	15	\$300.00	\$4,500.00
Excavator - Mini		Day	10	\$500.00	\$5,000.00
Subcontractor - Crane		Lump Sum	1	\$4,000.00	\$4,000.00
Subcontractor - Electrical		Lump Sum	1	\$15,000.00	\$15,000.00
Temporary Fence		Linear Ft.	600	\$3.00	\$1,800.00
Portable Toilet and Hand Wash		Week	3	\$100.00	\$300.00
Materials - Piping		Lump Sum	1	\$10,000.00	\$10,000.00
Materials - Backfill		Lump Sum	1	\$2,500.00	\$2,500.00
Materials - Crushed Rock		Lump Sum	1	\$2,500.00	\$2,500.00
Materials - Concrete		Lump Sum	1	\$3,750.00	\$3,750.00
Materials - Well vaults		Each	16	\$500.00	\$8,000.00
Construction Trailer Rental		Week	3	\$500.00	\$1,500.00
Chevron Direct-Bill Subcontractor Costs					\$7,000.00
Waste Disposal Coordination		Lump Sum	1	\$3,000.00	\$3,000.00
Waste Transport and Disposal	Transport and dispose of non-hazardous soil waste	Cubic Yard	20	\$100.00	\$2,000.00
Laboratory Analytical Services	Waste characterization samples	Sample	8	\$250.00	\$2,000.00
Total					\$174,605.00

Alternative 3 (Partial Excavation, Air Sparge/SVE, MNA, and Institutional Controls)**Task 8 System Startup**

Includes:

- Consultant labor, equipment, travel, and materials associated with remediation system startup
- Laboratory costs for vapor sample analysis

Assumptions:

- System startup is assumed to be a two week field effort

Item	Notes	Unit	Quantity	Unit Cost	Total
Consultant Labor					\$29,640.00
Senior Level Eng/Geo/Sci	24 hours planning + two 60-hour weeks in field	Hour	144	\$110.00	\$15,840.00
Project Level Eng/Geo/Sci	24 hours planning + two 60-hour weeks in field	Hour	144	\$85.00	\$12,240.00
Associate Level Eng/Geo/Sci	Office support of field activities	Hour	24	\$65.00	\$1,560.00
Consultant Travel					\$2,800.00
Lodging	8 nights lodging for 2 staff	Night	16	\$125.00	\$2,000.00
Per Diem	10 days per diem for 2 staff	Day	20	\$40.00	\$800.00
Consultant Equipment					\$3,800.00
Sampling Truck		Day	10	\$230.00	\$2,300.00
4-Gas Meter		Day	10	\$150.00	\$1,500.00
Consultant Subcontractor Costs					\$1,000.00
Equipment Supplier Field Support	Operating training and troubleshooting	Lump Sum	1	\$5,500.00	\$5,500.00
Construction Trailer Rental		Week	2	\$500.00	\$1,000.00
Chevron Direct-Bill Subcontractor Costs					\$1,500.00
Laboratory Analytical Services	Air samples	Sample	10	\$150.00	\$1,500.00
Total					\$38,740.00

Alternative 3 (Partial Excavation, Air Sparge/SVE, MNA, and Institutional Controls)

Task 9 Air Sparge/SVE Operation, Maintenance, and Monitoring (2 Years)

Includes:

- Consultant labor, equipment, and materials associated with operation, maintenance, and monitoring of the Air Sparge/SVE remediation system, including quarterly reporting for permit compliance

Item	Notes	Unit	Annual Quantity	# of Years	Unit Cost	Annual Total	Project Total
Consultant Labor						\$49,600.00	\$99,200.00
Principal Level Eng/Geo/Sci	Annual site visit	Hour	8	2	\$130.00	\$1,040.00	\$2,080.00
Senior Level Eng/Geo/Sci	4 site visits (12 hrs ea) + 4 hrs/mo reporting	Hour	96	2	\$110.00	\$10,560.00	\$21,120.00
Project Level Eng/Geo/Sci	6 site visits (12 hrs ea)	Hour	72	2	\$85.00	\$6,120.00	\$12,240.00
Associate Level Eng/Geo/Sci	26 site visits (12 hrs ea) + 12 hrs/mo reporting	Hour	456	2	\$65.00	\$29,640.00	\$59,280.00
Drafter	8 hours per quarter - reporting	Hour	32	2	\$70.00	\$2,240.00	\$4,480.00
Consultant Equipment						\$9,880.00	\$19,760.00
Sampling Truck		Day	26	2	\$230.00	\$5,980.00	\$11,960.00
4-Gas Meter		Day	26	2	\$150.00	\$3,900.00	\$7,800.00
Consultant Material Costs						\$1,000.00	\$2,000.00
Misc. Materials		Lump Sum	1	2	\$1,000.00	\$1,000.00	\$2,000.00
Consultant Subcontractor Costs						\$5,000.00	\$10,000.00
Specialty OMM visits		Event	1	2	\$5,000.00	\$5,000.00	\$10,000.00
Other Costs						\$6,700.00	\$13,400.00
Utilities - Electric		KWH	100,000	2	\$0.07	\$6,700.00	\$13,400.00
Chevron Direct-Bill Subcontractor Costs						\$16,600.00	\$33,200.00
Waste Disposal Coordination	Coordinate condensate disposal	Lump Sum	1	2	\$3,000.00	\$3,000.00	\$6,000.00
Waste Transport and Disposal	Condensate disposal (once per quarter)	Event	4	2	\$1,000.00	\$4,000.00	\$8,000.00
Lab - Groundwater Samples	10 quarterly samples	Sample	40	2	\$150.00	\$6,000.00	\$12,000.00
Lab - Air Samples	Monthly air discharge samples	Sample	24	2	\$150.00	\$3,600.00	\$7,200.00
Total						\$88,780.00	\$177,560.00

Alternative 3 (Partial Excavation, Air Sparge/SVE, MNA, and Institutional Controls)

Task 10 System Installation Documentation and OMM Manual Preparation

Includes:

- Preparation of system installation summary report
- Preparation of OMM manual with system specific maintenance procedures
- Preparation of system as-built documentation

Item	Notes	Unit	Quantity	Unit Cost	Total
Consultant Labor					\$23,760.00
Principal Level Eng/Geo/Sci		Hour	24	\$130.00	\$3,120.00
Senior Level Eng/Geo/Sci		Hour	48	\$110.00	\$5,280.00
Project Level Eng/Geo/Sci		Hour	80	\$85.00	\$6,800.00
Associate Level Eng/Geo/Sci		Hour	80	\$65.00	\$5,200.00
Drafter		Hour	48	\$70.00	\$3,360.00
Total					\$23,760.00

Alternative 3 (Partial Excavation, Air Sparge/SVE, MNA, and Institutional Controls)

Task 11 Monitoring of Natural Attenuation (5 Years)

Includes:

- Consultant labor, equipment, and materials associated with groundwater sampling to monitor natural attenuation processes
- Consultant labor for groundwater monitoring coordination, data evaluation, report preparation, and project management

Assumptions:

Monitoring will be required for a period of 5 years

Item	Notes	Unit	Annual Quantity	# of Years	Unit Cost	Annual Total	Project Total
Consultant Labor						\$9,600.00	\$48,000.00
Principal Level Eng/Geo/Sci		Hour	8	5	\$130.00	\$1,040.00	\$5,200.00
Senior Level Eng/Geo/Sci		Hour	24	5	\$110.00	\$2,640.00	\$13,200.00
Project Level Eng/Geo/Sci		Hour	32	5	\$85.00	\$2,720.00	\$13,600.00
Associate Level Eng/Geo/Sci		Hour	32	5	\$65.00	\$2,080.00	\$10,400.00
Drafter		Hour	16	5	\$70.00	\$1,120.00	\$5,600.00
Chevron Direct-Bill Subcontractor Costs						\$10,000.00	\$50,000.00
Groundwater Sampling Subcontractor		Event	2	5	\$2,500.00	\$5,000.00	\$25,000.00
Lab - Groundwater Samples	10 semiannual samples	Sample	20	5	\$250.00	\$5,000.00	\$25,000.00
Total						\$19,600.00	\$98,000.00

Alternative 3 (Partial Excavation, Air Sparge/SVE, MNA, and Institutional Controls)**Task 12 Coordination/Management/Maintenance of Institutional Controls (10 Years)**

Includes:

- Coordination of a restrictive covenant to prohibit groundwater use and place controls on subsurface activities on the active station property
- Coordination of soil management plans to establish soil handling measures for utility or other subsurface work in the adjacent right-of-ways

Assumptions:

- Costs assume one event to repair/replace damaged asphalt or concrete surface cover on the active station property
- Semiannual inspections and maintenance of asphalt and/or concrete surface cover on the active station property for a period of 10 years

Item	Notes	Unit	Quantity	Unit Cost	Annual Total
Consultant Labor					\$29,560.00
Principal Level Eng/Geo/Sci		Hour	24	\$130.00	\$3,120.00
Senior Level Eng/Geo/Sci		Hour	48	\$110.00	\$5,280.00
Project Level Eng/Geo/Sci		Hour	96	\$85.00	\$8,160.00
Associate Level Eng/Geo/Sci		Hour	200	\$65.00	\$13,000.00
Consultant Equipment					\$1,000.00
Field Vehicle		Day	8	\$125.00	\$1,000.00
Consultant Subcontractor Costs					\$25,000.00
Paving Subcontractor		Lump Sum	1	\$25,000.00	\$25,000.00
Total					\$55,560.00

Alternative 3 (Partial Excavation, Air Sparge/SVE, MNA, and Institutional Controls)

Task 13 Post Remedy Confirmation Sampling and Closure Management

Includes:

- Consultant labor, equipment, travel, and subcontractor costs to collect post remedy soil and soil-vapor confirmation samples
- HASP and work plan preparation, pre-project planning, and subcontractor coordination
- Consultant labor, equipment, travel, and subcontractor costs to collect post remedy soil confirmation samples
- Data evaluation and summary report preparation
- Laboratory analysis for soil and soil-vapor samples
- Waste coordination, transport and disposal

Assumptions:

- Costs assume soil samples are collected during a 3-day field effort with continuous oversight by two consultant staff
- All soil boring locations cleared to 8 feet bgs using air-knife/vac-truck rig
- Soil-vapor samples to be collected at existing soil-vapor sampling probe locations (one-time event)

Item	Notes	Unit	Quantity	Unit Cost	Total
Consultant Labor					\$31,040.00
Principal Level Eng/Geo/Sci		Hour	24	\$130.00	\$3,120.00
Senior Level Eng/Geo/Sci		Hour	80	\$110.00	\$8,800.00
Project Level Eng/Geo/Sci		Hour	120	\$85.00	\$10,200.00
Associate Level Eng/Geo/Sci		Hour	120	\$65.00	\$7,800.00
Drafter		Hour	16	\$70.00	\$1,120.00
Consultant Travel					\$740.00
Lodging	2x8 nights oversight crew + 4 nights supervisor	Night	4	\$125.00	\$500.00
Per Diem	2x10 days oversight crew + 6 days supervisor	Day	6	\$40.00	\$240.00
Consultant Equipment					\$1,670.00
Field Vehicle		Day	3	\$125.00	\$375.00
Sampling Truck		Day	4	\$230.00	\$920.00
PID		Day	3	\$75.00	\$225.00
Helium Meter		Day	1	\$150.00	\$150.00
Consultant Subcontractor Costs					\$12,390.00
Driller - Vac Truck Mobilization		Mile	300	\$3.50	\$1,050.00
Driller - Vac Truck Daily Rate	Includes per diem for 2 man crew	Day	1	\$1,750.00	\$1,750.00
Driller - HSA Drill Rig Mobilization		Mile	300	\$5.50	\$1,650.00
Driller - HSA Drill Rig Daily Rate	Includes per diem for 2 man crew	Day	2	\$3,250.00	\$6,500.00
Driller - Start Cards		Each	8	\$65.00	\$520.00
Driller - Surface Hole Patch		Each	8	\$50.00	\$400.00
Driller - Soil/Water Drums		Each	8	\$65.00	\$520.00
Chevron Direct-Bill Subcontractor Costs					\$9,400.00
Waste Disposal Coordination		Lump Sum	1	\$3,000.00	\$3,000.00
Waste Transport and Disposal		Drum	8	\$100.00	\$800.00
Laboratory Analytical Services	Soil samples	Sample	24	\$150.00	\$3,600.00
Laboratory Analytical Services	4 Soil-vapor samples + 1 equipment blank	Sample	5	\$400.00	\$2,000.00
Total					\$55,240.00

Summary of Alternative Costs		
Alternative 4 (MNA, Institutional Controls, and Future Property-Wide Excavation in Conjunction with Service Station Upgrades or Redevelopment)		
	Cost Components	Cost
Task 1	Coordination/Management/Maintenance of Institutional Controls (20 Years)	\$72,080
Task 2	Monitoring of Natural Attenuation (20 Years)	\$392,000
Task 3	Excavation Planning and Permitting	\$55,650
Task 4	Excavation Implementation	\$817,435
Task 5	Reporting	\$12,480
Task 6	Post Remedy Groundwater Confirmation Sampling and Closure Management	\$69,080
Total + 25% for taxes and contingency		\$1,773,406

Notes: See task-specific cost estimates for additional details regarding each of the cost components for this alternative.

Alternative 4 (MNA, Institutional Controls, and Future Property-Wide Excavation in Conjunction with Service Station Upgrades or Redevelopment)**Task 1 Coordination/Management/Maintenance of Institutional Controls (20 Years)**

Includes:

- Coordination of a restrictive covenant to prohibit groundwater use and place controls on subsurface activities on the active station property
- Coordination of soil management plans to establish soil handling measures for utility or other subsurface work in the adjacent right-of-ways
- Coordination financial assurance for future excavation

Assumptions:

- Costs assume one event to repair/replace damaged asphalt or concrete surface cover on the active station property
- Semiannual inspections and maintenance of asphalt and/or concrete surface cover on the active station property for a period of 20 years

Item	Description / Assumptions	Unit	Quantity	Unit Cost	Annual Total
Consultant Labor					\$46,080.00
	Principal Level Eng/Geo/Sci	Hour	24	\$130.00	\$3,120.00
	Senior Level Eng/Geo/Sci	Hour	80	\$110.00	\$8,800.00
	Project Level Eng/Geo/Sci	Hour	96	\$85.00	\$8,160.00
	Associate Level Eng/Geo/Sci	Hour	400	\$65.00	\$26,000.00
Consultant Equipment					\$1,000.00
	Field Vehicle	Day	8	\$125.00	\$1,000.00
Consultant Subcontractor Costs					\$25,000.00
	Paving Subcontractor	Lump Sum	1	\$25,000.00	\$25,000.00
Total					\$72,080.00

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

Task 2 Monitoring of Natural Attenuation (20 Years)

Includes:

- Consultant labor, equipment, and materials associated with groundwater sampling to monitor natural attenuation processes
- Consultant labor for groundwater monitoring coordination, data evaluation, report preparation, and project management

Assumptions:

Monitoring will be required for a period of 20 years prior to site redevelopment

Item	Description / Assumptions	Unit	Annual Quantity	# of Years	Unit Cost	Annual Total	Project Total
Consultant Labor						\$9,600.00	\$192,000.00
Principal Level Eng/Geo/Sci		Hour	8	20	\$130.00	\$1,040.00	\$20,800.00
Senior Level Eng/Geo/Sci		Hour	24	20	\$110.00	\$2,640.00	\$52,800.00
Project Level Eng/Geo/Sci		Hour	32	20	\$85.00	\$2,720.00	\$54,400.00
Associate Level Eng/Geo/Sci		Hour	32	20	\$65.00	\$2,080.00	\$41,600.00
Drafter		Hour	16	20	\$70.00	\$1,120.00	\$22,400.00
Chevron Direct-Bill Subcontractor Costs						\$10,000.00	\$200,000.00
Groundwater Sampling Subcontractor		Event	2	20	\$2,500.00	\$5,000.00	\$100,000.00
Lab - Groundwater Samples	10 semiannual samples	Sample	20	20	\$250.00	\$5,000.00	\$100,000.00
Total						\$19,600.00	\$392,000.00

Alternative 4 (MNA, Institutional Controls, and Future Property-Wide Excavation in Conjunction with Service Station Upgrades or Redevelopment)
Task 3 Excavation Planning and Permitting

Includes:

- Preparation of work plan, contractor specifications, and HASP
- Preparation of SEPA and soil/erosion control permits
- Subcontractor coordination and pre-project safety planning

Assumptions:

- Level of effort for excavation planning and permitting is assumed to be greater than for alternatives 2 and 3 because it will require additional coordination with the redeveloper

Item	Description / Assumptions	Unit	Quantity	Unit Cost	Total
Consultant Labor					
	Principal Level Eng/Geo/Sci	Hour	64	\$130.00	\$8,320
	Senior Level Eng/Geo/Sci	Hour	160	\$110.00	\$17,600
	Project Level Eng/Geo/Sci	Hour	160	\$85.00	\$13,600
	Associate Level Eng/Geo/Sci	Hour	160	\$65.00	\$10,400
	Drafter	Hour	64	\$70.00	\$4,480
Consultant Equipment					
	Field Vehicle	Day	2	\$125.00	\$250
Other Costs					
	Permit Fees	Lump Sum	1	\$1,000.00	\$1,000
Total					\$55,650

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

Task 4 Excavation Implementation

Includes:

- Consultant labor, equipment, travel, and materials associated with field oversight of excavation activities
- Subcontractor costs associated with excavation tasks, including;
 - Mobilization and site setup costs
 - Excavation and loading of overburden and impacted soil
 - Application of 4,000 pounds of ORC or equivalent product to be placed in excavation bottom
 - Labor, equipment, materials and subcontractors to backfill and compact excavation area
- Waste disposal coordination, transportation, and disposal by Chevron direct-bill subcontractors

Assumptions:

- Area to be excavated is approximately 13, 500 square feet
- Clean overburden soils from ground surface to 5 feet bgs
- Petroleum contaminated soil from 5 feet bgs to maximum excavation depth (12 feet bgs)
- Assume 1.6 tons per cubic yard of soil (in place)
- Estimated excavation and disposal of 3,500 cy or 5,600 tons of petroleum contaminated soil
- Estimated excavation and disposal of 2,500 cy or 4,000 tons of clean overburden soil
- Excavation to be performed during (5) 5-day weeks in the field

Item	Description / Assumptions	Unit	Quantity	Unit Cost	Total
Consultant Labor					\$77,580.00
Principal Level Eng/Geo/Sci		Hour	16	\$130.00	\$2,080.00
Senior Level Eng/Geo/Sci		Hour	100	\$110.00	\$11,000.00
Project Level Eng/Geo/Sci	Five 60-hour weeks in field	Hour	300	\$85.00	\$25,500.00
Associate Level Eng/Geo/Sci	Five 60-hour weeks in field for two staff	Hour	600	\$65.00	\$39,000.00
Consultant Travel					\$11,525.00
Lodging		Night	65	\$125.00	\$8,125.00
Per Diem		Day	85	\$40.00	\$3,400.00
Consultant Equipment					\$12,000.00
Field Vehicle		Day	35	\$125.00	\$4,375.00
Sampling Truck		Day	25	\$230.00	\$5,750.00
PID		Day	25	\$75.00	\$1,875.00
Consultant Subcontractor Costs					\$375,330.00
Project Manager		Hour	80	\$105.00	\$8,400.00
Health and Safety Manager		Hour	80	\$85.00	\$6,800.00
Foreman	5 weeks @ 60 hours per week + 20 hours planning	Hour	320	\$90.00	\$28,800.00
Operator	5 weeks @ 60 hours per week	Hour	300	\$85.00	\$25,500.00
Laborer	5 weeks @ 60 hours per week	Hour	300	\$70.00	\$21,000.00
Administrative Assistant		Hour	12	\$65.00	\$780.00
Per Diem - Meals		Day	75	\$40.00	\$3,000.00
Per Diem - Lodging		Night	60	\$125.00	\$7,500.00
Light Truck		Day	25	\$200.00	\$5,000.00
Service Truck		Day	25	\$300.00	\$7,500.00
Water Truck		Day	20	\$375.00	\$7,500.00
Excavator - 50,000 lb		Day	25	\$1,250.00	\$31,250.00
Excavator - 28,000 lb		Day	25	\$850.00	\$21,250.00
Compaction Plate Excavator		Day	15	\$250.00	\$3,750.00
Subcontractor - Compaction Testing		Lump Sum	1	\$7,500.00	\$7,500.00
Temporary Fence		Linear Ft.	600	\$3.00	\$1,800.00
Portable Toilet and Hand Wash		Week	5	\$100.00	\$500.00
Materials - Structural Fill (Delivered)		Ton	3,500	\$12.00	\$42,000.00
Materials - Crushed Rock (Delivered)		Ton	3,500	\$14.00	\$49,000.00
Materials - ORC		Pound	4,000	\$9.00	\$36,000.00
Construction Trailer Rental		Week	5	\$500.00	\$2,500.00
Overburden Transport & Disposal		Ton	4,000	\$7.00	\$28,000.00
Mobile Laboratory		Day	15	\$2,000.00	\$30,000.00
Chevron Direct-Bill Subcontractor Costs					\$341,000.00
Waste Disposal Coordination		Lump Sum	1	\$5,000.00	\$5,000.00
Waste Transport and Disposal	Transport and dispose of non-hazardous soil waste	Ton	5,600	\$60.00	\$336,000.00
Total					\$817,435.00

Alternative 4 (MNA, Institutional Controls, and Future Property-Wide Excavation in Conjunction with Service Station Upgrades or Redevelopment)
Task 5 Reporting

Includes:
 - Preparation of excavation summary report

Item	Description / Assumptions	Unit	Quantity	Unit Cost	Total
Consultant Labor					\$12,480.00
Principal Level Eng/Geo/Sci		Hour	8	\$130.00	\$1,040.00
Senior Level Eng/Geo/Sci		Hour	24	\$110.00	\$2,640.00
Project Level Eng/Geo/Sci		Hour	40	\$85.00	\$3,400.00
Associate Level Eng/Geo/Sci		Hour	40	\$65.00	\$2,600.00
Drafter		Hour	40	\$70.00	\$2,800.00
Total					\$12,480.00

Alternative 4 (MNA, Institutional Controls, and Future Property-Wide Excavation in Conjunction with Service Station Upgrades or Redevelopment)
Task 6 Post Remedy Groundwater Confirmation Sampling and Closure Management

Includes:

- Installation of four new monitoring wells on the active station property, and performance of four quarters of post excavation groundwater monitoring to demonstrate compliance with groundwater cleanup levels
- HASP and work plan preparation, pre-project planning, and subcontractor coordination

- Consultant labor, equipment, travel, and subcontractor costs to install monitoring wells and collect post remedy soil confirmation samples
- Laboratory analysis of soil and groundwater samples
- Waste coordination, transport and disposal
- Data evaluation, summary report preparation, and site closure management

Assumptions:

- Costs assume a 3-day field effort for new well installation, with continuous oversight by two consultant staff
- All boring locations cleared to 8 feet bgs using air-knife/vac-truck rig

Item	Description / Assumptions	Unit	Quantity	Unit Cost	Total
Consultant Labor					\$26,240.00
Principal Level Eng/Geo/Sci		Hour	24	\$130.00	\$3,120.00
Senior Level Eng/Geo/Sci		Hour	60	\$110.00	\$6,600.00
Project Level Eng/Geo/Sci		Hour	120	\$85.00	\$10,200.00
Associate Level Eng/Geo/Sci		Hour	80	\$65.00	\$5,200.00
Drafter		Hour	16	\$70.00	\$1,120.00
Consultant Travel					\$740.00
Lodging		Night	4	\$125.00	\$500.00
Per Diem		Day	6	\$40.00	\$240.00
Consultant Equipment					\$1,290.00
Field Vehicle		Day	3	\$125.00	\$375.00
Sampling Truck		Day	3	\$230.00	\$690.00
PID		Day	3	\$75.00	\$225.00
Consultant Subcontractor Costs					\$15,810.00
Driller - Vac Truck Mobilization		Mile	300	\$3.50	\$1,050.00
Driller - Vac Truck Daily Rate	Includes per diem for 2 man crew	Day	1	\$1,750.00	\$1,750.00
Driller - HSA Drill Rig Mobilization		Mile	300	\$5.50	\$1,650.00
Driller - HSA Drill Rig Daily Rate	Includes per diem for 2 man crew	Day	2	\$3,250.00	\$6,500.00
Driller - Start Cards		Each	4	\$65.00	\$260.00
Driller- 2" Well Materials	(4) 2"-diameter wells to 20 feet bgs	Foot	80	\$12.00	\$960.00
Driller - Flush Mount Well Box		Each	4	\$155.00	\$620.00
Driller - Soil/Water Drums		Each	8	\$65.00	\$520.00
Surveyor		Lump Sum	1	\$2,500.00	\$2,500.00
Chevron Direct-Bill Subcontractor Costs					\$25,000.00
Groundwater Sampling Subcontractor		Event	4	\$2,500.00	\$10,000.00
Waste Disposal Coordination		Lump Sum	1	\$3,000.00	\$3,000.00
Waste Transport and Disposal		Drum	8	\$100.00	\$800.00
Laboratory Analytical Services	Groundwater samples (4 quarters)	Sample	40	\$250.00	\$10,000.00
Laboratory Analytical Services	Soil samples	Sample	8	\$150.00	\$1,200.00
Total					\$69,080.00

Summary of Alternative Costs		
Alternative 5 (Property-Wide Excavation, MNA, and Institutional Controls)		
Cost Components		Cost
Task 1	Excavation Planning and Permitting	\$41,770
Task 2	Service Station Demolition and Excavation Implementation	\$892,000
Task 3	Service Station Reconstruction	\$1,000,000
Task 4	Reporting	\$12,480
Task 5	Monitoring of Natural Attenuation (5 Years)	\$98,000
Task 6	Coordination/Management/Maintenance of Institutional Controls (10 Years)	\$55,560
Task 7	Post Remedy Groundwater Confirmation Sampling and Closure Management	\$69,080
Total + 25% for taxes and contingency		\$2,711,113

Notes: See task-specific cost estimates for additional details regarding each of the cost components for this alternative.

Alternative 5 (Property-Wide Excavation, MNA, and Institutional Controls)

Task 1 Excavation Planning and Permitting

Includes:

- Preparation of work plan, contractor specifications, and HASP
- Preparation of SEPA and soil/erosion control permits
- Subcontractor coordination and pre-project safety planning

Item	Description / Assumptions	Unit	Quantity	Unit Cost	Total
Consultant Labor					
Principal Level Eng/Geo/Sci		Hour	24	\$130.00	\$40,520
Senior Level Eng/Geo/Sci		Hour	120	\$110.00	\$3,120
Project Level Eng/Geo/Sci		Hour	160	\$85.00	\$13,200
Associate Level Eng/Geo/Sci		Hour	120	\$65.00	\$13,600
Drafter		Hour	40	\$70.00	\$7,800
Consultant Equipment					
Field Vehicle		Day	2	\$125.00	\$250
Other Costs					
Permit Fees		Lump Sum	1	\$1,000.00	\$1,000
Total					\$41,770

**Alternative 5 (Property-Wide Excavation, MNA, and Institutional Controls)
Task 2 Service Station Demolition and Excavation Implementation**

Includes:

- Consultant labor, equipment, travel, and materials associated with field oversight of excavation activities
- Subcontractor costs associated with excavation tasks, including:

- Mobilization and site setup costs
- Demolition and disposal of service station infrastructure
- Excavation and loading of overburden and impacted soil
- Application of 4,000 pounds of ORC or equivalent product to be placed in excavation bottom
- Labor, equipment, materials and subcontractors to backfill and compact excavation area
- Waste disposal coordination, transportation, and disposal by Chevron direct-bill subcontractors

Assumptions:

- Area to be excavated is approximately 13, 500 square feet
- Clean overburden soils from ground surface to 5 feet bgs
- Petroleum contaminated soil from 5 feet bgs to maximum excavation depth (12 feet bgs)
- Assume 1.6 tons per cubic yard of soil (in place)
- Estimated excavation and disposal of 3,500 cy or 5,600 tons of petroleum contaminated soil
- Estimated excavation and disposal of 2,500 cy or 4,000 tons of clean overburden soil
- Demolition and excavation to be performed during (6) 5-day weeks in the field

Item	Description / Assumptions	Unit	Quantity	Unit Cost	Total
Consultant Labor					
Principal Level Eng/Geo/Sci		Hour	24	\$130.00	\$3,120.00
Senior Level Eng/Geo/Sci		Hour	120	\$110.00	\$13,200.00
Project Level Eng/Geo/Sci	Six 60-hour weeks in field	Hour	360	\$85.00	\$30,600.00
Associate Level Eng/Geo/Sci	Six 60-hour weeks in field for 2 staff	Hour	720	\$65.00	\$46,800.00
Drafter		Hour		\$70.00	\$0.00
Consultant Travel					
Lodging		Night	78	\$125.00	\$9,750.00
Per Diem		Day	102	\$40.00	\$4,080.00
Consultant Equipment					
Field Vehicle		Day	42	\$125.00	\$5,250.00
Sampling Truck		Day	30	\$230.00	\$6,900.00
PID		Day	30	\$75.00	\$2,250.00
Consultant Subcontractor Costs					
Project Manager		Hour	88	\$105.00	\$9,240.00
Health and Safety Manager		Hour	88	\$85.00	\$7,480.00
Foreman	6 weeks @ 60 hours per week + 40 hours planning	Hour	400	\$90.00	\$36,000.00
Operator	6 weeks @ 60 hours per week	Hour	360	\$85.00	\$30,600.00
Laborer	6 weeks @ 60 hours per week	Hour	360	\$70.00	\$25,200.00
Administrative Assistant		Hour	12	\$65.00	\$780.00
Per Diem - Meals		Day	90	\$40.00	\$3,600.00
Per Diem - Lodging		Night	72	\$125.00	\$9,000.00
Light Truck		Day	30	\$200.00	\$6,000.00
Service Truck		Day	30	\$300.00	\$9,000.00
Water Truck		Day	20	\$375.00	\$7,500.00
Excavator - 50,000 lb		Day	30	\$1,250.00	\$37,500.00
Excavator - 28,000 lb		Day	30	\$850.00	\$25,500.00
Compaction Plate Excavator		Day	15	\$250.00	\$3,750.00
Subcontractor - Compaction Testing		Lump Sum	1	\$7,500.00	\$7,500.00
Temporary Fence		Linear Ft.	600	\$3.00	\$1,800.00
Portable Toilet and Hand Wash		Week	6	\$100.00	\$600.00
Materials - Structural Fill (Delivered)		Ton	3,500	\$12.00	\$42,000.00
Materials - Crushed Rock (Delivered)		Ton	3,500	\$14.00	\$49,000.00
Materials - ORC		Pound	4,000	\$9.00	\$36,000.00
Construction Trailer Rental		Week	6	\$500.00	\$3,000.00
Overburden Transport & Disposal		Ton	4,000	\$7.00	\$28,000.00
Demolition Debris Transport & Disposal		Lump Sum	1	\$20,000.00	\$20,000.00
Mobile Laboratory		Day	15	\$2,000.00	\$30,000.00
Chevron Direct-Bill Subcontractor Costs					
Waste Disposal Coordination		Lump Sum	1	\$5,000.00	\$5,000.00
Waste Transport and Disposal	Transport and dispose of non-hazardous soil waste	Ton	5,600	\$60.00	\$336,000.00
Total					
					\$892,000.00

Alternative 5 (Property-Wide Excavation, MNA, and Institutional Controls)

Task 3 Service Station Reconstruction

Includes:

- Chevron reimbursement to Tri-Tex for station reconstruction costs
- Installation of new USTs, dispensers, and construction of new station building

Assumptions:

Reimbursement valued based on service and gas station construction cost estimates for Washington State from Reed Construction Data (www.reedconstructiondata.com)

Item	Description / Assumptions	Unit	Quantity	Unit Cost	Total
Other Costs					\$1,000,000
Station Reconstruction Cost		Lump Sum	1	\$1,000,000.00	\$1,000,000
Total					\$1,000,000



Alternative 5 (Property-Wide Excavation, MNA, and Institutional Controls)

Task 4 Reporting

Includes:

- Preparation of excavation summary report

Item	Description / Assumptions	Unit	Quantity	Unit Cost	Total
Consultant Labor					
Principal Level Eng/Geo/Sci		Hour	8	\$130.00	\$1,040.00
Senior Level Eng/Geo/Sci		Hour	24	\$110.00	\$2,640.00
Project Level Eng/Geo/Sci		Hour	40	\$85.00	\$3,400.00
Associate Level Eng/Geo/Sci		Hour	40	\$65.00	\$2,600.00
Drafter		Hour	40	\$70.00	\$2,800.00
Total					\$12,480.00

Alternative 5 (Property-Wide Excavation, MNA, and Institutional Controls)

Task 5 Monitoring of Natural Attenuation (5 Years)

Includes:

- Consultant labor, equipment, and materials associated with groundwater sampling to monitor natural attenuation processes
- Consultant labor for groundwater monitoring coordination, data evaluation, report preparation, and project management

Assumptions:

Monitoring will be required for a period of 5 years

Item	Notes	Unit	Annual Quantity	# of Years	Unit Cost	Annual Total	Project Total
Consultant Labor							
Principal Level Eng/Geo/Sci		Hour	8	5	\$130.00	\$9,600.00	\$48,000.00
Senior Level Eng/Geo/Sci		Hour	24	5	\$110.00	\$1,040.00	\$5,200.00
Project Level Eng/Geo/Sci		Hour	32	5	\$85.00	\$2,640.00	\$13,200.00
Associate Level Eng/Geo/Sci		Hour	32	5	\$65.00	\$2,720.00	\$13,600.00
Drafter		Hour	16	5	\$70.00	\$2,080.00	\$10,400.00
Chevron Direct-Bill Subcontractor Costs							
Groundwater Sampling Subcontractor		Event	2	5	\$2,500.00	\$10,000.00	\$50,000.00
Lab - Groundwater Samples	10 semiannual samples	Sample	20	5	\$250.00	\$5,000.00	\$25,000.00
Total						\$19,600.00	\$98,000.00

Alternative 5 (Property-Wide Excavation, MNA, and Institutional Controls)

Task 6 Coordination/Management/Maintenance of Institutional Controls (10 Years)

Includes:

- Coordination of a restrictive covenant to prohibit groundwater use and place controls on subsurface activities on the active station property
- Coordination of soil management plans to establish soil handling measures for utility or other subsurface work in the adjacent right-of-ways

Assumptions:

- Costs assume one event to repair/replace damaged asphalt or concrete surface cover on the active station property
- Semiannual inspections and maintenance of asphalt and/or concrete surface cover on the active station property for a period of 10 years

Item	Notes	Unit	Quantity	Unit Cost	Annual Total
Consultant Labor					\$29,560.00
Principal Level Eng/Geo/Sci		Hour	24	\$130.00	\$3,120.00
Senior Level Eng/Geo/Sci		Hour	48	\$110.00	\$5,280.00
Project Level Eng/Geo/Sci		Hour	96	\$85.00	\$8,160.00
Associate Level Eng/Geo/Sci		Hour	200	\$65.00	\$13,000.00
Consultant Equipment					\$1,000.00
Field Vehicle		Day	8	\$125.00	\$1,000.00
Consultant Subcontractor Costs					\$25,000.00
Paving Subcontractor		Lump Sum	1	\$25,000.00	\$25,000.00
Total					\$55,560.00

**Alternative 5 (Property-Wide Excavation, MNA, and Institutional Controls)
Task 7 Post Remedy Groundwater Confirmation Sampling and Closure Management**

Includes:

- Installation of four new monitoring wells on the active station property, and performance of four quarters of post excavation groundwater monitoring to demonstrate compliance with groundwater cleanup levels
 - HASP and work plan preparation, pre-project planning, and subcontractor coordination
 - Consultant labor, equipment, travel, and subcontractor costs to install monitoring wells and collect post remedy soil confirmation samples
 - Laboratory analysis of soil and groundwater samples
 - Waste coordination, transport and disposal
 - Data evaluation, summary report preparation, and site closure management
- Assumptions:**
- Costs assume a 3-day field effort for new well installation, with continuous oversight by two consultant staff
 - All boring locations cleared to 8 feet bgs using air-knife/vac-truck rig

Item	Description / Assumptions	Unit	Quantity	Unit Cost	Total
Consultant Labor					
Principal Level Eng/Geo/Sci		Hour	24	\$130.00	\$3,120.00
Senior Level Eng/Geo/Sci		Hour	60	\$110.00	\$6,600.00
Project Level Eng/Geo/Sci		Hour	120	\$85.00	\$10,200.00
Associate Level Eng/Geo/Sci		Hour	80	\$65.00	\$5,200.00
Drafter		Hour	16	\$70.00	\$1,120.00
Consultant Travel					
Lodging		Night	4	\$125.00	\$500.00
Per Diem		Day	6	\$40.00	\$240.00
Consultant Equipment					
Field Vehicle		Day	3	\$125.00	\$375.00
Sampling Truck		Day	3	\$230.00	\$690.00
PID		Day	3	\$75.00	\$225.00
Consultant Subcontractor Costs					
Driller - Vac Truck Mobilization		Mile	300	\$3.50	\$1,050.00
Driller - Vac Truck Daily Rate	Includes per diem for 2 man crew	Day	1	\$1,750.00	\$1,750.00
Driller - HSA Drill Rig Mobilization		Mile	300	\$5.50	\$1,650.00
Driller - HSA Drill Rig Daily Rate		Day	2	\$3,250.00	\$6,500.00
Driller - Start Cards		Each	4	\$65.00	\$260.00
Driller- 2" Well Materials	(4) 2"-diameter wells to 20 feet bgs	Foot	80	\$12.00	\$960.00
Driller - Flush Mount Well Box		Each	4	\$155.00	\$620.00
Driller - Soil/Water Drums		Each	8	\$65.00	\$520.00
Surveyor		Lump Sum	1	\$2,500.00	\$2,500.00
Chevron Direct-Bill Subcontractor Costs					
Groundwater Sampling Subcontractor		Event	4	\$2,500.00	\$10,000.00
Waste Disposal Coordination		Lump Sum	1	\$3,000.00	\$3,000.00
Waste Transport and Disposal		Drum	8	\$100.00	\$800.00
Laboratory Analytical Services	Groundwater samples (4 quarters)	Sample	40	\$250.00	\$10,000.00
Laboratory Analytical Services	Soil samples	Sample	8	\$150.00	\$1,200.00
Total					\$69,080.00

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