SUPPLEMENTAL SITE ASSESSMENT SUMMARY REPORT ALDERS CHEVRON / FORMER CHEVRON SERVICE STATION NO. 93883 (VCP #CE0391) 1702 East Yakima Avenue Yakima, Washington

March 31, 2015

Prepared for:

Chevron Environmental Management Company 6101 Bollinger Canyon Road San Ramon, California 94583

Prepared by:

Leidos Engineering, LLC 18919 North Creek Parkway, Suite 101 Bothell, Washington 98011



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Russell Shropshire, PE Senior Project Engineer



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SUPPLEMENTAL SITE ASSESSMENT SUMMARY REPORT ALDERS CHEVRON / FORMER CHEVRON SERVICE STATION NO. 93883 (VCP #CE0391)

1. INTRODUCTION

Leidos Engineering, LLC (Leidos), formerly SAIC Energy, Environment & Infrastructure, LLC (SAIC)¹, prepared this report on behalf of Chevron Environmental Management Company (CEMC) to summarize the results of supplemental site assessment activities performed at the Alders Chevron site (the Site), also known as Former Chevron Service Station No. 93883, located at 1702 East Yakima Avenue (formerly 1602 Terrace Heights Road) in Yakima, Washington. A vicinity map is included as Figure 1 and a site map is included as Figure 2.

The objective of the supplemental site assessment was to address data gaps from past investigation and cleanup activities of the Site, which were previously highlighted in a Partial Sufficiency and Further Action Determination issued by the Washington State Department of Ecology (Ecology) in May 2006 (Ecology, 2006). Specifically, Ecology requested the following additional information for the Site:

- Evidence that the previously abandoned wells were decommissioned in accordance with WAC 173-160, or the existing wells are located and abandoned; and
- Four consecutive quarters of groundwater monitoring showing contamination below MTCA.

Assessment activities documented in this report were performed in accordance with the procedures described in SAIC's *Supplemental Site Assessment Work Plan*, dated August 9, 2013 (SAIC, 2013), which was approved by the Washington State Department of Ecology (Ecology) by letter dated August 30, 2013 (Ecology, 2013B).

2. BACKGROUND

Property records indicate that Standard Oil Company of California (a predecessor of Chevron) purchased the property in 1970. Chevron reportedly operated a service station at the Site through 1992, when the property was sold to the current owner, Mr. Bob Hall. In 1993, the property was redeveloped to its current configuration, which is used as vehicle display parking for Bob Hall's Mazda automobile dealership.

The potential presence of petroleum contamination at the Site was first confirmed following assessment activities performed by Rittenhouse-Zeman & Associates, Inc. (RZA) in 1989, which included advancement of five soil borings and the installation of monitoring wells MW-1, MW-2 and MW-3 (RZA, 1989A). Subsequent groundwater sampling results indicated the presence of gasoline-range hydrocarbon contamination in monitoring wells MW-2 (C-4) and MW-3 (C-5) at

¹ The transition of SAIC to Leidos occurred on October 1, 2013. Within this report, each company name is used in association with the work that was performed or directed by that company.



concentrations of 14,000 micrograms per liter (μ g/L) and 13,000 μ g/L, respectively (RZA, 1989B).

Subsequent remedial actions were performed at the Site in 1992 and 1993, and consisted of the following:

- Removal of the heating oil underground storage tank (UST), waste oil UST, dry well, and 325 cubic yards of impacted soil (RZA, 1992A);
- Removal of the three gasoline product USTs (Chen-Northern, 1993A); and
- Removal of approximately 429 cubic yards of additional contaminated soil, which was discovered during the removal of the former service station building and canopy (Chen-Northern, 1993B). This work was apparently performed in association with Mr. Hall's redevelopment of the property.

In March 2004, Mr. Hall entered the Site into Ecology's Voluntary Cleanup Program (VCP) and the Site was assigned VCP # CE0191. Following review of available site assessment and remedial action reports prepared for the Site, Ecology issued a No Further Action (NFA) determination for soil at the Site, but indicated that additional assessment would be required to obtain an NFA determination for groundwater (Ecology, 2004).

In response to Ecology's determination letter, PLSA Engineering & Surveying (PLSA), on behalf of Mr. Hall, prepared a groundwater transport model which indicated that due to natural attenuation over the 12 years since the remedial actions were completed, residual petroleum hydrocarbon concentrations in groundwater at the Site would be reduced to less than 500 μ g/L, below MTCA Method A cleanup levels (PLSA, 2004). Ecology reviewed the model results and recommended groundwater sampling to confirm the results and demonstrate the absence of petroleum contaminants in groundwater (Ecology, 2005).

Ecology's 2004 NFA determination for soil was later rescinded and replaced by a Partial Sufficiency and Further Action Determination in May 2006 (Ecology, 2006). The 2006 further action determination letter provided the following requirements for closure of the site:

- Four consecutive quarters of groundwater monitoring showing contamination below MTCA Method A cleanup levels; and
- Evidence that the previously abandoned wells were decommissioned in accordance with WAC 173-160, or the existing wells are located and decommissioned.

The letter also recommended that "A single monitoring well be installed near MW-3 [or use MW-3 if it exists] to demonstrate groundwater contamination is below MTCA method A cleanup levels for four consecutive quarters. The groundwater should be sampled for the "waste oil" contaminants listed in Table 830-1, Required Testing for Petroleum Releases."

Available records for the Site suggest that no additional assessment or cleanup activity occurred at the Site until approximately 2012, when the Site was apparently elevated to priority status by the Department of Ecology. Ecology contacted CEMC regarding potential liability for



petroleum contamination at Site, and requested that additional assessment actions be performed. Following negotiations with the property owner for an access agreement to perform work on the Site, CEMC re-entered the Site into the VCP in April 2013. The Site was assigned VCP # CE0391 (Ecology, 2013A).

3. SITE ASSESSMENT ACTIVITIES

3.1 GEOPHYSICAL MONITORING WELL LOCATION SURVEY

Based on the recommendations provided in Ecology's 2006 Partial Sufficiency and Further Action determination letter, SAIC contracted ULS Services Corporation (ULS) to perform a subsurface geophysical survey to locate monitoring wells MW-1, MW-2, and MW-4, which were believed to have been paved over during redevelopment of the property in 1993. Monitoring well MW-3 was known to have been decommissioned in July 1992 (RZA, 1992B). ULS performed the survey work on April 17, 2013, which consisted of scanning suspected monitoring well location areas using a magnetic locator and electromagnetic induction metal detector to locate metallic monitoring well components such as well boxes, and a 500 megahertz ground penetrating radar (GPR) to locate the monitoring well casings.

Results of the survey did not provide any conclusive evidence to identify the locations of the missing monitoring wells; however, metallic survey and GPR results identified one location of interest in the vicinity of former wells MW-3 and MW-4. This location was marked and more fully investigated by air-knife excavation during subsequent monitoring well installation activities performed in August 2013, which are described in more detail in the following section. The air-knife investigation at this location revealed the presence of some small metal debris in the upper three feet of soil in this area; however, no evidence of an existing monitoring well was found.

During performance of the the geophysical survey, SAIC also spoke with the property owner, Mr. Bob Hall, regarding what efforts were made to preserve the monitoring wells during redevelopment of the property in 1993. Mr. Hall indicated that the surface grade of the former service station property had been cut by several feet during the redevelopment, which would indicate that the well casings would have required modifications to account for the change in ground surface elevation. Later that day, Mr. Hall spoke with PLSA, the engineering and land surveying firm involved with the redevelopment efforts on the property, in order to determine if they had any record of modifying the wells in this manner. However, PLSA reportedly found no mention of the wells in a review of their field notes for the project.

Based on the results of the geophysical survey, including the discussions with Mr. Hall, Leidos believes that monitoring wells MW-1, MW-2, and MW-4 were destroyed during redevelopment of the site in 1993. Therefore, the decommissioning of these wells in accordance with WAC 173-160 will not be possible. The area in which these monitoring wells were formerly located is currently covered by asphalt paving that is in good condition and is well maintained; therefore, Leidos believes that there is limited potential for the remains of these wells to serve as preferential conduits for migration of ground surface contamination to groundwater at this Site.



3.2 GROUNDWATER QUALITY ASSESSMENT

Following the determination that the previously existing monitoring wells were likely destroyed during redevelopment of the property in 1993, SAIC prepared a work plan (SAIC, 2013) to install and sample three new monitoring wells at the Site, in order to satisfy Ecology's request for four consecutive quarters of groundwater monitoring results. New monitoring wells were installed at the following locations (Figure 2):

- Monitoring well MW-5 was placed in the vicinity of the former dry well, heating oil UST, and waste oil UST location. This well is a replacement for former monitoring wells MW-3 and MW-4.
- Monitoring well MW-6 was placed approximately downgradient of the former gasoline UST basin. This well serves as a replacement for former monitoring well MW-2.
- Monitoring well MW-7 was placed southeast of the former service station property. This location is approximately downgradient of all former service station infrastructure at the Site.

3.2.1 Monitoring Well Installation Activities

Monitoring well installation activities were performed between August 27 and 29, 2013 by Cascade Drilling L.P., with oversight by SAIC. Each boring was first cleared to a depth of at least eight feet below ground surface (bgs) using an air-knife excavation rig. The borings were then advanced to their final depth using a limited access sonic drill rig.

During the drilling activities, an SAIC geologist was present to log soil lithology and collect soil samples for field-screening and laboratory analysis. Soil was collected in the upper eight feet of the boring with a stainless steel hand auger at approximately 2-foot intervals, if possible. Below eight feet, soil was collected continuously with the sonic rig sampling core. Soil samples were classified in accordance with the Unified Soil Classification System. Each sample was field screened for the presence of petroleum hydrocarbons by visual and olfactory observations. Headspace vapor measurements were recorded using a flame-ionization detector (FID) and a photo-ionization detector (PID), and sheen tests were conducted

At least two soil samples from each boring were collected and submitted for laboratory analysis: one from the capillary fringe, and the second from the deepest sample interval attained in the boring. However, additional soil samples were also submitted from depths containing the highest potential hydrocarbon impacts as indicated via field screening observations. Selected soil samples were submitted to Eurofins Lancaster Laboratories for the following analyses:

- Total petroleum hydrocarbons (TPH) as gasoline-range organics (TPH-GRO) by Ecology Method 97-602 NWTPH-Gx;
- TPH as diesel-range organics (TPH-DRO) and heavy oil-range organics (TPH-HRO) by Ecology Method 97-602 NWTPH-Dx;



- TPH-DRO and TPH-HRO by Ecology Method 97-602 NWTPH-Dx with silica gel cleanup;
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX), 1,2-dibromoethane (EDB), methyl tertiary butyl ether (MTBE), and halogenated volatile organic compounds (VOCs) by U.S. Environmental Protection Agency (USEPA) SW-846 8260;
- Carcinogenic polycyclic aromatic hydrocarbons (cPAHs) and naphthalene by USEPA Method SW-846 8270 with selective ion monitoring (SIM);
- Polychlorinated biphenyls (PCBs) by USEPA Method SW-846 8082; and
- Total cadmium, chromium, lead, nickel, and zinc by USEPA Method SW-846 6010.

Selected soil samples were also analyzed for:

- Extractable petroleum hydrocarbons (EPH) by ECY 97-602 WA EPH; and
- Volatile petroleum hydrocarbons (VPH) by ECY 97-602 WA VPH.

Soil sampling results are summarized in Table 2 and are further discussed in Section 4.2.

Each soil boring was completed as a 2-inch diameter monitoring well. Monitoring wells MW-5, MW-6, and MW-7 were installed at total depths of approximately 20, 19.5, and 19.5 feet bgs, respectively, which is consistent with the depth of the historical monitoring wells at the Site. The monitoring wells were constructed with schedule 40 poly-vinyl chloride casing, 0.020-inch factory slotted screen with a 10-foot screen interval, and with 2/12 Monterey sand for the filter-pack. The monitoring wells were completed at the ground surface with a flush-mounted, traffic-rated well box. Monitoring well elevation measurements were surveyed to the nearest 0.01 foot at the ground surface (top of well-box lid) and at the top of the well casing, relative to the North American Vertical Datum of 1988. Well construction details are presented on the boring logs, which are included in Appendix A.

Each of the new monitoring wells were developed by SAIC on August 30, 2013. Well development consisted of surging for 10 minutes, followed by pumping of the well, using an electric submersible pump, until at least 10 well casing volumes were removed or until water produced from the well was clear and free of sediment.

3.2.2 Groundwater Monitoring

Following the completion of monitoring well installation activities, a program of quarterly groundwater monitoring was initiated at the Site, which was performed by Gettler-Ryan, Inc. (Gettler-Ryan), on behalf of CEMC. Four consecutive quarterly monitoring events were performed on the following dates:

• September 21, 2013

• March 26, 2014



• December 23, 2013 • June 27, 2014

Gettler-Ryan collected depth-to-groundwater measurements and checked for the presence of separate-phase hydrocarbons in all three monitoring wells on the Site. Samples were then collected from each well using low-flow purge and sampling techniques, and the samples were submitted to Eurofins Lancaster Laboratories, Inc. for the following analyses:

- TPH-GRO by Ecology Method 97-602 NWTPH-Gx;
- TPH-DRO and TPH-HRO by Ecology Method 97-602 NWTPH-Dx;
- TPH-DRO and TPH-HRO by Ecology Method 97-602 NWTPH-Dx with silica gel cleanup;
- BTEX, 1,2 dichloroethane (EDC), MTBE, and halogenated VOCs by USEPA Method SW-846 8260;
- EDB by USEPA Method SW-846 8011;
- cPAHs and naphthalenes by USEPA Method SW-846 8270 SIM;
- PCBs by USEPA Method SW-846 8082; and
- Total cadmium, chromium, lead, nickel, and zinc by USEPA Method SW-846 6010.

A discussion of groundwater monitoring results is presented in Section 4. Gettler-Ryan field data sheets for each monitoring event are provided as Appendix B.

4. SUMMARY AND EVALUATION OF RESULTS

4.1 **GROUNDWATER**

Results of the four consecutive quarterly groundwater monitoring events are presented in Table 1 and laboratory analysis reports are provided as Appendix C. Data from these events indicate that groundwater collected at each monitoring well location was in compliance with MTCA Method A cleanup levels for all tested analytes, during each of the four quarterly monitoring events. Petroleum-range organics (TPH-GRO, TPH-DRO, and TPH-HRO) and BTEX compounds were not detected above the method detection limit in samples collected during any of the quarterly monitoring events.

Groundwater elevation data are presented in Table 1, and potentiometric maps for each monitoring event are provided in Figures 3 through 6. Groundwater elevation data collected during these events indicate that groundwater was generally encountered at depths of approximately 10 to 12 feet bgs, and that groundwater flow across the Site is consistently toward the southeast at a gradient of approximately 0.003 to 0.004 feet per foot. The maximum seasonal groundwater elevation variation observed between the four quarterly events was 1.35 feet.



4.2 SOIL

Soils encountered during installation of the three monitoring wells completed during this assessment indicate that the lithology beneath the Site, from ground surface to approximately 20 feet bgs, generally consists of brown, loose to medium dense, sandy gravel and cobbles with up to 15% fine to coarse sand and up to 20% silt. These observations are consistent with historical boring logs for the Site.

A summary of analytical results for soil samples collected during the installation of the monitoring wells is included in Table 2, and the laboratory analytical report for these samples is included as Appendix C. As these results indicate, petroleum-range impacts were detected above MTCA Method A cleanup levels for soil in two of the three monitoring wells installed. TPH-GRO was detected at monitoring well MW-5, at a depth of approximately 10 feet bgs (sample ID: MW-5-10), at a concentration of 480 milligrams per kilogram (mg/kg), and at monitoring well MW-6, at a depth of approximately 8 feet bgs (sample ID: MW-6-8), at a concentration of 50 mg/kg. TPH-DRO was detected in sample MW-5-10 at a concentration of 2,100 mg/kg. All other sampling results were in compliance with Method A cleanup levels for soil.

4.2.1 Evaluation of Soil Sampling Results Using Method B

In addition to a standard comparison of soil sampling results to MTCA Method A cleanup levels, Leidos also used Method B tools to evaluate whether site-specific factors result in conditions at the Site that are sufficiently protective of human health and the environment to comply with MTCA.

Method B is the standard or universal method for developing cleanup levels under MTCA and can be used for any site, unlike Method A which is intended for relatively simple sites with few hazardous substances. Method A cleanup levels may be overly conservative for some sites because they are based on the most conservative contaminant exposure pathway (protection of drinking water), which may not be present at some sites, and because they are based on standard product compositions for petroleum products, which do not account for reductions in product toxicity that occur due to natural attenuation processes. Under Method B, these site-specific factors are also considered in determining whether current conditions are sufficiently protective of human health and the environment to comply with MTCA.

To perform this evaluation, Leidos used Ecology's MTCATPH 11.1 workbook tool to examine the toxicity for the TPH composition that currently remains present at this Site, using petroleum fraction data from VPH/EPH analysis. A technical memorandum, which presents the workbook inputs and results, is presented in Appendix D. For this Site, groundwater monitoring data from four consecutive sampling events provides empirical evidence that TPH impacts remaining at the Site do not impact groundwater quality, and that groundwater at the Site meets drinking water standards. Therefore, the MCTATPH workbook was used to determine whether current conditions at the Site are protective of human health under a direct-contact exposure scenario, instead of protection of groundwater quality.

Results of the MTCATPH workbook analysis are provided in the following table:



Sample ID	Measured TPH Soil Conc. (mg/kg)	Protective TPH Soil Conc. (mg/kg)	RISK @ Measured TPH Soil Conc.	HI @ Measured TPH Soil Conc.	Measured TPH Soil Conc. Pass or Fail?	
MW-5-10	1,850.755	3,372.59	3.229E-07	5.488E-01	Pass	
MW-6-8 441.143		4,104.53	7.141E-08	1.075E-01	Pass	

As these results show, the MTCATPH workbook was used to calculate a Measured TPH Soil Concentration for each sample, based on the TPH fraction data provided by laboratory analysis of the samples. The workbook also calculates a Protective TPH Soil Concentration for the specific product composition determined to be present in each sample. In both cases, the Measured TPH Soil Concentration was less than the Protective TPH Soil Concentration, Risk was determined to be less than 1×10^{-6} , and the Hazard Index was less than 1. Therefore, both samples meet the criteria to demonstrate protection of human health for a direct-contact exposure pathway².

5. CONCLUSIONS

Based on recommendations for further action at the Site, which were provided by Ecology's Partial Sufficiency and Further Action Determination from 2006 (Ecology, 2006), supplemental site assessment activities were conducted at the Site between 2013 and 2014 in order to document the status of previously existing groundwater monitoring wells and to complete evaluation of groundwater conditions at the Site

The results of geophysical survey performed on April 17, 2013, and historical information gathered from discussions with Mr. Hall at the time of the survey, suggest that previously existing monitoring wells MW-1, MW-2, and MW-4 were likely destroyed during redevelopment activities on the property in 1993. No positive identification of the wells was found by the geophysical survey, and one area identified as a potential location (based on GPR and magnetometer survey results) was dismissed after using air-knife excavation equipment to clear the location to a depth of 8 feet bgs on August 27, 2013. Based on this information, the decommissioning of these wells in accordance with WAC 173-160 is not considered possible. The area in which these monitoring wells were formerly located is currently covered by asphalt paving that is in good condition and is well maintained, and there is limited potential for the remains of these wells to serve as preferential conduits for migration of ground surface contamination to groundwater at this Site. Therefore, Leidos requests that Ecology waive the requirement that these wells be decommissioned in accordance with WAC 173-160 as a condition for closure of the Site.

Results of the groundwater assessment activities at the Site indicate that no evidence of petroleum impact to groundwater was observed during four consecutive quarterly groundwater

² Under MTCA Method B, sites must also be evaluated to determine whether terrestrial ecological exposure pathways may be present, which may necessitate an adjustment of calculated Method B cleanup levels. However, per WAC 173-340-7491(1)(c), the Site is excluded from the requirement to complete a terrestrial ecological evaluation because there is less than 1.5 acres of contiguous undeveloped land on the Site or within 500 feet of any area of the Site.



sampling events. Results of these events indicate that TPH-GRO, TPH-DRO, TPH-HRO, and BTEX compounds were all determined to be at non-detect levels during each of the four sampling events. Total naphthalenes were detected in each monitoring well; however, at concentrations that are several orders of magnitude less than the Method A cleanup level. The results of soil sampling conducted indicate that residual gasoline and diesel range petroleum impacts remain present in soil in the vicinity of former UST basins at the Site. Based on the results of groundwater sampling, these residual impacts do not appear to degrade groundwater quality at the Site, which is currently in compliance with drinking water standards.

In consideration of this empirical demonstration that groundwater quality is not impacted by residual petroleum range contamination remaining in soil, MTCA Method B tools were used to assess the protectiveness of current soil conditions under a direct contact exposure scenario. Results of this evaluation indicate that current conditions at the Site are protective of human health for direct contact, and that an exposure pathway for ecological receptors is unlikely due to a lack of undeveloped land at the Site, and in the immediate vicinity. Based on land use and zoning in the vicinity of the Site (City of Yakima, 2012), use of the property is expected to remain as parking or as the future location for construction of additional slab-on-grade commercial structures. Therefore, future redevelopment of the Site is not likely to result in an increased risk to human or ecological receptors.

Based on the results of these assessment activities, Leidos believes that current and future anticipated conditions at this site are in compliance with MTCA standards for protection of human health and the environment. Therefore, on behalf of CEMC, we respectfully request that Ecology issue an opinion for No Further Action at this Site.



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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.

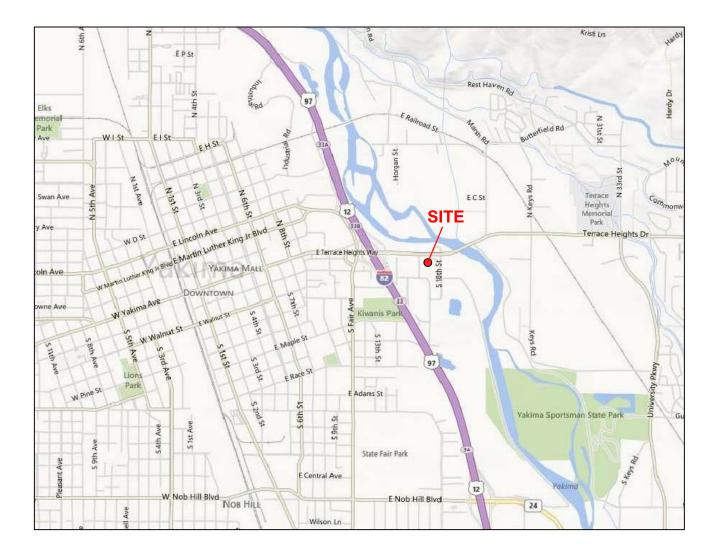
Opinions and recommendations presented in this technical document apply only to site conditions and features as they existed at the time of Leidos site visits or site work and cannot be applied to conditions and features of which Leidos is unaware and has not had the opportunity to evaluate.

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 on by Leidos in the context of this technical document. The conclusions, therefore, represent our professional opinion based on the identified sources of information.







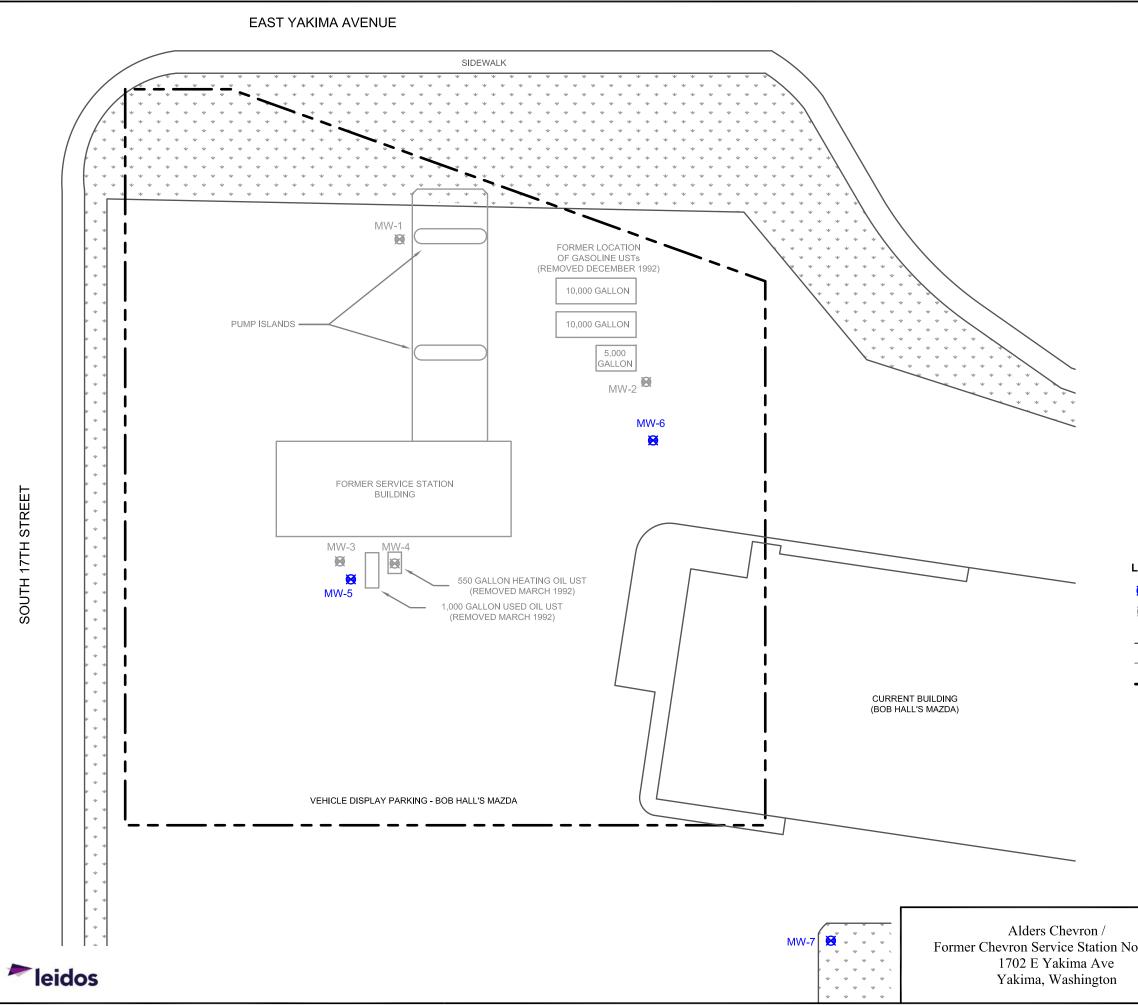


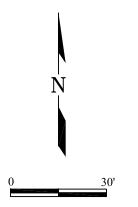
Alders Chevron / Former Chevron Service Station No. 93883 1702 E Yakima Ave Yakima, Washington

FIGURE 1 Vicinity Map



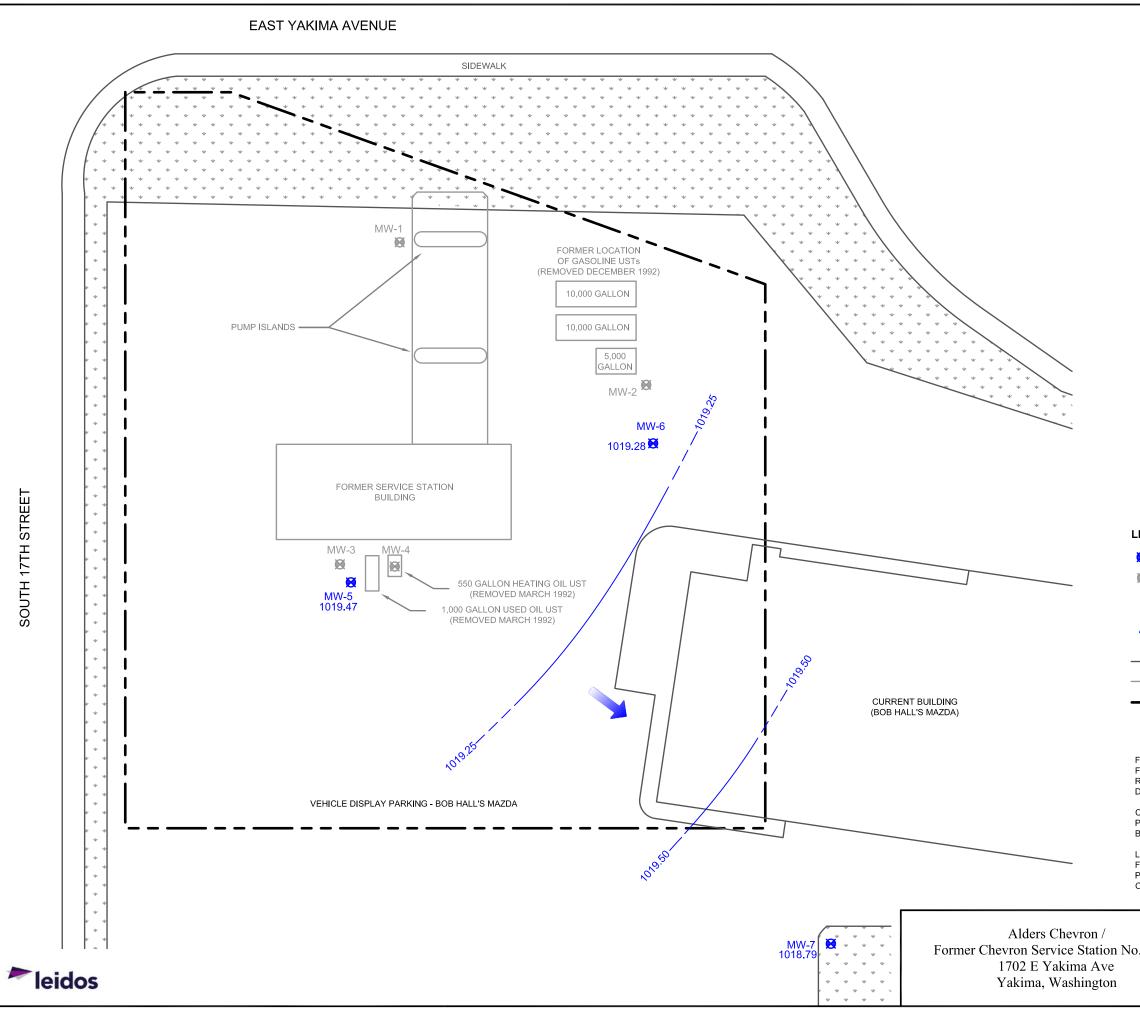
DATE: 3/31/2015 DRAWING: 93883 Vicinity Map.dwg





🔀 MW-6 G	ROUNDWATER MONITORING WELL LOCATION (SAIC 2013)					
	ORMER MONITORING WELL LOCATION (ABANDONED OR ESTROYED)					
C	URRENTLY EXISTING SITE FEATURES					
F	DRMER SITE FEATURES					
	PPROXIMATE BOUNDARY OF FORMER SERVICE STATION ROPERTY					
* * L.	ANDSCAPED AREA					
FEATURES ARE	CE STATION PROPERTY BOUNDARY AND FORMER SITE BASED ON THE SITE AND EXPLORATION PLAN (FIGURE 1) OF JEL OIL UST, USED OIL UST AND DRY WELL REMOVAL REPORT", I, 1992.					
	FEATURES ARE BASED ON INTERPRETATION OF A 2013 AERIAL ROM GOOGLE MAPS AND THE SEPTEMBER 2013 SITE SURVEY IONS.					
FEATURES ARE PHOTOGRAPHS	FORMER SITE FEATURES RELATIVE TO EXISTING SITE BASED ON INTERPRETATION OF HISTORICAL AERIAL OF THE SITE AND USE OF EXISTING LANDMARKS. LOCATIONS ES ARE APPROXIMATE.					
	FIGURE 2					
0. 93883	Site Map					
	j Site Map					

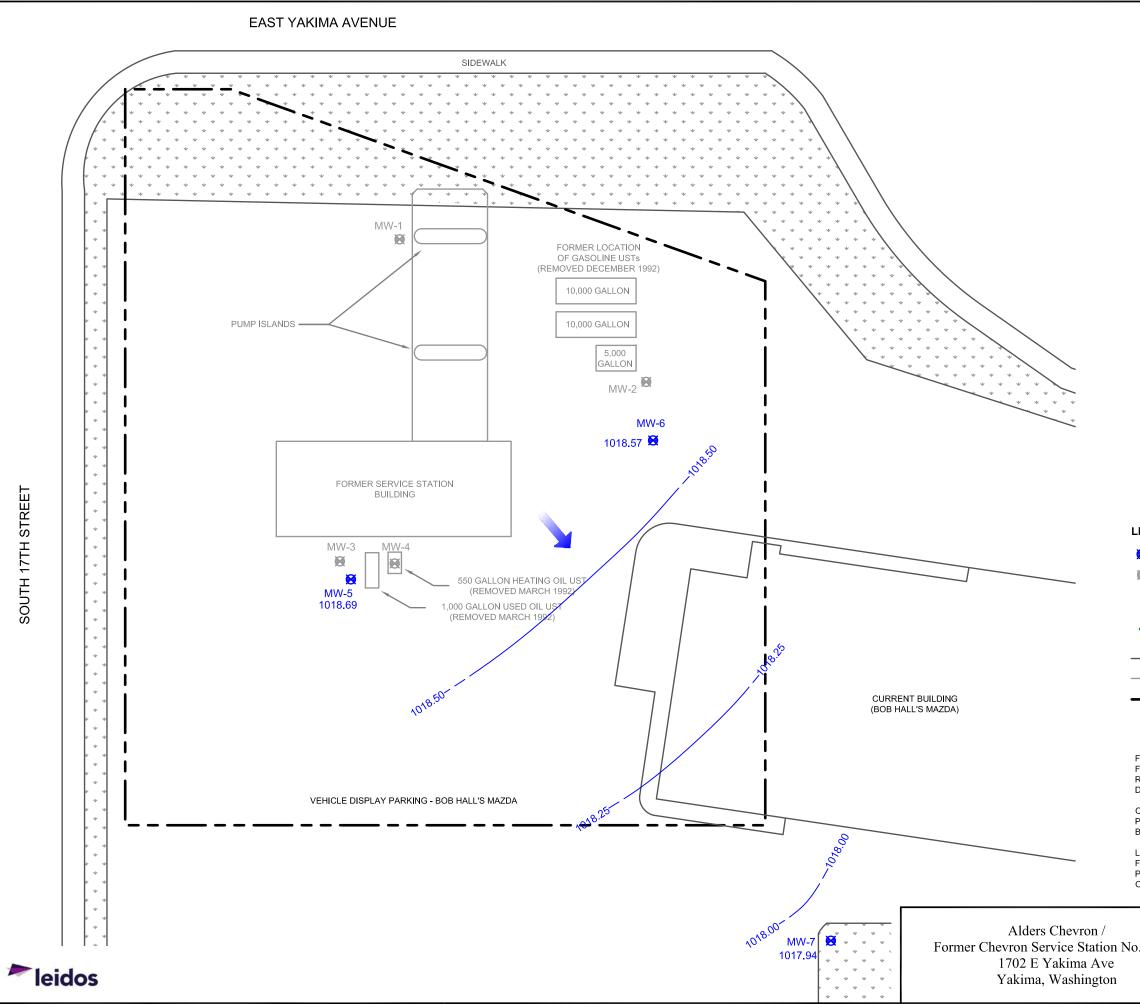
DATE: 3/9/2015	DRAWING: 93883 SiteMap.dwg





💆 MW-6 🔍	GROUNDWATER MONITORING WELL LOCATION (SAIC 2013)
	ORMER MONITORING WELL LOCATION (ABANDONED OR DESTROYED)
1019.28	GROUNDWATER ELEVATION IN FEET
	APPROXIMATE GROUNDWATER FLOW DIRECTION AT A GRADIENT OF 0.004 FEET PER FOOT.
(CURRENTLY EXISTING SITE FEATURES
F	ORMER SITE FEATURES
	APPROXIMATE BOUNDARY OF FORMER SERVICE STATION PROPERTY
* * * * * *	ANDSCAPED AREA
EATURES ARE	CE STATION PROPERTY BOUNDARY AND FORMER SITE BASED ON THE SITE AND EXPLORATION PLAN (FIGURE 1) OF IEL OIL UST, USED OIL UST AND DRY WELL REMOVAL REPORT", , 1992.
	FEATURES ARE BASED ON INTERPRETATION OF A 2013 AERIAL ROM GOOGLE MAPS AND THE SEPTEMBER 2013 SITE SURVEY IONS.
FEATURES ARE PHOTOGRAPHS	FORMER SITE FEATURES RELATIVE TO EXISTING SITE BASED ON INTERPRETATION OF HISTORICAL AERIAL OF THE SITE AND USE OF EXISTING LANDMARKS. LOCATIONS ES ARE APPROXIMATE.
	FIGURE 3
. 93883	Potentiometric Map
	September 21, 2013

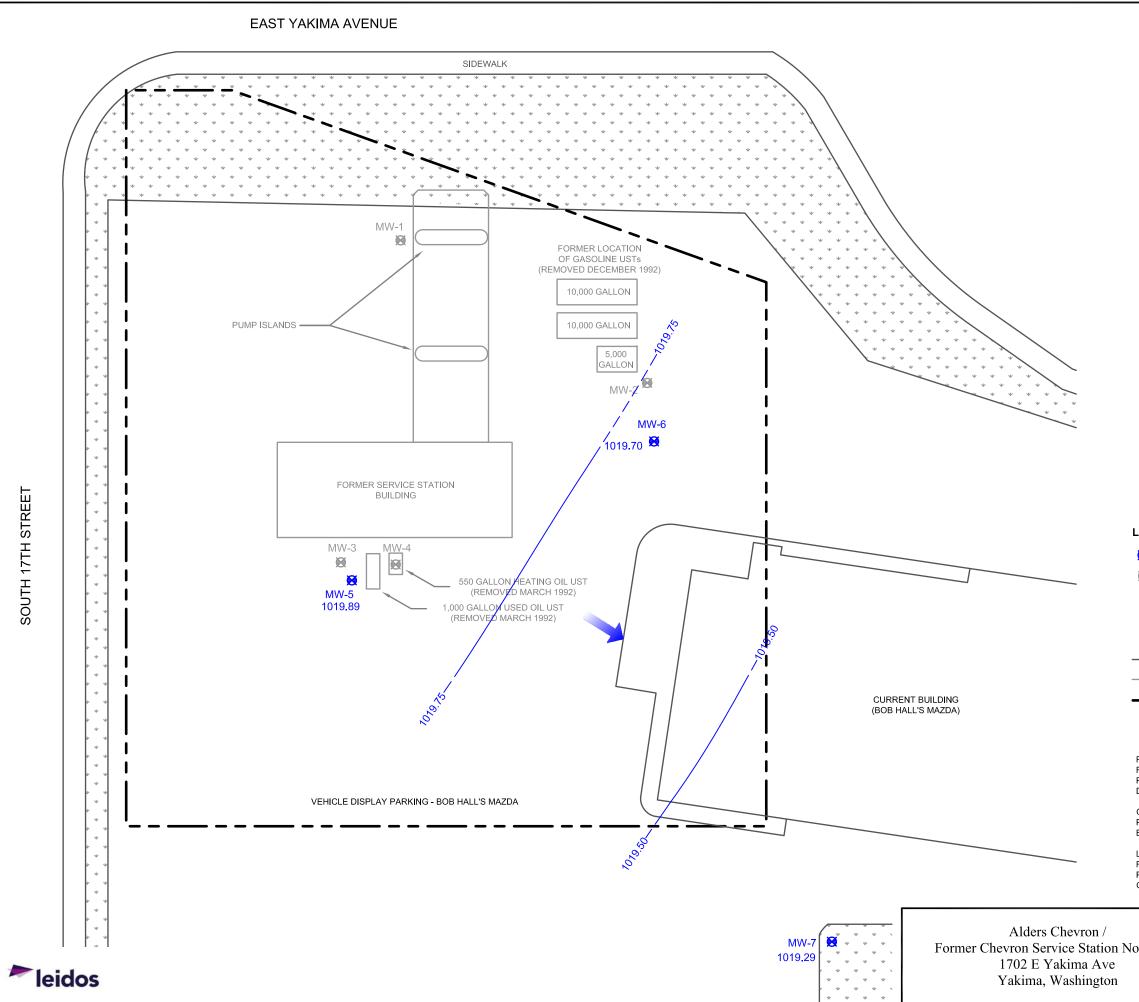
DATE: 3/9/2015	DRAWING: 93883 SiteMap.dwg
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🔀 MW-6 GR	OUNDWATER MONITORING WELL LOCATION (SAIC 2013)
	RMER MONITORING WELL LOCATION (ABANDONED OR STROYED)
1018.69 GR	OUNDWATER ELEVATION IN FEET
	PROXIMATE GROUNDWATER FLOW DIRECTION AT A ADIENT OF 0.004 FEET PER FOOT.
CU	RRENTLY EXISTING SITE FEATURES
FOI	RMER SITE FEATURES
	PROXIMATE BOUNDARY OF FORMER SERVICE STATION OPERTY
LAN	NDSCAPED AREA
FEATURES ARE BA	STATION PROPERTY BOUNDARY AND FORMER SITE ASED ON THE SITE AND EXPLORATION PLAN (FIGURE 1) OF OIL UST, USED OIL UST AND DRY WELL REMOVAL REPORT", 992.
	ATURES ARE BASED ON INTERPRETATION OF A 2013 AERIAL OM GOOGLE MAPS AND THE SEPTEMBER 2013 SITE SURVEY NS.
FEATURES ARE BA PHOTOGRAPHS O	ORMER SITE FEATURES RELATIVE TO EXISTING SITE ASED ON INTERPRETATION OF HISTORICAL AERIAL F THE SITE AND USE OF EXISTING LANDMARKS. LOCATIONS 5 ARE APPROXIMATE.
o. 93883	FIGURE 4 Potentiometric Map
	December 23, 2013

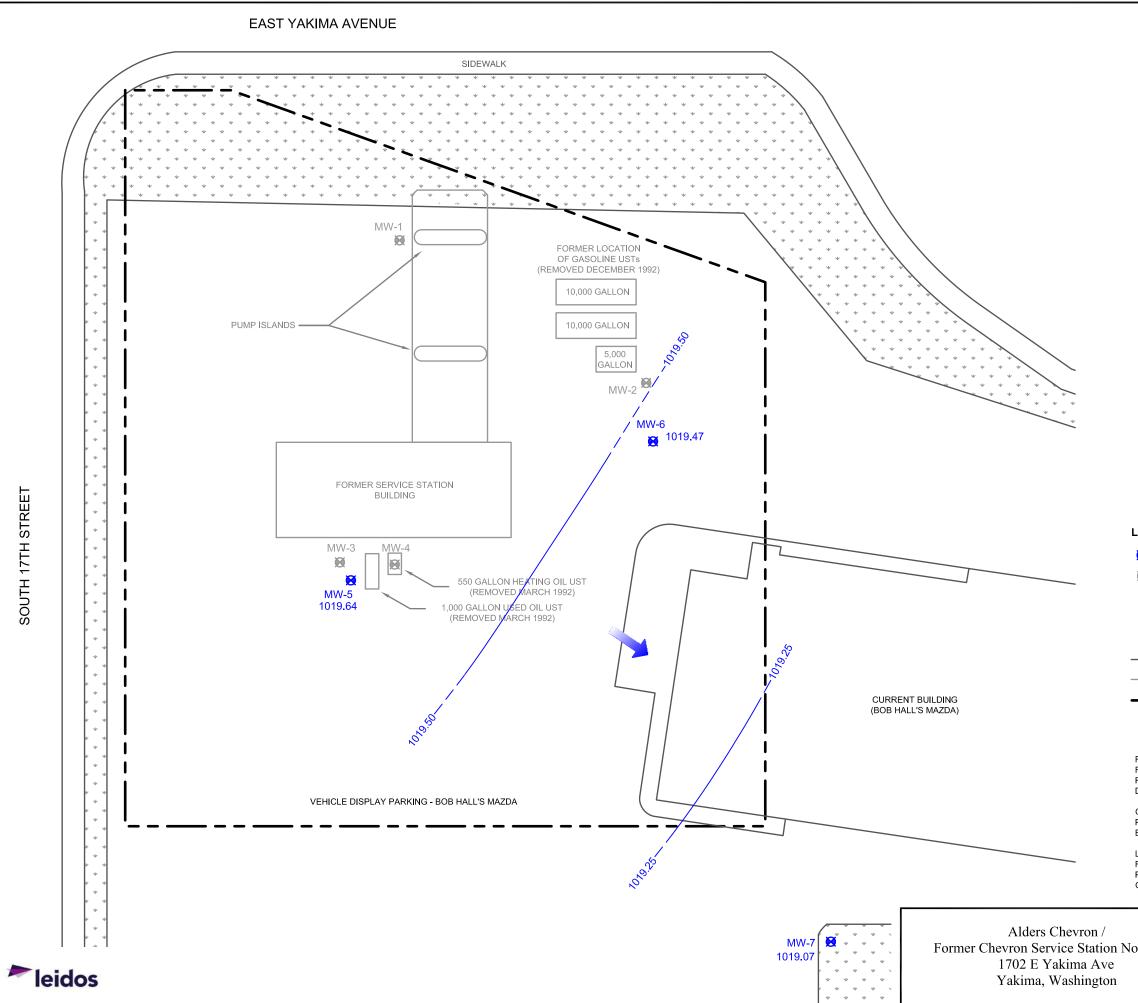
DATE: 3/9/2015	DRAWING: 93883 SiteMap.dwg
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🔀 MW-6	GROUNDWATER MONITORING WELL LOCATION (SAIC 2013)						
₩ MW-2	FORMER MONITORING WELL LOCATION (ABANDONED OR DESTROYED)						
1019.70	GROUNDWATER ELEVATION IN FEET						
	APPROXIMATE GROUNDWATER FLOW DIRECTION AT A GRADIENT OF 0.003 FEET PER FOOT.						
	CURRENTLY EXISTING SITE FEATURES						
	FORMER SITE FEATURES						
	APPROXIMATE BOUNDARY OF FORMER SERVICE STATION PROPERTY						
* * * * * *	LANDSCAPED AREA						
FEATURES AR	/ICE STATION PROPERTY BOUNDARY AND FORMER SITE E BASED ON THE SITE AND EXPLORATION PLAN (FIGURE 1) OF 'UEL OIL UST, USED OIL UST AND DRY WELL REMOVAL REPORT" '4, 1992.						
	EFEATURES ARE BASED ON INTERPRETATION OF A 2013 AERIAL FROM GOOGLE MAPS AND THE SEPTEMBER 2013 SITE SURVEY SIONS.						
FEATURES AR PHOTOGRAPH	F FORMER SITE FEATURES RELATIVE TO EXISTING SITE E BASED ON INTERPRETATION OF HISTORICAL AERIAL S OF THE SITE AND USE OF EXISTING LANDMARKS. LOCATIONS RES ARE APPROXIMATE.						
	FIGURE 5						
Potentiometric Map							
	March 26, 2014						

DATE: 3/9/2015 DRAWING: 93883 SiteMap.dwg





🔀 MW-6	GROUNDWATER MONITORING WELL LOCATION (SAIC 2013)
💓 MW-2	FORMER MONITORING WELL LOCATION (ABANDONED OR DESTROYED)
1019.64	GROUNDWATER ELEVATION IN FEET
	APPROXIMATE GROUNDWATER FLOW DIRECTION AT A GRADIENT OF 0.003 FEET PER FOOT.
	CURRENTLY EXISTING SITE FEATURES
	FORMER SITE FEATURES
	APPROXIMATE BOUNDARY OF FORMER SERVICE STATION PROPERTY
* * * * * *	LANDSCAPED AREA
FEATURES AR	/ICE STATION PROPERTY BOUNDARY AND FORMER SITE E BASED ON THE SITE AND EXPLORATION PLAN (FIGURE 1) OF ⁻ UEL OIL UST, USED OIL UST AND DRY WELL REMOVAL REPORT", 24, 1992.
	EFEATURES ARE BASED ON INTERPRETATION OF A 2013 AERIAL FROM GOOGLE MAPS AND THE SEPTEMBER 2013 SITE SURVEY SIONS.
FEATURES AR PHOTOGRAPH	F FORMER SITE FEATURES RELATIVE TO EXISTING SITE E BASED ON INTERPRETATION OF HISTORICAL AERIAL S OF THE SITE AND USE OF EXISTING LANDMARKS. LOCATIONS RES ARE APPROXIMATE.
	FIGURE 6
. 93883	Potentiometric Map
	June 27, 2014
	June 27, 2014

DATE: 3/9/2015 DRAWING: 93883 SiteMap.dwg

				Total Petroleum Hydrocarbons				Volatile Petroleum Hydrocarbons				Fuel Additives			
Well ID/Date	TOC ² (ft.)	DTW (ft.)	GWE (ft.)	TPH-GRO	TPH-DRO	TPH-DRO - Silica Gel Cleanup	TPH-HRO	TPH-HRO - Silica Gel Cleanup	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	EDB	EDC
MW-5															
9/21/2013	1,030.28	10.81	1,019.47	<50	<29	<29	<67	<67	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.0094	< 0.5
12/23/2013	1,030.28	11.59	1,018.69	<50	<29	<29	<67	<67	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.0097	< 0.5
3/26/2014	1,030.28	10.39	1,019.89	<50	<29	<29	<67	<67	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.0096	< 0.5
6/27/2014	1,030.28	10.64	1,019.64	<50	<29	<29	<68	<68	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.0097	< 0.5
MW-6															
9/21/2013	1,030.64	11.36	1,019.28	<50	<28	<28	<66	<66	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.0096	< 0.5
12/23/2013	1,030.64	12.07	1,018.57	<50	<29	<29	<68	<68	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.0097	< 0.5
3/26/2014	1,030.64	10.94	1,019.70	<50	<29	<29	<67	<67	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.0095	< 0.5
6/27/2014	1,030.64	11.17	1,019.47	<50	<29	<29	<67	<67	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.0097	< 0.5
MW-7															
9/21/2013	1,029.01	10.22	1,018.79	<50	<28	<28	<66	<66	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.0095	< 0.5
12/23/2013	1,029.01	11.07	1,017.94	<50	<29	<29	<68	<68	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.0097	< 0.5
3/26/2014	1,029.01	9.72	1,019.29	<50	<29	<29	<67	<67	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.0096	< 0.5
6/27/2014	1,029.01	9.94	1,019.07	<50	<29	<29	<67	<67	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.0097	< 0.5
QA					•	•		•				•		•	
9/21/2013				<50					< 0.5	< 0.5	< 0.5	< 0.5	< 0.5		
12/23/2013				<50					< 0.5	< 0.5	< 0.5	< 0.5	< 0.5		
3/26/2014				<50					< 0.5	< 0.5	< 0.5	< 0.5	< 0.5		
6/27/2014				<50					<0.5	< 0.5	< 0.5	< 0.5	< 0.5		
	MTCA M	ethod A Cle	anup Levels:	800/1,000 ³	500	500	500	500	5	1,000	700	1,000	20	0.01	5
		Cur	rrent Method:	NWTPH-Gx		NWTPH-D	x Extended			USEPA	8260B		U	SEPA 82601	В



					Napht	halenes					Carcinoger	nic PAHs			
Well ID/Date	TOC ² (ft.)	DTW (ft.)	GWE (ft.)	1-Methyl- naphthalene	2-Methyl- naphthalene	Naphthalene	Total Naphthalenes	Benzo(a) anthracene	Benzo(a) pyrene	Benzo(b) fluoranthene	Benzo(k) fluoranthene	Chrysene	Dibenz(a,h) anthracene	Indeno (1,2,3- cd) pyrene	Total cPAHs ⁴
MW-5															
9/21/2013	1,030.28	10.81	1,019.47	< 0.010	< 0.010	< 0.031	< 0.031	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
12/23/2013	1,030.28	11.59	1,018.69	< 0.010	< 0.010	0.033	0.033	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
3/26/2014	1,030.28	10.39	1,019.89	< 0.010	< 0.010	< 0.030	< 0.030	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
6/27/2014	1,030.28	10.64	1,019.64	< 0.010	0.013	< 0.030	< 0.030	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
MW-6			•				•						•		
9/21/2013	1,030.64	11.36	1,019.28	< 0.010	< 0.010	0.036	0.036	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
12/23/2013	1,030.64	12.07	1,018.57	< 0.010	< 0.010	< 0.030	< 0.030	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
3/26/2014	1,030.64	10.94	1,019.70	< 0.010	< 0.010	< 0.030	< 0.030	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
6/27/2014	1,030.64	11.17	1,019.47	< 0.010	0.012	< 0.030	< 0.030	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
MW-7			•				•						•		
9/21/2013	1,029.01	10.22	1,018.79	< 0.010	< 0.010	0.11	0.11	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
12/23/2013	1,029.01	11.07	1,017.94	< 0.010	< 0.010	0.047	0.047	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
3/26/2014	1,029.01	9.72	1,019.29	< 0.010	< 0.010	< 0.031	< 0.031	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	0.015	0.016	0.010
6/27/2014	1,029.01	9.94	1,019.07	< 0.010	0.011	< 0.030	< 0.030	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
QA			•			-							-		
9/21/2013															
12/23/2013															
3/26/2014															
6/27/2014															
	MTCA M	ethod A Cle	anup Levels:		-	-	160		S	See Total Carci	nogenic PAHs	(Total cPA	Hs)		0.1
Current Method:									US	EPA 8270C SIN	И				



					М	etals			Halogenated VOCs					
Well ID/Date	TOC ² (ft.)	DTW (ft.)	GWE (ft.)	Cadmium	Chromium	Lead	Nickel	Zinc	Methylene Chloride	РСЕ	1,1,1 - TCA	TCE	Vinyl Chloride	
MW-5														
9/21/2013	1,030.28	10.81	1,019.47	< 0.76	<1.6	<4.7	<1.5	3.5	<2	< 0.8	< 0.8	<1	<1	
12/23/2013	1,030.28	11.59	1,018.69	< 0.76	<1.6	<4.7	<1.5	5.0	<2	< 0.8	< 0.8	<1	<1	
3/26/2014	1,030.28	10.39	1,019.89	< 0.76	<1.6	5.5	2.6	10.1	<2	< 0.5	< 0.5	< 0.5	< 0.5	
6/27/2014	1,030.28	10.64	1,019.64	< 0.33	5.2	10.6	2.6	19.8	<2	< 0.5	< 0.5	< 0.5	< 0.5	
MW-6														
9/21/2013	1,030.64	11.36	1,019.28	< 0.76	<1.6	<4.7	<1.5	<2.0	<2	< 0.8	< 0.8	<1	<1	
12/23/2013	1,030.64	12.07	1,018.57	< 0.76	2.30	<4.7	<1.5	5.10	<2	< 0.8	< 0.8	<1	<1	
3/26/2014	1,030.64	10.94	1,019.70	< 0.76	<1.6	<4.7	<1.5	7.2	<2	< 0.5	< 0.5	< 0.5	< 0.5	
6/27/2014	1,030.64	11.17	1,019.47	< 0.33	<1.3	<4.7	<1.6	<2.0	<2	< 0.5	< 0.5	< 0.5	< 0.5	
MW-7														
9/21/2013	1,029.01	10.22	1,018.79	< 0.76	<1.6	<4.7	<1.5	<2.0	<2	< 0.8	< 0.8	<1	<1	
12/23/2013	1,029.01	11.07	1,017.94	< 0.76	<1.6	<4.7	<1.5	3.60	<2	< 0.8	< 0.8	<1	<1	
3/26/2014	1,029.01	9.72	1,019.29	0.77	<1.6	<4.7	<1.5	6.0	<2	< 0.5	< 0.5	< 0.5	< 0.5	
6/27/2014	1,029.01	9.94	1,019.07	< 0.33	<1.3	<4.7	<1.6	7.6	<2	< 0.5	< 0.5	< 0.5	< 0.5	
QA			•		• • • •		•		• •		•		•	
9/21/2013														
12/23/2013														
3/26/2014														
6/27/2014												-		
	MTCA M	ethod A Cle	anup Levels:	5	50	15			5	5	200	5	0.2	
		Cu	rrent Method:	: USEPA 6010B					USEPA 8260B					



							PC	Bs			
Well ID/Date	TOC ² (ft.)	DTW (ft.)	GWE (ft.)	1016	1221	1232	1242	1248	1254	1260	Total PCBs
MW-5											
9/21/2013	1,030.28	10.81	1,019.47	< 0.082	< 0.082	< 0.16	< 0.082	< 0.082	< 0.082	< 0.12	< 0.16
12/23/2013	1,030.28	11.59	1,018.69	< 0.081	< 0.081	< 0.16	< 0.081	< 0.081	< 0.081	< 0.12	< 0.16
3/26/2014	1,030.28	10.39	1,019.89	< 0.081	< 0.081	< 0.16	< 0.081	< 0.081	< 0.081	< 0.12	< 0.16
6/27/2014	1,030.28	10.64	1,019.64	< 0.081	< 0.081	< 0.16	< 0.081	< 0.081	< 0.081	< 0.12	< 0.16
MW-6											
9/21/2013	1,030.64	11.36	1,019.28	< 0.082	< 0.082	< 0.16	< 0.082	< 0.082	< 0.082	< 0.12	< 0.16
12/23/2013	1,030.64	12.07	1,018.57	< 0.082	< 0.082	< 0.16	< 0.082	< 0.082	< 0.082	< 0.12	< 0.16
3/26/2014	1,030.64	10.94	1,019.70	< 0.080	< 0.080	< 0.16	< 0.080	< 0.080	< 0.080	< 0.12	< 0.16
6/27/2014	1,030.64	11.17	1,019.47	< 0.081	< 0.081	< 0.16	< 0.081	< 0.081	< 0.081	< 0.12	< 0.16
MW-7											
9/21/2013	1,029.01	10.22	1,018.79	< 0.082	< 0.082	< 0.16	< 0.082	< 0.082	< 0.082	< 0.12	< 0.16
12/23/2013	1,029.01	11.07	1,017.94	< 0.081	< 0.081	< 0.16	< 0.081	< 0.081	< 0.081	< 0.12	< 0.16
3/26/2014	1,029.01	9.72	1,019.29	< 0.080	< 0.080	< 0.16	< 0.080	< 0.080	< 0.080	< 0.12	< 0.16
6/27/2014	1,029.01	9.94	1,019.07	< 0.080	< 0.080	< 0.16	< 0.080	< 0.080	< 0.080	< 0.12	< 0.16
QA											
9/21/2013											
12/23/2013											
3/26/2014											
6/27/2014											
	MTCA M	ethod A Cle	anup Levels:	See Total PCBs							
		Cu	rent Method:				USEP.	A 8082			1



Abbreviations:

DTW = Depth to Water EDB = Ethylene dibromide EDC = Ethylene dichloride (ft.) = Feet GWE = Groundwater Elevation MTBE = Methyl tertiary-butyl ether MTCA = Model Toxics Control Act PAHs = Polycyclic Aromatic Hydrocarbons PCBs = Polychlorinated biphenyls PCE = Tetrachloroethylene QA = Quality Assurance/Trip Blank TCA = Trichloroethane TCE = Trichloroethylene 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 VOCs = Volatile Organic Compounds -- = Not Measured/Not Analyzed µg/L = Micrograms per liter

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. TPH-GRO MTCA Method A cleanup level is 800 µg/L if benzene is present and 1,000 µg/L if benzene is not present.
- 4. Total cPAHs toxic equivalency calculated using the toxic equivalency factors listed in MTCA, Table 708-2.



				Total Petr	oleum Hydr	ocarbons		Vola	atile Petroleu	m Hydrocar	bons	Fuel Additives		
Sample ID	Depth (ft.)	Date Sampled	TPH-GRO	TPH-DRO	TPH-DRO - Silica Gel Cleanup	TPH-HRO	TPH-HRO - Silica Gel Cleanup	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	EDB	EDC
MW-5-10	10	8/29/2013	480	2,100	2,000	1,600	1,100	< 0.022	< 0.044	< 0.044	0.11	< 0.022	< 0.044	< 0.044
MW-5-13	13	8/29/2013	11	56	46	130	92	0.002	< 0.001	< 0.001	< 0.001	< 0.0006	< 0.001	< 0.001
MW-5-19	19	8/29/2013	<1.3	<3.3	<3.3	<11	<11	< 0.0005	< 0.0009	< 0.0009	< 0.0009	< 0.0005	< 0.0009	< 0.0009
MW-6-8	8	8/29/2013	50	410	320	400	250	< 0.029	< 0.059	< 0.059	< 0.059	< 0.029	< 0.059	< 0.059
DUP-082913	8	8/29/2013	17	240	200	270	230	0.003	0.002	< 0.001	0.001	< 0.0005	< 0.001	< 0.001
MW-6-13	13	8/29/2013	<1	<3.4	<3.4	<11	<11	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001
MW-6-19	19	8/29/2013	<1	<3.3	<3.3	<11	<11	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001
MW-7-11	11	8/29/2013	<1	<3.2	<3.2	<11	<11	0.0008	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001
MW-7-19	19	8/29/2013	<1.2	<3.3	<3.3	<11	<11	< 0.0005	< 0.0009	< 0.0009	< 0.0009	< 0.0005	< 0.0009	< 0.0009
MTCA Met	hod A Cl	eanup Levels:	30/100 ²	2,000	2,000	2,000	2,000	0.03	7	6	9	0.1	0.005	
	Analytical Method: NWTPH-Gx NWTPH-Dx Extended							USEPA 8260B						



				Naph	thalenes			Carcinogenic PAHs							
Sample ID	Depth (ft.)	Date Sampled	Naphthalene	1-Methyl naphthalene	2-Methyl naphthalene	Total Naphthalenes	Benzo(a) anthracene	Benzo(a) pyrene	Benzo(b) fluoranthene	Benzo(k) fluoranthene	Chrysene	Dibenz(a,h) anthracene	Indeno (1,2,3-cd) pyrene	Total cPAHs ³	
MW-5-10	10	8/29/2013	0.51	1.20	2.0	3.71	0.021	0.023	0.042	0.0088	0.093	0.010	0.013	0.033	
MW-5-13	13	8/29/2013	0.0094	0.015	0.022	0.0464	0.0038	0.0049	0.0085	0.0033	0.0088	0.0011	0.0029	0.0069	
MW-5-19	19	8/29/2013	< 0.00073	< 0.00073	< 0.00073	< 0.00073	< 0.00073	< 0.00073	< 0.00073	< 0.00073	< 0.00037	< 0.00073	< 0.00073	< 0.00073	
MW-6-8	8	8/29/2013	0.043	0.093	0.15	0.286	< 0.0079	< 0.0079	0.016	< 0.0079	0.019	< 0.0079	< 0.0079	0.0073	
DUP-082913	8	8/29/2013	0.024	0.055	0.089	0.168	< 0.0067	0.0078	0.015	< 0.0067	0.018	< 0.0067	< 0.0067	0.011	
MW-6-13	13	8/29/2013	< 0.00076	< 0.00076	< 0.00076	< 0.00076	< 0.00076	< 0.00076	< 0.00076	< 0.00076	< 0.00038	< 0.00076	< 0.00076	< 0.00076	
MW-6-19	19	8/29/2013	< 0.00072	< 0.00072	< 0.00072	< 0.00072	< 0.00072	< 0.00072	< 0.00072	< 0.00072	< 0.00036	< 0.00072	< 0.00072	< 0.00072	
MW-7-11	11	8/29/2013	0.00096	0.00080	0.0013	0.00306	< 0.00071	< 0.00071	0.00097	< 0.00071	0.00095	< 0.00071	< 0.00071	0.00060	
MW-7-19	19	8/29/2013	0.0013	< 0.00071	0.0014	0.0027	< 0.00071	< 0.00071	< 0.00071	< 0.00071	< 0.00036	< 0.00071	< 0.00071	< 0.00071	
MTCA Met	MTCA Method A Cleanup Levels			Fotal Naphtha	lenes	5	See Total Carcinogenic PAHs (Total cPAHs)					0.1			
	Anal	ytical Method:		USEPA 8270C SIM											



					Metals		Halogenated VOCs					
Sample ID	Depth (ft.)	Date Sampled	Cadmium	Chromium	Lead	Nickel	Zinc	Methylene Chloride	PCE	1,1,1 - TCA	TCE	
MW-5-10	10	8/29/2013	0.674	290	123	45.0	154	< 0.087	< 0.044	< 0.044	< 0.044	
MW-5-13	13	8/29/2013	1.36	86.7	661	52.0	639	< 0.002	< 0.001	< 0.001	< 0.001	
MW-5-19	19	8/29/2013	0.583	18.2	3.85	14.4	58.2	< 0.002	< 0.0009	< 0.0009	< 0.0009	
MW-6-8	8	8/29/2013	0.700	52.0	39.4	27.3	99.2	< 0.12	< 0.059	< 0.059	< 0.059	
DUP-082913	8	8/29/2013	0.637	56.4	61.3	30.1	132	< 0.002	< 0.001	< 0.001	< 0.001	
MW-6-13	13	8/29/2013	0.457	8.62	1.46	11.4	37.1	< 0.002	< 0.001	< 0.001	< 0.001	
MW-6-19	19	8/29/2013	0.609	19.5	3.11	18.3	57.3	< 0.002	< 0.001	< 0.001	< 0.001	
MW-7-11	11	8/29/2013	0.338	63.3	6.40	87.2	50.5	< 0.002	< 0.001	< 0.001	< 0.001	
MW-7-19	19	8/29/2013	0.402	17.6	4.79	12.0	56.3	< 0.002	< 0.0009	< 0.0009	< 0.0009	
MTCA Met	thod A Cl	eanup Levels:	2		250			0.02	0.05	2	0.03	
	Anal	ytical Method:	USEPA 6010B					USEPA 8260B				



						PC	Bs				
Sample ID	Depth (ft.)	Date Sampled	1016	1221	1232	1242	1248	1254	1260	Total PCBs	
MW-5-10	10	8/29/2013	< 0.0037	< 0.0047	< 0.0082	< 0.0034	< 0.0034	< 0.0034	< 0.0050	< 0.0082	
MW-5-13	13	8/29/2013	< 0.0038	< 0.0049	< 0.0085	< 0.0035	< 0.0035	< 0.0035	< 0.0052	< 0.0085	
MW-5-19	19	8/29/2013	< 0.0039	< 0.0050	< 0.0087	< 0.0036	< 0.0036	< 0.0036	< 0.0053	< 0.0087	
MW-6-8	8	8/29/2013	< 0.0043	< 0.0055	< 0.0095	< 0.0039	< 0.0039	< 0.0039	< 0.0058	< 0.0095	
DUP-082913	8	8/29/2013	< 0.0036	< 0.0046	< 0.0080	< 0.0033	< 0.0033	< 0.0033	< 0.0049	< 0.0080	
MW-6-13	13	8/29/2013	< 0.0041	< 0.0052	< 0.0090	< 0.0037	< 0.0037	< 0.0037	< 0.0055	< 0.0090	
MW-6-19	19	8/29/2013	< 0.0039	< 0.0049	< 0.0086	< 0.0035	< 0.0035	< 0.0035	< 0.0053	< 0.0086	
MW-7-11	11	8/29/2013	< 0.0038	< 0.0049	< 0.0085	< 0.0035	< 0.0035	< 0.0035	< 0.0052	< 0.0085	
MW-7-19	19	8/29/2013	< 0.0039	< 0.0050	< 0.0086	< 0.0036	< 0.0036	< 0.0036	< 0.0053	< 0.0086	
MTCA Met	hod A Cl	eanup Levels:	See Total PCBs								
	Anal	ytical Method:	USEPA 8082								



Abbreviations:

- DUP = Duplicate EDB = Ethylene dibromide EDC = Ethylene dichloride (ft.) = Feet mg/kg = Milligrams per kilogram MTBE = Methyl tertiary-butyl ether MTCA = Model Toxics Control Act
- NW = Northwest PAHs = Polycyclic Aromatic Hydrocarbons PCBs = Polychlorinated biphenyls PCE = Tetrachloroethylene TCA = Trichloroethane TCE = Trichloroethylene

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 VOCs = Volatile Organic Compounds

Notes:

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

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

3. Total cPAHs toxic equivalency calculated using the toxic equivalency factors listed in MTCA, Table 708-2.



Appendix A: Boring Logs and Well Construction Diagrams





18912 N Creek Pkwy, Ste 101 Bothell, WA 98011

Monitoring Well: MW-5

Project: Former Chevron Station No. 93883 Date Started: 8/27/2013 Total Boring Depth: 20 ft Well Diameter: 2 in Client: Chevron EMC Date Completed: 8/29/2013 Hole Diameter: 8/5.75 in Well Screen: 20-slot, 10-20 ft Filter Pack: 2/12 Monterey Sand Well Depth: 20 ft Location: 1702 E. Yakima Ave, Yakima, WA Driller: Cascade TOC Elevation: 1030.28 ft Drill Method: Sonic Drill Logged By: G. Cisneros Well Casing: Sch.40 PVC SAMP. INTERVAL ORGANIC VAPOR (ppm) ANALYTICAL SAMPLE ANALYTICAL RESULTS (mg/kg) MOISTURE GRAPHIC LOG DEPTH (ft) BLOWS/6" U.S.C.S. SYMBOL LITHOLOGY/DESCRIPTION WELL DIAGRAM 4-inches of asphalt. Brown, sandy cobbles (FILL). FID / Concrete \triangleright PID Steel 1 Air vacuumed down to 8 ft bgs. Monument 2 Brown to dark brown, loose, gravelly, medium to an Moist 0/0 coarse SAND with metal debris; no odor; no sheen. (FILL) 3 GP (GP) Brown, loose to medium dense, sandy, gravelly COBBLES up to 16 inches in diameter; Ο 4 no odor; no sheen. Hydrated Hole is caving in from 4-5 ft. No sample collected. Bentonite Chips 0 ,0° 0' 5. 0 6 Ecology Unique SW Brown, medium dense, gravelly COBBLES with ÓŌ Moist 0/0 Well ID BIC 744 10% fine to coarse sand; no odor; no sheen. \bigcirc 7 ,0°C Cobbles increase in size with depth. 0 GP 8-(GP) No recovery (8-10 ft). ÓŌ \bigcirc 9-D G 480 10-**MW-5-1** 00 Brown, dense, sandy, gravelly COBBLES with Moist D 2,100 o18/ 15% fine to medium sand; slight odor; no sheen. HO = 1.600195 \circ \circ B < 0.022 11 Brown, dense, sandy, cobbly GRAVEL with 10% fine to medium sand; no odor; no sheen. 12 60 Moist 9/90 G = 11 13 MW-5-1 25 Same as above; no odor; no sheen. D = 56 4/14 V HO = 130 Ō \bigcirc B = 0.002Brown, dense, sandy GRAVEL with 10% fine to 14 2/12 Monterey 0° medium sand and cobbles up to 16 inches in Sand 2/2 0 6 diameter; no odor; no sheen. GP 15 0.020 Inch Slot (GP) Same as above; no odor; no sheen. 7/2 0 16 Gray, medium dense, silty, sandy GRAVEL with 6/3 15% silt, 15% fine to medium sand, and cobbles; 0 no odor; no sheen. 17 7/4 Same as above; no odor; no sheen. Δ GM 18 (GM) Same as above; no odor; no sheen. 2/5 G <1.3 ດ D <3.3 19 MW-5-1 Same as above; no odor; no sheen. Wet 2/4 HO <11 B < 0.0005 20 Bottom of borehole at 20.0 feet.



18912 N Creek Pkwy, Ste 101 Bothell, WA 98011

Monitoring Well: MW-6

Project: Former Chevron Station No. 93883 Client: Chevron EMC Location: 1702 E. Yakima Ave, Yakima, W/ Logged By: G. Cisneros				[akima, WA [Date Co Driller: 0	mpleted	: 8/29/20	013 Hole Diameter: 8/5.75 in V Well Depth: 19.55 ft F	Well Diameter: 2 in Well Screen: 20-slot, 9.55-19.55 Filter Pack: 2/12 Monterey Sand Well Casing: Sch.40 PVC				
MOISTURE CONTENT	ORGANIC VAPOR (ppm)	BLOWS/6"	SAMP. INTERVAL	ANALYTICAL SAMPLE	ANALYTICAL RESULTS (mg/kg)	U.S.C.S. SYMBOL	GRAPHIC LOG	DEPTH (ft)	LITHOLOGY/DESCRIPTION	WE	LL DIAGRAM		
	FID /						20	7	4 inches of asphalt.	-/*	Concrete		
	PID					GP		1-	(GP) Air vacuumed down to 8 ft bgs.	\$27 \$27	Steel Monument		
								-	Brown, medium dense, large GRAVEL and		Monument		
Moist	0/0		M.					2	COBBLES with 15% fine to coarse sand; no odo no sheen.	or;			
							0	3-	Same as above; no odor; no sheen.				
							° 0 0						
								4	Brown, loose to medium dense, gravelly		L hadarata d		
								5-	COBBLES with 10% fine to coarse sand; no odo no sheen.		Hydrated Bentonite Chips		
								-	Unable to collect samples with a hand auger due to lithology.	*			
			SWN			GP		6-	(GP) Brown, medium dense, sandy, gravelly		Ecology Unique Well ID BIC 745		
			0				φ Φ	71	COBBLES with 10% fine to coarse sand and cobbles up to 16 inches in diameter.	_/			
Dry	37/			MW-6-8	G 50 D = 410			8-	Light gray to light brown, medium dense, silty, sandy GRAVEL with cobbles, 20% silt, and 15%				
Diy	286		\vee	M	HO = 400 B = 0.003		PON	- 9	fine sand; slight odor; no sheen.				
	0/15		\wedge		Б = 0.000			9 -	Same as above; no odor; no sheen.				
	- /0.0		$\left(\right)$			GM	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	10-	(GM) Same as above; no odor; no sheen.				
	5/38		\setminus					-	(,,,,,,				
	2/17		X					11	Same as above; no odor; no sheen.				
			/				PON	12—	Same as above; no odor; no sheen.				
Dry	0/7		$\left(\right)$	e									
Moist	1/2		$\backslash/$	MW-6-1	G <1 D <3.4			13	Same as above; no odor; no sheen.				
			X	M	HO <11 B <0.0005			_ 14 —			2/12 Monterey Sand		
Wet	2/5		$/ \setminus$			GP			(GP) Brown, dense, sandy GRAVEL with 25% cobbles, 15% fine to coarse sand, and 10% silt:		00.10		
	1/3						00	15	no odor; no sheen. Same as above; no odor; no sheen.		0.020 Inch Slot		
			\setminus					16-					
	1/3		Å					-	Same as above; no odor; no sheen.				
	25/4		/				00	17—	Same as above; no odor; no sheen.				
	_0,7							 18—			2/12 Monterey		
	10/2		\bigvee	_	0 -1			· · · -	Same as above; no odor; no sheen.		Sand		
Wet	10/3		\wedge	MW-6-19	G <1 D <3.3 ∺O <11	GP	00	19-	(GP) Same as above; no odor; no sheen.				
	10/3		/	MM	HO <11 B <0.0005			20-					
	I T							20	Bottom of borehole at 20.0 feet.				



18912 N Creek Pkwy, Ste 101 Bothell, WA 98011

Monitoring Well: MW-7

Project: Former Chevron Station No. 93883 Date Started: 8/28/2013 Total Boring Depth: 20 ft Well Diameter: 2 in Client: Chevron EMC Date Completed: 8/29/2013 Hole Diameter: 8/5.75 in Well Screen: 20-slot, 9.56-19.56 ft Filter Pack: 2/12 Monterey Sand Location: 1702 E. Yakima Ave, Yakima, WA Driller: Cascade Well Depth: 19.56 ft Drill Method: Sonic Drill Logged By: G. Cisneros TOC Elevation: 1029.01 ft Well Casing: Sch.40 PVC SAMP. INTERVAL ORGANIC VAPOR (ppm) ANALYTICAL SAMPLE ANALYTICAL RESULTS (mg/kg) MOISTURE GRAPHIC LOG DEPTH (ft) BLOWS/6" U.S.C.S. SYMBOL LITHOLOGY/DESCRIPTION WELL DIAGRAM <u>, 1./.</u> . 6 inches of grass and topsoil. GP άQ FID / Concrete (GP) Brown, loose, sandy, gravelly COBBLES \bowtie PID \circ Steel 1 $\overline{\langle}$ with 10% fine to coarse sand; no odor; no sheen. Monument Air vacuumed down to 8 ft bgs. 2 SW Same as above; no odor; no sheen. 0/0 Moist D ΟQ 3 \bigcirc D 4 Unable to collect samples with hand auger due to Hydrated 0 lithology. Bentonite Chips 5— GP 6 Ecology Unique (GP) Brown, medium dense, sandy, gravelly Well ID BIC 746 COBBLES with 10% fine to coarse sand and cobbles up to 16 inches in diameter; no odor; no 7sheen. 0 8-ÓŌ Light brown, medium dense, sandy GRAVEL with Dry 30% cobbles, 15% fine to coarse sand, and 10% 0% 2/11 silt: no odor: no sheen. 9 Same as above; no odor; no sheen. 0/4 20 10-Same as above; no odor; no sheen. 0/5 D°. MW-7-11 G <1 11-Dry Same as above; no odor; no sheen. D <3.2 0/3 HO <11 T B = 0.0008 12 Brown, medium dense, sandy, cobbly GRAVEL Moist 0/8 with 15% fine to coarse sand and <5% silt; no $\circ \circ$ odor; no sheen. 13 Same as above; no odor; no sheen. 1/9 2/12 Monterey 14 Sand 00 Same as above; no odor; no sheen. Moist 5/11 00 \circ GP \langle 15 0.020 Inch Slot (GP) Brown, medium dense, sandy, cobbly 0/4 GRAVEL with <5% coarse sand and <5% silt; no odor; no sheen. 16 Moist 0 1/4 Same as above; no odor; no sheen. $\circ \bigcirc$ 9 17 Ū. GM 3/9 (GM) Brown, medium dense, silty, sandy GRAVEL with 30% cobbles, 15% fine to coarse 0 18 2/12 Monterey sand, and 15% silt; no odor; no sheen. 1/12Sand Same as above; no odor; no sheen. G <1.2 ൭ MW-7-1 0 19-D <3.3 Moist 1/12 HO <11 Same as above; no odor; no sheen. B < 0.0005 20 Bottom of borehole at 20.0 feet.

Appendix B: Groundwater Monitoring and Sampling Data Packages





- 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

G-R #386763

September 27, 2013

RE: Former Chevron SS #9-3883 1702 East Yakima Avenue Yakima, Washington

WE HAVE ENCLOSED THE FOLLOWING:

Dublin, California 94568

COPIES

DESCRIPTION

VIA PDF

Groundwater Monitoring and Sampling Data Package Third Quarter Event of September 21, 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/9-3883



CHEVRON - SITE CHECK LIST

Facility#:	Chevron #9-38	383		Date:	9.21.13	
Address:	1702 East Yak	ima Avenue				
City/St.:	Yakima, WA	,				
Status of S	site: bob	HAU	1.			·····

DRUMS:

Please list below ALL DRUMS on site:

(i.e., drum description, condition, labeling, contents, amount and location of drums)

#	Description	Condition	Labeling	Contents	Amount @ Start	Amount @ End
	No Quints					······
	· · · · · · · · · · · · · · · · · · ·					
						25

Location:

WELLS:

Please check the condition of ALL WELLS on site:

(i.e., gaskets, bolts, replaced well plug and/or well lock, well box condition and etc.)

Well ID	Gaskets (M) Missing (R) Replaced	Bolts (M) Missing (R) Replaced	Replaced Plug Y/N	Replaced Lock Y/N	Well Box Manufacturer/Size/# of Bolts	Other
MW-5	6000-				& MORRISX 3	
MW-6	600D-				OS MARRIEX 3	
MW-7	(0000-				B" MARHEX 3	
					3	
					<u> </u>	
	~					

Additional Comments/Observations:

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 WizardTM (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 (\pm 0.1 unit), and Ec (\pm 10 uS) are required to stabilize. Additional parameters that may be required are DO (\pm 0.2 mg/l) and ORP (\pm 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.



Client/Facility#:	Chevron #	9-3883		Job	Number:					
Site Address:	1702 East	Yakima Av	enue	Ēve	ent Date:		9.21.1	3	(inclusive)	
City:	Yakima, W	Ά		Sar	mpler:		JP		•	
Well ID	MW-5)		Date N	Monitored:		9.21	.13		
Well Diameter	2	in.	Г						<u>.</u>	
Total Depth	10.05	ft.		Volume Factor (VF)	3/4"= 0.02 4"= 0.66					
Depth to Water	10.81	ft. C	heck if water o	column is le	ss then 0.50	D ft.				
	9.24		<u> </u>	— x3 c	ase volume =	Estimated	Purge Volum	ie:	gal.	
Depth to Water	w/ 80% Rechar	ge [(Height of W	ater Column x	0.20) + DTW	12.65	5. Tim	ne Started:		(2400 hrs)	
			::* :*				ne Completed	:	(2400 hrs)	
Purge Equipment:			mpling Equipr					t:		
Disposable Bailer		-	sposable Bailer							
Stainless Steel Baile Stack Pump	r	-	essure Bailer					ickness: ion/Description		
Suction Pump		-	etal Filters ristaltic Pump		×	V15	uai Commat	ion/Description		
Grundfos		•	ED Bladder Pun		<u> </u>	Ski	mmer / Absor	bant Sock (circ	le one)	
Peristaltic Pump	×	•	her:	·				om Skimmer:		
QED Bladder Pump							t Removed fro	om Well:	gal gal	
Other:						11	duct Transfer		yai	
<u></u>	· · · · · · · · · · · · · · · · · · ·							·····		
Start Time (purge): <u> </u>	6	Weathe	er Conditio	ns:	<u></u>	4			
Sample Time/Da	te: 89.50	1 9.21.13	Water C	Color: <u>c</u>	EAR	Odor: `	-			
Approx. Flow Ra	te: <u>(((((((((((((((((((</u>	mlpm	Sedime	nt Descrip	tion:	NONE				
Did well de-wate	? <u>NO</u>	If yes, Time:		_ Volume	:	gal.	DTW @ S	ampling:	11.48	
Time (2400 hr.)	Volume (Liters)	pН	Conductivity		nperature	D.0			Gauge DTW as parameters	
	• •			,s)_ (0)/F)	(mg/	(L)	(mV)	are recorded	
<u></u>	<u> </u>	6.71	. 151		5.6	. 7		22.	10.aco	
6916 6919	<u>Z. </u> Z.Y	0.69	. 153		5.7	-1/		24.5	11.33	
6919 6921	2.7	<u>6.68</u> 6.109	. 159		5.8	·2 . L		27.9	<u>11.75</u> <u>11.48</u>	
					<u></u>					
	LABORATORY INFORMATION									

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES								
MW-5	🖉 x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)/EDC/HVOC's(8260)								
	2 x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx								
	2 x voa vial	YES	N -Ma2D209-	LANCASTER	EDB (8011)								
	3 x 250ml ambers	YES	NP	LANCASTER	cPAH's/NAPHS(8270 SIM)/PCB's(8082)								
	x 250ml poly	YES	HNO3	LANCASTER	TOTAL METALS (6010)								
COMMENTS:	Depth Pump S	Set At:	17-18										

Add/Replaced Gasket: _____

Add/Replaced Lock: ____



Client/Facility#:	Chevron #9-	3883		Job Number:			
Site Address:	1702 East Ya	ikima Av	enue	Event Date:	9.2	.13	– (inclusive)
City:	Yakima, WA	· · · · ·		Sampler:	٦.	P	_```
Well ID	MW-6	_	E	Date Monitored:	9.2	1.13	_
Well Diameter	2 in	<u>.</u>	Volum	e 3/4"= 0.02	2 1"= 0.04 2"=	0.17 3"= 0.38	
Total Depth	19.65 ft.	-	Factor			1.50 12"= 5.80	
Depth to Water	11.30 ft.	_ 🛄 CI	heck if water colum	n is less then 0.50) ft.		
	ume:	gal.					
Depth to Water	w/ 80% Recharge	[(Height of W	ater Column x 0.20) +	DTW]: 12.9	1 Time Started:		(2400 hrs)
_					Time Complet	ed:	
Purge Equipment:			mpling Equipment:			uct:	
Disposable Bailer			sposable Bailer			er:	
Stainless Steel Baile	۲		essure Bailer			Thickness:	
Stack Pump Suction Pump			etal Filters ristaltic Pump		Visual Confirm	nation/Description	n:
Grundfos			ED Bladder Pump	¥	Skimmer / Ab	sorbant Sock (cire	cle one)
Peristaltic Pump	4		her:		Amt Removed	from Skimmer:_	gal
QED Bladder Pump	X					from Well:	
Other:					Water Remove Product Trans		gal
					Product Trans	terred to:	
Start Time (purge	=): 6750		Weather Co	nditions:	6 5.1		
Sample Time/Da	Re li	1.21.3	Water Color:		Odor: Y / A		
Approx. Flow Ra		mlpm	Sediment De		NONE		
Did well de-wate		yes, Time:		lume: —	gal. DTW @	Sampling:	12260
		•					Gauge DTW
Time (2400 hr.)	Volume	pН	Conductivity	Temperature	D.O.	ORP	as parameters
(2400 111.)	(Liters)		(pmme6/cm~µ3)*	(⑦ / F)	(mg/L)	(mV)	are recorded
	1.0	6.00	<u>. 148</u>	15.7	.62	55.7	11.44
	2.	680	.144	15.9	1.16	55.8	11.56
<u></u>	7.9	6.00	. 143	16.0	1.24	55.8	12.12
	1.7	6.00		16.1	1.72	55.9	12.26
<u>,</u>	· · · · · · · · · · · · · · · · · · ·		LABORATOR	YINFORMATIC)N		
SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY		ANALYSES	;
MW- 🖉	6 x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+	MTBE(8260)/ED	C/HVOC's(8260)
	1 x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/N	IWTPH-Dx	
	2 x voa vial	YES	Ná2D2O3		EDB (8011)		
	3 x 250ml ambers x 250ml poly	YES YES	HNO3	LANCASTER LANCASTER	CPAH'S/NAPHS(827	/	82)
		IEO		LANCASTER	TOTAL METALS (60		
							<u>_</u>
COMMENTS:	Depth Pump S	Set At:	SAM	16-17	MINDA	ALL DIA	BLEG IN TUBING

Add/Replaced Plug: _____ Add/Replaced Lock: _____



Client/Facility#:	Chevron #9-3883		Job Number:	385894	×	
Site Address:	1702 East Yakim	a Avenue	Event Date:	٩.:	21.13	– (inclusive)
City:	Yakima, WA		Sampler:		J.P	_`
Well ID	<u>MW-7</u>		Date Monitored:	<u> </u>	21.13	_
Well Diameter	2 in.		Volume 3/4"= 0.02	1"= 0.04 2"=	= 0.17 3"= 0.38	
Total Depth	<u>19.60 ft.</u>		Factor (VF) 4"= 0.66		1.50 12"= 5.80	
Depth to Water	10.22 ft.	Check if water of	column is less then 0.50	ft.		
	9.34 xVF_	=	x3 case volume =	Estimated Purge Vo	lume:	gal.
Depth to Water	w/ 80% Recharge [(Heig	ht of Water Column x (0.20) + DTW]: 12.04	2 Time Started	:	(2400 hrs)
_			/	Time Comple	eted:	
Purge Equipment:		Sampling Equips	nent:	Depth to Pro	duct:	ft
Disposable Bailer		Disposable Bailer			ter:	ft
Stainless Steel Baile	r	Pressure Bailer			Thickness:	ft
Stack Pump		Metal Filters		Visual Confin	mation/Description	1:
Suction Pump Grundfos		Peristaltic Pump	K	Skimmer / At	sorbant Sock (cire	cle one)
Peristaltic Pump		QED Bladder Pum Other:	ip		d from Skimmer:	
QED Bladder Pump	×	Outor			d from Well:	
Other:				Water Remov		gal
				Product Tran	sterred to:	
Start Time (purge	a): \$958	Weathe	r Conditions:	5.J		
Sample Time/Da		3 Water C	Color: <u>CLEAR</u>	Odor: Y / N)	15
Approx. Flow Ra				NONE		
Did well de-water			Volume: -	gal. DTW @) Sampling:	10.72
				90 0@	, oumping	
Time	Volume (Liters) pH	Conductivity		D.O.	ORP	Gauge DTW as parameters
(2400 hr.)	(Liters)	- (µmhos/cm - µ	I S)_ (CC)/ F)	(mg/L)	(mV)	are recorded
1016	1.0 6.7	133	17.3	z.53	16.8	10.32
1019	2. 6.7		17.4	z.57	200.5	10.47
622	2.4 6.7	1	17.4	Z.59	24.2	10.60
1925	2.7 6.7	\$	17.5	<u>z.57</u>	24.7	10.7Z
	<u></u>		TORY INFORMATIO	N		
SAMPLE ID	(#) CONTAINER REF	RIG. PRESERV. T		1	ANALYSES	

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW- 7	🖉 x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)/EDC/HVOC's(8260)
	Lx 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	1 x voa vial	YES	-Ha20203-N	LANCASTER	EDB (8011)
	3 x 250ml ambers	YES	NP	LANCASTER	cPAH's/NAPHS(8270 SIM)/PCB's(8082)
	x 250ml poly	YES	HNO3	LANCASTER	TOTAL METALS (6010)
				alu da d	
COMMENTS:	Depth Pump S	Set At:	16 - 1	7	

Add/Replaced Gasket: _

Add/Replaced Lock:

	Chevr	on l	NO	rthv	ve	st	R	legi	or	א ר	4n	al	ys	sis	; F	<i>le</i>	qι	le	st	/ C	h	aiı	n of Cu	stody
🔅 eurofins	Lancaster			Ad					Grou	p #		s Land		Sa	mple	#								
	Laboratories	5				1	Latter		li	nstructio	ons on I	reverse	side co	rrespon	d with c	ircled r	umbers	3.						4
(1)	Client Inform						4	Matrix			5			A	nalys	ses	Req	uest	ed				SCD #	2 71 × 2
Facility # 00m9-0000-01m	C G-10-0000	WE	BS		and a state	Met a				1												2010	SCR #	*
1702 East Yaku Site Address Chevron PM Consultan y Officien-Kyan, Im	CAICRS	Lea Court, S	ad Consu Suite J	J, Dublin			Sediment	Ground Surface		Containers	8260 Naphth				Cleanup 🕅	without Silica Gel Cleanup		Diss.	(BILD)		6279 J	TOTAL METWOR	 Results in Dry We J value reporting Must meet lowest limits possible for compounds 8021 MTBE Confi 	needed detection 8260
Consultant Project Mgr Haro	ing, (deanna@	grinc.co	om), (e	20) 001	-/44	4 X I	βU			No.			tes		Gel	lica (EPH	ă	5		Hd	2	Confirm MTBE +	
Consultant#bdo} #82-3323	x	11000						Potable	Air	đ	8021		Oxygenates		th Silica	thout Sil	WAB		5	1100	NA	<i>b</i> 0i	Confirm highest h	8260
Sampler		J.P.	HINE	/	3	Composite				Number	MTBE	fulì scan	0	ğ	NWTPH-Dx with	NWTPH-Dx wi		Total	C/HNO	\sim	+1'5, I+	199	Run oxy's	
2			Colle	ected	Grab	dmo	iii	Water	_	Total	EX +	so fu		ЛРН	ТР	ЛР	WA VPH	b	ED	E08	M	92		
Sample Identification			Date	Time		ŏ	Soil	Š	ö		BTEX	8260		TWN	ž	ŠZ	MN M	Lead	8	L.	V	S	6 Rema	rks
	Q.	· · ·	21.13	ded	X			X	ļ	\mathcal{V}	X			X									otal Metals include:	Pb Cd
	1000-	5		dazo	X			X	-	14	×			×	*	×			<u>X</u>	X	X	X	Cr, NI & Zn	
	MW. Mw).	5		1031	X			X	-	14	X			X	X	X			X	× 1	X	L Y	AMEND C	200'
	VVIAS		¥	1401						1-1		1				×			<u> </u>	<u> </u>	×	~	ADD Gx TO	
																							SAMPLES. H	lvoc's
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	**						-		+															
									5														MWC	1.24-13
7 Turnaround Time R	lequested (TAT)	(please ci	ircle)		Relind	quished	by	2n/)		Date			Time		/	Recei	ved by					Date	Time 9
Standard	5 day	4 d	lay			1	4	24			9.	23.1	13	16	PA	0								
72 hour	48 hour	24	hour	F/EDD	Relind	luished	d by				Date			Time			Recei	ved by	'				Date	Time
8 Data Package (circle	if required)	EDD (cir				quish	ed by	Commerc	ial Ca	rrier:							Receiv	ved by					Date	Time
Type I - Full	Type I - Full CVX-RTBU-FI_05 (default)			UPS FedEx Other																				
Type VI (Raw Data)		Other: _				Te	empe	erature l	Jpon	Rec	eipt				°C		С	istoc	dy Se	als	Intac	t?	Yes	No
										nd Pik	e, La	ncaste	er, PA	1760	1 • 71	7-656	6-230	0					Issued by Dep	t. 40 Management

The white copy should accompany samples to Eurofins Lancaster Laboratories. The yellow copy should be retained by the client.

Sued by Dept. 40 Management 7051.03



- 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 Chevron SS #9-3883 1702 East Yakima Avenue Yakima, Washington

WE HAVE ENCLOSED THE FOLLOWING:

COPIES

DESCRIPTION

VIA PDF

Groundwater Monitoring and Sampling Data Package Fourth Quarter Event of December 23, 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/9-3883

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January 6, 2014 G-R #386763



			CHEV	RON - S	ITE CHECK	K LIST	
	Facility#:	Chevron #			Dat	e: 12.23.13	
	Address:	1702 East		enue			
	City/St.:	Yakima, W	Α				
	Status of S	ite: 606	HAU	VEHICI	ES_		
DRUMS:	(/	i.e., drum des			ALL DRUMS on ng, contents, amo	site: ount and location of dr	ums)
#		ription	Condition	Labeling	Contents		· · · · · · · · · · · · · · · · · · ·
	No	DRUMS			<u></u>		
	· · ·	0					
970							1
Location:							
WELLS:	(i.	e., gaskets, b			tion of ALL WELL and/or well lock, w	LS on site: vell box condition and	etc.)
Well ID	Gaskets (M) Missing (R) Replaced	Bolts (M) Missing (R) Replaced	Replaced Plug Y/N	Replaced Lock Y/N		ell Box rer/Size/# of Bolts	Other
MW-5	6000 -				6'Ma	PPKV S	1
MW-6	(0000-						
MW-7	6000 -			Y		/	<u> </u>
						······································	
					······		├ ────
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							<u> </u>

Additional Comments/Observations:

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 WizardTM (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 (\pm 0.1 unit), and Ec (\pm 10 uS) are required to stabilize. Additional parameters that may be required are DO (\pm 0.2 mg/l) and ORP (\pm 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.



Client/Facility#:	Chevron #9-	3883		Job Number:			
Site Address:	1702 East Ya	akima Ave	nue	Event Date:	12-23	3.15	– (inclusive)
City:	Yakima, WA			Sampler:		-	_` ´
• •					<u></u>	· · · · · · · · · · · · · · · · · · ·	-
Well ID	MW-5	_	0	ate Monitored:	12.2	3.13	
Well Diameter	<u>2</u> in		Volum	e 3/4"= 0.02	2 1"= 0.04 2"	= 0.17 3"= 0.38	
Total Depth	10.05 ft.		Factor			= 1.50 12"= 5.80	
Depth to Water	<u>11.69 ft.</u>	Che	eck if water colum	n is less then 0.50) ft.		
	8.46	-	=			olume:	gal
Depth to Water	w/ 80% Recharge	e [(Height of Wa	ter Column x 0.20) +	DTW]: 13.28	2. Time Started	d:	(2400 hrs)
Dunna Equivanante		0				eted:	
Purge Equipment:			npling Equipment:			duct:	
Disposable Bailer		•	osable Bailer	·····		iter:	
Stainless Steel Baile	r		ssure Bailer			1 Thickness:	
Stack Pump Suction Pump			al Filters staltic Pump		Visuar Cornir	mation/Descriptior	1.
Grundfos			D Bladder Pump	<u> × </u>	Skimmer / A	bsorbant Sock (cire	cle one)
Peristaltic Pump	×	Othe				ed from Skimmer:	
QED Bladder Pump		Our		· · ···	Amt Remove	ed from Well:	gal
•					Water Remo	ved:	gal
Other:							
Other:					Product Tran	sferred to:	
	a): bei		Weather Co			sferred to:	
Start Time (purge	the second s		Weather Cor		-010		
Start Time (purge Sample Time/Da	ite: 1103/1		Water Color:	CLEAR	Odor: Y /N		
Start Time (purge Sample Time/Da Approx. Flow Ra	ite: 103/1	mlpm	Water Color: Sediment De	<u>cuear</u> scription:	Odor: Y /N)	
Start Time (purge Sample Time/Da	ite: 103/1		Water Color: Sediment De	CLEAR	Odor: Y /N)	12.08
Start Time (purge Sample Time/Da Approx. Flow Ra Did well de-wate	ite: 103/1	_mlpm yes, Time: _	Water Color: Sediment De Vo	<u>cuear</u> scription:	Odor: Y /N)	Gauge DTW
Start Time (purge Sample Time/Da Approx. Flow Ra Did well de-wate	nte: 1103/1; nte: 105/1; n? NO If	_mlpm yes, Time: _	Water Color: Sediment De	scription:	Odor: Y /N)) Sampling:	
Start Time (purge Sample Time/Da Approx. Flow Ra Did well de-wate	r? NO If Volume (Liters)	_mlpm yes, Time: _	Water Color: Sediment De Vo	scription:	Odor: Y /N gal. DTW @ D.0.)) Sampling: ORP	Gauge DTW as parameters
Start Time (purge Sample Time/Da Approx. Flow Ra Did well de-wate Time (2400 hr.)	r? NO If Volume (Liters)	_mlpm _yes, Time: _ ^{pH} (Water Color: Sediment De Vo	scription:	Odor: Y /N gal. DTW (D.O. (mg/L))) Sampling: ORP (mV)	Gauge DTW as parameters are recorded
Start Time (purge Sample Time/Da Approx. Flow Ra Did well de-wate Time (2400 hr.)	ite: 103/11 ite: 005/11 r? <u>NO</u> If Volume (Liters)	mlpm yes, Time: _ ^{pH} (روزیو) _	Water Color: Sediment De Vo	scription:	Odor: Y / N gal. DTW @ D.O. (mg/L))) Sampling: ORP (mV) _(3).5	Gauge DTW as parameters are recorded
Start Time (purge Sample Time/Da Approx. Flow Ra Did well de-wate Time (2400 hr.)	Ite: 103/11 Ite: 005/11 Ite: 005/11 Ite: 005/11 Volume (Liters) 1.8 2.1	mlpm yes, Time: _ ^{pH} (<u>(6.۹.۵ _</u>	Water Color: Sediment De Vo Conductivity (umbos/cm-uS) 	Image: Contract of the section is a contract of the secti	Odor: Y / N Odor: Y / N gal. DTW (D.O. (mg/L) z.16 1.190)) Sampling: ORP (mV) _(3).5	Gauge DTW as parameters are recorded
Start Time (purge Sample Time/Da Approx. Flow Ra Did well de-wate Time (2400 hr.)	Ite: 103/11 Ite: 005/11 Ite: 005/11 Ite: 005/11 Volume (Liters) 1.8 2.1	mlpm yes, Time: _ ^{pH} (<u>(6.۹.۵ _</u>	Water Color: Sediment De Conductivity (umbos/cm - µS) 	$\frac{2 \cdot \mathbf{E} \mathbf{A} \mathbf{C}}{\text{Iscription:}}$ $\frac{1}{\text{Iume:}}$ $\frac{1}{(\mathbf{C}) + \mathbf{C}}$ $\frac{5 \cdot \mathbf{A} \mathbf{C}}{5 \cdot \mathbf{A} \mathbf{C}}$ $\frac{5 \cdot \mathbf{A} \mathbf{C}}{5 \cdot 5}$	Odor: Y / N gal. DTW (D.O. (mg/L) <u>z.z6</u> <u>1.37</u> <u>1.37</u>)) Sampling: ORP (mV) _(3).5	Gauge DTW as parameters are recorded 11.79 11.86 11.97
Start Time (purge Sample Time/Da Approx. Flow Ra Did well de-wate Time (2400 hr.)	tte: 103/11 tte: 003/11 r? NO If Volume (Liters) 1.8 2.1 2.4 1.7	mlpm yes, Time: _ pH (6.96 _ 6.96 _ 6.91 _	Water Color: Sediment De Conductivity (umbos/cm - µS) 	$\frac{2 \sqrt{3} \sqrt{2}}{2 \sqrt{3} \sqrt{2}}$	Odor: Y / N gal. DTW (D.O. (mg/L) <u>z.z6</u> <u>1.37</u> <u>1.37</u>)) Sampling: ORP (mV) 31.5 32.3 34.1	Gauge DTW as parameters are recorded 11.79 11.86 11.97 12.08
Start Time (purge Sample Time/Da Approx. Flow Ra Did well de-wate Time (2400 hr.) 1049 1055 1055	Ite: 103/11 Ite: 005/11 Ite: 005/11 Ite: 005/11 Volume (Liters) 1.8 2.1	mlpm yes, Time: _ pH (6.96 _ 6.96 _ 6.96 _ 6.96 _ 6.96 _	Water Color: Sediment De Conductivity (umbos/cm - µS) 	<u> Cuesa c</u> Scription: Iume: Temperature (C) F) <u> 5.9 0 5.9 0 <u> 5.9 0 5.8 0 Y INFORMATIO LABORATORY </u></u>	Odor: Y / N Odor: Y / N gal. DTW (D.O. (mg/L) <u>7.76</u> <u>1.39</u> N)) Sampling: ORP (mV) 31.5 32.1 33.3 34.1 ANALYSES	Gauge DTW as parameters are recorded 11.79 11.86 11.97 12.08
Start Time (purge Sample Time/Da Approx. Flow Ra Did well de-wate Time (2400 hr.) 1049 1052 1055 1055	tte: 103/11 tte: 103/11 r? NO If Volume (Liters) 1.8 2.1 2.1 2.1 2.1 (#) CONTAINER	mlpm yes, Time: _ pH (6.96 _ 6.96 _ 6.96 _ 6.96 _ 6.96 _	Water Color: Sediment De Conductivity (umbos/cm-µS) 	<u> Cuesa c</u> Scription: Iume: Temperature (C) F) <u> 5.9 0 5.9 0 <u> 5.9 0 5.8 0 Y INFORMATIO LABORATORY </u></u>	Odor: Y / N gal. DTW (D.O. (mg/L) <u>z.z6</u> <u>1.37</u> <u>1.37</u>)) Sampling: ORP (mV) 	Gauge DTW as parameters are recorded 11.79 11.86 11.97 12.08
Start Time (purge Sample Time/Da Approx. Flow Ra Did well de-wate Time (2400 hr.) 1049 1052 1055 1055	ite: 108/1 ite: 108/1 r? NO If Volume (Liters) 1.8 2.1 2.1 2.1 1.7 (#) CONTAINER x voa vial 1.7 1.17 (#) CONTAINER x voa vial 1.7 1.17	mlpm yes, Time: _ pH (6.96 _ 6.96 _ 6.96 _ 6.96 _ 7.96 _ 7.96 _ 7.96 _ 6.96 _ 7.96 _	Water Color: Sediment De Vo Conductivity (umhos/cm-µS) 	CLEAR escription: lume: Temperature (C) F) 5.40 5.40 5.40	Odor: Y / N Odor: Y / N gal. DTW (D.O. (mg/L) z.25 2.190 1.37 1.37 N N NWTPH-Gx/BTEX)) Sampling: ORP (mV) 	Gauge DTW as parameters are recorded 11.79 11.86 11.97 12.08
Start Time (purge Sample Time/Da Approx. Flow Ra Did well de-wate Time (2400 hr.) 1049 1052 1055 1055	ite: 108/1 ite: 108/1 r? NO If Volume (Liters) 1.8 2.1 2.1 2.1	mlpm yes, Time: _ pH 6.a.6 (0.a.6 (0.a.6 (0.a.6 (0.a.6 (0.a.6)	Water Color: Sediment De Conductivity (umbos/cm-µS) 	CLEAR scription: lume: Temperature (C) F) <u>5.90</u> <u>5.90</u> <u>5.90</u> <u>5.90</u> <u>5.90</u> <u>5.90</u> <u>5.90</u> <u>5.90</u> <u>5.90</u> <u>5.90</u> <u>5.90</u> <u>5.90</u> <u>5.90</u> <u>5.90</u> <u>5.90</u> <u>5.90</u> <u>5.90</u> <u>5.90</u> <u>5.90</u> <u>5.90</u> <u>5.90</u> <u>5.90</u> <u>5.90</u> <u>5.90</u> <u>5.90</u> <u>5.90</u> <u>5.90</u> <u>5.90</u> <u>5.90</u> <u>5.90</u> <u>5.90</u> <u>5.90</u> <u>5.90</u> <u>5.90</u> <u>5.90</u> <u>5.90</u> <u>5.90</u> <u>5.90</u> <u>5.90</u> <u>5.90</u> <u>5.90</u> <u>5.90</u> <u>5.90</u> <u>5.90</u> <u>5.90</u> <u>5.90</u> <u>5.90</u> <u>5.90</u> <u>5.90</u> <u>5.90</u> <u>5.90</u> <u>5.90</u> <u>5.90</u> <u>5.90</u> <u>5.90</u> <u>5.90</u> <u>5.90</u> <u>5.81</u>	Odor: Y / N Odor: Y / N gal. DTW (D.O. (mg/L) z.zs z.190 1.37 1.37 N N NWTPH-Gx/BTEX NWTPH-Dx w/sgc/)) Sampling: ORP (mV) 31.5 32.1 33.3 34.1 34.1 ANALYSES +MTBE(8260)/EDC /NWTPH-Dx	Gauge DTW as parameters are recorded 11.79 11.86 11.97 12.08
Start Time (purge Sample Time/Da Approx. Flow Ra Did well de-wate Time (2400 hr.) 1049 1052 1055 1055	ite: 108/1 ite: 108/1 r? NO If Volume (Liters) 1.8 2.1 2.1 2.1 1.7 (#) CONTAINER x voa vial 1.7 1.17 (#) CONTAINER x voa vial 1.7 X voa vial 1.7 X voa vial	mlpm yes, Time: _ pH 6.96 4.96 6.96 6.96 7.95 7.00 8.96 7.00 7.00 7.00 7.00 7.00 7.00 7.00 7.0	Water Color: Sediment De — Vo Conductivity (µmbos/cm - µS) 	CLEAR scription: lume: Temperature (C F) <u>5.96</u> <u>5.96</u> <u>5.96</u> <u>5.96</u> <u>5.36</u> <u>5.36</u> <u>5.36</u> <u>1ABORATORY</u> LANCASTER LANCASTER LANCASTER	Odor: Y / N Odor: Y / N gal. DTW (D.O. (mg/L) <u>z.76</u> <u>1.87</u> <u>1.87</u> <u>NWTPH-Gx/BTEX</u> NWTPH-Dx w/sgc/ EDB (8011)	ORP ORP (mV) 131.5 132.1 132.3 134.1 ANALYSES +MTBE(8260)/EDC /NWTPH-Dx 270 SIM)/PCB's(80)	Gauge DTW as parameters are recorded 11.79 11.86 11.97 12.08

COMMENTS: Depth Pump Set At:

18-16

-7

7



Client/Facility#:	Chevron #9-3	883		Job Number:	385894					
Site Address:	1702 East Ya	kima Av	enue	Event Date:	12	.23.13	– (inclusive)			
City:	Yakima, WA			Sampler:		s.P				
Well ID	MW-6			Date Monitored:		2.23.13				
Well Diameter	2 in.	,	Vol	ume 3/4"= 0.02	2 1"= 0.04 7	2"= 0.17 3"= 0.38	3			
Total Depth	19.55 ft.			ctor (VF) 4"= 0.66		6"= 1.50 12"= 5.80	- ,			
Depth to Water 12.67 ft. Check if water column is less then 0.50 ft. 7.490 xVF = x3 case volume = Estimated Purge Volume: gal.										
Depth to Water				0) + DTW]: <u>3.6</u>	C Time Sta	rted:	(2400 hrs)			
Purge Equipment:		Sa	Impling Equipme	nt:		npleted: Product:	(2400 hrs)			
Disposable Bailer			sposable Bailer			Water:				
Stainless Steel Baile	r		essure Bailer		r i i i i i i i i i i i i i i i i i i i	bon Thickness:	ft			
Stack Pump		Me	etal Filters		Visual Co	onfirmation/Description	n:			
Suction Pump		Pe	ristaltic Pump	<u>×</u>						
Grundfos			ED Bladder Pump			/ Absorbant Sock (cir oved from Skimmer:_	· · ·			
Peristaltic Pump	X	Ot	her:		Amt Rem	oved from Well:	gai			
QED Bladder Pump					Water Re		gal			
Other: YSI M	15 656				Product T	ransferred to:				
	\									
Start Time (purge				Conditions:	FOL					
Sample Time/Da				Or: <u>CLEAC</u>	Odor: Y /	₽				
Approx. Flow Ra		mlpm		Description:	NONE					
Did well de-wate	r? <u>No</u> If	yes, Time:		Volume:	gal. DTW	/ @ Sampling: _	12.40			
Time	Volume	рH	Conductivity	Temperature	D.O.	ORP	Gauge DTW as parameters			
(2400 hr.)	(Liters)	·	(µmhos/cm - µS)	(C) F)	(mg/L)	(mV)	are recorded			
\$936	<u> </u>	7.03	. 093	<u>B.41</u>	3.04	126.8	,1.13			
0939		<u>7. a)</u>	· pay	<u>6.70</u>	3.19	_ 127.1	12.24			
6942	$\frac{2.4}{2.7}$	1. q 1. da	. 094	$\frac{Q.UU}{Q.UU}$	3.16		12.35			
<u> </u>	<u> </u>	<i>(</i> .9 ⁻)	. 990	10.10	3.2	128.6	12.96			
		··· ·· · ·	LABORATO		DN .	<u></u>				
SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYP			ANALYSES	3			
MW- 6	🖉 x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BT	EX+MTBE(8260)/ED	C/HVOC's(8260)			
	2 x 1 liter ambers	YES	HCL	LANCASTER	the second se	sgc/NWTPH-Dx				
	x voa vial x 250ml ambers	YES	Na2S2O3	LANCASTER	EDB (8011)					
	1 71 Y 250 mi amborel	YES	NP	LANCASTER	cPAH's/NAPHS(8270 SIM)/PCB's(8082)					

COMMENTS:

Depth Pump Set At:

x 250ml poly

1

15-16

HNO3

Add/Replaced Gasket: _____

YES

LANCASTER

TOTAL METALS (6010)



Client/Facility#:	Chevron #9-388	33	Job Nu	imber:	385894			
Site Address:	1702 East Yakir	na Avenue	Event	Date:	12.	15:13	5	(inclusive)
City:	Yakima, WA		Sample	ər:	·······	J.P	<i></i>	
Well ID	<u>MW- 7</u>		Date Mon	itored:	12	. 23.1.	3	
Well Diameter	2 in.		Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38	7
Total Depth	19.66 ft.	_	Factor (VF)	4"= 0.66	5"= 1.02		12"= 5.80	
Depth to Water	<u>11.07 ft.</u>	Lange of the second sec	column is less t					
-	<u> </u>		x3 case			e Volume:	~	gal.
Depth to Water v	w/ 80% Recharge [(He	eight of Water Column x	(0.20) + DTW]:	12.710				(2400 hrs)
Purge Equipment:		Sampling Equip	oment:			mpleted: Product:		
Disposable Bailer		Disposable Baile						
Stainless Steel Bailer		Pressure Bailer				bon Thicknes		^t
Stack Pump		Metal Filters			Visual Co	onfirmation/D		
Suction Pump	e_11	Peristaltic Pump	<u> </u>		Skimmor	/ Absorbant	Book (oiral	
Grundfos Peristaltic Pump		QED Bladder Pu	mp					gal
QED Bladder Pump	<u> </u>	Other:						gal
	MP3 556					emoved:		gal
3					Product	Fransferred to		
Start Time (purge): 1129	Weath	er Conditions:		50N/	FOL	,	
Sample Time/Da	te: 1201 / 12.22	bib Water	Color:	se	Odor: Y	N`)		
Approx. Flow Rat	te: mir	om Sedime	ent Description	:	NONE	$ \ge - $		
Did well de-water	? No If yes	, Time:	Volume:			V @ Samp	ling:	1.50
Time	Volume	Conductivi	ty Tempera	ature	D.O.	~	RP	Gauge DTW
(2400 hr.)	(Liters)	H		F)	(mg/L)		nV)	as parameters are recorded
1147	1.8 7.	\$1. deg	, do.	66	3.65	.34	6.7	
1150		99 .086	5 10.0	50	3.62		6.6	11.30
1163	<u>z.4</u> (0.	<u>99 .'qee</u>	2 10.1	182 -	3.69	13		11.41,
156	<u>1.7</u> b.	<u>90 - 90</u>	<u>e 19.3</u>	Þ₽	<u>B.69</u>	/ 13	7.3	11.50
	·	LABOD				-		······································

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-7	6 x voa viał	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)/EDC/HVOC's(8260)
	2 x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	τ x voa vial	YES	Na2S2O3	LANCASTER	EDB (8011)
	2 x 250ml ambers	YES	NP	LANCASTER	cPAH's/NAPHS(8270 SIM)/PCB's(8082)
	x 250ml poly	YES	HNO3	LANCASTER	TOTAL METALS (6010)
MMENTS:	Depth Pump S	et Δt·	16		(*)

Add/Replaced Gasket: _____

eurofins For Eurofins Lancaster Laboratories use only Lancaster Acct. # Group # Sample # instructions on reverse side correspond with circled numbers. Laboratories **Client Information** (4)Matrix **Analyses Requested** (5) SCR #: _____ acility # WBS SS49-3683-UML G-R#385694 32 Site Address Results in Dry Weight 1702 bust raking Avenue. Naphth 610705 INL -94 J value reporting needed Ź Method Sediment Surface Ground 0 0 0 Chevron PM Lead Consultant 껃 Must meet lowest detection NWTPH-Dx without Silica Gel Cleanup WHICH LEIDDSK 0923 Ø limits possible for 8260 NWTPH-Dx with Silica Gel Cleanup Containers Diss. Consultant/Office 8260 compounds Gellier-Fran, mc., dolp bus METALS 8021 MTBE Confirmation APH 5 EPH Consultant Project Mgr. Confirm MTBE + Naphthalene Oxygenates STREET, The Dist. Services 5 Confirm highest hit by 8260 8021 NPDES WA Air Potable HNOC Total Total Number of Consultant Phone # Confirm all hits by 8260 Ż 10201301-1444 6100 Run _____ oxy's on highest hit + MTBE AC Composite Sampler 8260 full scan 3 Run _____ oxy's on all hits \$ J. PRYNE NWTPH-Gx WA VPH RAH' Δ 7 FOC Water Grab 2 Collected 0 0 BTEX Lead Soil Ö W t J Sample Identification Date Time 6 Remarks 1.13.13 1 Qt X × MW-5 1103 × × ~ × 11 X × × 0960 X Y MLD.6 L L MW. 1.0 и X v ¥. V 7) Turnaround Time Requested (TAT) (please circle) Received by Relinquished by Date Date Time Time 9 12.23.13 100 Standard 5 dav 4 dav EDF/EDD Relinquished by Date Received by Date Time 72 hour 48 hour 24 hour Relinquished by Commercial Carrier: Received by Date (8) Data Package (circle if required) EDD (circle if required) Time Other ____ UPS × FedEx Type I - Full CVX-RTBU-FI_05 (default) Temperature Upon Receipt °C **Custody Seals Intact?** Yes No Other: Type VI (Raw Data)

Eurofins Lancaster Laboratories, Inc. • 2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300

Issued by Dept. 40 Managemen 7051.03

The white copy should accompany samples to Eurofins Lancaster Laboratories. The yellow copy should be retained by the client.

Chevron Northwest Region Analysis Request/Chain of Custody



- 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 Chevron SS #9-3883 1702 East Yakima Avenue Yakima, Washington

WE HAVE ENCLOSED THE FOLLOWING:

COPIES

DESCRIPTION

VIA PDF

Groundwater Monitoring and Sampling Data Package First Quarter Event of March 26, 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/9-3883

April 4, 2014 G-R #386763

63



	CHEV	RON - SITE CHECK LIST
Facility#:	Chevron #9-3883	Date: 3.2614
Address:	1702 East Yakima Ave	
City/St.:	Yakima, WA	
Status of S	ite: Bob Hace	- C'AR DEALERSHIP

DRUMS:

Please list below ALL DRUMS on site: (*i.e.*, *drum description, condition, labeling, contents, amount and location of drums*)

#	Description	Condition	Labeling	Contents	Amount @ Start	Amount @ End
	XO Dums					
	NO DUMS OBSERVED			*4		
L						

Location:

Please check the condition of ALL WELLS on site:

WELLS:

(i.e., gaskets, bolts, replaced well plug and/or well lock, well box condition and etc.)

Well ID	Gaskets (M) Missing (R) Replaced	Bolts (M) Missing (R) Replaced	Replaced Plug Y/N	Replaced Lock Y/N	Well Box Manufacturer/Size/# of Bolts	Other
MW-5	$(0000)^{-}$				BUNDREIS X Z	
MW-6	0000			-		
MW-7	0000-			4		
				/		

Additional Comments/Observations:

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 WizardTM (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 (\pm 0.1 unit), and Ec (\pm 10 uS) are required to stabilize. Additional parameters that may be required are DO (\pm 0.2 mg/l) and ORP (\pm 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.



Client/Facility#:	Chevron #9-3	883	Job Nu	mber:	385894					
Site Address:	1702 East Yak	cima Avenue	Event D	Date:	3	.26.14	- (inclusive)			
City:	Yakima, WA		Sample	r:		3.	-			
Well ID	MW-5		Date Moni	tored:	C	3.26.14				
Well Diameter	2 in.		Volume			2"= 0.17 3"= 0.38	-			
Total Depth	19.91 ft.		Factor (VF)	4"= 0.66		6"= 1.50 12"= 5.80				
Depth to Water	10.39 ft.	Check if water	column is less th	en 0.50 f	ft.					
Depth to Water w		VF = Height of Water Column >			stimated Purge		_gal.			
·			· · · · · · · · · · · · · · · · · · ·			ipleted:	(2400 hrs) (2400 hrs)			
Purge Equipment:		Sampling Equip	oment:			Product:	· · · ·			
Disposable Bailer	••••	Disposable Baile	r		Depth to V		ft			
Stainless Steel Bailer Stack Pump	•••••	Pressure Bailer Metal Filters				ydrocarbon Thickness:ft isual Confirmation/Description:				
Suction Pump		Peristaltic Pump			Visual Col	nnmation/Description	:			
Grundfos	•••••	QED Bladder Pu	mp	<u></u>		Absorbant Sock (circ				
Peristaltic Pump	×	Other: Toe				oved from Skimmer:				
QED Bladder Pump						Amt Removed from Well: gal Water Removed: gal				
Other: ×6 5- 1	<u>UPB 356</u>					ransferred to:	yai			
Start Time (purge)	6963	Weath	er Conditions:	C	DUERLA	.	· · · · · · · · · · · · · · · · · · ·			
Sample Time/Date	: 0984 1,9 a	Kater Water	Color: CUED	e o	Odor: Y /					
Approx. Flow Rate	e: 2000 m		ent Description:		ONE					
Did well de-water?	Y Kló If ye	es, Time:	Volume:	<u> </u>		@ Sampling:	10.46			
Time (2400 hr.)	Volume (Liters)	pH Conductor (µmhoo/em -		ure F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded			
da21	3.6 6	.80 .126	7.8		5.03	102.0	10.46			
<u> 0924</u>	4.0 6	.60 .124	7.8	1 -	3.00	101.4	10.46			
<u></u>	<u> </u>	2.91 .122	<u> </u>	<u> </u>	र्व. वर्ष	100.3	10.46			
						<u> </u>				

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-5	🖉 x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)/EDC/HVOC's(8260)
_	2 x 1 liter ambers	YES	HCL		NWTPH-Dx w/sgc/NWTPH-Dx
	x voa vial YES x 250ml ambers YES		Na2S2O3	LANCASTER	EDB (8011)
			NP	LANCASTER	cPAH's/NAPHS(8270 SIM)/PCB's(8082)
	x 250ml poly	YES	HNO3	LANCASTER	TOTAL METALS (6010)
MMENTS:	Depth Pump S	et At:	15-110	·	

Add/Replaced Gasket: _____

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



Client/Facility#: Site Address:	Chevron #9-3883 1702 East Yakima Aven		385894 3.26.14	_ _(inclusive)
City:	Yakima, WA	Sampler:	V./	_
Well ID	MW-6	Date Monitored:	3.26.14	
Well Diameter Total Depth	<u>2</u> in.	Volume 3/4"= 0.02 Factor (VF) 4"= 0.60		
Depth to Water		k if water column is less then 0.50		
Purge Equipment: Disposable Bailer Stainless Steel Baile Stack Pump Suction Pump Grundfos Peristaltic Pump QED Bladder Pump Other:	W/ 80% Recharge [(Height of Wate Samp Dispo Press Metal Perist QED B Other:	x3 case volume = r Column x 0.20) + DTW]:63 Iling Equipment: sable Bailer ure Bailer	Estimated Purge Volume:	ft ft ff ff ff ff ff ff ff ff ft
Start Time (purge Sample Time/Da		Weather Conditions:	OUT Y AT	
Approx. Flow Ra			NONE	
Did well de-water	? If yes, Time:		gal. DTW @ Sampling:	11.02
Time (2400 hr.)		Conductivity Temperature	D.O. ORP (mg/L) (mV)	Gauge DTW as parameters are recorded
	<u>3.6</u> <u>7.83</u> <u>4.2</u> <u>7.86</u> <u>4.9</u> <u>7.16</u>	- 122 10.08	3.63 93.0 0.72 91.6 3.79 91.0	11.02 11.02 11.02

SAMPLE ID	(#) CONTAINER	DEEDIO		Y INFORMATIC	
	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-4	🖉 x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)/EDC/HVOC's(8260)
	1 iter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx
	🖌 x voa viał	x voa vial YES Na		LANCASTER	EDB (8011)
	💁 x 250ml ambers	YES	NP	LANCASTER	cPAH's/NAPHS(8270 SIM)/PCB's(8082)
	x 250ml poly	YES	HNO3	LANCASTER	TOTAL METALS (6010)
					L
MMENTS:	Depth Pump S	et At:	15-14	,	



Client/Facility#:	Chevron #9-3	883		Job Number:	385894		
Site Address:	1702 East Yak	kima Avenue		Event Date:	3	.26.14	- (inclusive)
City:	Yakima, WA			Sampler:		N.P	-
Well ID	MW- 7		Da	ate Monitored:		8.26.14	
Well Diameter	2 in.		Volume	3/4"= 0.02		2"= 0.17 3"= 0.38	-
Total Depth	<u>19.40^{ft.}</u>		Factor (\			6"= 1.50 12"= 5.80	
Depth to Water	<u>9.72</u>	Check if water	column	is less then 0.50	ft.	.a	
		VF=				rge Volume:	_gal.
Depth to Water v	v/ 80% Recharge [(Height of Water Column x	0.20) + [DTW]: <u>11.65</u>	L Time S	itarted:	(2400 hrs)
Purge Equipment:		Complian Emil			18	completed:	. ,
Disposable Bailer		Sampling Equip				to Product:	
Stainless Steel Bailer		Disposable Baile Pressure Bailer	-		12	o Water: arbon Thickness:	
Stack Pump		Metal Filters	-			Confirmation/Description	
Suction Pump	·····	Peristaltic Pump	-	ĸ			
Grundfos		QED Bladder Pur	np _			er / Absorbant Sock (circ	
Peristaltic Pump	K	Other: TOB	ING			moved from Skimmer:	
QED Bladder Pump Other: yot	100 556					Removed:	
Outer	100 5.56				Product	t Transferred to:	
Start Time (purge)	·	Weathe		lia:	\frown		
Sample Time/Dat		and the second				24AST	<u> </u>
Approx. Flow Rat						<u>N</u>	
Did well de-water		•	Volu		JONE		a 0.1
Did well de-water	: <u> </u>			ine	gai. DT	W @ Sampling:	a.84
Time (2400 hr.)	Volume (Liters)	pH Conductivit (µmhos/em-		Temperature	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
1018	3.6 4	0.91 .103		9.70	3.7 2	98.6	9.84
(02)	4.2 6	0.94 .101		9.77	3.69	98.8	9.84
1024	<u> 4.8 </u>	96 .101		9.83	3.57	99.3	9.84
		······					-

			LABORATORY	Y INFORMATIC	DN
SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-7	💋 x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)/EDC/HVOC's(8260)
•	2 x 1 liter ambers YES 2 x voa vial YES 3 x 250ml ambers YES		HCL		NWTPH-Dx w/sgc/NWTPH-Dx
			Na2S2O3	LANCASTER	EDB (8011)
			NP	LANCASTER	cPAH's/NAPHS(8270 SIM)/PCB's(8082)
	x 250ml poly	YES	HNO3	LANCASTER	TOTAL METALS (6010)
MMENTS:	Depth Pump S	et At:	16 - 14		

Add/Replaced Gasket: _____

Add/Replaced Plug: _____ Add/Replaced Lock: _____

Chevron Northwest Region Analysis Request/Chain of Custody

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🔅 eurofins	Lancaster Laboratories		Ad	cct. # _				Grou	For Eu p # nstructio				_ Sai	mple :	#	-							स्त्री C	
(1)	Client Informati					4	Matri	(Г	5			Ar	nalys	ses l	Requ	Jest	ed				SCR #:		
Site Address 1702 East Ya Chevron PM MHO Consultant/O Gettier-Ryan , Consultant Pr BeaMha L. Ha Consultant Ph 925) 551-744 Sampler	LEIDOSRS , Inc., 6805 Sierra arding, (deanna@ 14 x180	KIMA, W/ Lead Cons Court, Si grinc.con	uitant Rus uite G, D n) /E ected	Crab C	Iposite		Water NPDES Surface	Air	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 🗍	ead Total Diss. Method	OC & HODC 'S B260	06 801/18270/2082	YAHSINA MS/MBS		Results in Dry We J value reporting r Must meet lowest limits possible for compounds 8021 MTBE Confi Confirm MTBE + I Confirm MTBE + I Confirm all hits by Run oxy's Run oxy's	meeded detection 8260 mation Naphthale t by 8260 8260 on highes	ene) st hit
Sample Identification	Q.A MW.5	Date 3.26.	Time V Ø93	Ū ×	Ŭ	Soil	×	ö	14 14	<u>Х</u> вт	82		$\times \times$	NN VN	X	Ŵ	, Le	X	r X	< >) Remar Fotal Metals In Cd, Cr, NI	clude:	Pb,
	Min . 7		Ø831 10/30	X			X X		14	X			X X	×	XX			××	X × X	K / < /				
									F												- '			
						_			E															
		1																						
Turnaround Time R	lequested (TAT) (ple 5 day			Relinqu	C	X				Date <i>3</i> ·	26		Time	7 <i>Ø</i> ,		Receiv	/ed by	ł				Date	Time	9
72 hour	48 hour	24 hour				nquished by Date Time					Received by						Time							
8 Data Package (circle Type I - Full		D (circle if r K-RTBU-FI_08		1	quishe PS _	- 7	¢omme F	cial Ca edE		, 	Oth	ner _				Receiv	/ed by					Date	Time	
Type VI (Raw Data)	Oth	ier:			Те	mpe	erature	Upor	Rec	eipt			°	°C		Сι	istoc	ly Sea	als In	tact?		Yes	N	0

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Issued by Dept. 40 Management 7051.03

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- 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 Chevron SS #9-3883 1702 East Yakima Avenue Yakima, Washington

WE HAVE ENCLOSED THE FOLLOWING:

COPIES

DESCRIPTION

VIA PDF

Groundwater Monitoring and Sampling Data Package Second Quarter Event of June 27, 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/9-3883

July 7, 2014 G-R #386763



CHEVRON - SITE CHECK LIST										
Facility#:	Chevron #9-3883		Date:	6.27.14						
Address:	1702 East Yakima	Avenue								
City/St.:	Yakima, WA			· · · · · · · · · · · · · · · · · · ·						
Status of S	Site: Bob Ha	1 CARS								

DRUMS:

Please list below ALL DRUMS on site: (*i.e., drum description, condition, labeling, contents, amount and location of drums*)

#	Description	Condition	Labeling	Contents	Amount @ Start	Amount @ End
	No Devinis					
	engite					

Location:

Please check the condition of ALL WELLS on site:

WELLS:

(i.e., gaskets, bolts, replaced well plug and/or well lock, well box condition and etc.)

Well ID	Gaskets (M) Missing (R) Replaced	Bolts (M) Missing (R) Replaced	Replaced Plug Y/N	Replaced Lock Y/N	Well Box Manufacturer/Size/# of Bolts	Other
MW-5	(0000)-				B MARRIEX 3	
MW-6	6000~			7		
MW-7	6000 ~					
	-1					
				····		

Additional Comments/Observations:

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 WizardTM (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 (\pm 0.1 unit), and Ec (\pm 10 uS) are required to stabilize. Additional parameters that may be required are DO (\pm 0.2 mg/l) and ORP (\pm 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.



Client/Facility#:	Chevron #9	-3883			Job Number:	38589)4		
Site Address:	1702 East \	akima Ave	nue		Event Date:	-	6.27	7.14	(inclusi∨e)
City:	Yakima, W	4		{	Sampler:		√;	0	
Well ID	<u></u>	_		Dat	e Monitored:		6.2	7.14	
Well Diameter Total Depth		<u>in.</u> ft.		Volume Factor (VI	3/4"= 0.02 F) 4"= 0.66	0.17 1.50 3"= 0.38 12"= 5.80			
Depth to Water	10.64				s less then 0.50				#1
Depth to Water	<u>9.27</u> w/ 80% Recharg	xVF Je [(Height of Wa			:3 case volume = TW]: <u>(</u>		Purge Vol		_gal. (2400 hrs)
		-			- 1	8	•	ted:	(2400 hrs)
Purge Equipment:			pling Equip					uct:	
Disposable Bailer			osable Baile	r _		ft			
Stainless Steel Baile	ſ		ssure Bailer					Thickness:	
Stack Pump Peristaltic Pump			al Filters			VISU	Jai Comm	nation/Description	
QED Bladder Pump	<u>×</u>		staltic Pump		<u>×</u>	Skir	nmer / Ab	sorbant Sock (circ	le one)
Other: YAT M	ob lalala		Bladder Pu	· -				from Skimmer:	
Other. 74 VV	13 376	Othe	er: <u>~~</u> 0#	DINO				from Well:	
						Wat	ter Remov	ed:	ltr
						Pro	duct Trans	ferred to:	18
Start Time (purge	e): 1041.		Weath	er Condi	tions:	5.,	7		
Sample Time/Da		6.27.14	Water	Color:	CUTAR	Odor: 1			
Approx. Flow Ra		mlpm		ent Desc		NON	\sim		
Did well de-wate		If yes, Time:			me:			Sampling:	10.93
		n yes, nine			ne			Samping	
Time (2400 hr.)	Volume (Liters)	рН	Conductivi (µS/nS µmhos/cm	Ď,	Temperature	D.C (mg/		ORP (mV)	Gauge DTW as parameters are recorded
1059	5.4	<u>6.98</u>	. 12B		16.52	et. 9	12	30.00	10.73
1102	6.3	6.96	.150	<u> </u>	16.60	2.9	60	32. B	10.81
5	7.2	6.95	. 132		16.68		<u>78</u>	33.6	10.93

			LABORATORY	INFORMATIC	DN				
SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES				
MW- 5	🕼 x voa vial	YES HCL		LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)/EDC/HVOC's(8260)				
	V x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx				
	🖌 x voa vial	YES	Na2S2O3	LANCASTER	EDB(8011) cPAH's/NAPHS(8270 SIM)/PCB's(8082)				
	3 x 250ml ambers	YES	NP	LANCASTER					
	x 250ml poly	YES	HNO3	LANCASTER	TOTAL METALS(6010)				
	<u> </u>				L				
DMMENTS:	Depth Pump S	Set At:	/	5-16					

Add/Replaced Gasket: _____

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



Client/Facility#:	Chevron #9-	3883		Job Number:	385894		gal. (2400 hrs) ft ft				
Site Address:	1702 East Ya	akima Ave	nue	Event Date:	6.2	7.14	- (inclusive)				
City:	Yakima, WA			Sampler:		s.p	- ` ´´				
Well ID	<u>MW- @</u>			Date Monitored:	b.	27.14	_				
Well Diameter	2 in		Va	blume 3/4"= 0.0	02 1"= 0.04 2	= 0.17 3"= 0.38					
Total Depth	<u>19.40</u> ft			actor (VF) 4"= 0.6		- 1.50 12"= 5.80					
Depth to Water	<u>11.17</u> ft	Che	eck if water co	lumn is less then 0.5	0 ft.						
	0.23	_xvf	=~		Estimated Purge V	olume: -	_gal.				
Depth to Water	w/ 80% Recharge	e [(Height of Wat	ter Column x 0.2	20) + DTW]: <u>A-B</u>							
Purge Equipment:		Sam	pling Equipme	ant.		leted:					
Disposable Bailer			osable Bailer	si1t.							
Stainless Steel Baile	r		sure Bailer	<u></u>							
Stack Pump		Meta	al Filters			rmation/Description					
Peristaltic Pump		Peri	staltic Pump	X							
QED Bladder Pump		QED	Bladder Pump			bsorbant Sock (circ					
Other: VSI N	<u>196 556</u>	Othe	er: <u>тов</u> і	NG		ed from Skimmer: ed from Well:					
					Water Remo		ltr				
*					Product Trai	nsferred to:					
Otent Time /	y de u		147	0. I'''							
Start Time (purge				Conditions:	SUN						
Sample Time/Da				lor: <u>aear</u>	_Odor: Y /N	Ŋ					
Approx. Flow Ra		_mlpm /		Description:	NONE						
Did well de-wate	r? <u>/X/O</u> If	yes, Time: _		Volume:	Itrs DTW @	Sampling:	11.26				
Time (2400 hr.)	Volume (Liters)	рН	Conductivity (µS mS µmhos/cm)	Temperature	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded				
1000/	5.4	6.96, -	- 110.3	14.67	2.26	42.5	11.26				
	$\frac{6.3}{70}$	6.94 -	.166		2.30	<u></u>	11.20				
	<u></u>	<u>w·7</u> ~	.168	7	<u>~.uu</u>	86.6	11.26				

LABORATORY INFORMATION											
SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES						
MW-6	10 x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)/EDC/HVOC's(8260)						
•	1 x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx						
	1/ x voa vial	YES	Na2S2O3	LANCASTER	EDB(8011) cPAH's/NAPHS(8270 SIM)/PCB's(8082)						
	🔊 x 250ml ambers	YES	NP	LANCASTER							
	x 250ml poly	YES	HNO3	LANCASTER	TOTAL METALS(6010)						
					<u> </u>						
DMMENTS:	Depth Pump S	Set At:		15-16							

Add/Replaced Gasket: _____



Client/Facility#:	Chevron #9	-3883		Job	Number:	385894			
Site Address:	1702 East Y	'akima Ave	nue	Eve	nt Date:	6	2 47.	14	- (inclusive)
City:	Yakima, WA			San	npler:		04	2	-
Well ID	MW- 7			Date M	lonitored:		6.27.	11	
Well Diameter	2 i	n.	1		•				
Total Depth	19.40	 ft.		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	
Depth to Water	9.94	it. 🗍 Che	eck if water	column is les	s then 0.50 f	ft.	- <u></u>]
<u>.</u>	9.46	xvf~		x3 ca	se volume = E	stimated Pure	ge Volume:_		_gal.
Depth to Water v	w/ 80% Recharg	IE [(Height of Wa	ter Column x		A				(2400 hrs)
							ompleted:		
Purge Equipment:		San	pling Equip	ment:		Depth to	o Product:		ft
Disposable Bailer			osable Bailer	r		Depth to	o Water:		ft
Stainless Steel Bailer	r		sure Bailer			ft			
Stack Pump			al Filters			Visual C	Confirmation	/Description	:
Peristaltic Pump	<u>×</u>		staltic Pump		×	Chimme			
QED Bladder Pump			Bladder Pur				er / Absorbar moved from		
Other: W	25 MMG_	Othe	er: <u> </u>	BING		1	moved from		
							Removed:		ltr ltr
							Transferred	to:	
Start Time (purge				er Conditior		Sin			
Sample Time/Da	te: <u>1208/</u>	6-27-14		Color:		Odor: Y /	<u>() </u>		
Approx. Flow Ra	te: <u>300</u>	_mlpm 🖊	Sedime	ent Descript	ion:	NONE			
Did well de-water	r? <u>Nó</u>	lf yes, Time: _		Volume:		_ Itrs DTV	V @ Sam	pling:	10.09
Time (2400 hr.)	Volume (Liters)	рН	Conductivit (µS mS µmhos/cm		perature / F)	D.O. (mg/L)		ORP (mV)	Gauge DTW as parameters are recorded
	5.4	6.91	.pa:	<u>5 r</u>	Lie -	R.52		3.3	10.00
1000	<u><u>63</u></u>	6.93	. \$96	14	1.27	2.56		5.0	10.0090
1203	1.2	6.96	. Ø9	19 _17	1.84	2.60	6	7.3	(\$. \$P
4950 C							_		

	LABORATORY INFORMATION											
SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES							
MW- 7	🖉 🖉 x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)/EDC/HVOC's(8260)							
	A x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc/NWTPH-Dx							
	🚜 x voa vial	YES	Na2S2O3	LANCASTER	EDB(8011)							
	3 x 250ml ambers	YES	NP	LANCASTER	cPAH's/NAPHS(8270 SIM)/PCB's(8082)							
	/ x 250ml poly	YES	HNO3	LANCASTER	TOTAL METALS(6010)							
COMMENTS:	Depth Pump S	et At:	<u></u>	15-16								

Add/Replaced Gasket:

Add/Replaced Bolt: _____

Chevron Northwest Region Analysis Request/Chain of Custody

🔅 eurofins	Lancaster Laboratories		Ad	cct. #				Group	p#				_ Sa	oratorie Imple d with c	#						4		-	
(1)	Client Inform	nation			K	4)	Matrix	1.000	Г	5		1000	Ar	nalys	ses	Requ	uest	ed		× 4		000 #		
Facility # SS#9-3883-O	ML G-R#3858	WBS 94			Т		/		1				260							-17	2	SCR #:	and the second second	T
Site Address 1702 East Ya	kima Avenue, '	YAKIMA, WA					ø d						58.							62	\mathcal{S}	Results in Dry We	-	
Chevron PM MHO	LEIDOSR	Lead Consu	Itant Rus	sell S	Shrej	ent Bent	Grognd Surface			Naphth			SC'	Ø	J dnu		Method	Ş			02	Must meet lowest limits possible for	detection	
Consultant/Office Gettler-Ryan,	Inc., 6805 Sier	ra Court, Su	ite G, D	ublin,	CA		Sul Sul		Containers	8260 N			$+1\sqrt{6}$	NWTPH-Dx with Silica Gel Cleanup	Gel Cleanup			ME		H.		compounds		
Consultant Project Mgr.									onts			ş	$\mathbf{\hat{\mathbf{x}}}$	Gel C	ca G	PH [Diss.	57	S	A.		Confirm MTBE + I		e
Deanna L. Ha Consultant Phone #	Deanna L. Harding, (deanna@grinc.com)						e v	Air	of C	8021		Oxygenates	EO(lica (t Silic	WA EPH		M	R	2	2	Confirm highest h	-	
(925) 551-744	4 x180			Г			Potable NPDES		jer ()xyge	W	ith Si	ithou	5		.1	^v	N	2	Confirm all hits by		hit
Sampler		J. Pm	NE	3	Composite				Number (MTBE	8260 full scan		+Gx	-Dx w	NWTPH-Dx without Silica		Total	74	00	H.	ă	Run oxy's		-
2	· .		ected	Grab	du	Soil	Water	_	Total	BTEX +	60 fu		NWTPH-Gx	TPF	VTPF	WA VPH	ead	P	łu	2				
Sample Identification	21	Date	Time	Ū	Ŭ I	ŭ	<u>></u>	Ö	Ĕ	8	82		NN	Ž	N	Ň	Le	1-	_		_¥	6) Remai	'ks	
	MANE	6.27.14	IIID		+		<u> </u>	+		X			<u>х</u>		~				V	X	\mathbf{x}	Total Metals In	ciude: f	ъ,
	MUD. C	2	1015	\mathbf{x}	+	+	X		14	X			X	X	4			$\overline{\mathbf{x}}$	$\overline{}$	$\overline{\mathbf{v}}$		Cd, Cr, NI		
	MW-7		1102	×	1		X		10	X			X	X	X			X	×	X	Ž	The QA analyses nwTPH BTax+m Hu	a	ine
		_		╏──┼	+	+		+												+				1
																						omalyses	С.	
																						NOTAM	~~ X	BUD
						_		<u> </u>	<u> </u>													BTax +M	TBE	
					\rightarrow	_		<u> </u>		<u> </u>												(III)	LM	2/14
					+			+	┨──												-	The	1	<i>•(</i> •
						-			\mathbf{t}													\bigcirc		
7 Turnaround Time R	Requested (TAT)	(please circle)		Relinqu	ished t	y')	Date			Time	and a	(Recei	ved by					Date	Time	9
(Standard	(Standard) 5 day 4 day				(<u> </u>				27.	1		tØØ	,									
72 hour	ur 48 hour EDF/EDD Relinquis				iished b	by	. (Date			Time			Recei	ved by					Date	Time	3
8) Data Package (circle if required) EDD (circle if required) Relinquis				uished	d by C	Commerc	cial Ca	arrier:	L						Recei	ved by		1.1.1			Date	Time		
Type I - Full CVX-RTBU-FI_05 (default)				PS		_ F	edE>	<		Otl	ner _													
Type VI (Raw Data)					Ter	npei	ratu re l	Jpon	n Rec	ceipt				°C	a	Сι	ustoc	ly Se	eals I	ntact	?	Yes	No	

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The white copy should accompany samples to Eurofins Lancaster Laboratories. The yellow copy should be retained by the client.

Appendix C: Laboratory Analytical Reports





Lancaster Laboratories Environmental



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REVISED

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

February 03, 2014

Project: 93883

Submittal Date: 08/31/2013 Group Number: 1415667 PO Number: 0015119898 Release Number: SHRILL HOPKINS State of Sample Origin: WA

Client Sample Description Trip Blank-082713 Water Rinsate-082713 Grab Water MW-5-10 Grab Soil MW-5-13 Grab Soil MW-6-8 Grab Soil MW-6-13 Grab Soil DUP-082913 Grab Soil MW-6-19 Grab Soil Rinsate-082913 Grab Water MW-7-11 Grab Soil MW-7-19 Grab Soil

Lancaster Labs (LL)

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

ELECTRONIC SAIC COPY TO

Attn: Russ Shropshire



Lancaster Laboratories Environmental



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REVISED

Respectfully Submitted,

Lyn M. Frederiksen

Lynn M. Frederiksen Principal Specialist Group Leader

(717) 556-7255



Lancaster Laboratories Environmental

Analysis Report

Account

LL Sample # WW 7182489 LL Group # 1415667

11255

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REVISED

Sample Description: Trip Blank-082713 Water Facility# 93883 1702 E. Yakima Ave - Yakima, WA

Project Name: 93883

EYTRB

Collected: 08/27/2013 16:50

Submitted: 08/31/2013 08:50 Reported: 02/03/2014 08:48

Chevron L4310 6001 Bollinger Canyon Road San Ramon CA 94583

CAT No.	Analysis Name	CAS Numbe	As Received er Result	As Received Method Detection Limit	Dilution Factor
GC Vo	latiles E	CY 97-602 NWTPH-	Gx ug/l	ug/l	
08274	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Vo	latiles S	W-846 8021B	ug/l	ug/l	
02102	Benzene	71-43-2	N.D.	0.5	1
02102	Ethylbenzene	100-41-4	N.D.	0.5	1
02102	Methyl tert-Butyl Eth	er 1634-04-4	4 N.D.	2.5	1
02102	Toluene	108-88-3	N.D.	0.5	1
02102	Total Xylenes	1330-20-	7 N.D.	1.5	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
08274	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH- Gx	1	13246B53A	09/04/2013 16:32	Catherine J Schwarz	1
02102	Method 8021 Water Master	SW-846 8021B	1	13246B53A	09/04/2013 16:32	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	13246B53A	09/04/2013 16:32	Catherine J Schwarz	1



Analysis Report

LL Sample # WW 7182490 LL Group # 1415667 Account # 11255

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REVISED

Sample Description: Rinsate-082713 Grab Water Facility# 93883 1702 E. Yakima Ave - Yakima, WA

Project Name: 93883

EYR27

Collected: 08/27/2013 17:00 by KL

Submitted: 08/31/2013 08:50 Reported: 02/03/2014 08:48

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		
10335	Benzene		71-43-2	N.D.	0.5	1	
10335	Bromodichloromethane	•	75-27-4	N.D.	1	1	
10335	Bromoform		75-25-2	N.D.	1	1	
10335	Bromomethane		74-83-9	N.D.	1	1	
10335	Carbon Tetrachloride	•	56-23-5	N.D.	1	1	
10335	Chlorobenzene		108-90-7	N.D.	0.8	1	
10335	Chloroethane		75-00-3	N.D.	1	1	
10335	Chloroform		67-66-3	N.D.	0.8	1	
10335	Chloromethane		74-87-3	N.D.	1	1	
10335	Dibromochloromethane	:	124-48-1	N.D.	1	1	
10335	1,2-Dibromoethane		106-93-4	N.D.	0.5	1	
10335	1,2-Dichlorobenzene		95-50-1	N.D.	1	1	
10335	1,3-Dichlorobenzene		541-73-1	N.D.	1	1	
10335	1,4-Dichlorobenzene		106-46-7	N.D.	1	1	
10335	1,1-Dichloroethane		75-34-3	N.D.	1	1	
10335	1,2-Dichloroethane		107-06-2	N.D.	0.5	1	
10335	1,1-Dichloroethene		75-35-4	N.D.	0.8	1	
	cis-1,2-Dichloroethe		156-59-2	N.D.	0.8	1	
	trans-1,2-Dichloroet	hene	156-60-5	N.D.	0.8	1	
10335	1,2-Dichloropropane		78-87-5	N.D.	1	1	
	cis-1,3-Dichloroprop		10061-01-5	N.D.	1	1	
	trans-1,3-Dichloropr	opene	10061-02-6	N.D.	1	1	
10335	Ethylbenzene		100-41-4	N.D.	0.5	1	
	Freon 113		76-13-1	N.D.	2	1	
	Methyl Tertiary Buty	'l Ether	1634-04-4	N.D.	0.5	1	
10335	Methylene Chloride		75-09-2	N.D.	2	1	
10335	1,1,2,2-Tetrachloroe	thane	79-34-5	N.D.	1	1	
10335	Tetrachloroethene		127-18-4	N.D.	0.8	1	
10335	Toluene		108-88-3	N.D.	0.5	1	
10335	1,1,1-Trichloroethan		71-55-6	N.D.	0.8	1	
10335	1,1,2-Trichloroethan	le	79-00-5	N.D.	0.8	1	
10335	Trichloroethene		79-01-6	N.D.	1	1	
10335	Trichlorofluorometha	ine	75-69-4	N.D.	2	1	
10335	Vinyl Chloride		75-01-4	N.D.	1	1 1	
10335	m+p-Xylene		179601-23-1	N.D. N.D.	0.5 0.5	1	
10335	o-Xylene		95-47-6	N.D.	0.5	1	
GC/MS	Semivolatiles	SW-846	8270C SIM	ug/l	ug/l		
08357	Benzo(a)anthracene		56-55-3	N.D.	0.013	1	
08357	Benzo(a)pyrene		50-32-8	N.D.	0.013	1	
08357	Benzo(b)fluoranthene	2	205-99-2	N.D.	0.013	1	
08357	Benzo(k)fluoranthene		207-08-9	N.D.	0.013	1	
08357	Chrysene		218-01-9	N.D.	0.013	1	
08357	Dibenz(a,h)anthracen	le	53-70-3	N.D.	0.013	1	
08357	Indeno(1,2,3-cd)pyre		193-39-5	N.D.	0.013	1	
08357	1-Methylnaphthalene		90-12-0	N.D.	0.013	1	
08357	2-Methylnaphthalene		91-57-6	N.D.	0.013	1	
08357	Naphthalene		91-20-3	N.D.	0.040	1	



Analysis Report

Account

LL Sample # WW 7182490 LL Group # 1415667

11255

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Sample Description: Rinsate-082713 Grab Water Facility# 93883 1702 E. Yakima Ave - Yakima, WA

Project Name: 93883

Collected: 08/27/2013 17:00 by KL

Submitted: 08/31/2013 08:50 Reported: 02/03/2014 08:48 Chevron L4310 6001 Bollinger Canyon Road San Ramon CA 94583

EYR27

CAT No.	Analysis Name		CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Vo	latiles	ECY 97-602	NWTPH-Gx	ug/l	ug/l	
08273	NWTPH-Gx water C7-	212	n.a.	N.D.	50	1
Pesti	cides/PCBs	SW-846 808	2	ug/l	ug/l	
10227	PCB-1016		12674-11-2	N.D.	0.083	1
10227	PCB-1221		11104-28-2	N.D.	0.083	1
10227	PCB-1232		11141-16-5	N.D.	0.17	1
10227	PCB-1242		53469-21-9	N.D.	0.083	1
10227	PCB-1248		12672-29-6	N.D.	0.083	1
10227	PCB-1254		11097-69-1	N.D.	0.083	1
10227	PCB-1260		11096-82-5	N.D.	0.12	1
GC Pe	troleum	ECY 97-602	NWTPH-Dx	ug/l	ug/l	
Hydro	carbons	modified				
08271	Diesel Range Organ	ics C12-C24	n.a.	N.D.	33	1
08271	Heavy Range Organi	cs C24-C40	n.a.	N.D.	76	1
GC Pe	troleum	ECY 97-602	NWTPH-Dx	ug/l	ug/l	
Hydro	carbons w/Si	modified				
12005	DRO C12-C24 w/Si G	el	n.a.	N.D.	33	1
	HRO C24-C40 w/Si G		n.a.	N.D.	76	1
The	reverse surrogate, o	apric acid, is	s present at <	18.		
Metal	S	SW-846 601	.0B	ug/l	ug/l	
07049	Cadmium		7440-43-9	N.D.	0.76	1
07051	Chromium		7440-47-3	N.D.	1.6	1
07055	Lead		7439-92-1	N.D.	4.7	1
07061	Nickel		7440-02-0	N.D.	1.5	1
07072	Zinc		7440-66-6	N.D.	2.0	1

General Sample Comments

State of Washington Lab Certification No. C259 Carcinogenic PAHs have been reported for this sample

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	8260 Ext. Water Master w/GRO	SW-846 8260B	1	W132482AA	09/05/2013 16:25	Emily R Styer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W132482AA	09/05/2013 16:25	Emily R Styer	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13246WAC026	09/04/2013 07:49	Brian K Graham	1



Analysis Report

Account

LL Sample # WW 7182490

11255

LL Group # 1415667

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Sample Description: Rinsate-082713 Grab Water Facility# 93883 1702 E. Yakima Ave - Yakima, WA

Project Name: 93883

Collected: 08/27/2013 17:00 by KL

Submitted: 08/31/2013 08:50 Reported: 02/03/2014 08:48 Chevron L4310 6001 Bollinger Canyon Road San Ramon CA 94583

EYR27

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13246WAC026	09/03/2013	17:10	JoElla L Rice	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH- Gx	1	13246B20A	09/04/2013	11:34	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	13246B20A	09/04/2013	11:34	Catherine J Schwarz	1
10227	PCBs in Water 8082	SW-846 8082	1	132460003A	09/04/2013	08:56	Monica M Souders	1
11117	PCB Waters Extraction	SW-846 3510C	1	132460003A	09/03/2013	15:00	Seth A Farrier	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH- Dx modified	1	132490033A	09/10/2013	10:16	Glorines Suarez- Rivera	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH- Dx modified	1	132490032A	09/11/2013	13:43	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH- Dx 06/97	1	132490032A	09/09/2013	11:15	Denise L Trimby	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH- Dx 06/97	1	132490033A	09/09/2013	11:15	Denise L Trimby	1
07049	Cadmium	SW-846 6010B	1	132481848006	09/07/2013	01:38	John W Yanzuk II	1
07051	Chromium	SW-846 6010B	1	132481848006	09/07/2013	01:38	John W Yanzuk II	1
07055	Lead	SW-846 6010B	1	132481848006	09/07/2013	01:38	John W Yanzuk II	1
07061	Nickel	SW-846 6010B	1	132481848006	09/07/2013	01:38	John W Yanzuk II	1
07072	Zinc	SW-846 6010B	1	132481848006	09/07/2013	01:38	John W Yanzuk II	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132481848006	09/06/2013	07:19	James L Mertz	1



Analysis Report

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LL Sample # SW 7182491 LL Group # 1415667 Account # 11255

Sample Description: MW-5-10 Grab Soil Facility# 93883 1702 E. Yakima Ave - Yakima, WA

Project Name: 93883

Collected: 08/29/2013 10:00 by KL

Submitted: 08/31/2013 08:50 Reported: 02/03/2014 08:48 Chevron L4310 6001 Bollinger Canyon Road San Ramon CA 94583

EY510

GC Volatiles

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS	Volatiles SW-846 82	60B	mg/kg	mg/kg	
10237	Benzene	71-43-2	N.D.	0.022	42.55
10237	Bromodichloromethane	75-27-4	N.D.	0.044	42.55
10237	Bromoform	75-25-2	N.D.	0.044	42.55
10237	Bromomethane	74-83-9	N.D.	0.087	42.55
10237	Carbon Tetrachloride	56-23-5	N.D.	0.044	42.55
10237	Chlorobenzene	108-90-7	N.D.	0.044	42.55
10237	Chloroethane	75-00-3	N.D.	0.087	42.55
10237	Chloroform	67-66-3	N.D.	0.044	42.55
10237	Chloromethane	74-87-3	N.D.	0.087	42.55
10237	Dibromochloromethane	124-48-1	N.D.	0.044	42.55
10237	1,2-Dibromoethane	106-93-4	N.D.	0.044	42.55
10237	1,2-Dichlorobenzene	95-50-1	N.D.	0.044	42.55
10237	1,3-Dichlorobenzene	541-73-1	N.D.	0.044	42.55
10237	1,4-Dichlorobenzene	106-46-7	N.D.	0.044	42.55
10237	1,1-Dichloroethane	75-34-3	N.D.	0.044	42.55
10237	1,2-Dichloroethane	107-06-2	N.D.	0.044	42.55
10237	1,1-Dichloroethene	75-35-4	N.D.	0.044	42.55
10237	cis-1,2-Dichloroethene	156-59-2	N.D.	0.044	42.55
10237	trans-1,2-Dichloroethene	156-60-5	N.D.	0.044	42.55
10237	1,2-Dichloropropane	78-87-5	N.D.	0.044	42.55
10237	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.044	42.55
10237	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.044	42.55
10237	Ethylbenzene	100-41-4	N.D.	0.044	42.55
10237	Freon 113	76-13-1	N.D.	0.087	42.55
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.022	42.55
10237	Methylene Chloride	75-09-2	N.D.	0.087	42.55
10237	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.044	42.55
10237	Tetrachloroethene	127-18-4	N.D.	0.044	42.55
10237	Toluene	108-88-3	N.D.	0.044	42.55
10237	1,1,1-Trichloroethane	71-55-6	N.D.	0.044	42.55
10237	1,1,2-Trichloroethane	79-00-5	N.D.	0.044	42.55
10237	Trichloroethene	79-01-6	N.D.	0.044	42.55
10237	Trichlorofluoromethane	75-69-4	N.D.	0.087	42.55
10237	Vinyl Chloride	75-01-4	N.D.	0.044	42.55
10237	Xylene (Total)	1330-20-7	0.11	0.044	42.55
Repo:	rting limits were raised due to i	nterference from	m the sample matrix.		
GC/MS	Semivolatiles SW-846 82	70C SIM	mg/kg	mg/kg	
10725	Benzo(a) anthracene	56-55-3	0.021	0.0068	10
10725	Benzo(a)pyrene	50-32-8	0.023	0.0068	10
10725	Benzo(b)fluoranthene	205-99-2	0.042	0.0068	10
10725	Benzo(k)fluoranthene	207-08-9	0.0088	0.0068	10
10725	Chrysene	218-01-9	0.093	0.0034	10
10725	Dibenz(a,h)anthracene	53-70-3	0.010	0.0068	10
10725	Indeno(1,2,3-cd)pyrene	193-39-5	0.013	0.0068	10
10725	1-Methylnaphthalene	90-12-0	1.2	0.0068	10
10725	2-Methylnaphthalene	91-57-6	2.0	0.0068	10
10725	Naphthalene	91-20-3	0.51	0.0068	10

mg/kg

mg/kg

ECY 97-602 NWTPH-Gx



Analysis Report

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LL Sample # SW 7182491 LL Group # 1415667 Account # 11255

Sample	Description:	MW - 5 -	-10	Grab	So	il			
		Facil	Lity	7# 938	83				
		1702	Е.	Yakim	na i	Ave	-	Yakima,	WA

Project Name: 93883

EY510

Collected: 08/29/2013 10:00 by KL

Submitted: 08/31/2013 08:50 Reported: 02/03/2014 08:48

CAT No.	Analysis Name		CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC Vo	latiles	ECY 97-602	NWTPH-Gx	mg/kg	mg/kg	
02005	TPH by NWTPH-Gx soi	ls	n.a.	480	19	466.61
Pesti	cides/PCBs	SW-846 808	2	mg/kg	mg/kg	
10736	PCB-1016		12674-11-2	N.D.	0.0037	1
10736	PCB-1221		11104-28-2	N.D.	0.0047	1
10736	PCB-1232		11141-16-5	N.D.	0.0082	1
10736	PCB-1242		53469-21-9	N.D.	0.0034	1
10736	PCB-1248		12672-29-6	N.D.	0.0034	1
	PCB-1254		11097-69-1	N.D.	0.0034	1
10736	PCB-1260		11096-82-5	N.D.	0.0050	1
GC Pe	troleum	ECY 97-602	NWTPH-Dx	mg/kg	mg/kg	
Hydro	carbons	modified				
08272	Diesel Range Organi	cs C12-C24	n.a.	2,100	31	10
	Heavy Range Organic		n.a.	1,600	100	10
GC Pet	troleum	ECY 97-602	WA EPH	mg/kg	mg/kg	
	carbons	201 57 002		5. 5	5. 5	
-			~ ~	98	F 1	F
	>C10-C12 Aliphatic >C10-C12 Aromatic		n.a. n.a.	6.0	5.1 2.0	5 2
	>C10-C12 Aromatic >C12-C16 Aliphatic			590	5.1	2
	>C12-C16 Ariphatic		n.a. n.a.	53	2.0	2
	>C16-C21 Aliphatic		n.a.	560	15	5
	>C16-C21 Ariphacic		n.a.	110	4.1	2
	>C21-C34 Aliphatic		n.a.	320	4.1 30	2
	>C21-C34 Ariphatic		n.a.	91	4.1	2
The	holding time was not ide of the holding the				1.1	2
GC Pe	troleum	ECY 97-602	WA VPH	mg/kg	mg/kg	
Hydro	carbons					
05666	Benzene		71-43-2	N.D.	0.0480	46.75
05666	C5-C6 Aliphatic Hyd	rocarbons	n.a.	N.D.	2.40	46.75
05666	C6-C8 Aliphatic Hyd	rocarbons	n.a.	N.D.	2.40	46.75
05666	C8-C10 Aliphatic Hy	drocarbons	n.a.	12.3	2.40	46.75
05666	C8-C10 Aromatic Hyd	rocarbons	n.a.	10.4	2.40	46.75
	Ethylbenzene		100-41-4	N.D.	0.0480	46.75
	Methyl t-butyl ethe	r	1634-04-4	N.D.	0.0480	46.75
	Toluene		108-88-3	N.D.	0.0480	46.75
05666	o-Xylene		95-47-6	N.D.	0.0480	46.75
05666	m,p-Xylenes		179601-23-1	N.D.	0.0960	46.75
GC Pe	troleum	ECY 97-602	NWTPH-Dx	mg/kg	mg/kg	
Hydro	carbons w/Si	modified				
-	DRO C12-C24 w/Si Ge		n.a.	2,000	31	10
	HRO C24-C40 w/Si Ge		n.a.	1,100	100	10
	reverse surrogate ca					



Analysis Report

Account

LL Sample # SW 7182491

11255

LL Group # 1415667

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REVISED

Sample	Description:	MW - 5 ·	-10	Grab	Sc	il			
		Faci	lity	7# 938	83				
		1702	Ε.	Yakim	na	Ave	-	Yakima,	WA

Project Name: 93883

EY510

Collected: 08/29/2013 10:00 by KL

Submitted: 08/31/2013 08:50 Reported: 02/03/2014 08:48 Chevron L4310 6001 Bollinger Canyon Road San Ramon CA 94583

CAT No.	Analysis Name	CAS NU	Dry mber Result	Dry Method Detection Limit	Dilution Factor
	to the dilution of not be determined	f the sample extract, ca	apric acid recovery		
Metal	s	SW-846 6010B	mg/kg	mg/kg	
06949	Cadmium	7440-4	3-9 0.674	0.152	2
06951	Chromium	7440-4	7-3 290	0.319	2
06955	Lead	7439-9	2-1 123	0.997	2
06961	Nickel	7440-0	2-0 45.0	0.259	2
06972	Zinc	7440-6	6-6 154	0.399	2
Wet Cl	hemistry	SM 2540 G-1997	8	8	
00111	Moisture	n.a.	2.6	0.50	1
	-	s Celsius. The moisture	of the sample after ove result reported is on	1 0	

General Sample Comments

State of Washington Lab Certification No. C259 Carcinogenic PAHs have been reported for this sample

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
10237	EPA SW-846/8260 (Soil)	SW-846 8260B	1	Q132461AA	09/03/2013	19:41	Sarah A Guill	42.55
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201324332242	08/29/2013	10:00	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201324332242	08/29/2013	10:00	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201324332242	08/29/2013	10:00	Client Supplied	1
10725	SIM SVOA (microwave)	SW-846 8270C SIM	1	13249SLD026	09/13/2013	07:28	Mark A Clark	10
10811	BNA Soil Microwave SIM	SW-846 3546	1	13249SLD026	09/09/2013	11:45	Kelli M Barto	1
02005	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH- Gx	1	13249A31A	09/06/2013	20:11	Laura M Krieger	466.61
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201324332242	08/29/2013	10:00	Client Supplied	n.a.
10736	PCBs Soil 8082 Microwave	SW-846 8082	1	132460012A	09/04/2013	19:22	Monica M Souders	1
10497	PCB Microwave Soil Extraction	SW-846 3546	1	132460012A	09/04/2013	06:00	Roman Kuropatkin	1
08272	NWTPH-Dx soil	ECY 97-602 NWTPH- Dx modified	1	132520012A	09/11/2013	23:15	Glorines Suarez- Rivera	10
05970	WA EPH in Soil	ECY 97-602 WA EPH	1	132670018A	09/26/2013	23:33	Heather E Williams	2



Analysis Report

Account

LL Sample # SW 7182491 LL Group # 1415667

11255

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REVISED

Sample Description: MW-5-10 Grab Soil Facility# 93883 1702 E. Yakima Ave - Yakima, WA

Project Name: 93883

Collected: 08/29/2013 10:00 by KL

Submitted: 08/31/2013 08:50 Reported: 02/03/2014 08:48

EY510

Laboratory Sample Analysis Record

Chevron L4310

6001 Bollinger Canyon Road

San Ramon CA 94583

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
05970	WA EPH in Soil	ECY 97-602 WA EPH	1	132670018A	09/27/2013		Heather E Williams	
05666	WA- VPH soils	ECY 97-602 WA VPH	1	13268A54A	09/25/2013	17:45	Nicholas R Rossi	46.75
12006	NWTPH-Dx soil w/ 10g Si Gel	ECY 97-602 NWTPH- Dx modified	1	132520013A	09/12/2013	07:51	Glorines Suarez- Rivera	10
12008	NW Dx soil w/ 10g column	ECY 97-602 NWTPH- Dx 06/97	1	132520013A	09/09/2013	19:30	Sally L Appleyard	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH- Dx 06/97	1	132520012A	09/09/2013	19:30	Sally L Appleyard	1
11213	WA EPH Soils Extraction	ECY 97-602 WA EPH	1	132670018A	09/25/2013	02:30	Sherry L Morrow	1
06170	GC - Bulk Soil Prep (VPH)	MA DEP VPH 5/04	1	201326132447	09/18/2013	11:24	Larry E Bevins	n.a.
00497	Silica Gel Fractionation	SW-846 3630C modified	1	132670018A	09/25/2013	14:30	Edwin Ortiz	1
06949	Cadmium	SW-846 6010B	1	132475708003	09/06/2013	13:54	Eric L Eby	2
06951	Chromium	SW-846 6010B	1	132475708003	09/06/2013	13:54	Eric L Eby	2
06955	Lead	SW-846 6010B	1	132475708003	09/06/2013	13:54	Eric L Eby	2
06961	Nickel	SW-846 6010B	1	132475708003	09/06/2013	13:54	Eric L Eby	2
06972	Zinc	SW-846 6010B	1	132475708003	09/06/2013	13:54	Eric L Eby	2
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	132475708003	09/05/2013	10:00	Denise K Conners	1
00111	Moisture	SM 2540 G-1997	2	13249820001A	09/06/2013	07:47	William C Schwebel	1



Analysis Report

LL Sample # SW 7182492 LL Group # 1415667 Account # 11255

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REVISED

Sample Description: MW-5-13 Grab Soil Facility# 93883 1702 E. Yakima Ave - Yakima, WA

Project Name: 93883

EY513

GC Volatiles

Collected: 08/29/2013 10:05 by KL

Submitted: 08/31/2013 08:50 Reported: 02/03/2014 08:48 Chevron L4310 6001 Bollinger Canyon Road San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS	Volatiles SW-846	8260B	mg/kg	mg/kg	
10237	Benzene	71-43-2	0.002	0.0006	1.05
10237	Bromodichloromethane	75-27-4	N.D.	0.001	1.05
10237	Bromoform	75-25-2	N.D.	0.001	1.05
10237	Bromomethane	74-83-9	N.D.	0.002	1.05
	Carbon Tetrachloride	56-23-5	N.D.	0.001	1.05
10237	Chlorobenzene	108-90-7	N.D.	0.001	1.05
10237	Chloroethane	75-00-3	N.D.	0.002	1.05
	Chloroform	67-66-3	N.D.	0.001	1.05
	Chloromethane	74-87-3	N.D.	0.002	1.05
	Dibromochloromethane	124-48-1	N.D.	0.001	1.05
	1,2-Dibromoethane	106-93-4	N.D.	0.001	1.05
	1,2-Dichlorobenzene	95-50-1	N.D.	0.001	1.05
	1,3-Dichlorobenzene	541-73-1	N.D.	0.001	1.05
	1,4-Dichlorobenzene	106-46-7	N.D.	0.001	1.05
	1,1-Dichloroethane	75-34-3	N.D.	0.001	1.05
	1,2-Dichloroethane	107-06-2	N.D.	0.001	1.05
	1,1-Dichloroethene	75-35-4	N.D.	0.001	1.05
	cis-1,2-Dichloroethene	156-59-2	N.D.	0.001	1.05
	trans-1,2-Dichloroethene	156-60-5	N.D.	0.001	1.05
	1,2-Dichloropropane	78-87-5	N.D. N.D.	0.001	1.05
		10061-01-5	N.D. N.D.		1.05
10237	cis-1,3-Dichloropropene			0.001	
	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.001	1.05
	Ethylbenzene	100-41-4	N.D.	0.001	1.05
	Freon 113	76-13-1	N.D.	0.002	1.05
	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0006	1.05
	Methylene Chloride	75-09-2	N.D.	0.002	1.05
	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.001	1.05
	Tetrachloroethene	127-18-4	N.D.	0.001	1.05
	Toluene	108-88-3	N.D.	0.001	1.05
	1,1,1-Trichloroethane	71-55-6	N.D.	0.001	1.05
	1,1,2-Trichloroethane	79-00-5	N.D.	0.001	1.05
	Trichloroethene	79-01-6	N.D.	0.001	1.05
	Trichlorofluoromethane	75-69-4	N.D.	0.002	1.05
	Vinyl Chloride	75-01-4	N.D.	0.001	1.05
10237	Xylene (Total)	1330-20-7	N.D.	0.001	1.05
GC/MS	Semivolatiles SW-846	8270C SIM	mg/kg	mg/kg	
10725	Benzo(a)anthracene	56-55-3	0.0038	0.00072	1
	Benzo(a)pyrene	50-32-8	0.0049	0.00072	1
10725	Benzo(b)fluoranthene	205-99-2	0.0085	0.00072	1
10725	Benzo(k)fluoranthene	207-08-9	0.0033	0.00072	1
	Chrysene	218-01-9	0.0088	0.00036	1
	Dibenz(a,h)anthracene	53-70-3	0.0011	0.00072	1
10725	Indeno (1,2,3-cd) pyrene	193-39-5	0.0029	0.00072	1
	1-Methylnaphthalene	90-12-0	0.015	0.00072	1
		91-57-6	0.022	0.00072	
10725	2-Methylnaphthalene	91-57-6	0.022	0.00072	1

mg/kg

mg/kg

ECY 97-602 NWTPH-Gx



Analysis Report

Account

LL Sample # SW 7182492 LL Group # 1415667

11255

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REVISED

Sample Description: MW-5-13 Grab Soil Facility# 93883 1702 E. Yakima Ave - Yakima, WA

Project Name: 93883

Collected: 08/29/2013 10:05 by KL

Submitted: 08/31/2013 08:50 Reported: 02/03/2014 08:48 Chevron L4310 6001 Bollinger Canyon Road San Ramon CA 94583

EY513

CAT No.	Analysis Name		CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC Vo	latiles	ECY 97-602	NWTPH-Gx	mg/kg	mg/kg	
02005	TPH by NWTPH-Gx soi	ls	n.a.	11	1.3	29.31
Pesti	cides/PCBs	SW-846 808	32	mg/kg	mg/kg	
10736	PCB-1016		12674-11-2	N.D.	0.0038	1
10736	PCB-1221		11104-28-2	N.D.	0.0049	1
10736	PCB-1232		11141-16-5	N.D.	0.0085	1
10736	PCB-1242		53469-21-9	N.D.	0.0035	1
10736	PCB-1248		12672-29-6	N.D.	0.0035	1
10736	PCB-1254		11097-69-1	N.D.	0.0035	1
10736	PCB-1260		11096-82-5	N.D.	0.0052	1
GC Pe	troleum	ECY 97-602	NWTPH-Dx	mg/kg	mg/kg	
Hydro	carbons	modified				
08272	Diesel Range Organi	cs C12-C24	n.a.	56	3.2	1
	Heavy Range Organic		n.a.	130	11	1
GC Pe	troleum	ECY 97-602	NWTPH-Dx	mg/kg	mg/kg	
Hydro	carbons w/Si	modified				
12006	DRO C12-C24 w/Si Ge	1	n.a.	46	3.2	1
12006	HRO C24-C40 w/Si Ge	1	n.a.	92	11	1
The	reverse surrogate, ca	apric acid, is	s present at <1	8.		
Metal	5	SW-846 601	L0B	mg/kg	mg/kg	
06949	Cadmium		7440-43-9	1.36	0.0793	1
06951	Chromium		7440-47-3	86.7	0.167	1
06955	Lead		7439-92-1	661	2.61	5
06961	Nickel		7440-02-0	52.0	0.136	1
06972	Zinc		7440-66-6	639	0.209	1
Wet C	hemistry	SM 2540 G-	1997	8	8	
00111	Moisture		n.a.	7.0	0.50	1
	Moisture represents 103 - 105 degrees C as-received basis.			sample after oven drying at reported is on an		

General Sample Comments

State of Washington Lab Certification No. C259 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.



Analysis Report

LL Sample # SW 7182492 LL Group # 1415667 Account # 11255

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REVISED

Sample Description: MW-5-13 Grab Soil Facility# 93883 1702 E. Yakima Ave - Yakima, WA

Project Name: 93883

Collected: 08/29/2013 10:05 by KL

Submitted: 08/31/2013 08:50 Reported: 02/03/2014 08:48 L4310 6001 Bollinger Canyon Road San Ramon CA 94583

Chevron

	Laboratory Sample Analysis Record									
CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor		
10237	EPA SW-846/8260 (Soil)	SW-846 8260B	1	X132461AA	09/04/2013	10:47	Stephanie A Selis	1.05		
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201324332242	08/29/2013	10:05	Client Supplied	1		
02392	NaHSO4	SW-846 5035A	2	201324332242	08/29/2013	10:05	Client Supplied	1		
07579	Preserv.MeOH-NC	SW-846 5035A	1	201324332242	08/29/2013	10:05	Client Supplied	1		
10725	SIM SVOA (microwave)	SW-846 8270C SIM	1	13249SLD026	09/13/2013	09:02	Mark A Clark	1		
10811	BNA Soil Microwave SIM	SW-846 3546	1	13249SLD026	09/09/2013	11:45	Kelli M Barto	1		
02005	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH- Gx	1	13235A31C	09/03/2013	20:04	Laura M Krieger	29.31		
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201324332242	08/29/2013	10:05	Client Supplied	n.a.		
10736	PCBs Soil 8082 Microwave	SW-846 8082	1	132460012A	09/04/2013	19:56	Monica M Souders	1		
10497	PCB Microwave Soil Extraction	SW-846 3546	1	132460012A	09/04/2013	06:00	Roman Kuropatkin	1		
08272	NWTPH-Dx soil	ECY 97-602 NWTPH- Dx modified	1	132520012A	09/11/2013	20:57	Christine E Dolman	1		
12006	NWTPH-Dx soil w/ 10g Si Gel	ECY 97-602 NWTPH- Dx modified	1	132520013A	09/12/2013	06:30	Glorines Suarez- Rivera	1		
12008	NW Dx soil w/ 10g column	ECY 97-602 NWTPH- Dx 06/97	1	132520013A	09/09/2013	19:30	Sally L Appleyard	1		
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH- Dx 06/97	1	132520012A	09/09/2013	19:30	Sally L Appleyard	1		
06949	Cadmium	SW-846 6010B	1	132475708003	09/06/2013	00:46	John W Yanzuk II	1		
06951	Chromium	SW-846 6010B	1	132475708003	09/06/2013	00:46	John W Yanzuk II	1		
06955	Lead	SW-846 6010B	1	132475708003	09/08/2013	10:41	Tara L Snyder	5		
06961	Nickel	SW-846 6010B	1	132475708003	09/06/2013	00:46	John W Yanzuk II	1		
06972	Zinc	SW-846 6010B	1	132475708003	09/06/2013	00:46	John W Yanzuk II	1		
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	132475708003	09/05/2013	10:00	Denise K Conners	1		
00111	Moisture	SM 2540 G-1997	2	13249820001A	09/06/2013	07:47	William C Schwebel	1		



Analysis Report

LL Sample # SW 7182493 LL Group # 1415667 Account # 11255

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REVISED

Sample Description: MW-5-19 Grab Soil Facility# 93883 1702 E. Yakima Ave - Yakima, WA

Project Name: 93883

Collected: 08/29/2013 10:55 by KL

Submitted: 08/31/2013 08:50 Reported: 02/03/2014 08:48 Chevron L4310 6001 Bollinger Canyon Road San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS	Volatiles SW-846	8260B	mg/kg	mg/kg	
10237	Benzene	71-43-2	N.D.	0.0005	0.85
10237	Bromodichloromethane	75-27-4	N.D.	0.0009	0.85
10237	Bromoform	75-25-2	N.D.	0.0009	0.85
10237	Bromomethane	74-83-9	N.D.	0.002	0.85
10237	Carbon Tetrachloride	56-23-5	N.D.	0.0009	0.85
10237	Chlorobenzene	108-90-7	N.D.	0.0009	0.85
10237	Chloroethane	75-00-3	N.D.	0.002	0.85
10237	Chloroform	67-66-3	N.D.	0.0009	0.85
10237	Chloromethane	74-87-3	N.D.	0.002	0.85
10237	Dibromochloromethane	124-48-1	N.D.	0.0009	0.85
10237	1,2-Dibromoethane	106-93-4	N.D.	0.0009	0.85
10237	1,2-Dichlorobenzene	95-50-1	N.D.	0.0009	0.85
10237	1,3-Dichlorobenzene	541-73-1	N.D.	0.0009	0.85
10237	1,4-Dichlorobenzene	106-46-7	N.D.	0.0009	0.85
10237	1,1-Dichloroethane	75-34-3	N.D.	0.0009	0.85
10237	1,2-Dichloroethane	107-06-2	N.D.	0.0009	0.85
10237	1,1-Dichloroethene	75-35-4	N.D.	0.0009	0.85
10237	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0009	0.85
10237	trans-1,2-Dichloroethene	156-60-5	N.D.	0.0009	0.85
10237	1,2-Dichloropropane	78-87-5	N.D.	0.0009	0.85
10237	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.0009	0.85
10237	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.0009	0.85
10237	Ethylbenzene	100-41-4	N.D.	0.0009	0.85
10237	Freon 113	76-13-1	N.D.	0.002	0.85
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	0.85
10237	Methylene Chloride	75-09-2	N.D.	0.002	0.85
10237	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.0009	0.85
10237	Tetrachloroethene	127-18-4	N.D.	0.0009	0.85
10237	Toluene	108-88-3	N.D.	0.0009	0.85
10237	1,1,1-Trichloroethane	71-55-6	N.D.	0.0009	0.85
10237	1,1,2-Trichloroethane	79-00-5	N.D.	0.0009	0.85
10237	Trichloroethene	79-01-6	N.D.	0.0009	0.85
10237	Trichlorofluoromethane	75-69-4	N.D.	0.002	0.85
10237	Vinyl Chloride	75-01-4	N.D.	0.0009	0.85
10237	Xylene (Total)	1330-20-7	N.D.	0.0009	0.85
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
10725	1-Methylnaphthalene	90-12-0	N.D.	0.00073	1
10725	2-Methylnaphthalene	91-57-6	N.D.	0.00073	1
10725	Naphthalene	91-20-3	N.D.	0.00073	1
GC Vol	atiles ECY 97	-602 NWTPH-Gx	mg/kg	mg/kg	



Analysis Report

Account

LL Sample # SW 7182493 LL Group # 1415667

11255

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REVISED

Sample Description: MW-5-19 Grab Soil Facility# 93883 1702 E. Yakima Ave - Yakima, WA

Project Name: 93883

EY519

Collected: 08/29/2013 10:55 by KL

Submitted: 08/31/2013 08:50 Reported: 02/03/2014 08:48 Chevron L4310 6001 Bollinger Canyon Road San Ramon CA 94583

CAT No.	Analysis Name		CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC Vo	latiles	ECY 97-602	2 NWTPH-Gx	mg/kg	mg/kg	
02005	TPH by NWTPH-Gx soi	ls	n.a.	N.D.	1.3	29.04
Pesti	cides/PCBs	SW-846 808	32	mg/kg	mg/kg	
10736	PCB-1016		12674-11-2	N.D.	0.0039	1
10736	PCB-1221		11104-28-2	N.D.	0.0050	1
10736	PCB-1232		11141-16-5	N.D.	0.0087	1
10736	PCB-1242		53469-21-9	N.D.	0.0036	1
10736	PCB-1248		12672-29-6	N.D.	0.0036	1
10736	PCB-1254		11097-69-1	N.D.	0.0036	1
10736	PCB-1260		11096-82-5	N.D.	0.0053	1
GC Pe	troleum	ECY 97-602	2 NWTPH-Dx	mg/kg	mg/kg	
Hydro	carbons	modified				
-	Diesel Range Organi	CS C12-C24	n.a.	N.D.	3.3	1
	Heavy Range Organic		n.a.	N.D.	11	1
	troleum carbons w/Si	ECY 97-602 modified	2 NWTPH-Dx	mg/kg	mg/kg	
-	-				2.2	-
	DRO C12-C24 w/Si Ge		n.a.	N.D.	3.3	1
	HRO C24-C40 w/Si Ge		n.a.	N.D.	11	1
The	reverse surrogate, c	apric acid, is	s present at <1	č.		
Metal	S	SW-846 601	LOB	mg/kg	mg/kg	
06949	Cadmium		7440-43-9	0.583	0.0800	1
06951	Chromium		7440-47-3	18.2	0.169	1
06955	Lead		7439-92-1	3.85	0.527	1
06961	Nickel		7440-02-0	14.4	0.137	1
06972	Zinc		7440-66-6	58.2	0.211	1
Wet C	hemistry	SM 2540 G-	-1997	8	૪	
00111	Moisture		n.a.	8.7	0.50	1
	Moisture represents 103 - 105 degrees (as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259 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.



Analysis Report

LL Sample # SW 7182493 LL Group # 1415667 Account # 11255

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Sample Description: MW-5-19 Grab Soil Facility# 93883 1702 E. Yakima Ave - Yakima, WA

Project Name: 93883

Collected: 08/29/2013 10:55 by KL

Submitted: 08/31/2013 08:50 Reported: 02/03/2014 08:48

EY519

	Laboratory Sample Analysis Record									
CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor		
10237	EPA SW-846/8260 (Soil)	SW-846 8260B	1	X132481AA	09/05/2013	19:31	Chelsea B Stong	0.85		
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201324332242	08/29/2013	10:55	Client Supplied	1		
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201324332242	08/29/2013	10:55	Client Supplied	1		
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201324332242	08/29/2013	10:55	Client Supplied	1		
10725	SIM SVOA (microwave)	SW-846 8270C SIM	1	13249SLD026	09/13/2013	09:33	Mark A Clark	1		
10811	BNA Soil Microwave SIM	SW-846 3546	1	13249SLD026	09/09/2013	11:45	Kelli M Barto	1		
02005	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH- Gx	1	13235A31C	09/03/2013	20:40	Laura M Krieger	29.04		
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201324332242	08/29/2013	10:55	Client Supplied	n.a.		
10736	PCBs Soil 8082 Microwave	SW-846 8082	1	132460012A	09/04/2013	20:07	Monica M Souders	1		
10497	PCB Microwave Soil Extraction	SW-846 3546	1	132460012A	09/04/2013	06:00	Roman Kuropatkin	1		
08272	NWTPH-Dx soil	ECY 97-602 NWTPH- Dx modified	1	132520012A	09/10/2013	15:00	Christine E Dolman	1		
12006	NWTPH-Dx soil w/ 10g Si Gel	ECY 97-602 NWTPH- Dx modified	1	132520013A	09/12/2013	04:52	Glorines Suarez- Rivera	1		
12008	NW Dx soil w/ 10g column	ECY 97-602 NWTPH- Dx 06/97	1	132520013A	09/09/2013	19:30	Sally L Appleyard	1		
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH- Dx 06/97	1	132520012A	09/09/2013	19:30	Sally L Appleyard	1		
06949	Cadmium	SW-846 6010B	1	132475708003	09/06/2013	00:51	John W Yanzuk II	1		
06951	Chromium	SW-846 6010B	1	132475708003	09/06/2013	00:51	John W Yanzuk II	1		
06955	Lead	SW-846 6010B	1	132475708003	09/06/2013	14:14	Eric L Eby	1		
06961	Nickel	SW-846 6010B	1	132475708003	09/06/2013	00:51	John W Yanzuk II	1		
06972	Zinc	SW-846 6010B	1	132475708003	09/06/2013	00:51	John W Yanzuk II	1		
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	132475708003	09/05/2013	10:00	Denise K Conners	1		
00111	Moisture	SM 2540 G-1997	2	13249820001A	09/06/2013	07:47	William C Schwebel	1		



Analysis Report

LL Sample # SW 7182494 LL Group # 1415667 Account # 11255

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

REVISED

Sample Description: MW-6-8 Grab Soil Facility# 93883 1702 E. Yakima Ave - Yakima, WA

Project Name: 93883

Collected: 08/29/2013 14:30 by KL

Submitted: 08/31/2013 08:50 Reported: 02/03/2014 08:48 Chevron L4310 6001 Bollinger Canyon Road San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS	Volatiles SW-846	8260B	mg/kg	mg/kg	
10237	Benzene	71-43-2	N.D.	0.029	49.4
10237	Bromodichloromethane	75-27-4	N.D.	0.059	49.4
10237	Bromoform	75-25-2	N.D.	0.059	49.4
10237	Bromomethane	74-83-9	N.D.	0.12	49.4
10237	Carbon Tetrachloride	56-23-5	N.D.	0.059	49.4
10237	Chlorobenzene	108-90-7	N.D.	0.059	49.4
10237	Chloroethane	75-00-3	N.D.	0.12	49.4
10237	Chloroform	67-66-3	N.D.	0.059	49.4
10237	Chloromethane	74-87-3	N.D.	0.12	49.4
10237	Dibromochloromethane	124-48-1	N.D.	0.059	49.4
10237	1,2-Dibromoethane	106-93-4	N.D.	0.059	49.4
10237	1,2-Dichlorobenzene	95-50-1	N.D.	0.059	49.4
10237	1,3-Dichlorobenzene	541-73-1	N.D.	0.059	49.4
10237	1,4-Dichlorobenzene	106-46-7	N.D.	0.059	49.4
10237	1,1-Dichloroethane	75-34-3	N.D.	0.059	49.4
10237	1,2-Dichloroethane	107-06-2	N.D.	0.059	49.4
10237	1,1-Dichloroethene	75-35-4	N.D.	0.059	49.4
10237	cis-1,2-Dichloroethene	156-59-2	N.D.	0.059	49.4
10237	trans-1,2-Dichloroethene	156-60-5	N.D.	0.059	49.4
10237	1,2-Dichloropropane	78-87-5	N.D.	0.059	49.4
10237	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.059	49.4
10237	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.059	49.4
10237	Ethylbenzene	100-41-4	N.D.	0.059	49.4
10237	Freon 113	76-13-1	N.D.	0.12	49.4
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.029	49.4
10237	Methylene Chloride	75-09-2	N.D.	0.12	49.4
10237	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.059	49.4
10237	Tetrachloroethene	127-18-4	N.D.	0.059	49.4
10237	Toluene	108-88-3	N.D.	0.059	49.4
10237	1,1,1-Trichloroethane	71-55-6	N.D.	0.059	49.4
10237	1,1,2-Trichloroethane	79-00-5	N.D.	0.059	49.4
10237	Trichloroethene	79-01-6	N.D.	0.059	49.4
10237	Trichlorofluoromethane	75-69-4	N.D.	0.12	49.4
10237	Vinyl Chloride	75-01-4	N.D.	0.059	49.4
10237 Repo	Xylene (Total) rting limits were raised due t	1330-20-7 o interference fr	N.D. om the sample matri	0.059	49.4
nepo.	tering finites were fulbed due		om ene bampie maeri	A.	
•		8270C SIM	mg/kg	mg/kg	
10725	Benzo(a)anthracene	56-55-3	N.D.	0.0079	10
10725	Benzo(a)pyrene	50-32-8	N.D.	0.0079	10
10725	Benzo(b)fluoranthene	205-99-2	0.016	0.0079	10
10725	Benzo(k)fluoranthene	207-08-9	N.D.	0.0079	10
10725	Chrysene	218-01-9	0.019	0.0040	10
10725	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0079	10
10725	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.0079	10
10725	1-Methylnaphthalene	90-12-0	0.093	0.0079	10
10725	2-Methylnaphthalene	91-57-6	0.15	0.0079	10
10725	Naphthalene	91-20-3	0.043	0.0079	10
GC Vol	latiles ECY 97	-602 NWTPH-Gx	mg/kg	mg/kg	



Analysis Report

LL Sample # SW 7182494 LL Group # 1415667 Account # 11255

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REVISED

Sample	Description:	MW - 6 -	-8 @	Frab	Soi	1			
		Facil	lity	7# 93	883	3			
		1702	Е.	Yaki	ma	Ave	-	Yakima,	WA

Project Name: 93883

EY608

Collected: 08/29/2013 14:30 by KL

Submitted: 08/31/2013 08:50 Reported: 02/03/2014 08:48

CAT No.	Analysis Name		CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC Vo	latiles	ECY 97-602	NWTPH-Gx	mg/kg	mg/kg	
02005	TPH by NWTPH-Gx soil	ls	n.a.	50	4.4	92.6
Pesti	cides/PCBs	SW-846 808	2	mg/kg	mg/kg	
10736	PCB-1016		12674-11-2	N.D.	0.0043	1
10736	PCB-1221		11104-28-2	N.D.	0.0055	1
10736	PCB-1232		11141-16-5	N.D.	0.0095	1
10736	PCB-1242		53469-21-9	N.D.	0.0039	1
10736	PCB-1248		12672-29-6	N.D.	0.0039	1
10736	PCB-1254		11097-69-1	N.D.	0.0039	1
10736	PCB-1260		11096-82-5	N.D.	0.0058	1
GC Pe	troleum	ECY 97-602	NWTPH-Dx	mg/kg	mg/kg	
Hydro	carbons	modified				
08272	Diesel Range Organi	cs C12-C24	n.a.	410	3.6	1
08272	Heavy Range Organic	s C24-C40	n.a.	400	12	1
GC Pe	troleum	ECY 97-602	WA EPH	mg/kg	mg/kg	
Hydro	carbons					
05970	>C10-C12 Aliphatic		n.a.	10	1.2	1
05970	>C10-C12 Aromatic		n.a.	N.D.	1.2	1
05970	>C12-C16 Aliphatic		n.a.	110	1.2	1
	>C12-C16 Aromatic		n.a.	9.7	1.2	1
05970	>C16-C21 Aliphatic		n.a.	140	3.5	1
05970	>C16-C21 Aromatic		n.a.	23	2.4	1
05970	>C21-C34 Aliphatic		n.a.	110	7.1	1
05970	>C21-C34 Aromatic		n.a.	35	2.4	1
	holding time was not ide of the holding ti		lysis was add	ed to the sample		
GC Pe	troleum	ECY 97-602	WA VPH	mg/kg	mg/kg	
Hydro	carbons					
05666	Benzene		71-43-2	N.D.	0.0560	47.07
05666	C5-C6 Aliphatic Hyd	rocarbons	n.a.	N.D.	2.80	47.07
05666	C6-C8 Aliphatic Hyd	rocarbons	n.a.	N.D.	2.80	47.07
05666	C8-C10 Aliphatic Hyd	drocarbons	n.a.	N.D.	2.80	47.07
05666	C8-C10 Aromatic Hyd	rocarbons	n.a.	N.D.	2.80	47.07
05666	Ethylbenzene		100-41-4	N.D.	0.0560	47.07
	Methyl t-butyl ethe	r	1634-04-4	N.D.	0.0560	47.07
05666	Toluene		108-88-3	N.D.	0.0560	47.07
05666	o-Xylene		95-47-6	N.D.	0.0560	47.07
05666	m,p-Xylenes		179601-23-1	N.D.	0.112	47.07
GC Pe	troleum	ECY 97-602	NWTPH-Dx	mg/kg	mg/kg	
Hydro	carbons w/Si	modified				
12006	DRO C12-C24 w/Si Ge	1	n.a.	320	3.6	1
12006	HRO C24-C40 w/Si Ge	1	n.a.	250	12	1
The	reverse surrogate, ca	apric acid, is	present at <	1%.		



Analysis Report

Account

LL Sample # SW 7182494 LL Group # 1415667

11255

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REVISED

Sample Description: MW-6-8 Grab Soil Facility# 93883 1702 E. Yakima Ave - Yakima, WA

Project Name: 93883

EY608

Collected: 08/29/2013 14:30 by KL

Submitted: 08/31/2013 08:50 Reported: 02/03/2014 08:48 Chevron L4310 6001 Bollinger Canyon Road San Ramon CA 94583

CAT No.	Analysis Name		CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Metal	S	SW-846 60	010B	mg/kg	mg/kg	
06949	Cadmium		7440-43-9	0.700	0.0869	1
06951	Chromium		7440-47-3	52.0	0.183	1
06955	Lead		7439-92-1	39.4	0.572	1
06961	Nickel		7440-02-0	27.3	0.149	1
06972	Zinc		7440-66-6	99.2	0.229	1
Wet C	hemistry	SM 2540 (G-1997	8	8	
00111	Moisture		n.a.	15.9	0.50	1
		s Celsius. The		sample after oven t reported is on a		

General Sample Comments

State of Washington Lab Certification No. C259 Carcinogenic PAHs have been reported for this sample

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
10237	EPA SW-846/8260 (Soil)	SW-846 8260B	1	Q132461AA	09/03/2013	20:04	Sarah A Guill	49.4
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201324332242	08/29/2013	14:30	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201324332242	08/29/2013	14:30	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201324332242	08/29/2013	14:30	Client Supplied	1
10725	SIM SVOA (microwave)	SW-846 8270C SIM	1	13249SLD026	09/13/2013	10:04	Mark A Clark	10
10811	BNA Soil Microwave SIM	SW-846 3546	1	13249SLD026	09/09/2013	11:45	Kelli M Barto	1
02005	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH- Gx	1	13235A31C	09/03/2013	23:41	Laura M Krieger	92.6
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201324332242	08/29/2013	14:30	Client Supplied	n.a.
10736	PCBs Soil 8082 Microwave	SW-846 8082	1	132460012A	09/04/2013	20:41	Monica M Souders	1
10497	PCB Microwave Soil Extraction	SW-846 3546	1	132460012A	09/04/2013	06:00	Roman Kuropatkin	1
08272	NWTPH-Dx soil	ECY 97-602 NWTPH- Dx modified	1	132520012A	09/11/2013	22:16	Glorines Suarez- Rivera	1
05970	WA EPH in Soil	ECY 97-602 WA EPH	1	132670018A	09/27/2013	03:34	Heather E Williams	1
05970	WA EPH in Soil	ECY 97-602 WA EPH	1	132670018A	09/27/2013	04:14	Heather E Williams	1
05666	WA- VPH soils	ECY 97-602 WA VPH	1	13268A54A	09/26/2013	08:47	Nicholas R Rossi	47.07



Analysis Report

Account

LL Sample # SW 7182494

11255

LL Group # 1415667

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

REVISED

Sample Description: MW-6-8 Grab Soil Facility# 93883 1702 E. Yakima Ave - Yakima, WA

Project Name: 93883

Collected: 08/29/2013 14:30 by KL

Submitted: 08/31/2013 08:50 Reported: 02/03/2014 08:48

EY608

Chevron L4310

6001 Bollinger Canyon Road

San Ramon CA 94583

	Laboratory Sample Analysis Record										
CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor			
12006	NWTPH-Dx soil w/ 10g Si Gel	ECY 97-602 NWTPH- Dx modified	1	132520013A	09/12/2013	06:50	Glorines Suarez- Rivera	1			
12008	NW Dx soil w/ 10g column	ECY 97-602 NWTPH- Dx 06/97	1	132520013A	09/09/2013	19:30	Sally L Appleyard	1			
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH- Dx 06/97	1	132520012A	09/09/2013	19:30	Sally L Appleyard	1			
11213	WA EPH Soils Extraction	ECY 97-602 WA EPH	1	132670018A	09/25/2013	02:30	Sherry L Morrow	1			
06170	GC - Bulk Soil Prep (VPH)	MA DEP VPH 5/04	1	201326132447	09/18/2013	11:23	Larry E Bevins	n.a.			
00497	Silica Gel Fractionation	SW-846 3630C modified	1	132670018A	09/25/2013	14:30	Edwin Ortiz	1			
06949	Cadmium	SW-846 6010B	1	132475708003	09/06/2013	00:55	John W Yanzuk II	1			
06951	Chromium	SW-846 6010B	1	132475708003	09/06/2013	00:55	John W Yanzuk II	1			
06955	Lead	SW-846 6010B	1	132475708003	09/06/2013	14:18	Eric L Eby	1			
06961	Nickel	SW-846 6010B	1	132475708003	09/06/2013	00:55	John W Yanzuk II	1			
06972	Zinc	SW-846 6010B	1	132475708003	09/06/2013	00:55	John W Yanzuk II	1			
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	132475708003	09/05/2013	10:00	Denise K Conners	1			
00111	Moisture	SM 2540 G-1997	2	13249820001A	09/06/2013	07:47	William C Schwebel	1			

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Analysis Report

LL Sample # SW 7182495 LL Group # 1415667 Account # 11255

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

REVISED

Sample Description: MW-6-13 Grab Soil Facility# 93883 1702 E. Yakima Ave - Yakima, WA

Project Name: 93883

Collected: 08/29/2013 14:50 by KL

Submitted: 08/31/2013 08:50 Reported: 02/03/2014 08:48 Chevron L4310 6001 Bollinger Canyon Road San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS	Volatiles SW-846	8260B	mg/kg	mg/kg	
10237	Benzene	71-43-2	N.D.	0.0005	0.91
10237	Bromodichloromethane	75-27-4	N.D.	0.001	0.91
10237	Bromoform	75-25-2	N.D.	0.001	0.91
10237	Bromomethane	74-83-9	N.D.	0.002	0.91
10237	Carbon Tetrachloride	56-23-5	N.D.	0.001	0.91
10237	Chlorobenzene	108-90-7	N.D.	0.001	0.91
10237	Chloroethane	75-00-3	N.D.	0.002	0.91
10237	Chloroform	67-66-3	N.D.	0.001	0.91
10237	Chloromethane	74-87-3	N.D.	0.002	0.91
10237	Dibromochloromethane	124-48-1	N.D.	0.001	0.91
10237	1,2-Dibromoethane	106-93-4	N.D.	0.001	0.91
10237	1,2-Dichlorobenzene	95-50-1	N.D.	0.001	0.91
10237	1,3-Dichlorobenzene	541-73-1	N.D.	0.001	0.91
10237	1,4-Dichlorobenzene	106-46-7	N.D.	0.001	0.91
10237	1,1-Dichloroethane	75-34-3	N.D.	0.001	0.91
10237	1,2-Dichloroethane	107-06-2	N.D.	0.001	0.91
10237	1,1-Dichloroethene	75-35-4	N.D.	0.001	0.91
10237	cis-1,2-Dichloroethene	156-59-2	N.D.	0.001	0.91
10237	trans-1,2-Dichloroethene	156-60-5	N.D.	0.001	0.91
10237	1,2-Dichloropropane	78-87-5	N.D.	0.001	0.91
10237	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.001	0.91
10237	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.001	0.91
10237	Ethylbenzene	100-41-4	N.D.	0.001	0.91
10237	Freon 113	76-13-1	N.D.	0.002	0.91
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	0.91
10237	Methylene Chloride	75-09-2	N.D.	0.002	0.91
10237	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.001	0.91
10237	Tetrachloroethene	127-18-4	N.D.	0.001	0.91
10237	Toluene	108-88-3	N.D.	0.001	0.91
10237	1,1,1-Trichloroethane	71-55-6	N.D.	0.001	0.91
10237	1,1,2-Trichloroethane	79-00-5	N.D.	0.001	0.91
10237	Trichloroethene	79-01-6	N.D.	0.001	0.91
10237	Trichlorofluoromethane	75-69-4	N.D.	0.002	0.91
10237	Vinyl Chloride	75-01-4	N.D.	0.001	0.91
10237	Xylene (Total)	1330-20-7	N.D.	0.001	0.91
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
10725	1-Methylnaphthalene	90-12-0	N.D.	0.00076	1
10725	2-Methylnaphthalene	91-57-6	N.D.	0.00076	1
10725	Naphthalene	91-20-3	N.D.	0.00076	1
GC Vol	latiles ECY 97-	602 NWTPH-Gx	mg/kg	mg/kg	



Analysis Report

Account

LL Sample # SW 7182495 LL Group # 1415667

11255

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REVISED

Sample Description: MW-6-13 Grab Soil Facility# 93883 1702 E. Yakima Ave - Yakima, WA

Project Name: 93883

EY613

Collected: 08/29/2013 14:50 by KL

Submitted: 08/31/2013 08:50 Reported: 02/03/2014 08:48 Chevron L4310 6001 Bollinger Canyon Road San Ramon CA 94583

CAT No.	Analysis Name		CAS Number	Dry Result	Me	Dry ethod etection Limit	Dilution Factor
GC Vo	latiles	ECY 97-602	NWTPH-Gx	mg/kg	mg	J/kg	
02005	TPH by NWTPH-Gx soi	ls	n.a.	N.D.	1		21.61
Pesti	cides/PCBs	SW-846 808	2	mg/kg	mg	J/kg	
10736	PCB-1016		12674-11-2	N.D.	0.	0041	1
10736	PCB-1221		11104-28-2	N.D.	0.	0052	1
10736	PCB-1232		11141-16-5	N.D.	0.	0090	1
10736	PCB-1242		53469-21-9	N.D.	0.	0037	1
10736	PCB-1248		12672-29-6	N.D.	0.	0037	1
10736	PCB-1254		11097-69-1	N.D.	0.	0037	1
10736	PCB-1260		11096-82-5	N.D.	0.	0055	1
GC Pe	troleum	ECY 97-602	NWTPH-Dx	mg/kg	mg	J/kg	
Hydro	carbons	modified					
-	Diesel Range Organi	cs C12-C24	n.a.	N.D.	3.	4	1
	Heavy Range Organic		n.a.	N.D.	11		1
GC Pe	troleum	ECY 97-602	NWTPH-Dx	mg/kg	mg	J/kg	
Hydro	carbons w/Si	modified					
12006	DRO C12-C24 w/Si Ge	21	n.a.	N.D.	3.	4	1
12006	HRO C24-C40 w/Si Ge	21	n.a.	N.D.	11	_	1
The	reverse surrogate, c	apric acid, is	present at <1	°.			
Metal	5	SW-846 601	.0в	mg/kg	mg	J/kg	
06949	Cadmium		7440-43-9	0.457	0.	0852	1
06951	Chromium		7440-47-3	8.62	0.	179	1
06955	Lead		7439-92-1	1.46	0.	560	1
06961	Nickel		7440-02-0	11.4	0.	146	1
06972	Zinc		7440-66-6	37.1	0.	224	1
Wet C	hemistry	SM 2540 G-	1997	8	8		
00111	Moisture		n.a.	12.5	0.	50	1
	Moisture represents 103 - 105 degrees C as-received basis.						

General Sample Comments

State of Washington Lab Certification No. C259 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.



Analysis Report

LL Sample # SW 7182495 LL Group # 1415667 Account # 11255

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REVISED

Sample Description: MW-6-13 Grab Soil Facility# 93883 1702 E. Yakima Ave - Yakima, WA

Project Name: 93883

Collected: 08/29/2013 14:50 by KL

Submitted: 08/31/2013 08:50 Reported: 02/03/2014 08:48 Chevron L4310 6001 Bollinger Canyon Road San Ramon CA 94583

		Laborat	ory Sa	ample Analysi	s Record			
CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
10237	EPA SW-846/8260 (Soil)	SW-846 8260B	1	X132481AA	09/05/2013	19:54	Chelsea B Stong	0.91
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201324332242	08/29/2013	14:50	Client Supplied	1
	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201324332242	, -,	14:50	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201324332242	08/29/2013	14:50	Client Supplied	1
10725	SIM SVOA (microwave)	SW-846 8270C SIM	1	13249SLD026	09/13/2013	10:35	Mark A Clark	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	13249SLD026	09/09/2013	11:45	Kelli M Barto	1
02005	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH- Gx	1	13235A31C	09/03/2013	21:17	Laura M Krieger	21.61
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201324332242	08/29/2013	14:50	Client Supplied	n.a.
10736	PCBs Soil 8082 Microwave	SW-846 8082	1	132460012A	09/04/2013	20:53	Monica M Souders	1
10497	PCB Microwave Soil Extraction	SW-846 3546	1	132460012A	09/04/2013	06:00	Roman Kuropatkin	1
08272	NWTPH-Dx soil	ECY 97-602 NWTPH- Dx modified	1	132520012A	09/10/2013	15:21	Christine E Dolman	1
12006	NWTPH-Dx soil w/ 10g Si Gel	ECY 97-602 NWTPH- Dx modified	1	132520013A	09/12/2013	05:11	Glorines Suarez- Rivera	1
12008	NW Dx soil w/ 10g column	ECY 97-602 NWTPH- Dx 06/97	1	132520013A	09/09/2013	19:30	Sally L Appleyard	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH- Dx 06/97	1	132520012A	09/09/2013	19:30	Sally L Appleyard	1
06949	Cadmium	SW-846 6010B	1	132475708003	09/06/2013	00:59	John W Yanzuk II	1
06951	Chromium	SW-846 6010B	1	132475708003	09/06/2013	00:59	John W Yanzuk II	1
06955	Lead	SW-846 6010B	1	132475708003	09/06/2013	14:22	Eric L Eby	1
06961	Nickel	SW-846 6010B	1	132475708003	09/06/2013	00:59	John W Yanzuk II	1
06972	Zinc	SW-846 6010B	1	132475708003	09/06/2013	00:59	John W Yanzuk II	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	132475708003	09/05/2013	10:00	Denise K Conners	1
00111	Moisture	SM 2540 G-1997	2	13249820001A	09/06/2013	07:47	William C Schwebel	1



Analysis Report

LL Sample # SW 7182496 LL Group # 1415667 Account # 11255

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REVISED

Sample Description: DUP-082913 Grab Soil Facility# 93883 1702 E. Yakima Ave - Yakima, WA

Project Name: 93883

Collected: 08/29/2013 15:20 by KL

Submitted: 08/31/2013 08:50 Reported: 02/03/2014 08:48

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS	Volatiles SW-846	8260B	mg/kg	mg/kg	
10237	Benzene	71-43-2	0.003	0.0005	0.95
10237	Bromodichloromethane	75-27-4	N.D.	0.001	0.95
10237	Bromoform	75-25-2	N.D.	0.001	0.95
10237	Bromomethane	74-83-9	N.D.	0.002	0.95
10237	Carbon Tetrachloride	56-23-5	N.D.	0.001	0.95
10237	Chlorobenzene	108-90-7	N.D.	0.001	0.95
10237	Chloroethane	75-00-3	N.D.	0.002	0.95
10237	Chloroform	67-66-3	N.D.	0.001	0.95
10237	Chloromethane	74-87-3	N.D.	0.002	0.95
10237	Dibromochloromethane	124-48-1	N.D.	0.001	0.95
10237	1,2-Dibromoethane	106-93-4	N.D.	0.001	0.95
10237	1,2-Dichlorobenzene	95-50-1	N.D.	0.001	0.95
10237	1,3-Dichlorobenzene	541-73-1	N.D.	0.001	0.95
10237	1,4-Dichlorobenzene	106-46-7	N.D.	0.001	0.95
10237	1,1-Dichloroethane	75-34-3	N.D.	0.001	0.95
10237	1,2-Dichloroethane	107-06-2	N.D.	0.001	0.95
10237	1,1-Dichloroethene	75-35-4	N.D.	0.001	0.95
10237	cis-1,2-Dichloroethene	156-59-2	N.D.	0.001	0.95
10237	trans-1,2-Dichloroethene	156-60-5	N.D.	0.001	0.95
10237	1,2-Dichloropropane	78-87-5	N.D.	0.001	0.95
10237	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.001	0.95
10237	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.001	0.95
10237	Ethylbenzene	100-41-4	N.D.	0.001	0.95
10237	Freon 113	76-13-1	N.D.	0.002	0.95
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	0.95
10237	Methylene Chloride	75-09-2	N.D.	0.002	0.95
10237	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.001	0.95
10237	Tetrachloroethene	127-18-4	N.D.	0.001	0.95
10237	Toluene	108-88-3	0.002	0.001	0.95
10237	1,1,1-Trichloroethane	71-55-6	N.D.	0.001	0.95
10237	1,1,2-Trichloroethane	79-00-5	N.D.	0.001	0.95
10237	Trichloroethene	79-01-6	N.D.	0.001	0.95
10237	Trichlorofluoromethane	75-69-4	N.D.	0.002	0.95
10237	Vinyl Chloride	75-01-4	N.D.	0.001	0.95
10237	Xylene (Total)	1330-20-7	0.001	0.001	0.95
GC/MS	Semivolatiles SW-846	8270C SIM	mg/kg	mg/kg	
10725	Benzo(a)anthracene	56-55-3	N.D.	0.0067	10
10725	Benzo (a) pyrene	50-32-8	0.0078	0.0067	10
10725	Benzo(b)fluoranthene	205-99-2	0.015	0.0067	10
10725	Benzo(k)fluoranthene	207-08-9	N.D.	0.0067	10
10725	Chrysene	218-01-9	0.018	0.0034	10
10725	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0067	10
10725	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.0067	10
10725	1-Methylnaphthalene	90-12-0	0.055	0.0067	10
10725	2-Methylnaphthalene	91-57-6	0.089	0.0067	10
10725	Naphthalene	91-20-3	0.024	0.0067	10
GC Vol	latiles ECY 97	-602 NWTPH-Gx	mg/kg	mg/kg	



Analysis Report

Account

LL Sample # SW 7182496 LL Group # 1415667

11255

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REVISED

Sample Description:	DUP-082913 Grab Soil
	Facility# 93883
	1702 E. Yakima Ave - Yakima, WA

Project Name: 93883

Collected: 08/29/2013 15:20 by KL

Submitted: 08/31/2013 08:50 Reported: 02/03/2014 08:48 Chevron L4310 6001 Bollinger Canyon Road San Ramon CA 94583

EY-FD

CAT No.	Analysis Name		CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC Vo	latiles	ECY 97-602	NWTPH-Gx	mg/kg	mg/kg	
02005	TPH by NWTPH-Gx soi	ls	n.a.	17	1.9	46.3
Pesti	cides/PCBs	SW-846 808	32	mg/kg	mg/kg	
10736	PCB-1016		12674-11-2	N.D.	0.0036	1
10736	PCB-1221		11104-28-2	N.D.	0.0046	1
10736	PCB-1232		11141-16-5	N.D.	0.0080	1
10736	PCB-1242		53469-21-9	N.D.	0.0033	1
10736	PCB-1248		12672-29-6	N.D.	0.0033	1
	PCB-1254		11097-69-1	N.D.	0.0033	1
10736	PCB-1260		11096-82-5	N.D.	0.0049	1
GC Pe	troleum	ECY 97-602	NWTPH-Dx	mg/kg	mg/kg	
Hydro	carbons	modified				
08272	Diesel Range Organi	cs C12-C24	n.a.	240	3.0	1
08272	Heavy Range Organic	cs C24-C40	n.a.	270	10	1
GC Pe	troleum	ECY 97-602	NWTPH-Dx	mg/kg	mg/kg	
Hydro	carbons w/Si	modified				
12006	DRO C12-C24 w/Si Ge	el	n.a.	200	3.0	1
12006	HRO C24-C40 w/Si Ge	21	n.a.	230	10	1
The	reverse surrogate, c	apric acid, is	s present at <1	∻.		
Metal	5	SW-846 601	.0B	mg/kg	mg/kg	
06949	Cadmium		7440-43-9	0.637	0.0764	1
06951	Chromium		7440-47-3	56.4	0.161	1
06955	Lead		7439-92-1	61.3	0.503	1
06961	Nickel		7440-02-0	30.1	0.131	1
06972	Zinc		7440-66-6	132	0.201	1
Wet C	hemistry	SM 2540 G-	1997	8	8	
00111	Moisture		n.a.	1.5	0.50	1
	Moisture represents 103 - 105 degrees (as-received basis.			sample after oven drying reported is on an	at	

General Sample Comments

State of Washington Lab Certification No. C259 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.



Analysis Report

LL Sample # SW 7182496 LL Group # 1415667 Account # 11255

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REVISED

Sample Description: DUP-082913 Grab Soil Facility# 93883 1702 E. Yakima Ave - Yakima, WA

Project Name: 93883

Collected: 08/29/2013 15:20 by KL

Submitted: 08/31/2013 08:50 Reported: 02/03/2014 08:48

EY-FD

		Laborat	cory Sa	ample Analysi	s Record			
CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
10237 02392	EPA SW-846/8260 (Soil) GC/MS - Field Preserved NaHSO4	SW-846 8260B SW-846 5035A	1 1	X132481AA 201324332242	09/05/2013 08/29/2013	21:48 15:20	Chelsea B Stong Client Supplied	0.95 1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201324332242	08/29/2013	15:20	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201324332242	08/29/2013	15:20	Client Supplied	1
10725	SIM SVOA (microwave)	SW-846 8270C SIM	1	13249SLD026	09/13/2013	11:07	Mark A Clark	10
10811	BNA Soil Microwave SIM	SW-846 3546	1	13249SLD026	09/09/2013	11:45	Kelli M Barto	1
02005	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH- Gx	1	13235A31C	09/04/2013	00:18	Laura M Krieger	46.3
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201324332242	08/29/2013	15:20	Client Supplied	n.a.
10736	PCBs Soil 8082 Microwave	SW-846 8082	1	132460012A	09/04/2013	21:04	Monica M Souders	1
10497	PCB Microwave Soil Extraction	SW-846 3546	1	132460012A	09/04/2013	06:00	Roman Kuropatkin	1
08272	NWTPH-Dx soil	ECY 97-602 NWTPH- Dx modified	1	132520012A	09/11/2013	21:17	Christine E Dolman	1
12006	NWTPH-Dx soil w/ 10g Si Gel	ECY 97-602 NWTPH- Dx modified	1	132520013A	09/12/2013	07:10	Glorines Suarez- Rivera	1
12008	NW Dx soil w/ 10g column	ECY 97-602 NWTPH- Dx 06/97	1	132520013A	09/09/2013	19:30	Sally L Appleyard	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH- Dx 06/97	1	132520012A	09/09/2013	19:30	Sally L Appleyard	1
06949	Cadmium	SW-846 6010B	1	132475708003	09/06/2013	01:03	John W Yanzuk II	1
06951	Chromium	SW-846 6010B	1	132475708003	09/06/2013	01:03	John W Yanzuk II	1
06955	Lead	SW-846 6010B	1	132475708003	09/06/2013	14:26	Eric L Eby	1
06961	Nickel	SW-846 6010B	1	132475708003	09/06/2013	01:03	John W Yanzuk II	1
06972	Zinc	SW-846 6010B	1	132475708003	09/06/2013	01:03	John W Yanzuk II	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	132475708003	09/05/2013	10:00	Denise K Conners	1
00111	Moisture	SM 2540 G-1997	2	13249820001A	09/06/2013	07:47	William C Schwebel	1



Analysis Report

LL Sample # SW 7182497 LL Group # 1415667 Account # 11255

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REVISED

Sample Description: MW-6-19 Grab Soil Facility# 93883 1702 E. Yakima Ave - Yakima, WA

Project Name: 93883

Collected: 08/29/2013 15:30 by KL

Submitted: 08/31/2013 08:50 Reported: 02/03/2014 08:48 Chevron L4310 6001 Bollinger Canyon Road San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS	Volatiles SW-846	8260B	mg/kg	mg/kg	
10237	Benzene	71-43-2	N.D.	0.0005	0.92
10237	Bromodichloromethane	75-27-4	N.D.	0.001	0.92
10237	Bromoform	75-25-2	N.D.	0.001	0.92
10237	Bromomethane	74-83-9	N.D.	0.002	0.92
10237	Carbon Tetrachloride	56-23-5	N.D.	0.001	0.92
10237	Chlorobenzene	108-90-7	N.D.	0.001	0.92
10237	Chloroethane	75-00-3	N.D.	0.002	0.92
10237	Chloroform	67-66-3	N.D.	0.001	0.92
10237	Chloromethane	74-87-3	N.D.	0.002	0.92
10237	Dibromochloromethane	124-48-1	N.D.	0.001	0.92
10237	1,2-Dibromoethane	106-93-4	N.D.	0.001	0.92
10237	1,2-Dichlorobenzene	95-50-1	N.D.	0.001	0.92
10237	1,3-Dichlorobenzene	541-73-1	N.D.	0.001	0.92
10237	1,4-Dichlorobenzene	106-46-7	N.D.	0.001	0.92
10237	1,1-Dichloroethane	75-34-3	N.D.	0.001	0.92
10237	1,2-Dichloroethane	107-06-2	N.D.	0.001	0.92
10237	1,1-Dichloroethene	75-35-4	N.D.	0.001	0.92
10237	cis-1,2-Dichloroethene	156-59-2	N.D.	0.001	0.92
10237	trans-1,2-Dichloroethene	156-60-5	N.D.	0.001	0.92
10237	1,2-Dichloropropane	78-87-5	N.D.	0.001	0.92
10237	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.001	0.92
10237	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.001	0.92
10237	Ethylbenzene	100-41-4	N.D.	0.001	0.92
10237	Freon 113	76-13-1	N.D.	0.002	0.92
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	0.92
10237	Methylene Chloride	75-09-2	N.D.	0.002	0.92
10237	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.001	0.92
10237	Tetrachloroethene	127-18-4	N.D.	0.001	0.92
10237	Toluene	108-88-3	N.D.	0.001	0.92
10237	1,1,1-Trichloroethane	71-55-6	N.D.	0.001	0.92
10237	1,1,2-Trichloroethane	79-00-5	N.D.	0.001	0.92
10237	Trichloroethene	79-01-6	N.D.	0.001	0.92
10237	Trichlorofluoromethane	75-69-4	N.D.	0.002	0.92
10237	Vinyl Chloride	75-01-4	N.D.	0.001	0.92
10237	Xylene (Total)	1330-20-7	N.D.	0.001	0.92
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
10725	1-Methylnaphthalene	90-12-0	N.D.	0.00072	1
10725	2-Methylnaphthalene	91-57-6	N.D.	0.00072	1
10725	Naphthalene	91-20-3	N.D.	0.00072	1
GC Vol	latiles ECY 97-	602 NWTPH-Gx	mg/kg	mg/kg	



Analysis Report

Account

LL Sample # SW 7182497 LL Group # 1415667

11255

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REVISED

Sample Description: MW-6-19 Grab Soil Facility# 93883 1702 E. Yakima Ave - Yakima, WA

Project Name: 93883

EY619

Collected: 08/29/2013 15:30 by KL

Submitted: 08/31/2013 08:50 Reported: 02/03/2014 08:48 Chevron L4310 6001 Bollinger Canyon Road San Ramon CA 94583

CAT No.	Analysis Name		CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC Vo	latiles	ECY 97-602	NWTPH-Gx	mg/kg	mg/kg	
02005	TPH by NWTPH-Gx soi	ls	n.a.	N.D.	1	21.99
Pesti	cides/PCBs	SW-846 808	32	mg/kg	mg/kg	
10736	PCB-1016		12674-11-2	N.D.	0.0039	1
10736	PCB-1221		11104-28-2	N.D.	0.0049	1
10736	PCB-1232		11141-16-5	N.D.	0.0086	1
10736	PCB-1242		53469-21-9	N.D.	0.0035	1
10736	PCB-1248		12672-29-6	N.D.	0.0035	1
10736	PCB-1254		11097-69-1	N.D.	0.0035	1
10736	PCB-1260		11096-82-5	N.D.	0.0053	1
GC Pe	troleum	ECY 97-602	NWTPH-Dx	mg/kg	mg/kg	
Hydro	carbons	modified				
-	Diesel Range Organi		n.a.	N.D.	3.3	1
	Heavy Range Organic		n.a.	N.D.	11	1
00272	nouvy nungo organic					-
GC Pe	troleum	ECY 97-602	NWTPH-Dx	mg/kg	mg/kg	
Hydro	carbons w/Si	modified				
12006	DRO C12-C24 w/Si Ge	21	n.a.	N.D.	3.3	1
	HRO C24-C40 w/Si Ge		n.a.	N.D.	11	1
The	reverse surrogate, c	apric acid, is	s present at <1	°°.		
Metal	S	SW-846 601	.0B	mg/kg	mg/kg	
06949	Cadmium		7440-43-9	0.609	0.0793	1
06951	Chromium		7440-47-3	19.5	0.167	1
06955	Lead		7439-92-1	3.11	0.521	1
06961	Nickel		7440-02-0	18.3	0.136	1
06972	Zinc		7440-66-6	57.3	0.209	1
Wet C	hemistry	SM 2540 G-	1997	8	8	
00111	Moisture		n.a.	7.8	0.50	1
	Moisture represents 103 - 105 degrees C as-received basis.			ample after oven dr reported is on an	ying at	

General Sample Comments

State of Washington Lab Certification No. C259 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.



Analysis Report

LL Sample # SW 7182497 LL Group # 1415667 Account # 11255

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

REVISED

Sample Description: MW-6-19 Grab Soil Facility# 93883 1702 E. Yakima Ave - Yakima, WA

Project Name: 93883

Collected: 08/29/2013 15:30 by KL

Submitted: 08/31/2013 08:50 Reported: 02/03/2014 08:48 Chevron L4310 6001 Bollinger Canyon Road San Ramon CA 94583

		Laborat	ory Sa	ample Analysi	s Record			
CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
10237	EPA SW-846/8260 (Soil)	SW-846 8260B	1	X132481AA	09/05/2013	20:17	Chelsea B Stong	0.92
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201324332242	08/29/2013	15:30	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201324332242	08/29/2013	15:30	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201324332242	08/29/2013	15:30	Client Supplied	1
10725	SIM SVOA (microwave)	SW-846 8270C SIM	1	13249SLD026	09/13/2013	11:38	Mark A Clark	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	13249SLD026	09/09/2013	11:45	Kelli M Barto	1
02005	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH- Gx	1	13235A31C	09/03/2013	21:53	Laura M Krieger	21.99
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201324332242	08/29/2013	15:30	Client Supplied	n.a.
10736	PCBs Soil 8082 Microwave	SW-846 8082	1	132460012A	09/04/2013	21:15	Monica M Souders	1
10497	PCB Microwave Soil Extraction	SW-846 3546	1	132460012A	09/04/2013	06:00	Roman Kuropatkin	1
08272	NWTPH-Dx soil	ECY 97-602 NWTPH- Dx modified	1	132520012A	09/10/2013	15:41	Christine E Dolman	1
12006	NWTPH-Dx soil w/ 10g Si Gel	ECY 97-602 NWTPH- Dx modified	1	132520013A	09/12/2013	05:31	Glorines Suarez- Rivera	1
12008	NW Dx soil w/ 10g column	ECY 97-602 NWTPH- Dx 06/97	1	132520013A	09/09/2013	19:30	Sally L Appleyard	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH- Dx 06/97	1	132520012A	09/09/2013	19:30	Sally L Appleyard	1
06949	Cadmium	SW-846 6010B	1	132475708003	09/06/2013	01:07	John W Yanzuk II	1
06951	Chromium	SW-846 6010B	1	132475708003	09/06/2013	01:07	John W Yanzuk II	1
06955	Lead	SW-846 6010B	1	132475708003	09/06/2013	14:30	Eric L Eby	1
06961	Nickel	SW-846 6010B	1	132475708003	09/06/2013	01:07	John W Yanzuk II	1
06972	Zinc	SW-846 6010B	1	132475708003	09/06/2013	01:07	John W Yanzuk II	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	132475708003	09/05/2013	10:00	Denise K Conners	1
00111	Moisture	SM 2540 G-1997	2	13249820001A	09/06/2013	07:47	William C Schwebel	1



Analysis Report

LL Sample # WW 7182498 LL Group # 1415667 Account # 11255

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REVISED

Sample Description: Rinsate-082913 Grab Water Facility# 93883 1702 E. Yakima Ave - Yakima, WA

Project Name: 93883

EYR29

Collected: 08/29/2013 16:45 by KL

Submitted: 08/31/2013 08:50 Reported: 02/03/2014 08:48

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		
10335	Benzene		71-43-2	N.D.	0.5	1	
10335	Bromodichloromethane	2	75-27-4	N.D.	1	1	
10335	Bromoform		75-25-2	N.D.	1	1	
10335	Bromomethane		74-83-9	N.D.	1	1	
10335	Carbon Tetrachloride	2	56-23-5	N.D.	1	1	
10335	Chlorobenzene		108-90-7	N.D.	0.8	1	
10335	Chloroethane		75-00-3	N.D.	1	1	
10335	Chloroform		67-66-3	N.D.	0.8	1	
10335	Chloromethane		74-87-3	N.D.	1	1	
10335	Dibromochloromethane	2	124-48-1	N.D.	1	1	
10335	1,2-Dibromoethane		106-93-4	N.D.	0.5	1	
10335	1,2-Dichlorobenzene		95-50-1	N.D.	1	1	
10335	1,3-Dichlorobenzene		541-73-1	N.D.	1	1	
10335	1,4-Dichlorobenzene		106-46-7	N.D.	1	1	
10335	1,1-Dichloroethane		75-34-3	N.D.	1	1	
10335	1,2-Dichloroethane		107-06-2	N.D.	0.5	1	
10335	1,1-Dichloroethene		75-35-4	N.D.	0.8	1	
	cis-1,2-Dichloroethe		156-59-2	N.D.	0.8	1	
	trans-1,2-Dichloroet	hene	156-60-5	N.D.	0.8	1	
10335	1,2-Dichloropropane		78-87-5	N.D.	1	1	
	cis-1,3-Dichloroprop		10061-01-5	N.D.	1	1	
	trans-1,3-Dichlorop	copene	10061-02-6	N.D.	1	1	
10335	Ethylbenzene		100-41-4	N.D.	0.5	1	
	Freon 113		76-13-1	N.D.	2	1	
	Methyl Tertiary Buty	/l Ether	1634-04-4	N.D.	0.5	1	
10335	Methylene Chloride		75-09-2	N.D.	2	1	
10335	1,1,2,2-Tetrachloroe	ethane	79-34-5	N.D.	1	1	
10335	Tetrachloroethene		127-18-4	N.D.	0.8	1	
10335	Toluene		108-88-3	N.D.	0.5	1	
10335	1,1,1-Trichloroethar		71-55-6	N.D.	0.8	1	
10335	1,1,2-Trichloroethar	ie	79-00-5	N.D.	0.8	1	
10335	Trichloroethene		79-01-6	N.D.	1	1	
10335	Trichlorofluorometha	ane	75-69-4	N.D.	2	1	
10335	Vinyl Chloride		75-01-4	N.D.	1	1	
10335	m+p-Xylene		179601-23-1	N.D.	0.5 0.5	1 1	
10335	o-Xylene		95-47-6	N.D.	0.5	1	
GC/MS	Semivolatiles	SW-846	8270C SIM	ug/l	ug/l		
08357	Benzo(a) anthracene		56-55-3	N.D.	0.010	1	
08357	Benzo (a) pyrene		50-32-8	N.D.	0.010	1	
08357	Benzo (b) fluoranthene	2	205-99-2	N.D.	0.010	1	
08357	Benzo(k) fluoranthene		207-08-9	N.D.	0.010	1	
08357	Chrysene		218-01-9	N.D.	0.010	1	
08357	Dibenz(a,h)anthracer	ne	53-70-3	N.D.	0.010	1	
08357	Indeno(1,2,3-cd)pyre		193-39-5	N.D.	0.010	1	
08357	1-Methylnaphthalene		90-12-0	N.D.	0.010	1	
08357	2-Methylnaphthalene		91-57-6	0.011	0.010	1	
08357	Naphthalene		91-20-3	0.097	0.030	1	
	-						



Analysis Report

Account

LL Sample # WW 7182498 LL Group # 1415667

11255

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REVISED

Sample Description: Rinsate-082913 Grab Water Facility# 93883 1702 E. Yakima Ave - Yakima, WA

Project Name: 93883

EYR29

Collected: 08/29/2013 16:45 by KL

Submitted: 08/31/2013 08:50 Reported: 02/03/2014 08:48 Chevron L4310 6001 Bollinger Canyon Road San Ramon CA 94583

CAT No.	Analysis Name		CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Vo	latiles	ECY 97-602	NWTPH-Gx	ug/l	ug/l	
08273	NWTPH-Gx water C7-C	12	n.a.	N.D.	50	1
Pesti	cides/PCBs	SW-846 808	2	ug/l	ug/l	
10227	PCB-1016		12674-11-2	N.D.	0.082	1
10227	PCB-1221		11104-28-2	N.D.	0.082	1
10227	PCB-1232		11141-16-5	N.D.	0.16	1
10227	PCB-1242		53469-21-9	N.D.	0.082	1
10227	PCB-1248		12672-29-6	N.D.	0.082	1
10227	PCB-1254		11097-69-1	N.D.	0.082	1
10227	PCB-1260		11096-82-5	N.D.	0.12	1
GC Pe	troleum	ECY 97-602	NWTPH-Dx	ug/l	ug/l	
Hvdro	carbons	modified				
-	Diesel Range Organi	cs C12-C24	n.a.	100	41	1
	Heavy Range Organic		n.a.	590	95	1
GC Pe	troleum	ECY 97-602	NWTPH-Dx	ug/l	ug/l	
Hydro	carbons w/Si	modified				
12005	DRO C12-C24 w/Si Ge	1	n.a.	59	41	1
12005	HRO C24-C40 w/Si Ge	1	n.a.	380	95	1
The	reverse surrogate, ca	apric acid, is	present at <	1%.		
Metal	S	SW-846 601	.0B	ug/l	ug/l	
07049	Cadmium		7440-43-9	N.D.	0.76	1
07051	Chromium		7440-47-3	N.D.	1.6	1
07055	Lead		7439-92-1	N.D.	4.7	1
07061	Nickel		7440-02-0	N.D.	1.5	1
07072	Zinc		7440-66-6	2.2	2.0	1

General Sample Comments

State of Washington Lab Certification No. C259 Carcinogenic PAHs have been reported for this sample

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	8260 Ext. Water Master w/GRO	SW-846 8260B	1	W132482AA	09/05/2013 16:49	Emily R Styer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W132482AA	09/05/2013 16:49	Emily R Styer	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13246WAC026	09/04/2013 08:18	Brian K Graham	1



Analysis Report

Account

LL Sample # WW 7182498

11255

LL Group # 1415667

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REVISED

Sample Description: Rinsate-082913 Grab Water Facility# 93883 1702 E. Yakima Ave - Yakima, WA

Project Name: 93883

Collected: 08/29/2013 16:45 by KL

Submitted: 08/31/2013 08:50 Reported: 02/03/2014 08:48 Chevron L4310 6001 Bollinger Canyon Road San Ramon CA 94583

EYR29

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13246WAC026	09/03/2013	17:10	JoElla L Rice	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH- Gx	1	13246B20A	09/04/2013	11:56	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	13246B20A	09/04/2013	11:56	Catherine J Schwarz	1
10227	PCBs in Water 8082	SW-846 8082	1	132460003A	09/04/2013	09:07	Monica M Souders	1
11117	PCB Waters Extraction	SW-846 3510C	1	132460003A	09/03/2013	15:00	Seth A Farrier	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH- Dx modified	1	132490033A	09/10/2013	10:35	Glorines Suarez- Rivera	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH- Dx modified	1	132490032A	09/11/2013	14:03	Christine E Dolman	. 1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH- Dx 06/97	1	132490032A	09/09/2013	11:15	Denise L Trimby	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH- Dx 06/97	1	132490033A	09/09/2013	11:15	Denise L Trimby	1
07049	Cadmium	SW-846 6010B	1	132481848006	09/07/2013	01:42	John W Yanzuk II	1
07051	Chromium	SW-846 6010B	1	132481848006	09/07/2013	01:42	John W Yanzuk II	1
07055	Lead	SW-846 6010B	1	132481848006	09/07/2013	01:42	John W Yanzuk II	1
07061	Nickel	SW-846 6010B	1	132481848006	09/07/2013	01:42	John W Yanzuk II	1
07072	Zinc	SW-846 6010B	1	132481848006	09/07/2013	01:42	John W Yanzuk II	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132481848006	09/06/2013	07:19	James L Mertz	1



Analysis Report

Account

LL Sample # SW 7182499 LL Group # 1415667

11255

Dilution

Factor

1

1

1

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CAS Number

REVISED

Sample Description: MW-7-11 Grab Soil Facility# 93883 1702 E. Yakima Ave - Yakima, WA

Project Name: 93883

EY711

CAT

No.

10725

10725

10725 Naphthalene

1-Methylnaphthalene

2-Methylnaphthalene

Collected: 08/29/2013 18:20 by KL

Submitted: 08/31/2013 08:50 Reported: 02/03/2014 08:48

Analysis Name

Chevron T-4310 6001 Bollinger Canyon Road San Ramon CA 94583

Dry

Method

0.00071

0.00071

0.00071

ma/ka

Detection Limit mg/kg mg/kg SW-846 8260B GC/MS Volatiles 10237 Benzene 71-43-2 0.0008 0.0005 0.95 Bromodichloromethane 75-27-4 10237 0.001 0.95 N.D. 10237 Bromoform 75-25-2 N.D. 0.001 0.95 10237 Bromomethane 74-83-9 N.D. 0.002 0.95 10237 Carbon Tetrachloride 56-23-5 N.D. 0.001 0.95 108-90-7 Chlorobenzene 0.95 10237 N.D. 0.001 75-00-3 0.95 10237 Chloroethane ND 0.002 10237 Chloroform 67-66-3 N.D. 0.001 0.95 Chloromethane 74-87-3 0.002 10237 N.D. 0.95 Dibromochloromethane 10237 124-48-1 N.D. 0.001 0.95 1.2-Dibromoethane 0.001 10237 106 - 93 - 4N.D. 0.95 10237 1.2-Dichlorobenzene 95-50-1 N.D. 0.001 0.95 10237 1,3-Dichlorobenzene 541-73-1 N.D. 0.001 0.95 10237 1,4-Dichlorobenzene 106-46-7 N.D. 0.001 0.95 1,1-Dichloroethane 75-34-3 10237 N.D. 0.001 0.95 1,2-Dichloroethane 107-06-2 ND 0.001 0.95 10237 10237 1,1-Dichloroethene 75-35-4 N.D. 0.001 0.95 cis-1,2-Dichloroethene 156-59-2 0.001 0.95 10237 N.D. 10237 trans-1,2-Dichloroethene 156-60-5 N.D. 0.001 0.95 1,2-Dichloropropane 78-87-5 10237 N.D. 0.001 0.95 10237 cis-1,3-Dichloropropene 10061-01-5 N.D. 0.001 0.95 10237 trans-1,3-Dichloropropene 10061-02-6 N.D. 0.001 0.95 10237 Ethylbenzene 100-41-4 N.D. 0.001 0.95 76-13-1 0.002 0.95 10237 Freon 113 N.D. Methyl Tertiary Butyl Ether 1634-04-4 0.0005 0.95 10237 ND 10237 Methylene Chloride 75-09-2 N.D. 0.002 0.95 10237 1,1,2,2-Tetrachloroethane 79-34-5 N.D. 0.001 0.95 10237 Tetrachloroethene 127-18-4 N.D. 0.001 0.95 108-88-3 N.D. 0.001 0.95 10237 Toluene 1,1,1-Trichloroethane 10237 71-55-6 N.D. 0.001 0.95 10237 1,1,2-Trichloroethane 79-00-5 N.D. 0.001 0.95 10237 Trichloroethene 79-01-6 N.D. 0.001 0.95 Trichlorofluoromethane 75-69-4 0.95 10237 N.D. 0.002 10237 Vinvl Chloride 75-01-4 ND 0.001 0.95 10237 Xylene (Total) 1330-20-7 N.D. 0.001 0.95 GC/MS Semivolatiles SW-846 8270C SIM ma/ka mg/kg N.D. 0.00071 10725 Benzo(a)anthracene 56-55-3 1 10725 Benzo(a)pyrene 50-32-8 N.D. 0.00071 1 10725 Benzo(b)fluoranthene 205-99-2 0.00097 0.00071 1 10725 Benzo(k)fluoranthene 207-08-9 N.D. 0.00071 1 218-01-9 0.00095 10725 Chrvsene 0.00035 1 Dibenz(a,h)anthracene 10725 53-70-3 N.D. 0.00071 1 10725 Indeno(1,2,3-cd)pyrene 193-39-5 N.D. 0.00071 1

Dry

Result

ECY 97-602 NWTPH-Gx ma/ka GC Volatiles

90-12-0

91-57-6

91-20-3

0.00080

0.0013

0.00096



Analysis Report

Account

LL Sample # SW 7182499 LL Group # 1415667

11255

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REVISED

Sample Description: MW-7-11 Grab Soil Facility# 93883 1702 E. Yakima Ave - Yakima, WA

Project Name: 93883

EY711

Collected: 08/29/2013 18:20 by KL

Submitted: 08/31/2013 08:50 Reported: 02/03/2014 08:48 Chevron L4310 6001 Bollinger Canyon Road San Ramon CA 94583

CAT No.	Analysis Name		CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor		
GC Vo	latiles	ECY 97-602	2 NWTPH-Gx	mg/kg	mg/kg			
02005	TPH by NWTPH-Gx soi	ls	n.a.	N.D.	1	22.93		
Pesti	cides/PCBs	SW-846 808	32	mg/kg	mg/kg			
10736	PCB-1016		12674-11-2	N.D.	0.0038	1		
10736	PCB-1221		11104-28-2	N.D.	0.0049	1		
10736	PCB-1232		11141-16-5	N.D.	0.0085	1		
10736	PCB-1242		53469-21-9	N.D.	0.0035	1		
10736	PCB-1248		12672-29-6	N.D.	0.0035	1		
10736	PCB-1254		11097-69-1	N.D.	0.0035	1		
10736	PCB-1260		11096-82-5	N.D.	0.0052	1		
GC Pe	troleum	ECY 97-602	NWTPH-Dx	mg/kg	mg/kg			
Hydro	carbons	modified						
-	Diesel Range Organi		n.a.	N.D.	3.2	1		
	Heavy Range Organic		n.a.	N.D.	11	1		
GC Pe	troleum	ECY 97-602	2 NWTPH-Dx	mg/kg	mg/kg			
Hydro	carbons w/Si	modified						
12006	DRO C12-C24 w/Si Ge	21	n.a.	N.D.	3.2	1		
	HRO C24-C40 w/Si Ge		n.a.	N.D.	11	1		
	reverse surrogate, c			∞.				
Metal	S	SW-846 601	10в	mg/kg	mg/kg			
06949	Cadmium		7440-43-9	0.338	0.0795	1		
06951	Chromium		7440-47-3	63.3	0.167	1		
06955	Lead		7439-92-1	6.40	0.523	1		
06961	Nickel		7440-02-0	87.2	0.136	1		
06972	Zinc		7440-66-6	50.5	0.209	1		
Wet C	hemistry	SM 2540 G-	1997	8	8			
	Moisture		n.a.	6.3	0.50	1		
	Moisture n.a. 6.3 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. C259 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.



Analysis Report

LL Sample # SW 7182499 LL Group # 1415667 Account # 11255

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REVISED

Sample Description: MW-7-11 Grab Soil Facility# 93883 1702 E. Yakima Ave - Yakima, WA

Project Name: 93883

Collected: 08/29/2013 18:20 by KL

Submitted: 08/31/2013 08:50 Reported: 02/03/2014 08:48 L4310 6001 Bollinger Canyon Road San Ramon CA 94583

Chevron

	Laboratory Sample Analysis Record										
CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor			
10237	EPA SW-846/8260 (Soil)	SW-846 8260B	1	X132481AA	09/05/2013	20:40	Chelsea B Stong	0.95			
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201324332242	08/29/2013	18:20	Client Supplied	1			
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201324332242	08/29/2013	18:20	Client Supplied	1			
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201324332242	08/29/2013	18:20	Client Supplied	1			
10725	SIM SVOA (microwave)	SW-846 8270C SIM	1	13249SLD026	09/13/2013	12:09	Mark A Clark	1			
10811	BNA Soil Microwave SIM	SW-846 3546	1	13249SLD026	09/09/2013	11:45	Kelli M Barto	1			
02005	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH- Gx	1	13235A31C	09/03/2013	22:29	Laura M Krieger	22.93			
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201324332242	08/29/2013	18:20	Client Supplied	n.a.			
10736	PCBs Soil 8082 Microwave	SW-846 8082	1	132460012A	09/04/2013	21:27	Monica M Souders	1			
10497	PCB Microwave Soil Extraction	SW-846 3546	1	132460012A	09/04/2013	06:00	Roman Kuropatkin	1			
08272	NWTPH-Dx soil	ECY 97-602 NWTPH- Dx modified	1	132520012A	09/10/2013	16:21	Christine E Dolman	1			
12006	NWTPH-Dx soil w/ 10g Si Gel	ECY 97-602 NWTPH- Dx modified	1	132520013A	09/12/2013	05:51	Glorines Suarez- Rivera	1			
12008	NW Dx soil w/ 10g column	ECY 97-602 NWTPH- Dx 06/97	1	132520013A	09/09/2013	19:30	Sally L Appleyard	1			
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH- Dx 06/97	1	132520012A	09/09/2013	19:30	Sally L Appleyard	1			
06949	Cadmium	SW-846 6010B	1	132465708003	09/05/2013	00:45	John W Yanzuk II	1			
06951	Chromium	SW-846 6010B	1	132465708003	09/05/2013	00:45	John W Yanzuk II	1			
06955	Lead	SW-846 6010B	1	132465708003	09/05/2013	00:45	John W Yanzuk II	1			
06961	Nickel	SW-846 6010B	1	132465708003	09/05/2013	00:45	John W Yanzuk II	1			
06972	Zinc	SW-846 6010B	1	132465708003	09/05/2013	00:45	John W Yanzuk II	1			
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	132465708003	09/04/2013	09:35	Denise K Conners	1			
00111	Moisture	SM 2540 G-1997	2	13249820001A	09/06/2013	07:47	William C Schwebel	1			



Analysis Report

LL Sample # SW 7182500 LL Group # 1415667 Account # 11255

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REVISED

Sample Description: MW-7-19 Grab Soil Facility# 93883 1702 E. Yakima Ave - Yakima, WA

Project Name: 93883

EY719

Collected: 08/29/2013 18:45 by KL

Submitted: 08/31/2013 08:50 Reported: 02/03/2014 08:48

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS	Volatiles SW-846	8260B	mg/kg	mg/kg	
10237	Benzene	71-43-2	N.D.	0.0005	0.86
10237	Bromodichloromethane	75-27-4	N.D.	0.0009	0.86
10237	Bromoform	75-25-2	N.D.	0.0009	0.86
10237	Bromomethane	74-83-9	N.D.	0.002	0.86
10237	Carbon Tetrachloride	56-23-5	N.D.	0.0009	0.86
10237	Chlorobenzene	108-90-7	N.D.	0.0009	0.86
10237	Chloroethane	75-00-3	N.D.	0.002	0.86
10237	Chloroform	67-66-3	N.D.	0.0009	0.86
10237	Chloromethane	74-87-3	N.D.	0.002	0.86
10237	Dibromochloromethane	124-48-1	N.D.	0.0009	0.86
10237	1,2-Dibromoethane	106-93-4	N.D.	0.0009	0.86
10237	1,2-Dichlorobenzene	95-50-1	N.D.	0.0009	0.86
10237	1,3-Dichlorobenzene	541-73-1	N.D.	0.0009	0.86
10237	1,4-Dichlorobenzene	106-46-7	N.D.	0.0009	0.86
10237	1,1-Dichloroethane	75-34-3	N.D.	0.0009	0.86
10237	1,2-Dichloroethane	107-06-2	N.D.	0.0009	0.86
10237	1,1-Dichloroethene	75-35-4	N.D.	0.0009	0.86
10237	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0009	0.86
10237	trans-1,2-Dichloroethene	156-60-5	N.D.	0.0009	0.86
10237	1,2-Dichloropropane	78-87-5	N.D.	0.0009	0.86
10237	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.0009	0.86
10237	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.0009	0.86
10237	Ethylbenzene	100-41-4	N.D.	0.0009	0.86
10237	Freon 113	76-13-1	N.D.	0.002	0.86
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	0.86
10237	Methylene Chloride	75-09-2	N.D.	0.002	0.86
10237	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.002	0.86
10237	Tetrachloroethene	127-18-4	N.D.	0.0009	0.86
10237	Toluene	108-88-3	N.D. N.D.	0.0009	0.86
10237	1,1,1-Trichloroethane	71-55-6	N.D. N.D.		0.86
				0.0009	
10237	1,1,2-Trichloroethane	79-00-5	N.D.	0.0009	0.86
10237	Trichloroethene	79-01-6	N.D.	0.0009	0.86
10237	Trichlorofluoromethane	75-69-4	N.D.	0.002	0.86
10237	Vinyl Chloride	75-01-4	N.D.	0.0009	0.86
10237	Xylene (Total)	1330-20-7	N.D.	0.0009	0.86
C/MS	Semivolatiles SW-846	8270C SIM	mg/kg	mg/kg	
10725	Benzo(a)anthracene	56-55-3	N.D.	0.00071	1
10725	Benzo(a)pyrene	50-32-8	N.D.	0.00071	1
10725	Benzo(b)fluoranthene	205-99-2	N.D.	0.00071	1
10725	Benzo(k)fluoranthene	207-08-9	N.D.	0.00071	1
10725	Chrysene	218-01-9	N.D.	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
10725	1-Methylnaphthalene	90-12-0	N.D.	0.00071	1
10725	2-Methylnaphthalene	91-57-6	0.0014	0.00071	1
10725	Naphthalene	91-20-3	0.0013	0.00071	1
	atiles ECY 97-	-602 NWTPH-Gx	mg/kg	mg/kg	



Analysis Report

Account

LL Sample # SW 7182500 LL Group # 1415667

11255

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REVISED

Sample Description: MW-7-19 Grab Soil Facility# 93883 1702 E. Yakima Ave - Yakima, WA

Project Name: 93883

EY719

Collected: 08/29/2013 18:45 by KL

Submitted: 08/31/2013 08:50 Reported: 02/03/2014 08:48 Chevron L4310 6001 Bollinger Canyon Road San Ramon CA 94583

CAT No.	Analysis Name		CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor			
GC Vo	latiles	ECY 97-602	2 NWTPH-Gx	mg/kg	mg/kg				
02005	TPH by NWTPH-Gx soi	ls	n.a.	N.D.	1.2	27.16			
Pesti	cides/PCBs	SW-846 808	32	mg/kg	mg/kg				
10736	PCB-1016		12674-11-2	N.D.	0.0039	1			
10736	PCB-1221		11104-28-2	N.D.	0.0050	1			
10736	PCB-1232		11141-16-5	N.D.	0.0086	1			
10736	PCB-1242		53469-21-9	N.D.	0.0036	1			
10736	PCB-1248		12672-29-6	N.D.	0.0036	1			
10736	PCB-1254		11097-69-1	N.D.	0.0036	1			
10736	PCB-1260		11096-82-5	N.D.	0.0053	1			
GC Pe	troleum	ECY 97-602	NWTPH-Dx	mg/kg	mg/kg				
Hvdro	carbons	modified							
-	Diesel Range Organi		n.a.	N.D.	3.3	1			
	Heavy Range Organic		n.a.	N.D.	11	1			
00272	neary nange erganre				± ±	-			
GC Pe	troleum	ECY 97-602	NWTPH-Dx	mg/kg	mg/kg				
Hydro	carbons w/Si	modified							
12006	DRO C12-C24 w/Si Ge	1	n.a.	N.D.	3.3	1			
	HRO C24-C40 w/Si Ge		n.a.	N.D.	11	1			
	reverse surrogate, c		s present at <1	8.					
Metal	S	SW-846 601	0B	mg/kg	mg/kg				
06949	Cadmium		7440-43-9	0.402	0.0825	1			
06951	Chromium		7440-47-3	17.6	0.174	1			
06955	Lead		7439-92-1	4.79	0.543	1			
06961	Nickel		7440-02-0	12.0	0.141	1			
06972	Zinc		7440-66-6	56.3	0.217	1			
Wet C	hemistry	SM 2540 G-	1997	%	8				
	-		n.a.	7.9	0.50	1			
	00111 Moisture n.a. 7.9 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. 1								

General Sample Comments

State of Washington Lab Certification No. C259 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.



Analysis Report

LL Sample # SW 7182500 LL Group # 1415667 Account # 11255

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REVISED

Sample Description: MW-7-19 Grab Soil Facility# 93883 1702 E. Yakima Ave - Yakima, WA

Project Name: 93883

Collected: 08/29/2013 18:45 by KL

Submitted: 08/31/2013 08:50 Reported: 02/03/2014 08:48

EY719

	Laboratory Sample Analysis Record										
CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor			
10237	EPA SW-846/8260 (Soil)	SW-846 8260B	1	X132481AA	09/05/2013		Chelsea B Stong	0.86			
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201324332242	08/29/2013	18:45	Client Supplied	1			
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201324332242	08/29/2013	18:45	Client Supplied	1			
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201324332242	08/29/2013	18:45	Client Supplied	1			
10725	SIM SVOA (microwave)	SW-846 8270C SIM	1	13249SLD026	09/13/2013	12:41	Mark A Clark	1			
10811	BNA Soil Microwave SIM	SW-846 3546	1	13249SLD026	09/09/2013	11:45	Kelli M Barto	1			
02005	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH- Gx	1	13249A31A	09/06/2013	19:35	Laura M Krieger	27.16			
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201324332242	08/29/2013	18:45	Client Supplied	n.a.			
10736	PCBs Soil 8082 Microwave	SW-846 8082	1	132460012A	09/04/2013	21:38	Monica M Souders	1			
10497	PCB Microwave Soil Extraction	SW-846 3546	1	132460012A	09/04/2013	06:00	Roman Kuropatkin	1			
08272	NWTPH-Dx soil	ECY 97-602 NWTPH- Dx modified	1	132520012A	09/10/2013	16:01	Christine E Dolman	1			
12006	NWTPH-Dx soil w/ 10g Si Gel	ECY 97-602 NWTPH- Dx modified	1	132520013A	09/12/2013	06:11	Glorines Suarez- Rivera	1			
12008	NW Dx soil w/ 10g column	ECY 97-602 NWTPH- Dx 06/97	1	132520013A	09/09/2013	19:30	Sally L Appleyard	1			
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH- Dx 06/97	1	132520012A	09/09/2013	19:30	Sally L Appleyard	1			
06949	Cadmium	SW-846 6010B	1	132465708003	09/05/2013	00:49	John W Yanzuk II	1			
06951	Chromium	SW-846 6010B	1	132465708003	09/05/2013	00:49	John W Yanzuk II	1			
06955	Lead	SW-846 6010B	1	132465708003	09/05/2013	00:49	John W Yanzuk II	1			
06961	Nickel	SW-846 6010B	1	132465708003	09/05/2013	00:49	John W Yanzuk II	1			
06972	Zinc	SW-846 6010B	1	132465708003	09/05/2013	00:49	John W Yanzuk II	1			
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	132465708003	09/04/2013	09:35	Denise K Conners	1			
00111	Moisture	SM 2540 G-1997	2	13249820001A	09/06/2013	07:47	William C Schwebel	1			



Analysis Report

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Quality Control Summary

Client Name: Chevron Reported: 02/03/14 at 08:48 AM Group Number: 1415667

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 <u>Result</u>	Blank <u>MDL</u>	Report <u>Units</u>	LCS <u>%REC</u>	LCSD <u>%REC</u>	LCS/LCSD <u>Limits</u>	<u>RPD</u>	<u>RPD Max</u>			
Batch number: 0132461AA	Batch number: Q132461AA Sample number(s): 7182491,7182494										
Benzene	N.D.	0.025	mg/kg	92	91	80-120	0	30			
Bromodichloromethane	N.D.	0.050	mg/kg	82	82	75-120	1	30			
Bromoform	N.D.	0.050	mg/kg	93	93	70-120	0	30			
Bromomethane	N.D.	0.10	mg/kg	179*	189*	32-162	5	30			
Carbon Tetrachloride	N.D.	0.050	mg/kg	86	86	69-122	0	30			
Chlorobenzene	N.D.	0.050	mg/kg	92	93	80-120	1	30			
Chloroethane	N.D.	0.10	mg/kg	166	175*	17-171	6	30			
Chloroform	N.D.	0.050	mg/kg	87	87	80-120	0	30			
Chloromethane	N.D.	0.10	mg/kg	86	85	56-120	1	30			
Dibromochloromethane	N.D. N.D.	0.10	mg/kg	87	87	77-120	1	30			
1,2-Dibromoethane	N.D. N.D.		mg/kg	87 92	87 91	80-120	1	30			
		0.050		92 89			1				
1,2-Dichlorobenzene	N.D.	0.050	mg/kg		91	80-120		30			
1,3-Dichlorobenzene	N.D.	0.050	mg/kg	93	95	80-120	2	30			
1,4-Dichlorobenzene	N.D.	0.050	mg/kg	94	95	80-120	0	30			
1,1-Dichloroethane	N.D.	0.050	mg/kg	84	87	80-120	4	30			
1,2-Dichloroethane	N.D.	0.050	mg/kg	79	80	72-126	1	30			
1,1-Dichloroethene	N.D.	0.050	mg/kg	90	91	73-129	1	30			
cis-1,2-Dichloroethene	N.D.	0.050	mg/kg	91	90	80-120	1	30			
trans-1,2-Dichloroethene	N.D.	0.050	mg/kg	94	93	79-120	1	30			
1,2-Dichloropropane	N.D.	0.050	mg/kg	92	92	77-120	0	30			
cis-1,3-Dichloropropene	N.D.	0.050	mg/kg	90	90	74-120	1	30			
trans-1,3-Dichloropropene	N.D.	0.050	mg/kg	84	85	77-120	0	30			
Ethylbenzene	N.D.	0.050	mg/kg	88	89	80-120	1	30			
Freon 113	N.D.	0.10	mg/kg	91	87	64-137	5	30			
Methyl Tertiary Butyl Ether	N.D.	0.025	mg/kg	96	96	69-126	0	30			
Methylene Chloride	N.D.	0.10	mg/kg	93	93	80-124	0	30			
1,1,2,2-Tetrachloroethane	N.D.	0.050	mq/kq	87	86	71-123	1	30			
Tetrachloroethene	N.D.	0.050	mg/kg	97	98	78-126	1	30			
Toluene	N.D.	0.050	mg/kg	92	92	80-120	1	30			
1,1,1-Trichloroethane	N.D.	0.050	mg/kg	86	86	71-125	0	30			
1,1,2-Trichloroethane	N.D.	0.050	mg/kg	90	91	80-120	1	30			
Trichloroethene	N.D.	0.050	mg/kg	91	92	80-120	1	30			
Trichlorofluoromethane	N.D.	0.10	mg/kg	84	82	58-133	1	30			
Vinyl Chloride	N.D.	0.050	mg/kg	83	83	53-120	0	30			
Xylene (Total)	N.D.	0.050	mg/kg	90	91	80-120	1	30			
		0.000		50	22	00 120	-	50			
Batch number: W132482AA	Sample numb	per(s): 71	82490,7182	498							
Benzene	N.D.	0.5	ug/l	99	98	78-120	1	30			
Bromodichloromethane	N.D.	1.	ug/l	95	95	73-120	0	30			
Bromoform	N.D.	1.	ug/l	93	95	61-120	3	30			
Bromomethane	N.D.	1.	ug/l	74	73	51-120	1	30			
Carbon Tetrachloride	N.D.	1.	uq/l	98	97	74-130	0	30			
Chlorobenzene	N.D.	0.8	uq/l	106	108	80-120	1	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.



Client Name: Chevron

Lancaster Laboratories Environmental



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Quality Control Summary

Group Number: 1415667

Cilent Name: Chevron		C.	топр ил	iber: 1	415667			
Reported: 02/03/14 at	08:48 AM							
1 , ,	Blank	Blank	Report	LCS	LCSD	LCS/LCSD		
Analysis Name	Result	MDL	Units	%REC	%REC	Limits	RPD	<u>RPD Max</u>
Chloroethane	N.D.	1.	ug/l	76	76	45-120	0	30
Chloroform	N.D.	0.8	ug/l	100	100	77-122	0	30
Chloromethane	N.D.	1.	ug/l	91	92	55-120	1	30
Dibromochloromethane	N.D.	1.	ug/1	97	99	72-120	2	30
1,2-Dibromoethane	N.D.	0.5	ug/1	104	106	76-120	1	30
1,2-Dichlorobenzene	N.D.	1.	ug/1 ug/1	109	110	80-120	1	30
1,3-Dichlorobenzene	N.D.	1.	ug/1 ug/1	109	106	80-120	0	30
			J,					
1,4-Dichlorobenzene	N.D.	1.	ug/l	107	108	80-120	1	30
1,1-Dichloroethane	N.D.	1.	ug/l	98	98	80-120	1	30
1,2-Dichloroethane	N.D.	0.5	ug/l	101	101	71-130	0	30
1,1-Dichloroethene	N.D.	0.8	ug/l	96	97	76-124	2	30
cis-1,2-Dichloroethene	N.D.	0.8	ug/l	98	99	80-120	1	30
trans-1,2-Dichloroethene	N.D.	0.8	ug/l	99	101	80-120	2	30
1,2-Dichloropropane	N.D.	1.	ug/l	102	101	80-120	0	30
cis-1,3-Dichloropropene	N.D.	1.	uq/l	100	98	80-120	2	30
trans-1,3-Dichloropropene	N.D.	1.	uq/l	100	99	69-120	1	30
Ethylbenzene	N.D.	0.5	uq/l	103	104	79-120	1	30
Freon 113	N.D.	2.	uq/l	86	88	63-133	3	30
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/1	97	98	75-120	1	30
Methylene Chloride	N.D.	2.	ug/1	99	100	80-120	1	30
1,1,2,2-Tetrachloroethane	N.D.	1.	ug/1	104	104	70-120	0	30
Tetrachloroethene		1. 0.8		104	104	80-120	2	30
	N.D.		ug/l					
Toluene	N.D.	0.5	ug/l	104	106	80-120	2	30
1,1,1-Trichloroethane	N.D.	0.8	ug/l	98	99	66-126	1	30
1,1,2-Trichloroethane	N.D.	0.8	ug/l	101	101	80-120	0	30
Trichloroethene	N.D.	1.	ug/l	102	103	80-120	1	30
Trichlorofluoromethane	N.D.	2.	ug/l	84	83	65-130	1	30
Vinyl Chloride	N.D.	1.	ug/l	91	91	63-120	0	30
m+p-Xylene	N.D.	0.5	ug/l	104	105	80-120	1	30
o-Xylene	N.D.	0.5	ug/l	103	107	80-120	4	30
Batch number: X132461AA	Sample num	nber(s): 71	82492					
Benzene	N.D.	0.0005	mg/kg	94	95	80-120	1	30
Bromodichloromethane	N.D.	0.001	mg/kg	93	92	75-120	0	30
Bromoform	N.D.	0.001	mg/kg	105	101	70-120	4	30
Bromomethane	N.D.	0.002	mg/kg	93	92	32-162	1	30
Carbon Tetrachloride	N.D.	0.001	mg/kg	99	99	69-122	1	30
Chlorobenzene	N.D.	0.001	mg/kg	95	95	80-120	Ō	30
Chloroethane	N.D.	0.001	mg/kg	95	94	17-171	2	30
Chloroform	N.D.	0.002	mg/kg	96	96	80-120	0	30
Chloromethane				89	89	56-120	0	30
	N.D.	0.002	mg/kg	89 94	93			
Dibromochloromethane	N.D.	0.001	mg/kg			77-120	2	30
1,2-Dibromoethane	N.D.	0.001	mg/kg	96	94	80-120	3	30
1,2-Dichlorobenzene	N.D.	0.001	mg/kg	93	93	80-120	0	30
1,3-Dichlorobenzene	N.D.	0.001	mg/kg	92	94	80-120	2	30
1,4-Dichlorobenzene	N.D.	0.001	mg/kg	93	94	80-120	1	30
1,1-Dichloroethane	N.D.	0.001	mg/kg	91	92	80-120	1	30
1,2-Dichloroethane	N.D.	0.001	mg/kg	93	93	72-126	1	30
1,1-Dichloroethene	N.D.	0.001	mg/kg	98	98	73-129	0	30
cis-1,2-Dichloroethene	N.D.	0.001	mg/kg	97	97	80-120	0	30
trans-1,2-Dichloroethene	N.D.	0.001	mg/kg	101	102	79-120	2	30
1,2-Dichloropropane	N.D.	0.001	mg/kg	92	92	77-120	0	30
cis-1,3-Dichloropropene	N.D.	0.001	mg/kg	92	92	74-120	0	30
trans-1,3-Dichloropropene	N.D.	0.001	mg/kg	88	88	77-120	1	30
Ethylbenzene	N.D.	0.001	mg/kg	88 91	93	80-120	1	30
Freon 113	N.D. N.D.	0.001	mg/kg	86	93 87	64-137	1	30
LICOU 113	и.ц.	0.002	IIIA) vA	00	07	04-13/	T	50

*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.



Client Name: Chevron

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Quality Control Summary

Group Number: 1415667

Client Name: Chevron		G	roup Nut	nber: 14	115667			
Reported: 02/03/14 at 08:	48 AM							
	Blank	Blank	Report	LCS	LCSD	LCS/LCSD		
Analysis Name	Result	MDL	Units	%REC	%REC	Limits	RPD	RPD Max
Methyl Tertiary Butyl Ether	N.D.	0.0005	mq/kq	91	90	69-126	2	30
Methylene Chloride	N.D.	0.002	mg/kg	94	93	80-124	1	30
1,1,2,2-Tetrachloroethane	N.D.	0.001	mg/kg	90	89	71-123	2	30
Tetrachloroethene		0.001	mg/kg	100	103	78-126	2	30
	N.D.							
Toluene	N.D.	0.001	mg/kg	93	94	80-120	1	30
1,1,1-Trichloroethane	N.D.	0.001	mg/kg	98	98	71-125	0	30
1,1,2-Trichloroethane	N.D.	0.001	mg/kg	94	93	80-120	2	30
Trichloroethene	N.D.	0.001	mg/kg	100	100	80-120	0	30
Trichlorofluoromethane	N.D.	0.002	mg/kg	92	91	58-133	1	30
Vinyl Chloride	N.D.	0.001	mg/kg	92	93	53-120	0	30
Xylene (Total)	N.D.	0.001	mg/kg	93	93	80-120	1	30
Batch number: X132481AA	Sample num	ber(s): 71	82493,7182	2495-71824	197,718249	9-7182500		
Benzene	N.D.	0.0005	mg/kg	97	93	80-120	5	30
Bromodichloromethane	N.D.	0.001	mg/kg	98	97	75-120	1	30
Bromoform	N.D.	0.001	mg/kg	105	102	70-120	2	30
Bromomethane	N.D.	0.002	mg/kg	100	94	32-162	6	30
Carbon Tetrachloride	N.D.	0.001	mg/kg	108	102	69-122	6	30
Chlorobenzene	N.D.	0.001	mg/kg	97	93	80-120	4	30
Chloroethane	N.D.	0.002	mg/kg	98	93	17-171	6	30
Chloroform	N.D.	0.001	mg/kg	102	99	80-120	4	30
Chloromethane	N.D.	0.001		92	87	56-120	6	30
Dibromochloromethane	N.D. N.D.	0.002	mg/kg	92 97	87 94	77-120	3	30
			mg/kg					
1,2-Dibromoethane	N.D.	0.001	mg/kg	92	92	80-120	0	30
1,2-Dichlorobenzene	N.D.	0.001	mg/kg	94	94	80-120	0	30
1,3-Dichlorobenzene	N.D.	0.001	mg/kg	95	93	80-120	3	30
1,4-Dichlorobenzene	N.D.	0.001	mg/kg	96	93	80-120	3	30
1,1-Dichloroethane	N.D.	0.001	mg/kg	93	91	80-120	2	30
1,2-Dichloroethane	N.D.	0.001	mg/kg	97	96	72-126	2	30
1,1-Dichloroethene	N.D.	0.001	mg/kg	104	97	73-129	6	30
cis-1,2-Dichloroethene	N.D.	0.001	mg/kg	101	98	80-120	3	30
trans-1,2-Dichloroethene	N.D.	0.001	mg/kg	105	100	79-120	5	30
1,2-Dichloropropane	N.D.	0.001	mg/kg	95	92	77-120	3	30
cis-1,3-Dichloropropene	N.D.	0.001	mg/kg	94	94	74-120	1	30
trans-1,3-Dichloropropene	N.D.	0.001	mg/kg	88	86	77-120	2	30
Ethylbenzene	N.D.	0.001	mg/kg	93	90	80-120	4	30
Freon 113	N.D.	0.002	mg/kg	105	97	64-137	8	30
Methyl Tertiary Butyl Ether	N.D.	0.0005	mg/kg	90	91	69-126	1	30
Methylene Chloride	N.D.	0.002	mg/kg	96	94	80-124	3	30
1,1,2,2-Tetrachloroethane	N.D.	0.002	mg/kg	83	85	71-123	3	30
				83 103	85 96	78-126	3 7	30
Tetrachloroethene	N.D.	0.001	mg/kg		90		5	
Toluene	N.D.	0.001	mg/kg	94		80-120		30
1,1,1-Trichloroethane	N.D.	0.001	mg/kg	97	92	71-125	5	30
1,1,2-Trichloroethane	N.D.	0.001	mg/kg	90	91	80-120	0	30
Trichloroethene	N.D.	0.001	mg/kg	102	99	80-120	3	30
Trichlorofluoromethane	N.D.	0.002	mg/kg	105	98	58-133	7	30
Vinyl Chloride	N.D.	0.001	mg/kg	96	90	53-120	6	30
Xylene (Total)	N.D.	0.001	mg/kg	94	91	80-120	4	30
Batch number: 13246WAC026	Sample num	ber(s): 71	82490,7182	2498				
Benzo(a)anthracene	N.D.	0.010	ug/l	90	89	73-127	1	30
Benzo(a)pyrene	N.D.	0.010	ug/l	93	96	72-120	3	30
Benzo(b)fluoranthene	N.D.	0.010	ug/l	100	106	79-136	6	30
Benzo(k)fluoranthene	N.D.	0.010	uq/1	104	112	73-131	7	30
Chrysene	N.D.	0.010	ug/1	96	99	76-125	3	30
Dibenz(a,h)anthracene	N.D.	0.010	ug/l	99	101	58-131	2	30
DINCHIZ (u, II) UNCHIZACCHE		0.010	ug/ 1	~ ~ ~	TOT	JU TOT	2	50

*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.



Analysis Report

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Quality Control Summary

Client Name: Chevron Reported: 02/03/14 at 08:	48 AM	G	roup Nun	ıber: 14	15667			
	Blank	Blank	Report	LCS	LCSD	LCS/LCSD		
<u>Analysis Name</u>	<u>Result</u>	MDL	<u>Units</u>	<u>%REC</u>	<u>%REC</u>	<u>Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Indeno(1,2,3-cd)pyrene	N.D.	0.010	ug/l	108	110	62-130	2	30
1-Methylnaphthalene	N.D.	0.010	ug/l	102	106	80-126	4	30
2-Methylnaphthalene Naphthalene	N.D. N.D.	0.010 0.030	ug/l ug/l	102 97	104 101	81-124 75-120	3 4	30 30
Napitellatelle	N.D.	0.030	ug/1	97	TOT	75-120	4	30
Batch number: 13249SLD026	Sample numb	er(s): 718	82491-7182	497,71824	99-7182500)		
Benzo(a) anthracene	N.D.	0.00067	mg/kg	103		83-119		
Benzo(a)pyrene	N.D.	0.00067	mg/kg	99		80-122		
Benzo(b)fluoranthene	N.D.	0.00067	mg/kg	111		82-135		
Benzo(k)fluoranthene	N.D. N.D.	0.00067	mg/kg	94 98		79-123		
Chrysene Dibenz (a,h) anthracene	N.D.	0.00033 0.00067	mg/kg mg/kg	98 106		84-113 78-124		
Indeno (1, 2, 3-cd) pyrene	N.D.	0.00067	mg/kg	103		77-124		
1-Methylnaphthalene	N.D.	0.00067	mg/kg	118		78-119		
2-Methylnaphthalene	N.D.	0.00067	mg/kg	113		78-121		
Naphthalene	N.D.	0.00067	mg/kg	107		79-113		
Batch number: 13235A31C	Sample numb					00 100	3	2.0
TPH by NWTPH-Gx soils	N.D.	1.0	mg/kg	96	93	80-120	3	30
Batch number: 13246B20A	Sample numb	er(s): 718	2490,7182	498				
NWTPH-Gx water C7-C12	N.D.	50.	ug/l	93		75-135		
Batch number: 13246B53A	Sample numb	er(s): 718	82489					
Benzene	N.D.	0.2	ug/l	96	95	80-120	1	30
Ethylbenzene	N.D.	0.2	ug/l	100	100	80-120	1	30
Methyl tert-Butyl Ether	N.D.	0.3	ug/l	93	94	76-131	1	30
NWTPH-Gx water C7-C12	N.D.	50.	ug/l	115	111	75-135	3	30
Toluene	N.D.	0.2	ug/l	98	99	80-120	0	30
Total Xylenes	N.D.	0.6	ug/l	103	104	80-120	1	30
Batch number: 13249A31A	Sample numb	er(s): 718	32491,7182	500				
TPH by NWTPH-Gx soils	N.D.	1.0	mg/kg	92	96	80-120	4	30
Batch number: 132460003A	Comple numb		0400 7100	400				
PCB-1016	Sample numbo N.D.	0.080	uq/l	498 86	86	69-120	0	30
PCB-1010 PCB-1221	N.D.	0.080	ug/l	00	00	09-120	0	30
PCB-1232	N.D.	0.16	ug/1					
PCB-1242	N.D.	0.080	uq/l					
PCB-1248	N.D.	0.080	ug/l					
PCB-1254	N.D.	0.080	ug/l					
PCB-1260	N.D.	0.12	ug/l	98	96	69-128	3	30
Batch number: 132460012A	Sample numb	er(g) · 718	2491-7182	497 71824	99-7182500	1		
PCB-1016	N.D.	0.0036	mq/kq	92	<i>JJ</i> 7102300	77-121		
PCB-1221	N.D.	0.0046	mg/kg					
PCB-1232	N.D.	0.0080	mg/kg					
PCB-1242	N.D.	0.0033	mg/kg					
PCB-1248	N.D.	0.0033	mg/kg					
PCB-1254	N.D.	0.0033	mg/kg					
PCB-1260	N.D.	0.0049	mg/kg	102		77-127		
Batch number: 132490033A	Sample numb	er(s): 718	32490.7182	498				
Diesel Range Organics C12-C24	N.D.	30.	uq/1	79	78	50-113	2	20
Heavy Range Organics C24-C40	N.D.	70.	ug/l	-	-			-
			2.					

*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.



Client Name: Chevron

Lancaster Laboratories Environmental

Analysis Report

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Quality Control Summary

Group Number: 1415667

Cilent Name: Chevron		C	эгоир ми	mber: 1	415667			
Reported: 02/03/14 at 08:	48 AM							
	Blank	Blank	Report	LCS	LCSD	LCS/LCSD		
<u>Analysis Name</u>	<u>Result</u>	MDL	<u>Units</u>	<u>%REC</u>	<u>%REC</u>	<u>Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 132520012A	-		4		499-7182500			
Diesel Range Organics C12-C24	N.D.	3.0	mg/kg	83		60-120		
Heavy Range Organics C24-C40	N.D.	10.	mg/kg					
Batch number: 132670018A	Sample nu	mber(s): 71	82491.7182	2494				
>C10-C12 Aliphatic	N.D.	1.0	mg/kg	96		31-137		
>C10-C12 Aromatic	N.D.	1.0	mg/kg	93		22-119		
>C12-C16 Aliphatic	N.D.	1.0	mg/kg	100		42-146		
>C12-C16 Aromatic	N.D.	1.0	mg/kg	89		24-136		
>C16-C21 Aliphatic	N.D.	3.0	mg/kg	98		57-111		
>C16-C21 Aromatic	N.D.	2.0	mg/kg	93		34-143		
>C21-C34 Aliphatic	N.D.	6.0	mg/kg	97		50-124		
>C21-C34 Aromatic	N.D.	2.0	mg/kg	93		44-134		
Batch number: 13268A54A		mber(s): 71			0.7	80 120	1	50
Benzene	N.D.	0.0500	mg/kg	88	87	70-130	1	50
C5-C6 Aliphatic Hydrocarbons	N.D.	2.50	mg/kg	81	84	70-130	5	50
C6-C8 Aliphatic Hydrocarbons	N.D.	2.50	mg/kg	80	84	70-130	5	50
C8-C10 Aliphatic Hydrocarbons	N.D.	2.50	mg/kg	81	77	70-130	4	50
C8-C10 Aromatic Hydrocarbons	N.D.	2.50	mg/kg	96	96	70-130	0	50
Ethylbenzene	N.D.	0.0500	mg/kg	91	90	70-130	1	50
Methyl t-butyl ether	N.D.	0.0500	mg/kg	85	86	70-130	1	50
Toluene	N.D.	0.0500	mg/kg	91	91	70-130	0	50
o-Xylene	N.D.	0.0500	mg/kg	97	96	70-130	1	50
m,p-Xylenes	N.D.	0.100	mg/kg	100	99	70-130	1	50
Batch number: 132490032A	Sample nu	mber(s): 71	82490.718	2498				
DRO C12-C24 w/Si Gel	N.D.	30.	ug/1	69	68	32-117	2	20
HRO C24-C40 w/Si Gel	N.D.	70.	ug/l	0.5	00	52 11,	-	20
Detah number 1205000123	Comple nu		00401 710	2407 7100	400 7100500	<u>,</u>		
Batch number: 132520013A DRO C12-C24 w/Si Gel	N.D.	3.0		2497,7182 76	499-7182500	, 50-133		
			mg/kg	76		50-133		
HRO C24-C40 w/Si Gel	N.D.	10.	mg/kg					
Batch number: 132465708003	Sample nu	mber(s): 71	82499-7182	2500				
Cadmium	N.D.	0.0760	mg/kg	105		80-120		
Chromium	N.D.	0.160	mg/kg	104		80-120		
Lead	N.D.	0.500	mg/kg	105		80-120		
Nickel	N.D.	0.130	mg/kg	106		80-120		
Zinc	0.207	0.200	mg/kg	104		80-120		
Batch number: 132475708003	Sample nu	mber(s): 71	82491-718	2497				
Cadmium	N.D.	0.0760	mg/kg	108		80-120		
Chromium	N.D.	0.160	mg/kg	109		80-120		
Lead	N.D.	0.500	mg/kg	110		80-120		
Nickel	N.D.	0.130	mg/kg	110		80-120		
Zinc	0.202	0.200	mg/kg	108		80-120		
Batch number: 132481848006	-	mber(s): 71				00.111		
Cadmium	N.D.	0.76	ug/l	104		90-112		
Chromium	N.D.	1.6	ug/l	101		90-110		
Lead	N.D.	4.7	ug/l	102		88-110		
Nickel	N.D.	1.5	ug/l	106		90-111		
Zinc	N.D.	2.0	ug/l	104		90-110		
Batch number: 13249820001A	Sample nu	mber(s): 71	82491-7182	2497,7182	499-7182500)		

*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.



Analysis Report

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Quality Control Summary

Client Name: Chevron		G	Froup Nur	nber: 1	L415667			
Reported: 02/03/14 at 0	8:48 AM							
2	Blank	Blank	Report	LCS	LCSD	LCS/LCSD		
<u>Analysis Name</u>	<u>Result</u>	MDL	<u>Units</u>	%REC	<u>%REC</u>	<u>Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Moisture				100		99-101		

Sample Matrix Quality Control Unspiked (UNSPK) = the sample used in conjunction with the matrix spike Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS <u>%REC</u>	MSD <u>%REC</u>	MS/MSD <u>Limits</u>	<u>RPD</u>	RPD <u>MAX</u>	BKG <u>Conc</u>	DUP <u>Conc</u>	DUP <u>RPD</u>	Dup RPD <u>Max</u>
Batch number: X132481AA	Sample	number(s)	: 7182493	.71824	95-7182	497.7182499	-7182500	UNSPK: P185153	
Benzene	95	110.000 (0)	55-143	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		19777202199	,102000	010110 1100100	
Bromodichloromethane	87		53-136						
Bromoform	98		38-124						
Bromomethane	78		42-168						
Carbon Tetrachloride	86		45-153						
Chlorobenzene	88		49-135						
Chloroethane	76		39-152						
Chloroform	86		61-142						
Chloromethane	103		36-143						
Dibromochloromethane	90		51-128						
1,2-Dibromoethane	95		54-129						
1,2-Dichlorobenzene	76		36-133						
1,3-Dichlorobenzene	81		34-134						
1,4-Dichlorobenzene	80		35-136						
1,1-Dichloroethane	78		63-142						
1,2-Dichloroethane	87		54-143						
1,1-Dichloroethene	81		61-149						
cis-1,2-Dichloroethene	84		53-146						
trans-1,2-Dichloroethene	85		51-153						
1,2-Dichloropropane	88		54-144						
cis-1,3-Dichloropropene	88		45-137						
trans-1,3-Dichloropropene	85		41-129						
Ethylbenzene	92		44-141						
Freon 113	82		56-156						
Methyl Tertiary Butyl Ether	73		55-129						
Methylene Chloride	71		60-149						
1,1,2,2-Tetrachloroethane	94		40-152						
Tetrachloroethene	98		42-149						
Toluene	110		50-146						
1,1,1-Trichloroethane	77		52-146						
1,1,2-Trichloroethane	101		47-161						
Trichloroethene	95		53-144						
Trichlorofluoromethane	94		47-163						
Vinyl Chloride	92		50-154						
Xylene (Total)	88		44-136						
Batch number: 13249SLD026	Sample	number(s)	: 7182491	-71824	97,7182	499-7182500	UNSPK: 7	182491	
Benzo(a)anthracene	81	90	44-143	6	30				
Benzo(a)pyrene	77	81	44-140	3	30				
Benzo(b)fluoranthene	74	89	26-142	8	30				
Benzo(k)fluoranthene	107	115	54-142	6	30				
Chrysene	39	58	29-148	6	30				
Dibenz(a,h)anthracene	60	54	20-137	8	30				

*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.



Analysis Report

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Quality Control Summary

Client Name: Chevron Reported: 02/03/14 at 08:48 AM Group Number: 1415667

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> Indeno(1,2,3-cd)pyrene	MS <u>%REC</u> 63	MSD <u>%REC</u> 48	MS/MSD <u>Limits</u> 17-136	<u>RPD</u> 16	RPD <u>MAX</u> 30	BKG <u>Conc</u>	DUP <u>Conc</u>	DUP <u>RPD</u>	Dup RPD <u>Max</u>
1-Methylnaphthalene	-771	-479	50-131	10	30				
2-Methylnaphthalene	(2) -1423 (2)	(2) -1089 (2)	35-152	7	30				
Naphthalene	(2) -237 (2)	(2) -133 (2)	31-148	8	30				
Batch number: 13246B20A NWTPH-Gx water C7-C12	Sample 107	number(s) 117	: 7182490 75-135	,71824 7	98 UNSP 30	K: P182472			
Batch number: 132460012A PCB-1016 PCB-1260	Sample 74 80	number(s) 75 80	: 7182491 19-146 29-141	-71824 3 2	97,7182 50 50	499-7182500	UNSPK: 718	2491	
Batch number: 132520012A Diesel Range Organics C12-C24 Heavy Range Organics C24-C40	Sample	number(s)	: 7182491	-71824	97,7182	499-7182500 2,000 1,500	BKG: 7182 2,300 1,600	491 14 2	20 20
Batch number: 132670018A >C10-C12 Aliphatic >C10-C12 Aromatic >C12-C16 Aliphatic	Sample 747 (2) 306* 3186 (2)	number(s)	: 7182491 31-137 22-119 42-146	,71824	94 UNSP	K: 7182491 95 5.8 580	BKG: 718249 150 12 970	1 45* (1) 66* (1) 51*	25 25 25
>C12-C16 Aromatic >C16-C21 Aliphatic	609 (2) 2129		42-122 57-111			52 540	100 900	66* 50*	25 25
>C16-C21 Aromatic >C21-C34 Aliphatic	(2) 799 (2) 1020 (2)		53-132 38-120			110 310	190 560	56* 58*	25 25
>C21-C34 Aromatic	340*		55-126			88	170	62*	25
Batch number: 132520013A DRO C12-C24 w/Si Gel HRO C24-C40 w/Si Gel	Sample	number(s)	: 7182491	-71824	97,7182	499-7182500 1,900 1,100	BKG: 7182 2,100 1,300	491 7 13 (1)	20 20
Batch number: 132465708003 Cadmium Chromium Lead Nickel Zinc	Sample 102 108 99 103 102	number(s) 103 109 102 103 103	: 7182499 75-125 75-125 75-125 75-125 75-125 75-125	-71825 2 2 0 2 2 2	00 UNSP 20 20 20 20 20 20	K: P182459 N.D. 2.36 1.52 1.86 4.27	BKG: P18245 N.D. 2.47 1.53 1.87 4.63	9 0 (1) 5 (1) 0 (1) 0 (1) 8 (1)	20 20 20 20 20
Batch number: 132475708003 Cadmium Chromium Lead Nickel Zinc	Sample 103 115 104 104 107	number(s) 100 109 103 104 104	: 7182491 75-125 75-125 75-125 75-125 75-125 75-125	-71824: 2 5 1 0 2	97 UNSP 20 20 20 20 20 20	K: P185142 0.118 3.79 1.31 2.74 8.22	BKG: P18514 0.111 3.07 1.19 2.28 6.89	2 6 (1) 21* (1) 10 (1) 18 (1) 18 (1)	20 20 20 20 20 20
Batch number: 132481848006 Cadmium	Sample 102	number(s) 103	: 7182490 83-116	,71824 1	98 UNSP 20	K: P184423 N.D.	BKG: P18442 N.D.	3 0 (1)	20

*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.



Analysis Report

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Quality Control Summary

Client Name: Chevron Reported: 02/03/14 at 08:48 AM Group Number: 1415667

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
<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>
Chromium	100	101	81-120	0	20	N.D.	N.D.	0 (1)	20
Lead	100	100	75-125	0	20	N.D.	N.D.	0 (1)	20
Nickel	103	104	86-115	1	20	N.D.	N.D.	0 (1)	20
Zinc	105	106	85-117	1	20	N.D.	2.0	200* (1)	20
Batch number: 13249820001A Moisture	Sample	number(s	s): 7182491	L-71824	97,7182	2499-7182500 17.0) BKG: P18 17.9	31357 5	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.

	Name: 8260 Ext. mber: Q132461AA	Soil Master w/GRO		
Daten nu	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7182491	90	98	92	88
7182494	89	94	89	84
Blank	84	90	84	74
LCS	99	106	101	89
LCSD	101	103	101	91
Limits:	50-141	54-135	52-141	50-131
		Water Master w/GRO		
Batch nu	mber: W132482AA		T I 10	
	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7182490	96	100	102	97
7182498	97	100	102	97
Blank	97	100	103	96
LCS	99	103	102	97
LCSD	98	100	102	99
Limits:	80-116	77-113	80-113	78-113
	Name: 8260 Ext. mber: X132461AA	Soil Master w/GRO		
Batch hu		1.2 Disblars athens d4	Taluana d0	4 Dromofluorohonnon
	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7182492	105	104	98	94
Blank	101	101	96	96
LCS	101	100	97	98
LCSD	100	102	97	98
Limits:	50-141	54-135	52-141	50-131
Analysis	Name: 8260 Ext.	Soil Master w/GRO		

Analysis Name: 8260 Ext. Soil Master w/GRO

*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.



Analysis Report

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Quality Control Summary

Client Name: Chevron Reported: 02/03/14 at 08:48 AM Group Number: 1415667

Surrogate Quality Control

			Surrogate y	
Batch nu	mber: X132481AA			
	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7182493	101	105	97	97
7182495	102	106	97	95
7182496	103	107	99	95
7182497	103	106	97	96
7182499	101	105	98	97
7182500	101	104	98	96
Blank	103	100	94	97
LCS	103	99	95	97
LCSD	102	98	95	98
MS	97	105	101	94
Limits:	50-141	54-135	52-141	50-131
Analysis	Name: PAHs in wa	ters by SIM		
Batch nu	mber: 13246WAC026			
	Fluoranthene-d10	Benzo(a)pyrene-d12	1-Methylnaphthalene-	
			d10	
			108	
7182490	93	94	107	
7182498	71	93	108	
Blank	76	87	87	
LCS	82	93	99	
LCSD	87	94	101	
Limits:	44-137	62-141	51-136	
Analveie	Name: SIM SVOA (microwaye)		
	mber: 13249SLD026	miciowave)		
Batti Ilu		Denne (e) numero d10	1 Mathuda an hthalana	
	Fluoranthene-d10	Benzo(a)pyrene-d12	1-Methylnaphthalene-	
			d10	
7182491	112	98	146*	
7182492	104	88	113	
7182492	101	97	103	
7182494	94	85	110	
7182495	91	85	88	
7182496	111	99	127*	
7182497	67	65	67	
7182499	103	97	103	
7182500	100	95	98	
Blank	106	103	111	
LCS	100	100	107	
MS	113	105	118	
MSD	115	104	113	
Limits:	54-129	59-125	61-125	
Analvsis	Name: NWTPH-GX S	oil C7-C12		
	mber: 13235A31C			
240011 114	Trifluorotoluene-F			
7182492	88			

7182492 88 7182493 89

*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.



Analysis Report

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Quality Control Summary

Group Number: 14	415	66	57
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Client Name: Chevron Reported: 02/03/14 at 08:48 AM

Surrogate Quality Control

7182494 7182495 7182496 7182497 7182499 Blank LCS	98 78 100 79 91 106 102	
LCS LCSD	102 101	
цсэр	101	

Limits: 50-142

Analysis Name: NWTPH-Gx water C7-C12 Batch number: 13246B20A Trifluorotoluene-F

	Trinuorotoiuene-F	
7182490	86	
7182498	85	
Blank	84	
LCS	116	
MS	131	
MSD	132	
MBD	152	
Limits:	63-135	
	Name: Method 8021 mber: 13246B53A	Water Master
Daten na	Trifluorotoluene-P	Trifluorotoluene-F
	THINGOLOIUEITE-F	
7182489	80	88
Blank	79	88
LCS	80	96
LCSD	79	95
Limits:	51-120	63-135
Batch nu	Name: NWTPH-GX Sc mber: 13249A31A Trifluorotoluene-F	
7182491	113	
7182500	90	
Blank	100	
LCS	96	
LCSD	101	
Limits:	50-142	
	Name: PCBs in Wat mber: 132460003A	
	Tetrachloro-m-xylene	Decachlorobiphenyl
7182490	94	90
7182498	82	37
Blank	83	78
LCS	93	91
LCSD	92	83

*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.



Analysis Report

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Quality Control Summary

Client Name: Chevron Reported: 02/03/14 at 08:48 AM Group Number: 1415667

Surrogate Quality Control

Limits:	58-140	36-153
	Name: PCBs in Soi nber: 132460012A	l (microwave)
Batch hu	Tetrachloro-m-xylene	Descelorabinhenvi
	Tetrachioro-m-xylene	Decachlorobiphenyl
7182491	84	91
7182492	90	81
7182493	98	86
7182494	80	86
7182495	98	86
7182496	80	85
7182497	100	87
7182499	93	86
7182500	98	88
Blank LCS	94 96	102 100
MS	82	85
MSD	80	78
MBD	80	,0
Limits:	41-146	39-151
Analvsis	Name: NWTPH-Dx wa	uter w/ 10g Si Gel
Batch nu	mber: 132490032A	
	Orthoterphenyl	
7182490	70	
7182498	69	
Blank	82	
LCS	97	
LCSD	93	
Limits:	50-150	
Analvsis	Name: NWTPH-Dx wa	ter
	mber: 132490033A	
	Orthoterphenyl	
7182490	102	
7182498	98	
Blank	104	
LCS	108	
LCSD	105	
Limits:	50-150	
Analycia	Name: NWTPH-Dx sc	
Batch nur	mber: 132520012A	
Dateir ilu	Orthoterphenyl	
	e. motor priority	
7182491	118	
7182492	104	
7182493	104	
7182494	112	
7182495	110	

*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.



Analysis Report

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Quality Control Summary

Group Number: 1415667

Client Name: Chevron Reported: 02/03/14 at 08:48 AM

Surrogate Quality Control

7182496	112
7182497	105
7182499	103
7182500	107
Blank	107
DUP	133
LCS	105

Limits: 50-150

Analysis Name: NWTPH-Dx soil w/ 10g Si Gel Batch number: 132520013A Orthoterphenyl

	Orthoterphenyl	
7182491	120	
7182492	94	
7182493	94	
7182494	95	
7182495	104	
7182496	102	
7182497	97	
7182499	94	
7182500 Blank	94 98	
DUP	98 120	
LCS	101	
ЦСБ	101	
Limits:	50-150	
Analysis	Name: WA EPH in S	Goil
Batch nu	mber: 132670018A	
	Orthoterphenyl	1-chlorooctadecane
7182491	68	67
7182494	91	75
Blank	87	86
DUP	97	110
LCS	86	86
MS	86	88
Limits:	50-142	33-122
Analveie	Name: WA- VPH soi	le
	mber: 13268A54A	
	Trifluorotoluene-P	Trifluorotoluene-F
7182491	66	78
7182494	72	79
Blank	68	83
LCS	79	87
LCSD	83	85
Limits:	60-140	60-140
LIMIUS:	00-140	00-140

*- 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: 02/03/14 at 08:48 AM Group Number: 1415667

*- 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.

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Laboratories						In	struction	ns on rev	verse si	de corre	espond	with circ	led num	bers.							
1 Client Informati	on			(4)	Matrix			5			An	alyse	es Re	eques	ted			SCR #:			
Facility# 13883 NWE	wbs <u>NV-0(</u>	29388	3-0804						vocs					Ĵ	S/M		22		- D	- : - 1-4	-
Chevron PM	YAKIN Lead Cons	via, W	A		— ·, —		~	Naphth	EDE, H				por	11.	Z JO S		Mig	J value re	eporting	needed	
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R, Shropshire				-		Air [of Co	80217	.WX21	Oxygenates					\$N0	80	GOLO P Stime	Confirm t	nighest h	nit by 8260	
425-482-3323 Sampler			3 ê		Potable NPDES		Number	MTBE 8	\mathbb{M}	Oxyg	×		Total L	6	H?	ß	200		oxy's	s on highest hit	
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Sample Identification	Date	Time	Grab Comp	Soil	Water	ō	Total	втех	826(NWTPH	MN	Lead		2		N.		Rema		-
Trip Blank-082713	827-	1650					2				\triangleleft				»			Please R	uN !	int silica	pls
Rinsade - 082713	8/27	1700					12	1			\square	\square					4		itho	ut silica	۰
Mw-5-10	8129	1000	$\mathbf{F}_{\mathbf{F}}$	\vdash			12							$- \ell$				gel.			or subscription
<u>Mus-5-13</u>	829	1005	4	\vdash			7		4		4	\square		$-\ell$	44	$ \downarrow $	H				and a second
MW-5-19	8/29	1055		\leftarrow			14				$ \rightarrow$	$ \rightarrow $		-	K	\leq	K¥.	WIA-VPH	1 d m	IA-EPH	an a
<u>MW-6-8</u>	8/29	1430		K			7		\leq		4			\vdash		\leq	K.K.	added	to	UN -5-11)
MW-6-13	8/29	1450	\mathbb{H}	\leftarrow		-	1_1_							-	K		\prec	alling 1	10 I Q	rerp	
DUP-082913	8/29	1520		K			7				\rightarrow	$ \rightarrow$		+	+		\leftarrow	Shmach	NP	1A-EPH 4W-5-10 PER R. BB/1B/13	
MW-6-19 Rinsate -082913	R /	1530	\vdash	\vdash		+	17				$ \rightarrow $			+	\mathbf{K}	\leq	KK	Sinufon	ALC.	OGMOB	
	8/29	1645					14		$\langle -$			4		+		\leq				11	
MW-7-11 MW-7-19	8/29	1845		⊬		•	7					$ \rightarrow $		-				·			
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Lancaster Laboratories, Inc. • 2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 The white copy should accompany samples to Lancaster Laboratories. The yellow copy should be retained by the client. 🔅 eurofins

Lancaster Laboratories Environmental

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)
С	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)	Ĺ	liter(s)
m3	cubic meter(s)	μL	microliter(s)
		pg/L	picogram/liter

- < less than The number following the sign is the <u>limit of quantitation</u>, 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 ≥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.

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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

October 07, 2013

Project: 93883

Submittal Date: 09/24/2013 Group Number: 1421149 PO Number: 0015119898 Release Number: SHRILL HOPKINS State of Sample Origin: WA

Client Sample Description QA Water MW-5 Grab Groundwater MW-6 Grab Groundwater MW-7 Grab Groundwater Lancaster Labs (LL) # 7209719 7209720 7209721 7209722

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





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Respectfully Submitted,

Amek Carts

Amek Carter

Specialist

(717) 556-7252



Analysis Report

Account

LL Sample # WW 7209719

11260

LL Group # 1421149

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Sample Description: QA Water Facility# 93883 Job# 385894 1702 East Yakima Avenue - Yakima, WA

Project Name: 93883

Collected: 09/21/2013

Submitted: 09/24/2013 09:15 Reported: 10/07/2013 10:33

EYYQA

Chevron 6001 Bollinger Canyon Road L4310 San Ramon CA 94583

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 Vol	Latiles 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. 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	F132734AA	09/30/2013 17:59	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F132734AA	09/30/2013 17:59	Brett W Kenyon	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-	1	13273B20A	10/01/2013 12:14	Marie D	1
		Gx				Beamenderfer	
01146	GC VOA Water Prep	SW-846 5030B	1	13273B20A	10/01/2013 12:14	Marie D Beamenderfer	1



Analysis Report

LL Sample # WW 7209720 LL Group # 1421149 Account # 11260

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample	Description:	MW - 5	Grab	Ground	water			
		Faci	lity#	93883	Job#	385	5894	
		1702	East	Yakima	Avenue	9 -	Yakima,	WA

Project Name: 93883

Collected: 09/21/2013 09:30 by JP

Submitted: 09/24/2013 09:15 Reported: 10/07/2013 10:33 Chevron 6001 Bollinger Canyon Road L4310 San Ramon CA 94583

EYY05

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	
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Bromodichloromethane	75-27-4	N.D.	1	1
10335	Bromoform	75-25-2	N.D.	1	1
10335	Bromomethane	74-83-9	N.D.	1	1
10335	Carbon Tetrachloride	56-23-5	N.D.	1	1
10335	Chlorobenzene	108-90-7	N.D.	0.8	1
10335	Chloroethane	75-00-3	N.D.	1	1
10335	Chloroform	67-66-3	N.D.	0.8	1
10335	Chloromethane	74-87-3	N.D.	1	1
10335	Dibromochloromethane	124-48-1	N.D.	1	1
10335	1,2-Dichlorobenzene	95-50-1	N.D.	1	1
10335	1,3-Dichlorobenzene	541-73-1	N.D.	1	1
10335	1,4-Dichlorobenzene	106-46-7	N.D.	1	1
10335	1,1-Dichloroethane	75-34-3	N.D.	1	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.8	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.8	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	1
10335	1,2-Dichloropropane	78-87-5	N.D.	1	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	1
10335	Ethylbenzene	100-41-4	N.D.	0.5	1
10335	Freon 113	76-13-1	N.D.	2	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	2	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	1
10335	Tetrachloroethene	127-18-4	N.D.	0.8	1
10335	Toluene	108-88-3	N.D.	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.8	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.8	1
10335	Trichloroethene	79-01-6	N.D.	1	1
10335	Trichlorofluoromethane	75-69-4	N.D.	2	1
10335	Vinyl Chloride	75-01-4	N.D.	1	1
10335	m+p-Xylene	179601-23-1	N.D.	0.5	1
10335	o-Xylene	95-47-6	N.D.	0.5	1
			<i>.</i> _	<i>(</i> -	
		8270C SIM	ug/l	ug/l	
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	1
08357	Chrysene	218-01-9	N.D.	0.010	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	1
08357	Naphthalene	91-20-3	N.D.	0.031	1
GC Vol	latiles ECY 97-	-602 NWTPH-Gx	ug/l	ug/l	



Analysis Report

LL Sample # WW 7209720 LL Group # 1421149 Account # 11260

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Sample	Description:	MW - 5	Grab	Ground	water			
		Faci	lity#	93883	Job#	38!	5894	
		1702	East	Yakima	Avenue	- 1	Yakima,	WA

Project Name: 93883

Collected: 09/21/2013 09:30 by JP

Submitted: 09/24/2013 09:15 Reported: 10/07/2013 10:33 Chevron 6001 Bollinger Canyon Road L4310 San Ramon CA 94583

EYY05

CAT No.	Analysis Name		CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Vo	latiles	ECY 97-602	NWTPH-Gx	ug/l	ug/l	
08273	NWTPH-Gx water C7-0	C12	n.a.	N.D.	50	1
GC Mi;	scellaneous	SW-846 801	1	ug/l	ug/l	
10398	Ethylene dibromide		106-93-4	N.D.	0.0094	1
Pesti	cides/PCBs	SW-846 808	2	ug/l	ug/l	
10227	PCB-1016		12674-11-2	N.D.	0.082	1
10227	PCB-1221		11104-28-2	N.D.	0.082	1
10227	PCB-1232		11141-16-5	N.D.	0.16	1
10227	PCB-1242		53469-21-9	N.D.	0.082	1
10227	PCB-1248		12672-29-6	N.D.	0.082	1
10227	PCB-1254		11097-69-1	N.D.	0.082	1
10227	PCB-1260		11096-82-5	N.D.	0.12	1
	ary. The following sample was re-extrac					
Summ The time firs	sample was re-extrac and the QC is compl t trial. Similar re	ted outside th iant. All res sults were obt	e method requ ults are repo ained in both	ired holding rted from the trials.	6	
Summ The time firs GC Pet	sample was re-extrac and the QC is compl t trial. Similar re troleum	ted outside th iant. All res sults were obt ECY 97-602	e method requ ults are repo ained in both	ired holding rted from the	ug/1	
Summ The time firs GC Pet Hydrod	sample was re-extrac and the QC is compl t trial. Similar re troleum carbons	ted outside th iant. All res sults were obt ECY 97-602 modified	e method requ ults are repo ained in both NWTPH-Dx	<pre>ired holding rted from the trials. ug/l</pre>		
Summ The time firs GC Pet Hydroo 08271	sample was re-extrac and the QC is compl t trial. Similar re troleum carbons Diesel Range Organ:	ted outside th iant. All res sults were obt ECY 97-602 modified ics C12-C24	e method requ ults are repo ained in both NWTPH-Dx n.a.	<pre>ired holding rted from the trials. ug/l N.D.</pre>	29	1
Summ The time firs GC Pet Hydroo 08271	sample was re-extrac and the QC is compl t trial. Similar re troleum carbons	ted outside th iant. All res sults were obt ECY 97-602 modified ics C12-C24	e method requ ults are repo ained in both NWTPH-Dx	<pre>ired holding rted from the trials. ug/l</pre>		1 1
Summ The time firs GC Pet Hydrod 08271 08271	sample was re-extrac and the QC is compl t trial. Similar re troleum carbons Diesel Range Organ:	ted outside th iant. All res sults were obt ECY 97-602 modified ics C12-C24	e method requ ults are repo ained in both NWTPH-Dx n.a. n.a.	<pre>ired holding rted from the trials. ug/l N.D.</pre>	29	
Summ The time firs GC Pei Hydroo 08271 08271 GC Pei	sample was re-extract and the QC is complet t trial. Similar re troleum carbons Diesel Range Organic Heavy Range Organic	ted outside th iant. All res sults were obt ECY 97-602 modified ics C12-C24 cs C24-C40	e method requ ults are repo ained in both NWTPH-Dx n.a. n.a.	<pre>ired holding rted from the trials. ug/l N.D. N.D.</pre>	29 67	
Summ The time firs GC Pei Hydroo 08271 08271 GC Pei Hydroo	sample was re-extract and the QC is complet t trial. Similar rest troleum carbons Diesel Range Organic Heavy Range Organic troleum	ted outside th iant. All results were obt ECY 97-602 modified ics C12-C24 cs C24-C40 ECY 97-602 modified	e method requ ults are repo ained in both NWTPH-Dx n.a. n.a.	<pre>ired holding rted from the trials. ug/l N.D. N.D.</pre>	29 67	
Summ The time firs GC Pei Hydroo 08271 08271 GC Pei Hydroo 12005	sample was re-extract and the QC is complet t trial. Similar rest troleum carbons Diesel Range Organic Heavy Range Organic troleum carbons w/Si	ted outside th iant. All res sults were obt ECY 97-602 modified ics C12-C24 cs C24-C40 ECY 97-602 modified el	e method requ ults are repo ained in both NWTPH-Dx n.a. n.a. NWTPH-Dx	<pre>ired holding rted from the trials. ug/l N.D. N.D. ug/l</pre>	29 67 ug/l	1
Summ The time firs GC Pei Hydroo 08271 08271 GC Pei Hydroo 12005 12005	sample was re-extract and the QC is complet t trial. Similar rest troleum carbons Diesel Range Organic Heavy Range Organic troleum carbons w/Si DRO C12-C24 w/Si Ge	ted outside th iant. All results were obt ECY 97-602 modified ics C12-C24 cs C24-C40 ECY 97-602 modified el	e method requ ults are repo ained in both NWTPH-Dx n.a. NWTPH-Dx n.a. n.a.	<pre>ired holding rted from the trials. ug/l N.D. N.D. ug/l N.D. N.D.</pre>	29 67 ug/l 29	1
Summ The time firs GC Pei Hydroo 08271 08271 GC Pei Hydroo 12005 12005	sample was re-extract and the QC is complet trial. Similar rest troleum Carbons Diesel Range Organ: Heavy Range Organic troleum Carbons w/Si DRO C12-C24 w/Si Ge HRO C24-C40 w/Si Ge reverse surrogate, co	ted outside th iant. All results were obt ECY 97-602 modified ics C12-C24 cs C24-C40 ECY 97-602 modified el	<pre>e method requ ults are repo ained in both NWTPH-Dx n.a. n.a. NWTPH-Dx n.a. n.a. present at <</pre>	<pre>ired holding rted from the trials. ug/l N.D. N.D. ug/l N.D. N.D.</pre>	29 67 ug/l 29	1
Summ The time firs GC Pei Hydrod 08271 08271 GC Pei Hydrod 12005 The Metal:	sample was re-extract and the QC is complet trial. Similar rest troleum Carbons Diesel Range Organ: Heavy Range Organic troleum Carbons w/Si DRO C12-C24 w/Si Ge HRO C24-C40 w/Si Ge reverse surrogate, co	ted outside th iant. All res sults were obt ECY 97-602 modified ics C12-C24 cs C24-C40 ECY 97-602 modified el el el	<pre>e method requ ults are repo ained in both NWTPH-Dx n.a. n.a. NWTPH-Dx n.a. n.a. present at <</pre>	<pre>ired holding rted from the trials. ug/l N.D. N.D. ug/l N.D. N.D. N.D. 1%.</pre>	29 67 ug/1 29 67	1
Summ The time firs GC Pei Hydroo 12005 12005 The Metals 07049	sample was re-extract and the QC is complet t trial. Similar rest troleum Diesel Range Organic Heavy Range Organic troleum Carbons w/Si DRO C12-C24 w/Si Ge HRO C24-C40 w/Si Ge reverse surrogate, co	ted outside th iant. All res sults were obt ECY 97-602 modified ics C12-C24 cs C24-C40 ECY 97-602 modified el el el	<pre>ne method requ ults are repo ained in both NWTPH-Dx n.a. n.a. NWTPH-Dx n.a. present at < 0B</pre>	<pre>ired holding rted from the trials. ug/l N.D. N.D. ug/l N.D. 1%. ug/l</pre>	29 67 ug/1 29 67 ug/1	1 1 1
Summ The time firs GC Pei Hydroo 12005 12005 The Metals 07049	sample was re-extract and the QC is complet t trial. Similar rest troleum carbons Diesel Range Organic troleum carbons w/Si DRO C12-C24 w/Si Ge HRO C24-C40 w/Si Ge reverse surrogate, cos Cadmium Chromium	ted outside th iant. All res sults were obt ECY 97-602 modified ics C12-C24 cs C24-C40 ECY 97-602 modified el el el	<pre>method requ ults are repo ained in both NWTPH-Dx n.a. n.a. n.a. present at < 0B 7440-43-9</pre>	<pre>ired holding rted from the trials. ug/l N.D. N.D. ug/l N.D. N.D. 1%. ug/l N.D. 1%.</pre>	29 67 ug/1 29 67 ug/1 0.76	1 1 1
Summ The time firs GC Pei Hydrod 08271 08271 08271 GC Pei Hydrod 12005 12005 12005 The Metals 07049 07051 07055	sample was re-extract and the QC is complet t trial. Similar rest troleum carbons Diesel Range Organic troleum carbons w/Si DRO C12-C24 w/Si Ge HRO C24-C40 w/Si Ge reverse surrogate, cos Cadmium Chromium	ted outside th iant. All res sults were obt ECY 97-602 modified ics C12-C24 cs C24-C40 ECY 97-602 modified el el el	<pre>method requires are repo ained in both NWTPH-Dx n.a. n.a. NWTPH-Dx n.a. present at < 0B 7440-43-9 7440-47-3</pre>	<pre>ired holding rted from the trials. ug/l N.D. N.D. ug/l N.D. 1%. ug/l N.D. 1%.</pre>	29 67 ug/l 29 67 ug/l 0.76 1.6	1 1 1 1

General Sample Comments

State of Washington Lab Certification No. C259 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.



Analysis Report

LL Sample # WW 7209720 LL Group # 1421149 Account # 11260

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description:	MW-5 Grab	Groundwater
	Facility#	93883 Job# 385894
	1702 East	Yakima Avenue – Yakima, WA

Project Name: 93883

Collected: 09/21/2013 09:30 by JP

Submitted: 09/24/2013 09:15 Reported: 10/07/2013 10:33 Chevron 6001 Bollinger Canyon Road L4310 San Ramon CA 94583

EYY05

	Laboratory Sample Analysis Record							
CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	.me	Analyst	Dilution Factor
10335	8260 Ext. Water Master w/GRO	SW-846 8260B	1	W132701AA	09/27/2013	08:49	Christopher G Torres	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W132701AA	09/27/2013	08:49	Christopher G Torres	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13268WAJ026	10/01/2013	04:48	Catherine E Bachman	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13268WAJ026	09/26/2013	09:10	Anna E Stager	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH- Gx	1	13268B20A	09/26/2013	19:37	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	13268B20A	09/26/2013	19:37	Marie D Beamenderfer	1
10398	EDB by 8011	SW-846 8011	1	132710014A	10/01/2013	17:36	Clinton M Wilson	1
10227	PCBs in Water 8082	SW-846 8082	1	132690007A	09/27/2013	14:38	Monica M Souders	1
11117	PCB Waters Extraction	SW-846 3510C	1	132690007A	09/26/2013	16:00	Seth A Farrier	1
07786	EDB Extraction	SW-846 8011	1	132710014A	09/30/2013	15:00	Edwin Ortiz	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH- Dx modified	1	132730021A	10/01/2013	18:11	Glorines Suarez- Rivera	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH- Dx modified	1	132730020A	10/01/2013	23:05	Glorines Suarez- Rivera	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH- Dx 06/97	1	132730020A	10/01/2013	03:00	Sherry L Morrow	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH- Dx 06/97	1	132730021A	10/01/2013	03:00	Sherry L Morrow	1
07049	Cadmium	SW-846 6010B	1	132681848009	10/01/2013	07:45	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132681848009	10/01/2013	07:45	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132681848009	10/01/2013	07:45	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132681848009	10/01/2013	07:45	Tara L Snyder	1
07072	Zinc	SW-846 6010B	1	132681848009	10/01/2013	07:45	Tara L Snyder	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132681848009	09/26/2013	10:11	James L Mertz	1



Analysis Report

LL Sample # WW 7209721 LL Group # 1421149 Account # 11260

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Sample	Description:	MW - 6	Grab	Ground	water			
		Faci	lity#	93883	Job#	385	5894	
		1702	East	Yakima	Avenue	9 -	Yakima,	WA

Project Name: 93883

Collected: 09/21/2013 08:26 by JP

Submitted: 09/24/2013 09:15 Reported: 10/07/2013 10:33 Chevron 6001 Bollinger Canyon Road L4310 San Ramon CA 94583

EYY06

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	
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Bromodichloromethane	75-27-4	N.D.	1	1
10335	Bromoform	75-25-2	N.D.	1	1
10335	Bromomethane	74-83-9	N.D.	1	1
10335	Carbon Tetrachloride	56-23-5	N.D.	1	1
10335	Chlorobenzene	108-90-7	N.D.	0.8	1
10335	Chloroethane	75-00-3	N.D.	1	1
10335	Chloroform	67-66-3	N.D.	0.8	1
10335	Chloromethane	74-87-3	N.D.	1	1
10335	Dibromochloromethane	124-48-1	N.D.	1	1
10335	1,2-Dichlorobenzene	95-50-1	N.D.	1	1
10335	1,3-Dichlorobenzene	541-73-1	N.D.	1	1
10335	1,4-Dichlorobenzene	106-46-7	N.D.	1	1
10335	1,1-Dichloroethane	75-34-3	N.D.	1	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.8	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.8	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	1
10335	1,2-Dichloropropane	78-87-5	N.D.	1	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	1
10335	Ethylbenzene	100-41-4	N.D.	0.5	1
10335	Freon 113	76-13-1	N.D.	2	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	2	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	1
10335	Tetrachloroethene	127-18-4	N.D.	0.8	1
10335	Toluene	108-88-3	N.D.	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.8	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.8	1
10335	Trichloroethene	79-01-6	N.D.	1	1
10335	Trichlorofluoromethane	75-69-4	N.D.	2	1
10335	Vinyl Chloride	75-01-4	N.D.	1	1
10335	m+p-Xylene	179601-23-1	N.D.	0.5	1
10335	o-Xylene	95-47-6	N.D.	0.5	1
	-				
GC/MS	Semivolatiles SW-846	8270C SIM	ug/l	ug/l	
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	1
08357	Chrysene	218-01-9	N.D.	0.010	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	1
08357	Naphthalene	91-20-3	0.036	0.031	1
	-				
GC Vol	latiles ECY 97-	-602 NWTPH-Gx	ug/l	ug/l	



Analysis Report

LL Sample # WW 7209721 LL Group # 1421149 Account # 11260

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Sample	Description:	MW - 6	Grab	Ground	water			
		Faci	lity#	93883	Job#	38!	5894	
		1702	East	Yakima	Avenue	e -	Yakima,	WA

Project Name: 93883

Collected: 09/21/2013 08:26 by JP

Submitted: 09/24/2013 09:15 Reported: 10/07/2013 10:33 Chevron 6001 Bollinger Canyon Road L4310 San Ramon CA 94583

EYY06

CAT No.	Analysis Name		CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Vo	latiles	ECY 97-602	NWTPH-Gx	ug/l	ug/l	
08273	NWTPH-Gx water C7-	C12 1	n.a.	N.D.	50	1
GC Mi	scellaneous	SW-846 8011		ug/l	ug/l	
10398	Ethylene dibromide	:	106-93-4	N.D.	0.0096	1
Pesti	cides/PCBs	SW-846 8082	2	ug/l	ug/l	
10227	PCB-1016		12674-11-2	N.D.	0.082	1
10227	PCB-1221	:	11104-28-2	N.D.	0.082	1
10227	PCB-1232	:	11141-16-5	N.D.	0.16	1
10227	PCB-1242	!	53469-21-9	N.D.	0.082	1
10227	PCB-1248	:	12672-29-6	N.D.	0.082	1
	PCB-1254		11097-69-1	N.D.	0.082	1
10227	PCB-1260	:	11096-82-5	N.D.	0.12	1
Spik Summ	e(s) is outside the ary. The following	QC acceptance l corrective acti	on was taken	ed on the QC :		
Spik Summ The time firs	e(s) is outside the ary. The following sample was re-extrac and the QC is compl t trial. Similar re	QC acceptance l corrective acti cted outside the liant. All resu esults were obta	imits as not on was taken method requ lts are repo ined in both	ed on the QC : ired holding rted from the trials.	ug /1	
Spik Summ The time firs GC Pe t	e(s) is outside the ary. The following sample was re-extrac and the QC is compl t trial. Similar re troleum	OC acceptance l corrective acti ted outside the liant. All resu esults were obta ECY 97-602	imits as not on was taken method requ lts are repo ined in both	ed on the QC : ired holding rted from the	ug/l	
Spik Summ The time firs GC Pet	e(s) is outside the ary. The following sample was re-extrac and the QC is compl t trial. Similar re troleum carbons	QC acceptance l corrective acti ted outside the liant. All resu esults were obta ECY 97-602 modified	<pre>imits as not on was taken method requ lts are repo ined in both NWTPH-Dx</pre>	ed on the QC : ired holding rted from the trials. ug/l		1
Spik Summ The time firs GC Pet Hydroo 08271	e(s) is outside the ary. The following sample was re-extrac and the QC is compl t trial. Similar re troleum	QC acceptance l corrective acti ted outside the liant. All resu esults were obta ECY 97-602 modified ics C12-C24	imits as not on was taken method requ lts are repo ined in both	ed on the QC : ired holding rted from the trials.	ug/l 28 66	1 1
Spik Summ The time firs GC Pet Hydro 08271 08271	e(s) is outside the ary. The following sample was re-extrac and the QC is compl t trial. Similar re troleum carbons Diesel Range Organ	QC acceptance l corrective acti ted outside the liant. All resu esults were obta ECY 97-602 modified ics C12-C24	<pre>imits as not on was taken method requ lts are repo ined in both NWTPH-Dx n.a. n.a.</pre>	ed on the QC : ired holding rted from the trials. ug/l N.D.	28	
Spik Summ The time firs GC Pei Hydroo 08271 08271 GC Pei	e(s) is outside the ary. The following sample was re-extrac and the QC is compl t trial. Similar re troleum carbons Diesel Range Organ Heavy Range Organi troleum	QC acceptance l corrective acti ted outside the liant. All resu esults were obta ECY 97-602 modified ics C12-C24 cs C24-C40	<pre>imits as not on was taken method requ lts are repo ined in both NWTPH-Dx n.a. n.a.</pre>	ed on the QC : ired holding rted from the trials. ug/l N.D. N.D.	28 66	
Spik Summ The time firs GC Pei Hydrod 08271 08271 GC Pei Hydrod	e(s) is outside the ary. The following sample was re-extract and the QC is complect t trial. Similar rest troleum carbons Diesel Range Organi Heavy Range Organi troleum carbons w/Si	QC acceptance l corrective acti ted outside the liant. All resu esults were obta ECY 97-602 modified ics C12-C24 cs C24-C40 ECY 97-602 modified	<pre>imits as not on was taken method requ lts are repo ined in both NWTPH-Dx n.a. n.a. NWTPH-Dx</pre>	ed on the QC : ired holding rted from the trials. ug/l N.D. N.D. ug/l	28 66 ug/l	1
Spik Summ The time firs GC Pei Hydroo 08271 08271 GC Pei Hydroo 12005	e(s) is outside the ary. The following sample was re-extrac and the QC is compl t trial. Similar re troleum carbons Diesel Range Organi Heavy Range Organi troleum carbons w/Si DRO C12-C24 w/Si G	QC acceptance l corrective acti ted outside the liant. All resu esults were obta ECY 97-602 modified ics C12-C24 cs C24-C40 ECY 97-602 modified el	<pre>imits as not on was taken method requ lts are repo ined in both NWTPH-Dx n.a. n.a.</pre>	ed on the QC : ired holding rted from the trials. ug/l N.D. N.D.	28 66	
Spik Summ The time firs GC Pei Hydroo 08271 08271 GC Pei Hydroo 12005 12005	e(s) is outside the ary. The following sample was re-extract and the QC is complect t trial. Similar rest troleum carbons Diesel Range Organi Heavy Range Organi troleum carbons w/Si	QC acceptance l corrective acti ted outside the liant. All resu esults were obta ECY 97-602 modified ics C12-C24 cs C24-C40 ECY 97-602 modified el	<pre>imits as not on was taken a method requ lts are repo ined in both NWTPH-Dx n.a. n.a. NWTPH-Dx n.a. n.a.</pre>	ed on the QC : ired holding rted from the trials. ug/l N.D. N.D. ug/l N.D. N.D. N.D.	28 66 ug/l 28	1
Spik Summ The time firs GC Pei Hydroo 08271 08271 GC Pei Hydroo 12005 12005	e(s) is outside the ary. The following sample was re-extract and the QC is complect t trial. Similar rest troleum Diesel Range Organ Heavy Range Organi troleum Carbons w/Si DRO C12-C24 w/Si G HRO C24-C40 w/Si G reverse surrogate, complete troget	QC acceptance l corrective acti ted outside the liant. All resu esults were obta ECY 97-602 modified ics C12-C24 cs C24-C40 ECY 97-602 modified el	<pre>imits as not on was taken a method requ lts are repo ined in both NWTPH-Dx n.a. n.a. NWTPH-Dx n.a. n.a. present at <</pre>	ed on the QC : ired holding rted from the trials. ug/l N.D. N.D. ug/l N.D. N.D. N.D.	28 66 ug/l 28	1
Spik Summ The time firs GC Pei Hydrod 08271 08271 GC Pei Hydrod 12005 The Metal:	e(s) is outside the ary. The following sample was re-extract and the QC is complect t trial. Similar rest troleum Diesel Range Organ Heavy Range Organi troleum Carbons w/Si DRO C12-C24 w/Si G HRO C24-C40 w/Si G reverse surrogate, complete troget	QC acceptance l corrective acti ted outside the liant. All resu esults were obta ECY 97-602 modified ics C12-C24 cs C24-C40 ECY 97-602 modified el capric acid, is SW-846 6010	<pre>imits as not on was taken method requ lts are repo ined in both NWTPH-Dx n.a. NWTPH-Dx n.a. n.a. present at <</pre>	ed on the QC : ired holding rted from the trials. ug/l N.D. N.D. ug/l N.D. N.D. N.D. 1%.	28 66 ug/1 28 66	1
Spik Summ The time firs GC Pei Hydrod 12005 12005 The Metals 07049	e(s) is outside the ary. The following sample was re-extrac and the QC is complet t trial. Similar re troleum Diesel Range Organ Heavy Range Organi troleum Carbons w/Si DRO C12-C24 w/Si G HRO C24-C40 w/Si G reverse surrogate, co	QC acceptance l corrective acti ted outside the liant. All resu esults were obta ECY 97-602 modified ics C12-C24 cs C24-C40 ECY 97-602 modified el capric acid, is SW-846 6010	<pre>imits as not on was taken method requ lts are repo ined in both NWTPH-Dx n.a. n.a. NWTPH-Dx n.a. present at < 0B</pre>	ed on the QC : ired holding rted from the trials. ug/l N.D. N.D. ug/l N.D. N.D. N.D. 1%. ug/l	28 66 ug/1 28 66 ug/1	1 1 1
Spik Summ The time firs GC Pei Hydrod 12005 12005 The Metals 07049	e(s) is outside the ary. The following sample was re-extrac and the QC is complet t trial. Similar re troleum Carbons Diesel Range Organi Heavy Range Organi troleum Carbons w/Si DRO C12-C24 w/Si G HRO C24-C40 w/Si G reverse surrogate, cos Cadmium Chromium	QC acceptance l corrective acti ted outside the liant. All resu esults were obta ECY 97-602 modified ics C12-C24 fr cs C24-C40 fr ECY 97-602 modified el fr capric acid, is SW-846 6010	<pre>imits as not on was taken a method requ lts are repo ined in both NWTPH-Dx n.a. n.a. NWTPH-Dx n.a. present at < DB 7440-43-9</pre>	ed on the QC : ired holding rted from the trials. ug/l N.D. N.D. ug/l N.D. N.D. 1%. ug/l N.D.	28 66 ug/1 28 66 ug/1 0.76	1 1 1
Spik Summ The time firs GC Pei Hydrod 12005 12005 12005 The Metals 07049 07051 07055	e(s) is outside the ary. The following sample was re-extrac and the QC is complet t trial. Similar re troleum carbons Diesel Range Organi Heavy Range Organi troleum carbons w/Si DRO C12-C24 w/Si G HRO C24-C40 w/Si G reverse surrogate, cos Cadmium Chromium	QC acceptance l corrective acti ted outside the liant. All resu esults were obta ECY 97-602 modified ics C12-C24 cs C24-C40 ECY 97-602 modified el el capric acid, is SW-846 6010	<pre>imits as not on was taken method requ lts are repo ined in both NWTPH-Dx n.a. n.a. NWTPH-Dx n.a. present at < 0B 7440-43-9 7440-47-3</pre>	ed on the QC : ired holding rted from the trials. ug/l N.D. N.D. N.D. N.D. 1%. ug/l N.D. 1%.	28 66 ug/l 28 66 ug/l 0.76 1.6	1 1 1 1

General Sample Comments

State of Washington Lab Certification No. C259 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.



Analysis Report

LL Sample # WW 7209721 LL Group # 1421149 Account # 11260

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description:	MW-6 Grab	Groundwater
	Facility#	93883 Job# 385894
	1702 East	Yakima Avenue – Yakima, WA

Project Name: 93883

Collected: 09/21/2013 08:26 by JP

Submitted: 09/24/2013 09:15 Reported: 10/07/2013 10:33 Chevron 6001 Bollinger Canyon Road L4310 San Ramon CA 94583

EYY06

	Laboratory Sample Analysis Record							
CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	.me	Analyst	Dilution Factor
10335	8260 Ext. Water Master w/GRO	SW-846 8260B	1	W132701AA	09/27/2013	09:13	Christopher G Torres	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W132701AA	09/27/2013	09:13	Christopher G Torres	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13268WAJ026	10/01/2013	05:17	Catherine E Bachman	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13268WAJ026	09/26/2013	09:10	Anna E Stager	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH- Gx	1	13268B20A	09/26/2013	20:03	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	13268B20A	09/26/2013	20:03	Marie D Beamenderfer	1
10398	EDB by 8011	SW-846 8011	1	132710014A	10/01/2013	17:52	Clinton M Wilson	1
10227	PCBs in Water 8082	SW-846 8082	1	132690007A	09/27/2013	14:56	Monica M Souders	1
11117	PCB Waters Extraction	SW-846 3510C	1	132690007A	09/26/2013	16:00	Seth A Farrier	1
07786	EDB Extraction	SW-846 8011	1	132710014A	09/30/2013	15:00	Edwin Ortiz	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH- Dx modified	1	132730021A	10/01/2013	19:02	Glorines Suarez- Rivera	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH- Dx modified	1	132730020A	10/01/2013	23:27	Glorines Suarez- Rivera	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH- Dx 06/97	1	132730020A	10/01/2013	03:00	Sherry L Morrow	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH- Dx 06/97	1	132730021A	10/01/2013	03:00	Sherry L Morrow	1
07049	Cadmium	SW-846 6010B	1	132681848009	10/01/2013	07:48	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	132681848009	10/01/2013	07:48	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	132681848009	10/01/2013	07:48	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	132681848009	10/01/2013	07:48	Tara L Snyder	1
07072	Zinc	SW-846 6010B	1	132681848009	10/01/2013	07:48	Tara L Snyder	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132681848009	09/26/2013	10:11	James L Mertz	1



Analysis Report

LL Sample # WW 7209722 LL Group # 1421149 Account # 11260

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample	Description:	MW - 7	Grab	Ground	water			
		Faci	lity#	93883	Job#	38!	5894	
		1702	East	Yakima	Avenue	9 -	Yakima,	WA

Project Name: 93883

Collected: 09/21/2013 10:31 by JP

Submitted: 09/24/2013 09:15 Reported: 10/07/2013 10:33 Chevron 6001 Bollinger Canyon Road L4310 San Ramon CA 94583

EYY07

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS	Volatiles SW-846 8	260B	ug/l	ug/l	
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Bromodichloromethane	75-27-4	N.D.	1	1
10335	Bromoform	75-25-2	N.D.	1	1
10335	Bromomethane	74-83-9	N.D.	1	1
10335	Carbon Tetrachloride	56-23-5	N.D.	1	1
10335	Chlorobenzene	108-90-7	N.D.	0.8	1
10335	Chloroethane	75-00-3	N.D.	1	1
10335	Chloroform	67-66-3	N.D.	0.8	1
10335	Chloromethane	74-87-3	N.D.	1	1
10335	Dibromochloromethane	124-48-1	N.D.	1	1
10335	1,2-Dichlorobenzene	95-50-1	N.D.	1	1
10335	1,3-Dichlorobenzene	541-73-1	N.D.	1	1
10335	1,4-Dichlorobenzene	106-46-7	N.D.	1	1
10335	1,1-Dichloroethane	75-34-3	N.D.	1	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.8	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.8	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	1
	1,2-Dichloropropane	78-87-5	N.D.	1	1
	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	1
10335	Ethylbenzene	100-41-4	N.D.	0.5	1
10335	Freon 113	76-13-1	N.D.	2	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	2	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	1
10335	Tetrachloroethene	127-18-4	N.D.	0.8	1
10335	Toluene	108-88-3	N.D.	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.8	1
	1,1,2-Trichloroethane	79-00-5	N.D.	0.8	1
	Trichloroethene	79-01-6	N.D.	1	1
10335	Trichlorofluoromethane	75-69-4	N.D.	2	1
	Vinyl Chloride	75-01-4	N.D.	1	1
10335	m+p-Xylene	179601-23-1	N.D.	0.5	1
10335	o-Xylene	95-47-6	N.D.	0.5	1
GC/MS	Semivolatiles SW-846 8	270C SIM	ug/l	ug/l	
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	1
08357	Chrysene	218-01-9	N.D.	0.010	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	1
08357	Naphthalene	91-20-3	0.11	0.030	1
The :	recovery for the sample interna	l standard is out	side the QC		

acceptance limits. The following corrective action was taken: The sample was re-analyzed and internal standard areas are again



Analysis Report

LL Sample # WW 7209722 LL Group # 1421149 Account # 11260

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample	Description:	MW - 7	Grab	Ground	water			
		Faci	lity#	93883	Job#	385	5894	
		1702	East	Yakima	Avenue	- 1	Yakima,	WA

Project Name: 93883

Collected: 09/21/2013 10:31	by JP	Chevron
		6001 Bollinger Canyon Road
Submitted: 09/24/2013 09:15		L4310
Reported: 10/07/2013 10:33		San Ramon CA 94583

EYY07

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
		cance limits, indicating a m om the initial analysis of t			
acce	1	mple surrogate(s) is outside ed on the QC Summary. Suff beat the analysis.	~		
GC VO	latiles	ECY 97-602 NWTPH-Gx	ug/l	ug/l	
	NWTPH-Gx water C7-C		N.D.	50	1
CC Mi	scellaneous	SW-846 8011	ug/l	ug/l	
	Ethylene dibromide		N.D.	0.0095	1
10390	Echyrene dibiomide	100-93-4	N.D.	0.0095	Ŧ
Pesti	cides/PCBs	SW-846 8082	ug/l	ug/l	
	PCB-1016	12674-11-2	N.D.	0.082	1
	PCB-1221	11104-28-2	N.D.	0.082	1
	PCB-1232	11141-16-5	N.D.	0.16	1
	PCB-1232	53469-21-9	N.D.	0.082	1 1
	PCB-1248	12672-29-6	N.D.	0.082	1
			N.D.	0.082	1
	$DCD_{-1}251$				
10227 10227 The	PCB-1260 recovery for a targe	11097-69-1 11096-82-5 et analyte(s) in the Laborat QC acceptance limits as not	N.D. ory Control	0.12	1
10227 10227 The Spik Summ The time	PCB-1260 recovery for a targe te(s) is outside the mary. The following sample was re-extrac and the QC is compl	11096-82-5 et analyte(s) in the Laborat	N.D. ory Control ed on the QC : ired holding rted from the		
10227 10227 The Spik Summ The time firs	PCB-1260 recovery for a targe te(s) is outside the mary. The following sample was re-extrac and the QC is compl	11096-82-5 et analyte(s) in the Laborat QC acceptance limits as not corrective action was taken eted outside the method requ liant. All results are repo	N.D. ory Control ed on the QC : ired holding rted from the		
10227 10227 The Spik Summ The time firs	PCB-1260 recovery for a targe te(s) is outside the nary. The following sample was re-extracted and the QC is complect trial. Similar re troleum	11096-82-5 et analyte(s) in the Laborat QC acceptance limits as not corrective action was taken ted outside the method requ liant. All results are repo esults were obtained in both ECY 97-602 NWTPH-Dx	N.D. ory Control ed on the QC : ired holding rted from the trials.	0.12	
10227 10227 The Spik Summ The time firs GC Pe Hydro	PCB-1260 recovery for a targe te(s) is outside the nary. The following sample was re-extract and the QC is compl st trial. Similar re troleum carbons	11096-82-5 et analyte(s) in the Laborat QC acceptance limits as not corrective action was taken eted outside the method requ liant. All results are repo esults were obtained in both ECY 97-602 NWTPH-Dx modified	N.D. ory Control ed on the QC : ired holding rted from the trials. ug/l	0.12 ug/l	1
10227 10227 The Spik Summ The time firs GC Pe Hydro 08271	PCB-1260 recovery for a targe te(s) is outside the nary. The following sample was re-extrac e and the QC is compl st trial. Similar re troleum carbons Diesel Range Organi	11096-82-5 et analyte(s) in the Laborat QC acceptance limits as not corrective action was taken ted outside the method requ liant. All results are repo esults were obtained in both ECY 97-602 NWTPH-Dx modified ics C12-C24 n.a.	N.D. ory Control ed on the QC : ired holding rted from the trials. ug/l N.D.	0.12 ug/l 28	1
10227 10227 The Spik Summ The time firs GC Pe Hydro 08271	PCB-1260 recovery for a targe te(s) is outside the nary. The following sample was re-extract and the QC is compl st trial. Similar re troleum carbons	11096-82-5 et analyte(s) in the Laborat QC acceptance limits as not corrective action was taken ted outside the method requ liant. All results are repo esults were obtained in both ECY 97-602 NWTPH-Dx modified ics C12-C24 n.a.	N.D. ory Control ed on the QC : ired holding rted from the trials. ug/l	0.12 ug/l	1
10227 10227 The Spik Summ The time firs GC Pe Hydro 08271 08271	PCB-1260 recovery for a targe te(s) is outside the nary. The following sample was re-extrac e and the QC is compl st trial. Similar re troleum carbons Diesel Range Organi	11096-82-5 et analyte(s) in the Laborat QC acceptance limits as not corrective action was taken ted outside the method requ liant. All results are repo esults were obtained in both ECY 97-602 NWTPH-Dx modified ics C12-C24 n.a.	N.D. ory Control ed on the QC : ired holding rted from the trials. ug/l N.D.	0.12 ug/l 28	1
10227 10227 The Spik Summ The time firs GC Pe Hydro 08271 08271 08271	PCB-1260 recovery for a targe te(s) is outside the nary. The following sample was re-extracted and the QC is complect st trial. Similar rest troleum carbons Diesel Range Organic troleum	11096-82-5 et analyte(s) in the Laborat QC acceptance limits as not corrective action was taken ted outside the method requ liant. All results are repo esults were obtained in both ECY 97-602 NWTPH-Dx modified ics C12-C24 n.a. cs C24-C40 n.a. ECY 97-602 NWTPH-Dx	N.D. ory Control ed on the QC : ired holding rted from the trials. ug/l N.D. N.D.	0.12 ug/1 28 66	1
10227 10227 The Spik Summ The time firs GC Pe Hydro 08271 08271 08271 GC Pe Hydro	PCB-1260 recovery for a targe te(s) is outside the nary. The following sample was re-extract and the QC is complect st trial. Similar re troleum carbons Diesel Range Organic troleum carbons w/Si	11096-82-5 et analyte(s) in the Laborat QC acceptance limits as not corrective action was taken ted outside the method requ liant. All results are repo esults were obtained in both ECY 97-602 NWTPH-Dx modified ics C12-C24 n.a. cs C24-C40 n.a. ECY 97-602 NWTPH-Dx modified	N.D. ory Control ed on the QC : ired holding rted from the trials. ug/l N.D. N.D. ug/l	0.12 ug/l 28 66 ug/l	1 1 1
10227 10227 The Spik Summ The time firs GC Pe Hydro 08271 08271 GC Pe Hydro 12005	PCB-1260 recovery for a targe te(s) is outside the mary. The following sample was re-extract e and the QC is complect trial. Similar re troleum Carbons Diesel Range Organic Heavy Range Organic troleum carbons w/Si DRO C12-C24 w/Si Ge	11096-82-5 et analyte(s) in the Laborat QC acceptance limits as not corrective action was taken ted outside the method requ i.ant. All results are repo esults were obtained in both ECY 97-602 NWTPH-Dx modified ics C12-C24 n.a. cs C24-C40 n.a. ECY 97-602 NWTPH-Dx modified el n.a.	N.D. ory Control ed on the QC : ired holding rted from the trials. ug/l N.D. N.D. ug/l N.D.	0.12 ug/1 28 66 ug/1 28	1 1 1
10227 10227 The spik Summ The time firs GC Pe Hydro 08271 08271 GC Pe Hydro 12005 12005	PCB-1260 recovery for a targe cs(s) is outside the mary. The following sample was re-extracted and the QC is complect trial. Similar rest troleum carbons Diesel Range Organic troleum carbons w/Si DRO C12-C24 w/Si Ge HRO C24-C40 w/Si Ge	11096-82-5 et analyte(s) in the Laborat QC acceptance limits as not corrective action was taken ted outside the method requ i.ant. All results are repo esults were obtained in both ECY 97-602 NWTPH-Dx modified ics C12-C24 n.a. cs C24-C40 n.a. ECY 97-602 NWTPH-Dx modified el n.a.	N.D. ory Control ed on the QC : ired holding rted from the trials. ug/l N.D. N.D. ug/l N.D. N.D. N.D.	0.12 ug/l 28 66 ug/l	1 1 1
10227 10227 The Spik Summ The time firs GC Pe Hydro 08271 08271 GC Pe Hydro 12005 12005	PCB-1260 recovery for a targe te(s) is outside the nary. The following sample was re-extract and the QC is complet trial. Similar re troleum carbons Diesel Range Organic Heavy Range Organic troleum carbons w/Si DRO C12-C24 w/Si Ge HRO C24-C40 w/Si Ge	11096-82-5 et analyte(s) in the Laborat QC acceptance limits as not corrective action was taken ted outside the method requ i.ant. All results are repo esults were obtained in both ECY 97-602 NWTPH-Dx modified ics C12-C24 n.a. cs C24-C40 n.a. ECY 97-602 NWTPH-Dx modified el n.a. el n.a.	N.D. ory Control ed on the QC : ired holding rted from the trials. ug/l N.D. N.D. ug/l N.D. N.D. N.D.	0.12 ug/1 28 66 ug/1 28	1 1 1
10227 10227 The Spik Summ The time firs GC Pe Hydro 08271 08271 08271 GC Pe Hydro 12005 12005 The Metal	PCB-1260 recovery for a targe te(s) is outside the nary. The following sample was re-extract and the QC is complet trial. Similar re troleum carbons Diesel Range Organic Heavy Range Organic troleum carbons w/Si DRO C12-C24 w/Si Ge HRO C24-C40 w/Si Ge	11096-82-5 et analyte(s) in the Laborat QC acceptance limits as not corrective action was taken eted outside the method requ liant. All results are repo seults were obtained in both ECY 97-602 NWTPH-Dx modified ics C12-C24 n.a. cs C24-C40 n.a. ECY 97-602 NWTPH-Dx modified el n.a. el n.a. eapric acid, is present at <	N.D. ory Control ed on the QC : ired holding rted from the trials. ug/l N.D. N.D. N.D. N.D. N.D. N.D. 1%. ug/l	0.12 ug/l 28 66 ug/l 28 66	1 1 1 1
10227 10227 The Spik Summ The time firs GC Pe Hydro 08271 08271 08271 08271 08271 08271 08271 08271 08271 08271 08271 08271 08271 08271 Hydro 08271 0705 0706 0706 0706 0706 0706 0706 0706	PCB-1260 recovery for a targe te(s) is outside the hary. The following sample was re-extract and the QC is complect trial. Similar re troleum carbons Diesel Range Organic Heavy Range Organic troleum carbons w/Si DRO C12-C24 w/Si Ge HRO C24-C40 w/Si Ge reverse surrogate, c S Cadmium	11096-82-5 et analyte(s) in the Laborat QC acceptance limits as not corrective action was taken eted outside the method requ liant. All results are repo soults were obtained in both ECY 97-602 NWTPH-Dx modified ics C12-C24 n.a. cs C24-C40 n.a. ECY 97-602 NWTPH-Dx modified el n.a. el n.a. el n.a. capric acid, is present at < SW-846 6010B 7440-43-9	N.D. ory Control ed on the QC : ired holding rted from the trials. ug/l N.D. N.D. N.D. N.D. 1%. ug/l N.D. 1%.	0.12 ug/l 28 66 ug/l 28 66 ug/l	1 1 1
10227 10227 The Spik Summ The time firs GC Pe Hydro 08271 1000 08271 0705 0705 0705 0705 0705 0705 0705 07	PCB-1260 recovery for a targe ce(s) is outside the nary. The following sample was re-extract and the QC is complect trial. Similar re troleum carbons Diesel Range Organic Heavy Range Organic troleum carbons w/Si DRO C12-C24 w/Si Ge HRO C24-C40 w/Si Ge reverse surrogate, c	11096-82-5 et analyte(s) in the Laborat QC acceptance limits as not corrective action was taken eted outside the method requ liant. All results are repo seults were obtained in both ECY 97-602 NWTPH-Dx modified ics C12-C24 n.a. cs C24-C40 n.a. ECY 97-602 NWTPH-Dx modified el n.a. el n.a. el n.a. sapric acid, is present at < SW-846 6010B	N.D. ory Control ed on the QC : ired holding rted from the trials. ug/l N.D. N.D. N.D. N.D. N.D. N.D. 1%. ug/l	0.12 ug/l 28 66 ug/l 28 66 ug/l 0.76	1 1 1 1 1 1 1
10227 10227 The Spik Summ The time firs GC Pe Hydro 08271 08271 08271 08271 08271 08271 08271 08271 08271 08271 08271 08271 08271 08271 08271 08271 10227	PCB-1260 recovery for a targe te(s) is outside the mary. The following sample was re-extract e and the QC is complect trial. Similar re troleum Carbons Diesel Range Organic troleum Carbons w/Si DRO C12-C24 w/Si Ge HRO C24-C40 w/Si Ge reverse surrogate, c S Cadmium Chromium Lead	11096-82-5 et analyte(s) in the Laborat QC acceptance limits as not corrective action was taken ted outside the method requ iant. All results are repo esults were obtained in both ECY 97-602 NWTPH-Dx modified ics C12-C24 n.a. cs C24-C40 n.a. ECY 97-602 NWTPH-Dx modified el n.a. el n.a. el n.a. sw-846 6010B 7440-43-9 7440-47-3	N.D. ory Control ed on the QC : ired holding rted from the trials. ug/l N.D. N.D. ug/l N.D. 1%. ug/l N.D. N.D. 1%.	0.12 ug/l 28 66 ug/l 28 66 ug/l 0.76 1.6	1 1 1 1 1 1



Analysis Report

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Sample Description: MW-7 Grab Groundwater Facility# 93883 Job# 385894 1702 East Yakima Avenue - Yakima, WA

Project Name: 93883

Collected: 09/21/2013 10:31 by JP

Submitted: 09/24/2013 09:15 Reported: 10/07/2013 10:33

EYY07

General Sample Comments

Chevron

L4310

6001 Bollinger Canyon Road

San Ramon CA 94583

State of Washington Lab Certification No. C259 Carcinogenic PAHs have been reported for this sample

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

	Laboratory Sample Analysis Record										
CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	.me	Analyst	Dilution Factor			
10335	8260 Ext. Water Master w/GRO	SW-846 8260B	1	W132701AA	09/27/2013	09:37	Christopher G Torres	1			
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W132701AA	09/27/2013	09:37	Christopher G Torres	1			
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13268WAJ026	10/01/2013	05:47	Catherine E Bachman	1			
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13268WAJ026	09/26/2013	09:10	Anna E Stager	1			
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH- Gx	1	13268B20A	09/26/2013	20:28	Marie D Beamenderfer	1			
01146	GC VOA Water Prep	SW-846 5030B	1	13268B20A	09/26/2013	20:28	Marie D Beamenderfer	1			
10398	EDB by 8011	SW-846 8011	1	132710014A	10/01/2013	18:08	Clinton M Wilson	1			
10227	PCBs in Water 8082	SW-846 8082	1	132690007A	09/27/2013	15:15	Monica M Souders	1			
11117	PCB Waters Extraction	SW-846 3510C	1	132690007A	09/26/2013	16:00	Seth A Farrier	1			
07786	EDB Extraction	SW-846 8011	1	132710014A	09/30/2013	15:00	Edwin Ortiz	1			
08271	NWTPH-Dx water	ECY 97-602 NWTPH- Dx modified	1	132730021A	10/01/2013	19:23	Glorines Suarez- Rivera	1			
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH- Dx modified	1	132730020A	10/01/2013	23:49	Glorines Suarez- Rivera	1			
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH- Dx 06/97	1	132730020A	10/01/2013	03:00	Sherry L Morrow	1			
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH- Dx 06/97	1	132730021A	10/01/2013	03:00	Sherry L Morrow	1			
07049	Cadmium	SW-846 6010B	1	132681848009	10/01/2013	07:52	Tara L Snyder	1			
07051	Chromium	SW-846 6010B	1	132681848009	10/01/2013	07:52	Tara L Snyder	1			
07055	Lead	SW-846 6010B	1	132681848009	10/01/2013	07:52	Tara L Snyder	1			
07061	Nickel	SW-846 6010B	1	132681848009	10/01/2013	07:52	Tara L Snyder	1			
07072	Zinc	SW-846 6010B	1	132681848009	10/01/2013	07:52	Tara L Snyder	1			
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132681848009	09/26/2013	10:11	James L Mertz	1			



Analysis Report

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Quality Control Summary

Client Name: Chevron Reported: 10/07/13 at 10:33 AM Group Number: 1421149

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 <u>Result</u>	Blank <u>MDL</u>	Report <u>Units</u>	LCS <u>%REC</u>	LCSD <u>%REC</u>	LCS/LCSD Limits	<u>RPD</u>	<u>RPD Max</u>
Batch number: F132734AA	Sample numb	$er(g) \cdot 720$	9719					
Benzene	N.D.	0.5	uq/l	90		78-120		
Ethylbenzene	N.D.	0.5	ug/l	90		79-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	uq/l	95		75-120		
Toluene	N.D.	0.5	uq/1	90		80-120		
Xylene (Total)	N.D.	0.5	ug/l	89		80-120		
Batch number: W132701AA	Sample numb	er(s): 720	9720-7209	722				
Benzene	N.D.	0.5	uq/l	94		78-120		
Bromodichloromethane	N.D.	1.	uq/l	87		73-120		
Bromoform	N.D.	1.	uq/1	81		61-120		
Bromomethane	N.D.	1.	uq/1	67		51-120		
Carbon Tetrachloride	N.D.	1.	uq/l	92		74-130		
Chlorobenzene	N.D.	0.8	ug/l	106		80-120		
Chloroethane	N.D.	1.	ug/l	77		45-120		
Chloroform	N.D.	0.8	uq/l	100		77-122		
Chloromethane	N.D.	1.	ug/l	81		55-120		
Dibromochloromethane	N.D.	1.	ug/l	90		72-120		
1,2-Dichlorobenzene	N.D.	1.	ug/l	105		80-120		
1,3-Dichlorobenzene	N.D.	1.	ug/l	104		80-120		
1,4-Dichlorobenzene	N.D.	1.	ug/1	105		80-120		
1,1-Dichloroethane	N.D.	1.	ug/l	93		80-120		
1,2-Dichloroethane	N.D.	0.5	ug/1	105		71-130		
1,1-Dichloroethene	N.D.	0.8	ug/l	89		76-124		
cis-1,2-Dichloroethene	N.D.	0.8	uq/l	92		80-120		
trans-1,2-Dichloroethene	N.D.	0.8	ug/1	95		80-120		
1,2-Dichloropropane	N.D.	1.	ug/l	98		80-120		
cis-1,3-Dichloropropene	N.D.	1.	ug/l	89		80-120		
trans-1,3-Dichloropropene	N.D.	1.	ug/l	91		69-120		
Ethylbenzene	N.D.	0.5	ug/l	100		79-120		
Freon 113	N.D.	2.	ug/l	87		63-133		
Methyl Tertiary Butyl Ether	N.D.	0.5	uq/l	94		75-120		
Methylene Chloride	N.D.	2.	ug/l	94		80-120		
1,1,2,2-Tetrachloroethane	N.D.	1.	ug/1	99		70-120		
Tetrachloroethene	N.D.	0.8	ug/1	105		80-120		
Toluene	N.D.	0.5	ug/l	101		80-120		
1,1,1-Trichloroethane	N.D.	0.8	ug/l	89		66-126		
1,1,2-Trichloroethane	N.D.	0.8	ug/1	96		80-120		
Trichloroethene	N.D.	1.	ug/1	101		80-120		
Trichlorofluoromethane	N.D.	2.	ug/1	91		65-130		
Vinyl Chloride	N.D.	1.	ug/1	86		63-120		
m+p-Xylene	N.D.	0.5	ug/1	100		80-120		
o-Xylene	N.D.	0.5	ug/1 ug/1	100		80-120		
0 11/20110		0.0	~9/ 1	200		00 120		

*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.



Client Name: Chevron

Lancaster Laboratories Environmental

Analysis Report

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Quality Control Summary

Group Number: 1421149

		G	roup nui	IDET: 14	+21149			
Reported: 10/07/13 at 10:	33 AM							
Repercea. 10/07/15 at 10.	Blank	Blank	Report	LCS	LCSD	LCS/LCSD		
Amelanaia Nome							RPD	
Analysis Name	Result	MDL	<u>Units</u>	<u>%REC</u>	<u>%REC</u>	<u>Limits</u>	RPD	<u>RPD Max</u>
Batch number: 13268WAJ026		ber(s): 72						
Benzo(a)anthracene	N.D.	0.010	ug/l	97	91	73-127	6	30
Benzo(a)pyrene	N.D.	0.010	ug/l	102	85	72-120	18	30
Benzo(b)fluoranthene	N.D.	0.010	ug/l	103	93	79-136	10	30
Benzo(k)fluoranthene	N.D.	0.010	uq/l	110	88	73-131	23	30
Chrysene	N.D.	0.010	ug/l	102	89	76-125	14	30
Dibenz(a,h)anthracene	N.D.	0.010	uq/l	92	72	58-131	25	30
Indeno (1,2,3-cd) pyrene	N.D.	0.010	uq/1	91	70	62-130	25	30
1-Methylnaphthalene	N.D.	0.010	uq/l	108	102	80-126	6	30
2-Methylnaphthalene	N.D.	0.010	ug/1 ug/1	106	99	81-124	7	30
					98		6	30
Naphthalene	N.D.	0.030	ug/l	104	98	75-120	6	30
Batch number: 13268B20A		ber(s): 72						
NWTPH-Gx water C7-C12	N.D.	50.	ug/l	103	105	75-135	2	30
Batch number: 13273B20A	Sample num	ber(s): 72	09719					
NWTPH-Gx water C7-C12	N.D.	50.	ug/l	102	101	75-135	1	30
Batch number: 132710014A	Sample num	ber(s): 72	09720-7209	722				
Ethylene dibromide	N.D.	0.010	uq/l	99	102	60-140	3	20
			57 =				-	
Batch number: 132690007A	Sample num	ber(s): 72	09720-7209	722				
PCB-1016	N.D.	0.080	uq/1	56*	81	67-117	36*	30
			ug/1 ug/1	50	01	0/-11/	50	50
PCB-1221	N.D.	0.080						
PCB-1232	N.D.	0.16	ug/l					
PCB-1242	N.D.	0.080	ug/l					
PCB-1248	N.D.	0.080	ug/l					
PCB-1254	N.D.	0.080	ug/l					
PCB-1260	N.D.	0.12	ug/l	74	86	67-128	15	30
Batch number: 132730021A	Sample num	ber(s): 72	09720-7209	722				
Diesel Range Organics C12-C24	N.D.	30.	ug/l	87	88	50-113	1	20
Heavy Range Organics C24-C40	N.D.	70.	uq/l					
noar, nango organios orr oro		,	~ <u>3</u> / ±					
Batch number: 132730020A	Sample num	ber(s): 72	09720-7209	722				
DRO C12-C24 w/Si Gel	N.D.	30.	uq/1	62	64	32-117	4	20
				62	64	52-11/	4	20
HRO C24-C40 w/Si Gel	N.D.	70.	ug/l					
	a 1	1 () ==						
Batch number: 132681848009		ber(s): 72						
Cadmium	N.D.	0.76	ug/l	105		90-112		
Chromium	N.D.	1.6	ug/l	103		90-110		
Lead	N.D.	4.7	ug/l	109		88-110		
Nickel	N.D.	1.5	ug/l	106		90-111		
Zinc	N.D.	2.0	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>	MS <u>%REC</u>	MSD <u>%REC</u>	MS/MSD <u>Limits</u>	<u>RPD</u>	RPD <u>MAX</u>	BKG <u>Conc</u>	DUP <u>Conc</u>	DUP <u>RPD</u>	Dup RPD <u>Max</u>
Batch number: F132734AA	Sample 1	number(s)	: 7209719	UNSPK:	P2098	71			

*- 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: 10/07/13 at 10:33 AM Group Number: 1421149

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
<u>Analysis Name</u>	<u>%REC</u>	<u>%REC</u>	<u>Limits</u>	RPD	MAX	<u>Conc</u>	<u>Conc</u>	<u>RPD</u>	<u>Max</u>
Benzene	93	94	72-134	1	30				
Ethylbenzene	93	94	71-134	1	30				
Methyl Tertiary Butyl Ether	93	96	72-126	2	30				
Toluene	94	96	80-125	2	30				
Xylene (Total)	92	94	79-125	2	30				
Detah number M12270177	[] a mm] a		700070						
Batch number: W132701AA						PK: P206991			
Benzene	95	99	72-134	4	30 30				
Bromodichloromethane	86	91	38-137	5					
Bromoform	75	78	48-118	4	30				
Bromomethane	72	74	47-129	3	30				
Carbon Tetrachloride	98	105	72-135	7	30				
Chlorobenzene	104	108	87-124	4	30				
Chloroethane	83	85	51-145	2	30				
Chloroform	99	104	81-134	5	30				
Chloromethane	86	88	50-131	2	30				
Dibromochloromethane	88	92	74-116	4	30				
1,2-Dichlorobenzene	102	107	84-119	4	30				
1,3-Dichlorobenzene	102	106	86-121	5	30				
1,4-Dichlorobenzene	101	105	85-121	4	30				
1,1-Dichloroethane	94	96	84-129	2	30				
1,2-Dichloroethane	101	104	68-131	3	30				
1,1-Dichloroethene	93	95	75-155	1	30				
cis-1,2-Dichloroethene	94	97	80-141	3	30				
trans-1,2-Dichloroethene	97	100	81-142	4	30				
1,2-Dichloropropane	95	100	83-124	5	30				
cis-1,3-Dichloropropene	87	92	70-116	5	30				
trans-1,3-Dichloropropene	86	89	74-119	4	30				
Ethylbenzene	103	106	71-134	3	30				
Freon 113	100	105	89-148	4	30				
Methyl Tertiary Butyl Ether	88	93	72-126	5	30				
Methylene Chloride	95	98	78-133	4	30				
1,1,2,2-Tetrachloroethane	92	94	72-128	3	30				
Tetrachloroethene	110	110	80-128	1	30				
Toluene	103	106	80-125	3	30				
1,1,1-Trichloroethane	95	98	69-140	4	30				
1,1,2-Trichloroethane	94	96	71-141	1	30				
Trichloroethene	104	106	88-133	2	30				
Trichlorofluoromethane	106	111	64-146	5	30				
Vinyl Chloride	95	95	66-133	0	30				
m+p-Xylene	102	106	79-125	3	30				
o-Xylene	100	103	79-125	3	30				
Batch number: 132710014A	Sample	number(s)	: 7209720)-72097	22 UNSI	PK: P211676	BKG: P21167	7	
Ethylene dibromide	93		60-140			N.D.	N.D.	0 (1)	30
Batch number: 132681848009	Sample	number(s)	: 7209720)-72097	22 UNSE	PK: P206792	BKG: P20679	2	
Cadmium	103	104	83-116	0	20	N.D.	N.D.	0 (1)	20
Chromium	104	104	76-120	0	20	2.6	2.7	3 (1)	20
Lead	105	106	75-125	1	20	N.D.	N.D.	0 (1)	20
Nickel	103	103	86-115	0	20	N.D.	N.D.	0 (1)	20
Zinc	103	103	85-117	0	20	N.D.	2.2	200* (1)	20

*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.



Analysis Report

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Quality Control Summary

Client Name: Chevron Reported: 10/07/13 at 10:33 AM Group Number: 1421149

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
<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>

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.

	Name: UST VOCs by mber: F132734AA	y 8260B - Water								
Batch hu	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene						
7209719	100	97	95	93						
Blank	99	98	96	93						
LCS	98	99	96	96						
MS	98	99	95	97						
MSD	100	94	97	97						
Limits:	80-116	77-113	80-113	78-113						
Analysis Batch nu	Analysis Name: 8260 Ext. Water Master w/GRO Batch number: W132701AA									
	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene						
7209720	96	98	101	93						
7209721	96	101	102	93						
7209722	95	100	101	92						
Blank	96	100	102	93						
LCS	98	100	103	96						
MS	97	98	103	96						
MSD	99	100	103	96						
Limits:	80-116	77-113	80-113	78-113						
	Name: PAHs in wat mber: 13268WAJ026	ters by SIM								
	Fluoranthene-d10	Benzo(a)pyrene-d12	1-Methylnaphthalene- d10							
7209720	101	95	101							
7209721	98	97	99							
7209722	180*	172*	186*							
Blank	95	93	101							
LCS	95	98	103							
LCSD	90	80	97							
Limits:	44-137	62-141	51-136							
	Name: NWTPH-Gx wa	ater C7-C12								

Batch number: 13268B20A

*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.



Analysis Report

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Page 5 of 6

Quality Control Summary

Client N	Jame	e: C	hevrc	n		
Reported	1: 1	L0/0	7/13	at	10:33	AM

Group Number: 1421149

Surrogate Quality Control

Trifluorotoluene-F

	minuorototuene-r	
7209720	01	
	91	
7209721	92	
7209722	90	
Blank	90	
LCS	96	
LCSD	96	
ЦСОР	50	
Limits:	63-135	
DIMILCO.	05 155	
Analycic	Name: NWTPH-Gx wa	ter 07-012
	nber: 13273B20A	
Daten nu		
	Trifluorotoluene-F	
7209719	90	
Blank	90	
LCS	95	
LCSD	94	
Limits:	63-135	
	Name: PCBs in Wat	er 8082
Batch nur	mber: 132690007A	
	Tetrachloro-m-xylene	Decachlorobiphenyl
	, , , , , , , , , , , , , , , , , , ,	
7209720	84	68
7209721	87	65
7209722	88	56
Blank	89	65
LCS	69	66
LCSD	100	40
Limits:	49-141	36-153
	Name: EDB, DBCP,	1,2,3-TCP 8011
Batch nur	mber: 132710014A	
	1,1,2,2-	
	Tetrachloroethane	
	rendemonoculture	
7209720	96	
7209721	90	
7209722	99	
Blank	106	
DUP	97	
LCS	107	
LCSD	106	
MS	94	
-		
Limits:	46-136	
Analysis	Name: NWTPH-Dx wa	nter w/ 10g Si Gel
Batch nur	mber: 132730020A	-
	Orthoterphenyl	
	e	
7209720	84	
. 200, 20		

*- 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

Group Number:	1421149
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Client Nam	ne: Chev	ron		
Reported:	10/07/1	3 at	10:33	AM

Surrogate Quality Control

7209721 7209722 Blank LCS LCSD	86 96 90 86 91
Limits:	50-150
	Name: NWTPH-Dx water mber: 132730021A Orthoterphenyl
7209720	112
7209721	114
7209722	112
Blank	111
LCS	121
LCSD	121
Limits:	50-150

*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.

	Chevro	on	No	rthv	ve	st	R	legi	on	n A	1n	al	ys	sis	;	le	qι	le	st	/C	ha	air	n of Cu	sto	dy
🔅 eurofins	Lancaster Laboratories			Ac	ct. # _	112	26	0	f Group Ir	For E		s Lanc	side cor	Labo Sa respon	mple d with c	es us # 7 ircled n		<u>6</u>	710	}-6	6				
(1)	Client Inform		n				4	Matrix			5			A	nalys	ses	Req	uest	ed				SCR #:		
Facility # 5579-3883-01	IL G-R#385894		WBS							1												6010 19	30n #		
1702 East Yakima Avenue, YAKIMA, WA								ø								-						Eluis	Results in Dry W	•	
	SAICRS						<u>3</u>	Ground Surface			Naphth				Ø			Method	6		ø123	r W	J value reporting Must meet lowes limits possible fo	st detection	n
Consultar Gattler-Ryan, in							S	รั ก		Containers	8260 🛛				l Cleanup	Gel Cleanup			6200		_s 0	Terral	compounds		
Consultar Degiona yr L. Haro	ding, (deanna@g	grinc.	.com), (§	925) 551	-744/	4 x1	0						nates		Silica Gel (Silica G	А ЕРН 🗌	Diss.	S		+ to H		Confirm MTBE +	hit by 8260	1
Consultan(425) 482-3323	x	-						Potable NPDES] Air	ber of	E 8021	L C	Oxygenates		vith Silic	without	WA	Total	100	(inde	N	600		's on highe	
Sampler		بل	PAYNE		3	Composite				I Number	+ MTBE	full scan		NWTPH-Gx	NWTPH-Dx with	NWTPH-Dx	H H H	ч	EOC/	\sim	6, [1년] 9	610	🔲 Run oxy	's on all hit	s
2) Sample Identification			Date	ected Time	Grab	Соп	Soil	Water	ē	Total	E E	8260 full :		ILMN	NWTI	LAN N	WA VPH	Lead	E	E00	IP,	100	6) Rema	arks	
· · · · · · · · · · · · · · · · · · ·	Q.		9.21.13		X			<u> X </u>		12	<u>1 X</u>									×	/		otal Metals include:	Pb. Cd.	
	MW			dazo	X			X	-	14	X			X	*	7			X	<u>×</u>	Ϋ́	X	Cr, Ni & Zn		
		Р Г		1031	X			X		<u>19</u> 19	<u></u> ↓ ×				7	×			X	A I	7	*			
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72 hour 48 hour 24 hour EDF/EDD						, ,				Dale			, intre			Recei	ved					Dale	Time		
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Type VI (Raw Data)		Othe												_					dy Se	als	Intac	ct?	Yes	N	lo _
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The white copy should accompany samples to Eurofins Lancaster Laboratories. The yellow copy should be retained by the client. Page 19 of 21

sued by Dept. 40 Management 7051.03

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1) Client Information					(4)	Matrix	(5			A	naly	ses	Requ	Jest	ed				SCR #	
aciity # CCHOROGOLOVIL CHWYDOLOGA 1702 East Yakimg Avenue, YAKIM Sile Address Shevron PM ¹¹⁰ SAICRS Sonsultani/Willier-Kyam, Inc., 0747 Silema Coc Sonsultani/Willier-Kyam, Inc., 0747 Silema Coc Sonsultani/Willier-Kyam, Inc., 0747 Silema Coc Sonsultani/Willier-Kyam, Inc., 0747 Silema Coc	Lead Cons TL, Suite		-7442	945 FXT	Ö Seðime	1	Air	ber of Containers	E 🔵 8021 🔲 8260 🔍 Naphth 📋		Oxygenates		NWTPH-Dx with Silica Gel Cleanup 🛛	WWTPH-Dx without Silica Gel Cleanup	WA EPH 📋	Total 🔲 Diss. 🔲 Method	NOC'S (BILD)	edin \	Whaph's B270	2002 Total METAS	Results in Dry W J value reporting Must meet lowes limits possible for compounds 6021 MTBE Conf Confirm MTBE + Confirm highest f Confirm all hits b	needed I detection 8260 irmation Naphthalene Iit by 8260
3 3 Sample Identification		lected	Grab 🕲	Composite	Soil	Water N		Total Number	BTEX + MTBE	8260 full scan		WTPH-Gx	VTPH-Dx v	VTPH-Dx v	WA VPH	ead To	EOC/MI	E00 (4	TALL'S	PC 6 9 5		s on all hits
Sample Identification	Date	Time		Ŏ	ŭ	<u> </u>	ō	_	6	82 82		Ž	Ž	Ž	Ž	ğ		Y	V	8	(6) Rema	rks
MW 5	9.71.12	dazo	X			X		11	X		1999	X	\star	7				×	X	1	otal Metals include: Cr. Ni & Zn	Pb, Cd,
MW 6		berlo	X	-		X		14	X			×	*	X			Ń	4	X	J L		いたながら 中心開発がいた
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7) Turnaround Time Requested (TAT) (please circle) Standard 5 day 4 day											9.23.13 1600									 	Pello	
72 hour 48 hour 24 hour EDF/EDD												Received by					<u> </u>	Date	Time			
B Data Package (circle if required) EDD (circle if required) Relinquished Type 1 - Full CVX-RTBU-FL05 (default)														Receiv	Received by					Date	Time	
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Lancaster Laboratories Environmental

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)
С	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)	Ĺ	liter(s)
m3	cubic meter(s)	μL	microliter(s)
		pg/L	picogram/liter

- < less than The number following the sign is the <u>limit of quantitation</u>, 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 ≥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.

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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

January 09, 2014

Project: 93883

Submittal Date: 12/24/2013 Group Number: 1442941 PO Number: 0015119898 Release Number: SHRILL HOPKINS State of Sample Origin: WA

Client Sample Description	Lancaster Labs (LL) #
QA Water	7322740
MW-5 Grab Groundwater	7322741
MW-6 Grab Groundwater	7322742
MW-7 Grab Groundwater	7322743

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





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Respectfully Submitted,

Amek Carts

Amek Carter Specialist

(717) 556-7252



Analysis Report

Account

LL Sample # WW 7322740

11260

LL Group # 1442941

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: QA Water Facility# 93883 Job# 385894 1702 East Yakima Avenue - Yakima, WA

Project Name: 93883

Collected: 12/23/2013

Submitted: 12/24/2013 10:30 Reported: 01/09/2014 09:02

YAYQA

Chevron 6001 Bollinger Canyon Road L4310 San Ramon CA 94583

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 Vol	Latiles 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.

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	Z140021AA	01/02/2014 18:33	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z140021AA	01/02/2014 18:33	Brett W Kenyon	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH- Gx	1	13361A07A	12/30/2013 15:39	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	13361A07A	12/30/2013 15:39	Catherine J Schwarz	1



Analysis Report

LL Sample # WW 7322741 LL Group # 1442941 Account # 11260

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample	Description:	MW - 5	Grab	Ground	water			
		Faci	lity#	93883	Job#	385	5894	
		1702	East	Yakima	Avenue	9 -	Yakima,	WA

Project Name: 93883

Collected: 12/23/2013 11:03 by JP

Submitted: 12/24/2013 10:30 Reported: 01/09/2014 09:02 Chevron 6001 Bollinger Canyon Road L4310 San Ramon CA 94583

YAYM5

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	
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Bromodichloromethane	75-27-4	N.D.	1	1
10335	Bromoform	75-25-2	N.D.	1	1
10335	Bromomethane	74-83-9	N.D.	1	1
10335	Carbon Tetrachloride	56-23-5	N.D.	1	1
10335	Chlorobenzene	108-90-7	N.D.	0.8	1
10335	Chloroethane	75-00-3	N.D.	1	1
10335	Chloroform	67-66-3	N.D.	0.8	1
10335	Chloromethane	74-87-3	N.D.	1	1
10335	Dibromochloromethane	124-48-1	N.D.	1	1
10335	1,2-Dichlorobenzene	95-50-1	N.D.	1	1
10335	1,3-Dichlorobenzene	541-73-1	N.D.	1	1
10335	1,4-Dichlorobenzene	106-46-7	N.D.	1	1
10335	1,1-Dichloroethane	75-34-3	N.D.	1	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.8	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.8	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	1
10335	1,2-Dichloropropane	78-87-5	N.D.	1	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	1
10335	Ethylbenzene	100-41-4	N.D.	0.5	1
10335	Freon 113	76-13-1	N.D.	2	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	2	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	1
10335	Tetrachloroethene	127-18-4	N.D.	0.8	1
10335	Toluene	108-88-3	N.D.	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.8	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.8	1
10335	Trichloroethene	79-01-6	N.D.	1	1
10335	Trichlorofluoromethane	75-69-4	N.D.	2	1
10335	Vinyl Chloride	75-01-4	N.D.	1	1
10335	m+p-Xylene	179601-23-1	N.D.	0.5	1
10335	o-Xylene	95-47-6	N.D.	0.5	1
GC/MS	Semivolatiles SW-846	8270C SIM	ug/l	ug/l	
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	1
08357	Chrysene	218-01-9	N.D.	0.010	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	1
08357	Naphthalene	91-20-3	0.033	0.030	1
GC Vol	atiles ECY 97	-602 NWTPH-Gx	ug/l	ug/l	



Analysis Report

LL Sample # WW 7322741 LL Group # 1442941 Account # 11260

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Sample	Description:	MW - 5	Grab	Ground	water			
		Facil	Lity#	93883	Job#	385	5894	
		1702	East	Yakima	Avenue	. –	Yakima,	WA

Project Name: 93883

Collected: 12/23/2013 11:03 by JP

Submitted: 12/24/2013 10:30 Reported: 01/09/2014 09:02 Chevron 6001 Bollinger Canyon Road L4310 San Ramon CA 94583

YAYM5

CAT No.	Analysis Name		CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Vo	latiles	ECY 97-60	2 NWTPH-Gx	ug/l	ug/l	
08273	NWTPH-Gx water C7-C	12	n.a.	N.D.	50	1
GC Mi	scellaneous	SW-846 80	11	ug/l	ug/l	
10398	Ethylene dibromide		106-93-4	N.D.	0.0097	1
Pesti	cides/PCBs	SW-846 80	82	ug/l	ug/l	
10227	PCB-1016		12674-11-2	N.D.	0.081	1
10227	PCB-1221		11104-28-2	N.D.	0.081	1
10227	PCB-1232		11141-16-5	N.D.	0.16	1
10227	PCB-1242		53469-21-9	N.D.	0.081	1
10227	PCB-1248		12672-29-6	N.D.	0.081	1
10227	PCB-1254		11097-69-1	N.D.	0.081	1
10227	PCB-1260		11096-82-5	N.D.	0.12	1
GC Pe	troleum	ECY 97-60	2 NWTPH-Dx	ug/l	ug/l	
Hydro	carbons	modified				
08271	Diesel Range Organi	cs C12-C24	n.a.	N.D.	29	1
08271	Heavy Range Organic	s C24-C40	n.a.	N.D.	67	1
GC Pe	troleum	ECY 97-60	2 NWTPH-Dx	ug/l	ug/l	
Hvdro	carbons w/Si	modified				
-	DRO C12-C24 w/Si Ge		n.a.	N.D.	29	1
	HRO C24-C40 w/Si Ge		n.a.	N.D.	67	1
	reverse surrogate, c					
Metal	S	SW-846 60	10B	ug/l	ug/l	
07049	Cadmium		7440-43-9	N.D.	0.76	1
07051	Chromium		7440-47-3	N.D.	1.6	1
07055	Lead		7439-92-1	N.D.	4.7	1
07061	Nickel		7440-02-0	N.D.	1.5	1
07072	Zinc		7440-66-6	5.0	2.0	1

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.

CAT	Analysis Name	Method	Trial#	Batch#	Analysis	Analyst	Dilution
No.					Date and Time		Factor
10335	8260 Ext. Water Master w/GRO	SW-846 8260B	1	W140031AA	01/03/2014 14:41	Chelsea B Stong	1



Analysis Report

Account

LL Sample # WW 7322741 LL Group # 1442941

11260

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample	Description:	MW - 5	Grab	Ground	water			
		Faci	lity#	93883	Job#	385	5894	
		1702	East	Yakima	Avenue	- 4	Yakima,	WA

Project Name: 93883

Collected: 12/23/2013 11:03 by JP

Submitted: 12/24/2013 10:30 Reported: 01/09/2014 09:02

YAYM5

L4310 San Ramon CA 94583

6001 Bollinger Canyon Road

Chevron

Laboratory Sample Analysis Record Method CAT Analysis Name Trial# Batch# Analysis Dilution Analyst No. Date and Time Factor 01163 GC/MS VOA Water Prep SW-846 5030B 01/03/2014 14:41 1 W140031AA Chelsea B Stong 1 08357 PAHs in waters by SIM SW-846 8270C STM 13359WAE026 Brian K Graham 1 01/07/2014 08:39 1 10470 BNA Water Extraction SW-846 3510C 1 13359WAE026 12/26/2013 19:30 Nicholas W Shroyer 1 (SIM) 08273 NWTPH-Gx water C7-C12 ECY 97-602 NWTPH-1 13358B07A 12/27/2013 18:10 Marie D 1 Gx Beamenderfer 01146 GC VOA Water Prep SW-846 5030B 1 13358B07A 12/27/2013 18:10 Marie D 1 Beamenderfer 10398 EDB by 8011 SW-846 8011 1 133650014A 01/03/2014 23:38 Jamie L Brillhart 1 12/31/2013 04:29 Monica M Souders PCBs in Water 8082 SW-846 8082 133590011A 10227 1 1 11117 PCB Waters Extraction SW-846 3510C 133590011A Sherry L Morrow 1 12/27/2013 02:30 1 07786 EDB Extraction SW-846 8011 1 133650014A 01/02/2014 12:30 William H Saadeh 1 08271 NWTPH-Dx water ECY 97-602 NWTPH-1 140020011A 01/04/2014 11:42 Glorines Suarez-1 Rivera Dx modified 12005 NWTPH-Dx water w/ 10g Si ECY 97-602 NWTPH-140020010A 01/07/2014 09:53 1 Glorines Suarez-1 Gel Dx modified Rivera 12007 NW Dx water w/ 10g column ECY 97-602 NWTPH-1 140020010A 01/03/2014 10:00 Anna E Stager 1 Dx 06/97 11197 WA DRO NW DX Ext (Non SG) 140020011A 1 01/03/2014 10:00 Anna E Stager ECY 97-602 NWTPH-1 Dx 06/97 07049 Cadmium SW-846 6010B 1 140021848001 01/07/2014 19:58 Maria A Orrs 1 140021848001 07051 Chromium SW-846 6010B 1 01/07/2014 19:58 Maria A Orrs 1 07055 Lead SW-846 6010B 1 140021848001 Maria A Orrs 1 01/07/2014 19:58 07061 Nickel SW-846 6010B 140021848001 01/07/2014 19:58 Maria A Orrs 1 1 07072 Zinc SW-846 6010B 1 140021848001 01/07/2014 19:58 Maria A Orrs 1 01848 WW SW846 ICP Digest (tot SW-846 3005A 1 140021848001 01/07/2014 10:10 James L Mertz 1 rec)



Analysis Report

LL Sample # WW 7322742 LL Group # 1442941 Account # 11260

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample	Description:	MW - 6	Grab	Ground	water			
		Faci	lity#	93883	Job#	385	5894	
		1702	East	Yakima	Avenue	9 -	Yakima,	WA

Project Name: 93883

Collected: 12/23/2013 09:50 by JP

Submitted: 12/24/2013 10:30 Reported: 01/09/2014 09:02 Chevron 6001 Bollinger Canyon Road L4310 San Ramon CA 94583

YAYM6

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	
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Bromodichloromethane	75-27-4	N.D.	1	1
10335	Bromoform	75-25-2	N.D.	1	1
10335	Bromomethane	74-83-9	N.D.	1	1
10335	Carbon Tetrachloride	56-23-5	N.D.	1	1
10335	Chlorobenzene	108-90-7	N.D.	0.8	1
10335	Chloroethane	75-00-3	N.D.	1	1
10335	Chloroform	67-66-3	N.D.	0.8	1
10335	Chloromethane	74-87-3	N.D.	1	1
10335	Dibromochloromethane	124-48-1	N.D.	1	1
10335	1,2-Dichlorobenzene	95-50-1	N.D.	1	1
10335	1,3-Dichlorobenzene	541-73-1	N.D.	1	1
10335	1,4-Dichlorobenzene	106-46-7	N.D.	1	1
10335	1,1-Dichloroethane	75-34-3	N.D.	1	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335		75-35-4	N.D.	0.8	1
10335		156-59-2	N.D.	0.8	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	1
10335		78-87-5	N.D.	1	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	1
10335	Ethylbenzene	100-41-4	N.D.	0.5	1
10335	Freon 113	76-13-1	N.D.	2	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	2	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	1
10335	Tetrachloroethene	127-18-4	N.D.	0.8	1
10335	Toluene	108-88-3	N.D.	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.8	1
	1,1,2-Trichloroethane	79-00-5	N.D.	0.8	1
10335	Trichloroethene	79-01-6	N.D.	1	1
10335	Trichlorofluoromethane	75-69-4	N.D.	2	1
10335	Vinyl Chloride	75-01-4	N.D.	1	1
10335	m+p-Xylene	179601-23-1	N.D.	0.5	1
10335	o-Xylene	95-47-6	N.D.	0.5	1
	1				
GC/MS	Semivolatiles SW-846	8270C SIM	ug/l	ug/l	
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	1
08357	Chrysene	218-01-9	N.D.	0.010	1
08357	Dibenz (a, h) anthracene	53-70-3	N.D.	0.010	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	1
08357	Naphthalene	91-20-3	N.D.	0.030	1
00007	<u>F</u>	21 20 0		0.000	-
GC Vol	latiles ECY 97-	602 NWTPH-Gx	ug/l	ug/l	



Analysis Report

LL Sample # WW 7322742 LL Group # 1442941 Account # 11260

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample	Description:	MW - 6	Grab	Ground	water			
		Faci	lity#	93883	Job#	38!	5894	
		1702	East	Yakima	Avenue	<u> </u>	Yakima,	WA

Project Name: 93883

Collected: 12/23/2013 09:50 by JP

Submitted: 12/24/2013 10:30 Reported: 01/09/2014 09:02 Chevron 6001 Bollinger Canyon Road L4310 San Ramon CA 94583

YAYM6

CAT No.	Analysis Name		CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Vo	latiles	ECY 97-602	2 NWTPH-Gx	ug/l	ug/l	
08273	NWTPH-Gx water C7-C		n.a.	N.D.	50	1
GC Mi	scellaneous	SW-846 801	11	ug/l	ug/l	
10398	Ethylene dibromide		106-93-4	N.D.	0.0097	1
Pesti	cides/PCBs	SW-846 808	32	ug/l	ug/l	
10227	PCB-1016		12674-11-2	N.D.	0.082	1
10227	PCB-1221		11104-28-2	N.D.	0.082	1
10227	PCB-1232		11141-16-5	N.D.	0.16	1
	PCB-1242		53469-21-9	N.D.	0.082	1
	PCB-1248		12672-29-6	N.D.	0.082	1
	PCB-1254		11097-69-1	N.D.	0.082	1
10227	PCB-1260		11096-82-5	N.D.	0.12	1
GC Pe	troleum	ECY 97-602	2 NWTPH-Dx	ug/l	ug/l	
Hydro	carbons	modified				
08271	Diesel Range Organi	cs C12-C24	n.a.	N.D.	29	1
08271	Heavy Range Organic	s C24-C40	n.a.	N.D.	68	1
GC Pe	troleum	ECY 97-602	2 NWTPH-Dx	ug/l	ug/l	
Hydro	carbons w/Si	modified				
12005	DRO C12-C24 w/Si Ge	1	n.a.	N.D.	29	1
	HRO C24-C40 w/Si Ge		n.a.	N.D.	68	1
	reverse surrogate, c		s present at <1	8.		
Metal	S	SW-846 601	10B	ug/l	ug/l	
07049	Cadmium		7440-43-9	N.D.	0.76	1
07051	Chromium		7440-47-3	2.3	1.6	1
07055	Lead		7439-92-1	N.D.	4.7	1
07061	Nickel		7440-02-0	N.D.	1.5	1
07072	Zinc		7440-66-6	5.1	2.0	1

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.

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	8260 Ext. Water Master w/GRO	SW-846 8260B	1	W140031AA	01/03/2014 15:52	Chelsea B Stong	1



Analysis Report

LL Sample # WW 7322742

LL Group # 1442941 Account # 11260

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description:	MW-6 Grab	Groundwater				
	Facility#	93883	Job# 385894			
	1702 East	Yakima A	Avenue – Yakima, WA			

Project Name: 93883

Collected: 12/23/2013 09:50 by JP

Submitted: 12/24/2013 10:30 Reported: 01/09/2014 09:02

YAYM6

L4310 San Ramon CA 94583

6001 Bollinger Canyon Road

Chevron

	Laboratory Sample Analysis Record										
CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor			
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W140031AA	01/03/2014	15:52	Chelsea B Stong	1			
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13359WAE026	01/07/2014	09:07	Brian K Graham	1			
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13359WAE026	12/26/2013	19:30	Nicholas W Shroyer	1			
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH- Gx	1	13358B07A	12/27/2013	18:36	Marie D Beamenderfer	1			
01146	GC VOA Water Prep	SW-846 5030B	1	13358B07A	12/27/2013	18:36	Marie D Beamenderfer	1			
10398	EDB by 8011	SW-846 8011	1	133650014A	01/03/2014	23:54	Jamie L Brillhart	1			
10227	PCBs in Water 8082	SW-846 8082	1	133590011A	12/31/2013	04:40	Monica M Souders	1			
11117	PCB Waters Extraction	SW-846 3510C	1	133590011A	12/27/2013	02:30	Sherry L Morrow	1			
07786	EDB Extraction	SW-846 8011	1	133650014A	01/02/2014	12:30	William H Saadeh	1			
08271	NWTPH-Dx water	ECY 97-602 NWTPH- Dx modified	1	140020011A	01/04/2014	12:04	Glorines Suarez- Rivera	1			
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH- Dx modified	1	140020010A	01/07/2014	10:15	Glorines Suarez- Rivera	1			
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH- Dx 06/97	1	140020010A	01/03/2014	10:00	Anna E Stager	1			
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH- Dx 06/97	1	140020011A	01/03/2014	10:00	Anna E Stager	1			
07049	Cadmium	SW-846 6010B	1	140021848002	01/06/2014	19:21	Maria A Orrs	1			
07051	Chromium	SW-846 6010B	1	140021848002	01/06/2014	19:21	Maria A Orrs	1			
07055	Lead	SW-846 6010B	1	140021848002	01/06/2014	19:21	Maria A Orrs	1			
07061	Nickel	SW-846 6010B	1	140021848002	01/06/2014	19:21	Maria A Orrs	1			
07072	Zinc	SW-846 6010B	1	140021848002	01/06/2014	19:21	Maria A Orrs	1			
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	140021848002	01/06/2014	01:30	Annamaria Kuhns	1			



Analysis Report

LL Sample # WW 7322743 LL Group # 1442941 Account # 11260

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample	Description:	MW - 7	Grab	Groundwater				
		Faci	lity#	93883	Job#	38!	5894	
		1702	East	Yakima	Avenue	- 1	Yakima,	WA

Project Name: 93883

Collected: 12/23/2013 12:01 by JP

Submitted: 12/24/2013 10:30 Reported: 01/09/2014 09:02 Chevron 6001 Bollinger Canyon Road L4310 San Ramon CA 94583

YAYM7

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS	Volatiles SW-846 82	60B	ug/l	ug/l	
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Bromodichloromethane	75-27-4	N.D.	1	1
10335	Bromoform	75-25-2	N.D.	1	1
10335	Bromomethane	74-83-9	N.D.	1	1
10335	Carbon Tetrachloride	56-23-5	N.D.	1	1
10335	Chlorobenzene	108-90-7	N.D.	0.8	1
10335	Chloroethane	75-00-3	N.D.	1	1
10335	Chloroform	67-66-3	N.D.	0.8	1
10335	Chloromethane	74-87-3	N.D.	1	1
10335	Dibromochloromethane	124-48-1	N.D.	1	1
10335	1,2-Dichlorobenzene	95-50-1	N.D.	1	1
10335	1,3-Dichlorobenzene	541-73-1	N.D.	1	1
10335	1,4-Dichlorobenzene	106-46-7	N.D.	1	1
10335	1,1-Dichloroethane	75-34-3	N.D.	1	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.8	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.8	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	1
10335	1,2-Dichloropropane	78-87-5	N.D.	1	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	1
10335	Ethylbenzene	100-41-4	N.D.	0.5	1
10335	Freon 113	76-13-1	N.D.	2	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	2	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	1
10335	Tetrachloroethene	127-18-4	N.D.	0.8	1
10335	Toluene	108-88-3	N.D.	0.5	1
	1,1,1-Trichloroethane	71-55-6	N.D.	0.8	1
	1,1,2-Trichloroethane	79-00-5	N.D.	0.8	1
	Trichloroethene	79-01-6	N.D.	1	1
	Trichlorofluoromethane	75-69-4	N.D.	2	1
	Vinyl Chloride	75-01-4	N.D.	1	1
10335	m+p-Xylene	179601-23-1	N.D.	0.5	1
10335	o-Xylene	95-47-6	N.D.	0.5	1
GC/MS	Semivolatiles SW-846 82	70C SIM	ug/l	ug/l	
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	1
	Benzo(a)pyrene	50-32-8	N.D.	0.010	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	1
	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	1
08357		218-01-9	N.D.	0.010	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	1
08357	Naphthalene	91-20-3	0.047	0.030	1
	recovery for the sample surrogate				
	otance limits as noted on the OC				

acceptance limits as noted on the QC Summary. The following corrective action was taken:



Analysis Report

Account

LL Sample # WW 7322743

11260

LL Group # 1442941

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: MW-7 Grab Groundwater Facility# 93883 Job# 385894 1702 East Yakima Avenue - Yakima, WA

Project Name: 93883

 Collected: 12/23/2013 12:01
 by JP
 Chevron

 Submitted: 12/24/2013 10:30
 6001 Bollinger Canyon Road

 Reported: 01/09/2014 09:02
 San Ramon CA 94583

YAYM7

CAT No.	Analysis Name		CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
time firs the	sample was re-extracted and the QC is completed trial. Similar reservention of:	iant. All re sults were ob	sults are repo tained in both	rted from the trials with		
-	get compounds were no	t detected in	the re-extrac	cion.		
	latiles		2 NWTPH-Gx	ug/l	ug/l	
08273	NWTPH-Gx water C7-C	12	n.a.	N.D.	50	1
GC Mi	scellaneous	SW-846 80	11	ug/l	ug/l	
10398	Ethylene dibromide		106-93-4	N.D.	0.0097	1
Pesti	cides/PCBs	SW-846 80	82	ug/l	ug/l	
	PCB-1016		12674-11-2	N.D.	0.081	1
	PCB-1221		11104-28-2	N.D.	0.081	1
10227	PCB-1232		11141-16-5	N.D.	0.16	1
10227	PCB-1242		53469-21-9	N.D.	0.081	1
10227	PCB-1248		12672-29-6	N.D.	0.081	1
10227	PCB-1254		11097-69-1	N.D.	0.081	1
10227	PCB-1260		11096-82-5	N.D.	0.12	1
GC Pe	troleum	ECY 97-60	2 NWTPH-Dx	ug/l	ug/l	
Hvdro	carbons	modified				
-	Diesel Range Organi		n.a.	N.D.	29	1
	Heavy Range Organic		n.a.	N.D.	68	1
GC Pe	troleum	ECY 97-60	2 NWTPH-Dx	ug/l	ug/l	
	carbons w/Si	modified			-	
-	DRO C12-C24 w/Si Ge		n.a.	N.D.	29	1
	HRO C24-C40 w/Si Ge		n.a.	N.D.	68	± 1
	reverse surrogate, ca				00	1
Metal	s	SW-846 60	10B	ug/l	ug/l	
07049	Cadmium		7440-43-9	N.D.	0.76	1
07051	Chromium		7440-47-3	N.D.	1.6	1
07055	Lead		7439-92-1	N.D.	4.7	1
07061	Nickel		7440-02-0	N.D.	1.5	1
07072	Zinc		7440-66-6	3.6	2.0	1

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.



Analysis Report

LL Sample # WW 7322743 LL Group # 1442941 Account # 11260

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Sample Description:	MW-7 Grab	Groundwater
	Facility#	93883 Job# 385894
	1702 East	Yakima Avenue – Yakima, WA

Project Name: 93883

Collected: 12/23/2013 12:01 by JP

Submitted: 12/24/2013 10:30 Reported: 01/09/2014 09:02 Chevron 6001 Bollinger Canyon Road L4310 San Ramon CA 94583

YAYM7

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
10335	8260 Ext. Water Master w/GRO	SW-846 8260B	1	W140031AA	01/03/2014	16:16	Chelsea B Stong	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W140031AA	01/03/2014	16:16	Chelsea B Stong	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13359WAE026	01/07/2014	09:35	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13359WAE026	12/26/2013	19:30	Nicholas W Shroyer	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH- Gx	1	13358B07A	12/27/2013	19:26	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	13358B07A	12/27/2013	19:26	Marie D Beamenderfer	1
10398	EDB by 8011	SW-846 8011	1	133650014A	01/04/2014	00:40	Jamie L Brillhart	1
10227	PCBs in Water 8082	SW-846 8082	1	133590011A	12/31/2013	04:52	Monica M Souders	1
11117	PCB Waters Extraction	SW-846 3510C	1	133590011A	12/27/2013	02:30	Sherry L Morrow	1
07786	EDB Extraction	SW-846 8011	1	133650014A	01/02/2014	12:30	William H Saadeh	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH- Dx modified	1	140020011A	01/04/2014	12:27	Glorines Suarez- Rivera	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH- Dx modified	1	140020010A	01/07/2014	10:38	Glorines Suarez- Rivera	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH- Dx 06/97	1	140020010A	01/03/2014	10:00	Anna E Stager	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH- Dx 06/97	1	140020011A	01/03/2014	10:00	Anna E Stager	1
07049	Cadmium	SW-846 6010B	1	140021848002	01/06/2014	19:24	Maria A Orrs	1
07051	Chromium	SW-846 6010B	1	140021848002	01/06/2014	19:24	Maria A Orrs	1
07055	Lead	SW-846 6010B	1	140021848002	01/06/2014	19:24	Maria A Orrs	1
07061	Nickel	SW-846 6010B	1	140021848002	01/06/2014	19:24	Maria A Orrs	1
07072	Zinc	SW-846 6010B	1	140021848002	01/06/2014	19:24	Maria A Orrs	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	140021848002	01/06/2014	01:30	Annamaria Kuhns	1



Analysis Report

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Quality Control Summary

Client Name: Chevron Reported: 01/09/14 at 09:02 AM Group Number: 1442941

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 <u>Result</u>	Blank <u>MDL</u>	Report <u>Units</u>	LCS <u>%REC</u>	LCSD <u>%REC</u>	LCS/LCSD <u>Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: W140031AA	Sample numbe	er(s): 732	2741-7322	743				
Benzene	N.D.	0.5	ug/l	111		78-120		
Bromodichloromethane	N.D.	1.	ug/l	103		73-120		
Bromoform	N.D.	1.	uq/1	91		61-120		
Bromomethane	N.D.	1.	ug/l	90		51-120		
Carbon Tetrachloride	N.D.	1.	ug/l	110		74-130		
Chlorobenzene	N.D.	0.8	ug/1	114		80-120		
Chloroethane	N.D.	1.	ug/l	98		45-120		
Chloroform	N.D.	0.8	ug/l	113		77-122		
Chloromethane	N.D.	1.	ug/1	106		55-120		
Dibromochloromethane	N.D.	1.	ug/1	95		72-120		
1,2-Dichlorobenzene	N.D.	1.	ug/1 ug/1	111		80-120		
1,3-Dichlorobenzene	N.D.	1.	ug/l	109		80-120		
1,4-Dichlorobenzene	N.D.	1.		109		80-120		
1,1-Dichloroethane	N.D. N.D.	1.	ug/l ug/l	112		80-120		
1,2-Dichloroethane	N.D.	0.5	ug/l	116		71-130		
1,1-Dichloroethene	N.D.	0.8	ug/l	108		76-124		
cis-1,2-Dichloroethene	N.D.	0.8	ug/l	111		80-120		
trans-1,2-Dichloroethene	N.D.	0.8	ug/l	114		80-120		
1,2-Dichloropropane	N.D.	1.	ug/l	112		80-120		
cis-1,3-Dichloropropene	N.D.	1.	ug/l	103		80-120		
trans-1,3-Dichloropropene	N.D.	1.	ug/l	96		69-120		
Ethylbenzene	N.D.	0.5	ug/l	111		79-120		
Freon 113	N.D.	2.	ug/l	113		63-133		
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	109		75-120		
Methylene Chloride	N.D.	2.	ug/l	113		80-120		
1,1,2,2-Tetrachloroethane	N.D.	1.	ug/l	103		70-120		
Tetrachloroethene	N.D.	0.8	ug/l	109		80-120		
Toluene	N.D.	0.5	ug/l	113		80-120		
1,1,1-Trichloroethane	N.D.	0.8	ug/l	103		66-126		
1,1,2-Trichloroethane	N.D.	0.8	uq/l	109		80-120		
Trichloroethene	N.D.	1.	ug/l	111		80-120		
Trichlorofluoromethane	N.D.	2.	ug/l	111		65-130		
Vinyl Chloride	N.D.	1.	ug/l	110		63-120		
m+p-Xylene	N.D.	0.5	ug/l	110		80-120		
o-Xylene	N.D.	0.5	ug/l	109		80-120		
Batch number: Z140021AA	Sample numbe	er(s): 732	2740					
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	97		75-120		
Toluene	N.D.	0.5	uq/1	103		80-120		
Xylene (Total)	N.D.	0.5	ug/l	100		80-120		
			- 10.					

*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.



Client Name: Chevron

Lancaster Laboratories Environmental

Analysis Report

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Quality Control Summary

Group Number: 1442941

Client Name: Chevron		(roup Nun	uber: 14	142941			
Reported: 01/09/14 at 09:	02 AM							
	Blank	Blank	Report	LCS	LCSD	LCS/LCSD		
<u>Analysis Name</u>	Result	MDL	Units	%REC	%REC	<u>Limits</u>	RPD	<u>RPD Max</u>
Batch number: 13359WAE026		ber(s): 73			<u> INDO</u>	<u>DIMI CO</u>	<u></u>	<u>ni b nun</u>
Benzo(a) anthracene	N.D.	0.010	uq/1	97		73-127		
Benzo (a) pyrene	N.D.	0.010	ug/1 ug/1	97		72-120		
Benzo (b) fluoranthene	N.D.	0.010	ug/1 ug/1	104		79-136		
Benzo(k) fluoranthene	N.D.	0.010	ug/1 ug/1	104 97		73-131		
Chrysene	N.D.	0.010	ug/1 ug/1	96		76-125		
	N.D. N.D.	0.010		96 78		58-131		
Dibenz (a, h) anthracene	N.D.		ug/l ug/l	86				
Indeno(1,2,3-cd)pyrene		0.010	<u> </u>			62-130		
1-Methylnaphthalene	N.D.	0.010	ug/l	105		80-126		
2-Methylnaphthalene	N.D.	0.010	ug/l	103		81-124		
Naphthalene	N.D.	0.030	ug/l	102		75-120		
Batch number: 13358B07A		ber(s): 73						
NWTPH-Gx water C7-C12	N.D.	50.	ug/l	102	106	75-135	4	30
		1 () 50	~~~ ~					
Batch number: 13361A07A		ber(s): 73						
NWTPH-Gx water C7-C12	N.D.	50.	ug/l	114	104	75-135	9	30
		1 () 50						
Batch number: 133650014A		ber(s): 73					_	
Ethylene dibromide	N.D.	0.010	ug/l	113	105	60-140	7	20
Batch number: 133590011A		ber(s): 73						
PCB-1016	N.D.	0.080	ug/l	90		67-117		
PCB-1221	N.D.	0.080	ug/l					
PCB-1232	N.D.	0.16	ug/l					
PCB-1242	N.D.	0.080	ug/l					
PCB-1248	N.D.	0.080	ug/l					
PCB-1254	N.D.	0.080	ug/l					
PCB-1260	N.D.	0.12	ug/l	94		67-128		
Batch number: 140020011A	Sample num	ber(s): 73	22741-7322	743				
Diesel Range Organics C12-C24	N.D.	30.	ug/l	82	85	50-113	3	20
Heavy Range Organics C24-C40	N.D.	70.	ug/l					
Batch number: 140020010A	Sample num	ber(s): 73	22741-7322	743				
DRO C12-C24 w/Si Gel	N.D.	30.	ug/l	71	70	32-117	1	20
HRO C24-C40 w/Si Gel	N.D.	70.	ug/l					
Batch number: 140021848001	Sample num	ber(s): 73	22741					
Cadmium	N.D.	0.76	ug/l	101		90-112		
Chromium	N.D.	1.6	ug/l	103		90-110		
Lead	N.D.	4.7	ug/l	105		88-110		
Nickel	N.D.	1.5	uq/l	105		90-111		
Zinc	N.D.	2.0	ug/l	99		90-110		
			- 57					
Batch number: 140021848002	Sample num	ber(s): 73	22742-7322	743				
Cadmium	N.D.	0.76	ug/l	105		90-112		
Chromium	N.D.	1.6	uq/l	104		90-110		
Lead	N.D.	4.7	ug/1 ug/1	110		88-110		
Nickel	N.D.	1.5	ug/1 ug/1	110		90-111		
Zinc	N.D.	2.0	ug/l	105		90-110		
21110		2.0	ug/ I	TOD		20 TTO		

Sample Matrix Quality Control

*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.



Client Name: Chevron

Lancaster Laboratories Environmental



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Quality Control Summary

Group Number: 1442941

Reported: 01/09/14 at 09:02 AM Unspiked (UNSPK) = the sample used in conjunction with the matrix spike Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS <u>%REC</u>	MSD <u>%REC</u>	MS/MSD <u>Limits</u>	<u>RPD</u>	RPD <u>MAX</u>	BKG <u>Conc</u>	DUP <u>Conc</u>	DUP <u>RPD</u>	Dup RPD <u>Max</u>
Batch number: W140031AA	Sample	number(s)	: 7322741	-732274	3 UNSPK	C: 7322741			
Benzene	117	117	72-134	0	30				
Bromodichloromethane	102	104	38-137	2	30				
Bromoform	89	90	48-118	1	30				
Bromomethane	98	96	47-129	2	30				
Carbon Tetrachloride	120	120	72-135	0	30				
Chlorobenzene	117	118	87-124	1	30				
Chloroethane	109	102	51-145	7	30				
Chloroform	117	117	81-134	1	30				
Chloromethane	118	113	50-131	5	30				
Dibromochloromethane	95	94	74-116	1	30				
1,2-Dichlorobenzene	111	113	84-119	1	30				
1,3-Dichlorobenzene	115	115	86-121	0	30				
1,4-Dichlorobenzene	115	115	85-121	0	30				
1,1-Dichloroethane	$114 \\ 117$	114	84-129	1	30				
•				0	30				
1,2-Dichloroethane	117	116	68-131						
1,1-Dichloroethene	117	118	75-155	1	30				
cis-1,2-Dichloroethene	115	116	80-141	0	30				
trans-1,2-Dichloroethene	121	121	81-142	0	30				
1,2-Dichloropropane	116	116	83-124	0	30				
cis-1,3-Dichloropropene	104	106	70-116	2	30				
trans-1,3-Dichloropropene	97	100	74-119	2	30				
Ethylbenzene	116	116	71-134	0	30				
Freon 113	128	127	89-148	1	30				
Methyl Tertiary Butyl Ether	108	109	72-126	1	30				
Methylene Chloride	117	115	78-133	2	30				
1,1,2,2-Tetrachloroethane	100	100	72-128	1	30				
Tetrachloroethene	116	118	80-128	1	30				
Toluene	119	118	80-125	1	30				
1,1,1-Trichloroethane	110	111	69-140	1	30				
1,1,2-Trichloroethane	107	108	71-141	1	30				
Trichloroethene	120	122	88-133	1	30				
Trichlorofluoromethane	130	124	64-146	4	30				
Vinyl Chloride	125	118	66-133	6	30				
m+p-Xylene	116	116	79-125	0	30				
o-Xylene	114	113	79-125	1	30				
Batch number: Z140021AA	Sample	number(s)	: 7322740	UNSPK:	P32455	3			
Benzene	103	100	72-134	2	30				
Ethylbenzene	101	99	71-134	2	30				
Methyl Tertiary Butyl Ether	96	94	72-126	2	30				
Toluene	108	106	80-125	2	30				
Xylene (Total)	106	104	79-125	2	30				
Batch number: 13359WAE026	Sample	number(s)	: 7322741	-732274	3 UNSPK	C: P322052			
Benzo(a) anthracene	104	104	37-150	1	30				
Benzo(a)pyrene	96	93	64-123	4	30				
Benzo(b)fluoranthene	104	101	33-152	4	30				
Benzo(k) fluoranthene	96	93	31-142	4	30				
Chrysene	96	94	34-135	3	30				
Dibenz(a,h)anthracene	86	78	17-134	10	30				
Indeno (1, 2, 3-cd) pyrene	90	83	29-143	9	30				
······································				-					

*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.



Analysis Report

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Quality Control Summary

Client Name: Chevron Reported: 01/09/14 at 09:02 AM Group Number: 1442941

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> 1-Methylnaphthalene 2-Methylnaphthalene Naphthalene	MS <u>%REC</u> 107 104 105	MSD <u>%REC</u> 107 104 105	MS/MSD <u>Limits</u> 49-152 51-146 58-131	RPD 1 1 1	RPD <u>MAX</u> 30 30 30	BKG <u>Conc</u>	DUP <u>Conc</u>	DUP <u>RPD</u>	Dup RPD <u>Max</u>
Batch number: 133650014A Ethylene dibromide	Sample 118	number(s)	: 7322741 60-140	-73227	43 UNSP	PK: P324598 N.D.	BKG: P324599 N.D.	9 0 (1)	30
Batch number: 133590011A PCB-1016 PCB-1260	Sample 83 75	number(s) 71 46	: 7322741 58-119 44-131	-73227 14 47*	43 UNSP 30 30	PK: P322662			
Batch number: 140021848001 Cadmium Chromium Lead Nickel Zinc	Sample 94 100 95 98 104	number(s) 94 99 94 97 103	: 7322741 83-116 76-120 75-125 86-115 85-117	UNSPK 0 1 0 0 0	: P3221 20 20 20 20 20 20	35 BKG: P32 N.D. N.D. N.D. 1.8 3.4	2135 N.D. N.D. N.D. 1.9 4.1	0 (1) 0 (1) 0 (1) 7 (1) 21* (1)	20 20 20 20 20
Batch number: 140021848002 Cadmium Chromium Lead Nickel Zinc	Sample 104 106 108 109 104	number(s) 104 106 109 109 104	: 7322742 83-116 76-120 75-125 86-115 85-117	-73227 0 0 1 1 0	43 UNSP 20 20 20 20 20 20	<pre>PK: P324204 1 N.D. 2.7 N.D. 1.8 9.1</pre>	BKG: P324204 N.D. 3.1 N.D. 1.8 9.0	4 0 (1) 14 (1) 0 (1) 3 (1) 0 (1)	20 20 20 20 20 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.

	Name: 8260 Ext. W mber: W140031AA	Nater Master w/GRO		
	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7322741	96	99	99	98
7322742	95	97	100	99
7322743	97	100	99	98
Blank	95	97	101	99
LCS	97	97	101	101
MS	98	99	100	99
MSD	97	99	101	100
Limits:	80-116	77-113	80-113	78-113
	Name: UST VOCs by mber: Z140021AA	78260B - Water		
	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7322740	103	100	100	91

*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.



Analysis Report

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	ç	Quality Co	ntrol Su	mmary	
	Name: Chevron ed: 01/09/14 at	: 09:02 AM	Grou	up Number:	1442941
- 1	, ,		Surrogate	Quality	Control
Blank	102	100	100	92	00110101
LCS	102	100	101	100	
MS	101	99	101	99	
MSD	101	99	100	99	
Limits:	80-116	77-113	80-113	78-113	
Analvsis	Name: PAHs in wat	ers by SIM			
	mber: 13359WAE026				
	Fluoranthene-d10	Benzo(a)pyrene-d12	1-Methylnaphthalen d10	6 -	
7322741	99	82	103		
7322742	93	63	98		
7322743	78	48*	86		
Blank	95	91	97		
LCS	103	96	106		
MS MSD	97 97	95 92	108 106		
MBD	51	92	100		
Limits:	44-137	62-141	51-136		
Batch nu	Name: NWTPH-Gx wa mber: 13358B07A Trifluorotoluene-F	ter C7-C12			
7322741 7322742	94 93				
7322742	103				
Blank	99				
LCS	109				
LCSD	107				
Limits:	63-135				
	Name: NWTPH-Gx wa mber: 13361A07A Trifluorotoluene-F	ter C7-C12			
7322740 Blank	89 102				
LCS	102				
LCSD	108				
Limits:	63-135				
	Name: PCBs in Wat	er 8082			
Bacen nu	mber: 133590011A Tetrachloro-m-xylene	Decachlorobiphenyl			
7322741	101	76			
7322742	102	68			
7322743	111	79			
Blank	105	98			
LCS	98	80			
MS	95	72			

*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.



Analysis Report

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ç	Quality Con	trol Summa	ary		
	: 09:02 AM	Group 1	Number: 1	1442941	
, ,		Surrogate O	uality	Control	
81	35*				
49-141	36-153				
	1,2,3-TCP 8011				
121 128 130 120 128 124 121 123					
46-136					
Name: NWTPH-Dx wa nber: 140020010A Orthoterphenyl	ter w/ 10g Si Gel				
98 91 100 95 100 97					
50-150					
	ter				
111 104 110 103 111 114 50-150					
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*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.

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Eurofins Lancaster Laboratories, Inc. • 2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 The white copy should accompany samples to Eurofins Lancaster aborter of the vellow copy should be retained by the client.

Issued by Dept. 40 Management 7051.03 1

🔅 eurofins

Lancaster Laboratories Environmental

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)
С	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)	Ĺ	liter(s)
m3	cubic meter(s)	μL	microliter(s)
		pg/L	picogram/liter

- < less than The number following the sign is the <u>limit of quantitation</u>, 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 ≥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.

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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

April 08, 2014

Project: 93883

Submittal Date: 03/27/2014 Group Number: 1462605 PO Number: 0015119898 Release Number: HOPKINS/HORNE State of Sample Origin: WA

Client Sample Description QA Water MW-5 Grab Groundwater MW-6 Grab Groundwater MW-7 Grab Groundwater Lancaster Labs (LL) # 7409269 7409270 7409271 7409272

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





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Respectfully Submitted,

Amek Carts

Amek Carter

Specialist

(717) 556-7252



Analysis Report

Account

LL Sample # WW 7409269

11260

LL Group # 1462605

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: QA Water Facility# 93883 Job# 385894 1702 East Yakima Avenue - Yakima, WA

Project Name: 93883

Collected: 03/26/2014

Submitted: 03/27/2014 09:40 Reported: 04/08/2014 21:41

EYYQA

Chevron 6001 Bollinger Canyon Road L4310 San Ramon CA 94583

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 Vol	atiles 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.

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Tim	me	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	D140924AA	04/02/2014	22:56	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D140924AA	04/02/2014	22:56	Brett W Kenyon	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-	1	14090B53A	03/31/2014	22:05	Marie D	1
		Gx					Beamenderfer	
01146	GC VOA Water Prep	SW-846 5030B	1	14090B53A	03/31/2014	22:05	Marie D Beamenderfer	1



Analysis Report

LL Sample # WW 7409270 LL Group # 1462605 Account # 11260

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample	Description:	MW - 5	Grab	Ground	water			
		Faci	lity#	93883	Job#	385	5894	
		1702	East	Yakima	Avenue	- 4	Yakima,	WA

Project Name: 93883

Collected: 03/26/2014 09:34 by JP

Submitted: 03/27/2014 09:40 Reported: 04/08/2014 21:41 Chevron 6001 Bollinger Canyon Road L4310 San Ramon CA 94583

EYY05

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	
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Bromodichloromethane	75-27-4	N.D.	0.5	1
10335	Bromoform	75-25-2	N.D.	0.5	1
10335	Bromomethane	74-83-9	N.D.	0.5	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.5	1
10335	Chlorobenzene	108-90-7	N.D.	0.5	1
10335	Chloroethane	75-00-3	N.D.	0.5	1
10335	Chloroform	67-66-3	N.D.	0.5	1
10335	Chloromethane	74-87-3	N.D.	0.5	1
10335	Dibromochloromethane	124-48-1	N.D.	0.5	1
10335	1,2-Dichlorobenzene	95-50-1	N.D.	1	1
10335	1,3-Dichlorobenzene	541-73-1	N.D.	1	1
10335	1,4-Dichlorobenzene	106-46-7	N.D.	1	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.5	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.5	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.5	1
10335	1,2-Dichloropropane	78-87-5	N.D.	0.5	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.5	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.5	1
10335	Ethylbenzene	100-41-4	N.D.	0.5	1
10335	Freon 113	76-13-1	N.D.	2	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	2	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.5	1
10335	Tetrachloroethene	127-18-4	N.D.	0.5	1
10335	Toluene	108-88-3	N.D.	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1
	Trichloroethene	79-01-6	N.D.	0.5	1
10335	Trichlorofluoromethane	75-69-4	N.D.	0.5	1
10335	Vinyl Chloride	75-01-4	N.D.	0.5	1
10335	m+p-Xylene	179601-23-1	N.D.	0.5	1
10335	o-Xylene	95-47-6	N.D.	0.5	1
GC/MS	Semivolatiles SW-846	8270C SIM	ug/l	ug/l	
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	1
08357	Chrysene	218-01-9	N.D.	0.010	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	1
08357	Naphthalene	91-20-3	N.D.	0.030	1
GC Vol	atiles ECY 97	-602 NWTPH-Gx	ug/l	ug/l	



Analysis Report

LL Sample # WW 7409270 LL Group # 1462605 Account # 11260

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Sample	Description:	MW - 5	Grab	Ground	water			
		Faci	lity#	93883	Job#	385	5894	
		1702	East	Yakima	Avenue) –	Yakima,	WA

Project Name: 93883

Collected: 03/26/2014 09:34 by JP

Submitted: 03/27/2014 09:40 Reported: 04/08/2014 21:41 Chevron 6001 Bollinger Canyon Road L4310 San Ramon CA 94583

EYY05

CAT No.	Analysis Name		CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Vo	latiles	ECY 97-602	2 NWTPH-Gx	ug/l	ug/l	
08273	NWTPH-Gx water C7-C		n.a.	N.D.	50	1
GC Mi	scellaneous	SW-846 801	11	ug/l	ug/l	
10398	Ethylene dibromide		106-93-4	N.D.	0.0096	1
Pesti	cides/PCBs	SW-846 808	32	ug/l	ug/l	
10227	PCB-1016		12674-11-2	N.D.	0.081	1
10227	PCB-1221		11104-28-2	N.D.	0.081	1
10227	PCB-1232		11141-16-5	N.D.	0.16	1
10227	PCB-1242		53469-21-9	N.D.	0.081	1
	PCB-1248		12672-29-6	N.D.	0.081	1
	PCB-1254		11097-69-1	N.D.	0.081	1
10227	PCB-1260		11096-82-5	N.D.	0.12	1
GC Pe	troleum	ECY 97-602	2 NWTPH-Dx	ug/l	ug/l	
Hydro	carbons	modified				
08271	Diesel Range Organi	cs C12-C24	n.a.	N.D.	29	1
08271	Heavy Range Organic	s C24-C40	n.a.	N.D.	67	1
GC Pe	troleum	ECY 97-602	2 NWTPH-Dx	ug/l	ug/l	
Hvdro	carbons w/Si	modified				
	DRO C12-C24 w/Si Ge	1	n.a.	N.D.	29	1
	HRO C24-C40 w/Si Ge		n.a.	N.D.	67	1
	reverse surrogate, c					
Metal	S	SW-846 601	10B	ug/l	ug/l	
07049	Cadmium		7440-43-9	N.D.	0.76	1
07051	Chromium		7440-47-3	N.D.	1.6	1
07055	Lead		7439-92-1	5.5	4.7	1
07061	Nickel		7440-02-0	2.6	1.5	1
07072	Zinc		7440-66-6	10.1	2.0	1

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.

CAT	Analysis Name	Method	Trial#	Batch#	Analysis	Analyst	Dilution
No.					Date and Time		Factor
10335	8260 Ext. Water Master w/GRO	SW-846 8260B	1	W140921AA	04/02/2014 21:05	Kevin A Sposito	1



Analysis Report

LL Sample # WW 7409270

LL Group # 1462605 Account # 11260

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description:	MW-5 Grab	Groundwater
	Facility#	93883 Job# 385894
	1702 East	Yakima Avenue - Yakima, WA

Project Name: 93883

Collected: 03/26/2014 09:34 by JP

Submitted: 03/27/2014 09:40 Reported: 04/08/2014 21:41

EYY05

L4310 San Ramon CA 94583

6001 Bollinger Canyon Road

Chevron

	Laboratory Sample Analysis Record										
CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	.me	Analyst	Dilution Factor			
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W140921AA	04/02/2014	21:05	Kevin A Sposito	1			
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	14090WAK026	04/03/2014	19:33	Chad A Moline	1			
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	14090WAK026	04/01/2014	10:00	David S Schrum	1			
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH- Gx	1	14087A53A	03/31/2014	17:06	Laura M Krieger	1			
01146	GC VOA Water Prep	SW-846 5030B	1	14087A53A	03/31/2014	17:06	Laura M Krieger	1			
10398	EDB by 8011	SW-846 8011	1	140870017A	04/02/2014	00:43	Matthew S Listner	1			
10227	PCBs in Water 8082	SW-846 8082	1	140870013A	03/31/2014	00:13	Monica M Souders	1			
11117	PCB Waters Extraction	SW-846 3510C	1	140870013A	03/29/2014	23:45	Karen L Beyer	1			
07786	EDB Extraction	SW-846 8011	1	140870017A	03/30/2014	16:45	Edwin Ortiz	1			
08271	NWTPH-Dx water	ECY 97-602 NWTPH- Dx modified	1	140910004A	04/02/2014	20:24	Glorines Suarez- Rivera	1			
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH- Dx modified	1	140910003A	04/02/2014	23:27	Glorines Suarez- Rivera	1			
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH- Dx 06/97	1	140910003A	04/01/2014	15:00	Kelli M Barto	1			
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH- Dx 06/97	1	140910004A	04/01/2014	15:00	Kelli M Barto	1			
07049	Cadmium	SW-846 6010B	1	140871848002	04/02/2014	17:12	Eric L Eby	1			
07051	Chromium	SW-846 6010B	1	140871848002	04/02/2014	17:12	Eric L Eby	1			
07055	Lead	SW-846 6010B	1	140871848002	04/02/2014	17:12	Eric L Eby	1			
07061	Nickel	SW-846 6010B	1	140871848002	04/02/2014	17:12	Eric L Eby	1			
07072	Zinc	SW-846 6010B	1	140871848002	04/02/2014	17:12	Eric L Eby	1			
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	140871848002	03/31/2014	09:23	Micaela L Dishong	1			



Analysis Report

LL Sample # WW 7409271 LL Group # 1462605 Account # 11260

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample	Description:	MW - 6	Grab	Ground	water			
		Faci	lity#	93883	Job#	385	5894	
		1702	East	Yakima	Avenue	. –	Yakima,	WA

Project Name: 93883

Collected: 03/26/2014 08:31 by JP

Submitted: 03/27/2014 09:40 Reported: 04/08/2014 21:41 Chevron 6001 Bollinger Canyon Road L4310 San Ramon CA 94583

EYY06

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	
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Bromodichloromethane	75-27-4	N.D.	0.5	1
10335	Bromoform	75-25-2	N.D.	0.5	1
10335	Bromomethane	74-83-9	N.D.	0.5	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.5	1
10335	Chlorobenzene	108-90-7	N.D.	0.5	1
10335	Chloroethane	75-00-3	N.D.	0.5	1
10335	Chloroform	67-66-3	N.D.	0.5	1
10335	Chloromethane	74-87-3	N.D.	0.5	1
10335	Dibromochloromethane	124-48-1	N.D.	0.5	1
10335	1,2-Dichlorobenzene	95-50-1	N.D.	1	1
10335	1,3-Dichlorobenzene	541-73-1	N.D.	1	1
10335	1,4-Dichlorobenzene	106-46-7	N.D.	1	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.5	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.5	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.5	1
10335	1,2-Dichloropropane	78-87-5	N.D.	0.5	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.5	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.5	1
10335	Ethylbenzene	100-41-4	N.D.	0.5	1
10335	Freon 113	76-13-1	N.D.	2	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	2	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.5	1
10335	Tetrachloroethene	127-18-4	N.D.	0.5	1
10335	Toluene	108-88-3	N.D.	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1
10335	Trichloroethene	79-01-6	N.D.	0.5	1
10335	Trichlorofluoromethane	75-69-4	N.D.	0.5	1
10335	Vinyl Chloride	75-01-4	N.D.	0.5	1
10335	m+p-Xylene	179601-23-1	N.D.	0.5	1
10335	o-Xylene	95-47-6	N.D.	0.5	1
GC/MS	Semivolatiles SW-846	8270C SIM	ug/l	ug/l	
08357	Benzo(a) anthracene	56-55-3	N.D.	0.010	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	1
08357	Chrysene	218-01-9	N.D.	0.010	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	1
08357	Naphthalene	91-20-3	N.D.	0.030	1
GC Vol	latiles ECY 97	-602 NWTPH-Gx	ug/l	ug/l	



Analysis Report

LL Sample # WW 7409271 LL Group # 1462605 Account # 11260

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample	Description:	MW - 6	Grab	Ground	water			
		Facil	lity#	93883	Job#	385	5894	
		1702	East	Yakima	Avenue	<u> </u>	Yakima,	WA

Project Name: 93883

Collected: 03/26/2014 08:31 by JP

Submitted: 03/27/2014 09:40 Reported: 04/08/2014 21:41 Chevron 6001 Bollinger Canyon Road L4310 San Ramon CA 94583

EYY06

CAT No.	Analysis Name		CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Vo	latiles	ECY 97-60	2 NWTPH-Gx	ug/l	ug/l	
08273	NWTPH-Gx water C7-C	12	n.a.	N.D.	50	1
GC Mi	scellaneous	SW-846 80	11	ug/l	ug/l	
10398	Ethylene dibromide		106-93-4	N.D.	0.0095	1
Pesti	cides/PCBs	SW-846 80	82	ug/l	ug/l	
10227	PCB-1016		12674-11-2	N.D.	0.080	1
	PCB-1221		11104-28-2	N.D.	0.080	1
	PCB-1232		11141-16-5	N.D.	0.16	1
	PCB-1242		53469-21-9	N.D.	0.080	1
	PCB-1248		12672-29-6	N.D.	0.080	1
	PCB-1254		11097-69-1	N.D.	0.080	1
10227	PCB-1260		11096-82-5	N.D.	0.12	1
GC Pe	troleum	ECY 97-60	2 NWTPH-Dx	ug/l	ug/l	
Hydro	carbons	modified				
08271	Diesel Range Organi	cs C12-C24	n.a.	N.D.	29	1
08271	Heavy Range Organic	s C24-C40	n.a.	N.D.	67	1
GC Pe	troleum	ECY 97-60	2 NWTPH-Dx	ug/l	ug/l	
Hvdro	carbons w/Si	modified				
-	DRO C12-C24 w/Si Ge		n.a.	N.D.	29	1
	HRO C24-C40 w/Si Ge		n.a.	N.D.	67	1
	reverse surrogate, c					-
Metal	s	SW-846 60	10B	ug/l	ug/l	
07049	Cadmium		7440-43-9	N.D.	0.76	1
07051	Chromium		7440-47-3	N.D.	1.6	1
07055	Lead		7439-92-1	N.D.	4.7	1
07061	Nickel		7440-02-0	N.D.	1.5	1
07072	Zinc		7440-66-6	7.2	2.0	1

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.

CAT	Analysis Name	Method	Trial#	Batch#	Analysis	Analyst	Dilution
No.					Date and Time		Factor
10335	8260 Ext. Water Master w/GRO	SW-846 8260B	1	W140921AA	04/02/2014 21:29	Kevin A Sposito	1



Analysis Report

LL Sample # WW 7409271 LL Group # 1462605 Account # 11260

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: MW-6 Grab Groundwater Facility# 93883 Job# 385894 1702 East Yakima Avenue - Yakima, WA

Project Name: 93883

Collected: 03/26/2014 08:31 by JP

Submitted: 03/27/2014 09:40 Reported: 04/08/2014 21:41

EYY06

6001 Bollinger Canyon Road

San Ramon CA 94583

Chevron

L4310

	Laboratory Sample Analysis Record										
CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	.me	Analyst	Dilution Factor			
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W140921AA	04/02/2014	21:29	Kevin A Sposito	1			
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	14090WAK026	04/03/2014	20:02	Chad A Moline	1			
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	14090WAK026	04/01/2014	10:00	David S Schrum	1			
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH- Gx	1	14087A53A	03/31/2014	17:33	Laura M Krieger	1			
01146	GC VOA Water Prep	SW-846 5030B	1	14087A53A	03/31/2014	17:33	Laura M Krieger	1			
10398	EDB by 8011	SW-846 8011	1	140870017A	04/02/2014	01:30	Matthew S Listner	1			
10227	PCBs in Water 8082	SW-846 8082	1	140870013A	03/31/2014	00:25	Monica M Souders	1			
11117	PCB Waters Extraction	SW-846 3510C	1	140870013A	03/29/2014	23:45	Karen L Beyer	1			
07786	EDB Extraction	SW-846 8011	1	140870017A	03/30/2014	16:45	Edwin Ortiz	1			
08271	NWTPH-Dx water	ECY 97-602 NWTPH- Dx modified	1	140910004A	04/02/2014	19:40	Glorines Suarez- Rivera	1			
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH- Dx modified	1	140910003A	04/02/2014	23:49	Glorines Suarez- Rivera	1			
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH- Dx 06/97	1	140910003A	04/01/2014	15:00	Kelli M Barto	1			
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH- Dx 06/97	1	140910004A	04/01/2014	15:00	Kelli M Barto	1			
07049	Cadmium	SW-846 6010B	1	140871848004	04/04/2014	20:03	Maria A Orrs	1			
07051	Chromium	SW-846 6010B	1	140871848004	04/04/2014	20:03	Maria A Orrs	1			
07055	Lead	SW-846 6010B	1	140871848004	04/04/2014	20:03	Maria A Orrs	1			
07061	Nickel	SW-846 6010B	1	140871848004	04/04/2014	20:03	Maria A Orrs	1			
07072	Zinc	SW-846 6010B	1	140871848004	04/04/2014	20:03	Maria A Orrs	1			
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	140871848004	03/31/2014	09:23	Micaela L Dishong	1			



Analysis Report

LL Sample # WW 7409272 LL Group # 1462605 Account # 11260

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample	Description:	MW - 7	Grab	Ground	water			
		Faci	lity#	93883	Job#	385	5894	
		1702	East	Yakima	Avenue	- 6	Yakima,	WA

Project Name: 93883

Collected: 03/26/2014 10:30 by JP

Submitted: 03/27/2014 09:40 Reported: 04/08/2014 21:41 Chevron 6001 Bollinger Canyon Road L4310 San Ramon CA 94583

EYY07

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	
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Bromodichloromethane	75-27-4	N.D.	0.5	1
10335	Bromoform	75-25-2	N.D.	0.5	1
10335	Bromomethane	74-83-9	N.D.	0.5	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.5	1
10335	Chlorobenzene	108-90-7	N.D.	0.5	1
10335	Chloroethane	75-00-3	N.D.	0.5	1
10335	Chloroform	67-66-3	N.D.	0.5	1
10335	Chloromethane	74-87-3	N.D.	0.5	1
10335	Dibromochloromethane	124-48-1	N.D.	0.5	1
10335	1,2-Dichlorobenzene	95-50-1	N.D.	1	1
10335	1,3-Dichlorobenzene	541-73-1	N.D.	1	1
10335	1,4-Dichlorobenzene	106-46-7	N.D.	1	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.5	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.5	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.5	1
10335	1,2-Dichloropropane	78-87-5	N.D.	0.5	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.5	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.5	1
10335	Ethylbenzene	100-41-4	N.D.	0.5	1
10335	Freon 113	76-13-1	N.D.	2	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	2	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.5	1
10335	Tetrachloroethene	127-18-4	N.D.	0.5	1
10335	Toluene	108-88-3	N.D.	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1
10335	Trichloroethene	79-01-6	N.D.	0.5	1
10335	Trichlorofluoromethane	75-69-4	N.D.	0.5	1
10335	Vinyl Chloride	75-01-4	N.D.	0.5	1
10335	m+p-Xylene	179601-23-1	N.D.	0.5	1
10335	o-Xylene	95-47-6	N.D.	0.5	1
GC/MS	Semivolatiles SW-846	8270C SIM	ug/l	ug/l	
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	1
08357	Chrysene	218-01-9	N.D.	0.010	1
08357	Dibenz(a,h)anthracene	53-70-3	0.015	0.010	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	0.016	0.010	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	1
08357	Naphthalene	91-20-3	N.D.	0.031	1
GC Vol	Latiles ECY 97-	602 NWTPH-Gx	ug/l	ug/l	



Analysis Report

LL Sample # WW 7409272 LL Group # 1462605 Account # 11260

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample	Description:	MW - 7	Grab	Ground	water			
		Faci	lity#	93883	Job#	385	5894	
		1702	East	Yakima	Avenue	- 4	Yakima,	WA

Project Name: 93883

Collected: 03/26/2014 10:30 by JP

Submitted: 03/27/2014 09:40 Reported: 04/08/2014 21:41 Chevron 6001 Bollinger Canyon Road L4310 San Ramon CA 94583

EYY07

CAT No.	Analysis Name		CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Vo	latiles	ECY 97-602	2 NWTPH-Gx	ug/l	ug/l	
08273	NWTPH-Gx water C7-C	12	n.a.	N.D.	50	1
GC Mi	scellaneous	SW-846 803	11	ug/l	ug/l	
10398	Ethylene dibromide		106-93-4	N.D.	0.0096	1
Pesti	cides/PCBs	SW-846 808	82	ug/l	ug/l	
10227	PCB-1016		12674-11-2	N.D.	0.080	1
10227	PCB-1221		11104-28-2	N.D.	0.080	1
10227	PCB-1232		11141-16-5	N.D.	0.16	1
10227	PCB-1242		53469-21-9	N.D.	0.080	1
10227	PCB-1248		12672-29-6	N.D.	0.080	1
10227	PCB-1254		11097-69-1	N.D.	0.080	1
10227	PCB-1260		11096-82-5	N.D.	0.12	1
GC Pe	troleum	ECY 97-602	2 NWTPH-Dx	ug/l	ug/l	
Hydro	carbons	modified				
08271	Diesel Range Organi	.cs C12-C24	n.a.	N.D.	29	1
08271	Heavy Range Organic	s C24-C40	n.a.	N.D.	67	1
GC Pe	troleum	ECY 97-602	2 NWTPH-Dx	ug/l	ug/l	
Hvdro	carbons w/Si	modified				
	DRO C12-C24 w/Si Ge		n.a.	N.D.	29	1
	HRO C24-C40 w/Si Ge		n.a.	N.D.	67	1
	reverse surrogate, c					
Metal	S	SW-846 603	10B	ug/l	ug/l	
07049	Cadmium		7440-43-9	0.77	0.76	1
07051	Chromium		7440-47-3	N.D.	1.6	1
07055	Lead		7439-92-1	N.D.	4.7	1
07061	Nickel		7440-02-0	N.D.	1.5	1
07072	Zinc		7440-66-6	6.0	2.0	1

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.

CAT	Analysis Name	Method	Trial#	Batch#	Analysis	Analyst	Dilution
No.					Date and Time		Factor
10335	8260 Ext. Water Master w/GRO	SW-846 8260B	1	W140921AA	04/02/2014 21:52	Kevin A Sposito	1



Analysis Report

LL Sample # WW 7409272

LL Group # 1462605 Account # 11260

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description:	MW-7 Grab	Groundwater	
	Facility#	93883 Job#	385894
	1702 East	Yakima Avenu	e – Yakima, WA

Project Name: 93883

Collected: 03/26/2014 10:30 by JP

Submitted: 03/27/2014 09:40 Reported: 04/08/2014 21:41

EYY07

San Ramon CA 94583

6001 Bollinger Canyon Road

Chevron

L4310

	Laboratory Sample Analysis Record							
CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W140921AA	04/02/2014	21:52	Kevin A Sposito	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	14090WAK026	04/03/2014	20:32	Chad A Moline	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	14090WAK026	04/01/2014	10:00	David S Schrum	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH- Gx	1	14087A53A	03/31/2014	18:00	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	14087A53A	03/31/2014	18:00	Laura M Krieger	1
10398	EDB by 8011	SW-846 8011	1	140870017A	04/02/2014	01:46	Matthew S Listner	1
10227	PCBs in Water 8082	SW-846 8082	1	140870013A	03/31/2014	00:36	Monica M Souders	1
11117	PCB Waters Extraction	SW-846 3510C	1	140870013A	03/29/2014	23:45	Karen L Beyer	1
07786	EDB Extraction	SW-846 8011	1	140870017A	03/30/2014	16:45	Edwin Ortiz	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH- Dx modified	1	140910004A	04/02/2014	20:02	Glorines Suarez- Rivera	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH- Dx modified	1	140910003A	04/03/2014	00:11	Glorines Suarez- Rivera	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH- Dx 06/97	1	140910003A	04/01/2014	15:00	Kelli M Barto	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH- Dx 06/97	1	140910004A	04/01/2014	15:00	Kelli M Barto	1
07049	Cadmium	SW-846 6010B	1	140871848004	04/04/2014	20:07	Maria A Orrs	1
07051	Chromium	SW-846 6010B	1	140871848004	04/04/2014	20:07	Maria A Orrs	1
07055	Lead	SW-846 6010B	1	140871848004	04/04/2014	20:07	Maria A Orrs	1
07061	Nickel	SW-846 6010B	1	140871848004	04/04/2014	20:07	Maria A Orrs	1
07072	Zinc	SW-846 6010B	1	140871848004	04/04/2014	20:07	Maria A Orrs	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	140871848004	03/31/2014	09:23	Micaela L Dishong	1



Analysis Report

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Quality Control Summary

Client Name: Chevron Reported: 04/08/14 at 09:41 PM Group Number: 1462605

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 <u>Result</u>	Blank <u>MDL</u>	Report <u>Units</u>	LCS <u>%REC</u>	LCSD <u>%REC</u>	LCS/LCSD <u>Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: D140924AA	Sample numb	er(s): 74	09269					
Benzene	N.D.	0.5	ug/l	109		78-120		
Ethylbenzene	N.D.	0.5	ug/l	109		79-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	105		75-120		
Toluene	N.D.	0.5	ug/l	115		80-120		
Xylene (Total)	N.D.	0.5	ug/l	115		80-120		
Batch number: W140921AA	Sample numb	er(s): 74	09270-7409	272				
Benzene	N.D.	0.5	uq/l	97	98	78-120	1	30
Bromodichloromethane	N.D.	0.5	ug/l	95	97	73-120	2	30
Bromoform	N.D.	0.5	uq/1	92	91	61-120	1	30
Bromomethane	N.D.	0.5	ug/l	111	114	58-120	3	30
Carbon Tetrachloride	N.D.	0.5	ug/l	102	102	74-130	0	30
Chlorobenzene	N.D.	0.5	uq/1	105	103	80-120	2	30
Chloroethane	N.D.	0.5	uq/1	100	100	56-120	0	30
Chloroform	N.D.	0.5	ug/l	105	104	80-122	0	30
Chloromethane	N.D.	0.5	uq/1	87	88	63-120	1	30
Dibromochloromethane	N.D.	0.5	ug/l	99	98	72-120	1	30
1,2-Dichlorobenzene	N.D.	1.	ug/l	105	103	80-120	3	30
1,3-Dichlorobenzene	N.D.	1.	uq/1	102	99	80-120	2	30
1,4-Dichlorobenzene	N.D.	1.	ug/l	100	100	80-120	1	30
1,1-Dichloroethane	N.D.	0.5	ug/l	94	94	80-120	0	30
1,2-Dichloroethane	N.D.	0.5	ug/l	103	104	65-135	1	30
1,1-Dichloroethene	N.D.	0.5	ug/l	110	108	76-124	1	30
cis-1,2-Dichloroethene	N.D.	0.5	ug/l	102	100	80-120	2	30
trans-1,2-Dichloroethene	N.D.	0.5	ug/l	107	106	80-120	1	30
1,2-Dichloropropane	N.D.	0.5	ug/l	93	94	80-120	1	30
cis-1,3-Dichloropropene	N.D.	0.5	ug/l	96	98	80-120	2	30
trans-1,3-Dichloropropene	N.D.	0.5	ug/l	94	93	76-120	1	30
Ethylbenzene	N.D.	0.5	ug/l	97	96	79-120	1	30
Freon 113	N.D.	2.	ug/l	102	103	67-127	1	30
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	100	100	75-120	0	30
Methylene Chloride	N.D.	2.	ug/l	102	101	80-120	1	30
1,1,2,2-Tetrachloroethane	N.D.	0.5	ug/l	96	97	70-120	2	30
Tetrachloroethene	N.D.	0.5	ug/l	105	105	80-120	0	30
Toluene	N.D.	0.5	ug/l	98	96	80-120	2	30
1,1,1-Trichloroethane	N.D.	0.5	ug/l	90	89	66-126	2	30
1,1,2-Trichloroethane	N.D.	0.5	ug/l	104	103	80-120	1	30
Trichloroethene	N.D.	0.5	ug/l	103	102	80-120	1	30
Trichlorofluoromethane	N.D.	0.5	ug/l	106	106	65-130	0	30
Vinyl Chloride	N.D.	0.5	ug/l	98	98	63-120	0	30
m+p-Xylene	N.D.	0.5	ug/l	103	102	80-120	1	30
o-Xylene	N.D.	0.5	ug/l	102	102	80-120	1	30
			-					

*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.



Client Name: Chevron

Lancaster Laboratories Environmental

Analysis Report

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Quality Control Summary

Group Number: 1462605

Client Name: Chevron Group Number: 1462605								
Reported: 04/08/14 at 09:	41 PM							
	Blank	Blank	Report	LCS	LCSD	LCS/LCSD		
Analysis Name	Result	MDL	Units	%REC	%REC	Limits	RPD	<u>RPD Max</u>
Batch number: 14090WAK026		mber(s): 74						<u></u>
Benzo (a) anthracene	N.D.	0.010	uq/l	104	114	79-122	9	30
Benzo (a) pyrene	N.D.	0.010	ug/l	104	106	80-121	2	30
Benzo(b) fluoranthene	N.D.	0.010	ug/1	117	115	79-136	2	30
Benzo(k) fluoranthene	N.D.	0.010	ug/1	100	97	81-131	3	30
Chrysene	N.D.	0.010	ug/1	99	102	84-118	3	30
Dibenz (a, h) anthracene	N.D.	0.010	ug/1 ug/1	99	102	66-133	4	30
Indeno (1, 2, 3-cd) pyrene	N.D.	0.010	ug/1 ug/1	103	102	68-132	2	30
				103 95	98	86-130	3	30
1-Methylnaphthalene	N.D.	0.010	ug/l					
2-Methylnaphthalene	N.D.	0.010	ug/l	93	97	81-131	4	30
Naphthalene	N.D.	0.030	ug/l	96	98	82-122	2	30
Detah number 140077527	Comple nu		00070 7400	070				
Batch number: 14087A53A NWTPH-Gx water C7-C12	N.D.	mber(s): 74 50.		107	100	75-135	7	30
NWIPH-GX Water C/-CI2	N.D.	50.	ug/l	107	100	/5-135	/	30
Batch number: 14090B53A	Sample nu	mber(s): 74	09269					
NWTPH-Gx water C7-C12	N.D.	50.	uq/1	110	112	75-135	2	30
INWIFII-GA WALCI C/-CIZ	N.D.	50.	ug/1	TIO	112	10-100	2	50
Batch number: 140870017A	Sample nu	mber(s): 74	09270-7409	1272				
Ethylene dibromide	N.D.	0.010	uq/1	96	101	60-140	6	20
		0.010	ug/ 1	50	101	00 110	0	20
Batch number: 140870013A	Sample nu	mber(s): 74	09270-7409	272				
PCB-1016	N.D.	0.080	ug/1	60	95	60-117	45*	30
PCB-1221	N.D.	0.080	ug/1	00	55	00 11,	15	50
PCB-1232	N.D.	0.16	ug/1					
PCB-1242	N.D.	0.080	ug/1					
PCB-1248	N.D.	0.080	ug/1					
PCB-1240 PCB-1254	N.D.	0.080	ug/1 ug/1					
PCB-1254 PCB-1260	N.D.	0.12		69	101	67-128	38*	30
PCB-1200	N.D.	0.12	ug/l	69	101	07-120	30"	30
Batch number: 140910004A	Sample nu	mber(s): 74	09270-7400	1272				
Diesel Range Organics C12-C24	N.D.	30.	ug/1	71	71	50-113	0	20
Heavy Range Organics C12-C24 Heavy Range Organics C24-C40	N.D.	70.	ug/1 ug/1	/ 1	/ 1	J0-11J	0	20
Heavy Range Organics C24-C40	N.D.	70.	ug/1					
Batch number: 140910003A	Sample nu	mber(s): 74	09270-7409	272				
DRO C12-C24 w/Si Gel	N.D.	30.	uq/1	82	75	32-117	9	20
HRO C24-C40 w/Si Gel	N.D.	70.	ug/1	02	75	52 117	2	20
		70.	ug/1					
Batch number: 140871848002	Sample nu	mber(s): 74	09270					
Cadmium	N.D.	0.76	uq/l	103		90-112		
Chromium	N.D.	1.6	ug/l	100		90-110		
Lead	N.D.	4.7	ug/l	103		88-116		
Nickel	1.5	1.5	ug/1	105		90-111		
Zinc	5.8	2.0	ug/1	103		90-110		
21110	5.0	2.0	ug/1	105		50 110		
Batch number: 140871848004	Sample nu	mber(s): 74	09271-7409	272				
Cadmium	N.D.	0.76	uq/1	106		90-112		
Chromium	N.D.	1.6	ug/1	101		90-110		
Lead	N.D.	4.7	ug/1	107		88-116		
Nickel	N.D.	1.5	ug/1	108		90-111		
Zinc	4.9	2.0	ug/1 ug/1	103		90-110		
51110	1.2	2.0	ug/ I	100		20 TTO		

Sample Matrix Quality Control

*- 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 Group Number: 1462605 Reported: 04/08/14 at 09:41 PM Unspiked (UNSPK) = the sample used in conjunction with the matrix spike Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS <u>%REC</u>	MSD <u>%REC</u>	MS/MSD <u>Limits</u>	<u>RPD</u>	RPD <u>MAX</u>	BKG <u>Conc</u>	DUP <u>Conc</u>	DUP <u>RPD</u>	Dup RPD <u>Max</u>
Batch number: D140924AA	Sample	number(s)	: 7409269	INSPK	P4091	31			
Benzene	111	106	72-134	5	30	51			
Ethylbenzene	109	109	71-134	0	30				
Methyl Tertiary Butyl Ether	98	96	72-126	1	30				
Toluene	114	115	80-125	0	30				
Xylene (Total)	111	112	79-125	1	30				
Ayrene (rocar)	111	112	10 120	1	50				
Batch number: 140870017A	Sample	number(s)	: 7409270	-740927	2 UNSP	K: P407926	BKG: P40792	7	
Ethylene dibromide	102		60-140			N.D.	N.D.	0 (1)	30
Batch number: 140871848002	Sample			UNSPK:		41 BKG: P41			
Cadmium	101	102	75-122	1	20	1.3	1.2	9 (1)	20
Chromium	98	98	76-120	0	20	N.D.	N.D.	0 (1)	20
Lead	107	105	75-125	2	20	N.D.	N.D.	0 (1)	20
Nickel	104	105	79-123	0	20	8.9	9.2	3 (1)	20
Zinc	102	103	85-117	1	20	19.0	19.8	4 (1)	20
Batch number: 140871848004	gample	numbor (g)	. 7400271	710007		K: P408378	DVC. DA0027	0	
Cadmium	98	98	75-122	0	200032	0.86	0.92	7 (1)	20
				0					
Chromium	100	101	76-120	1 O	20	2.2	2.6	16 (1)	20
Lead	96	96	75-125	0	20	N.D.	N.D.	0 (1)	20
Nickel	98	98	79-123	1	20	64.7	63.8	1	20
Zinc	105	106	85-117	1	20	35.4	34.6	2 (1)	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.

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene	
7409269	90	97	104	96	
Blank	91	95	102	95	
LCS	89	97	104	97	
MS	91	100	103	98	
MSD	89	97	105	99	
Limits:	80-116	77-113	80-113	78-113	
		Natan Mastan/GDC	`		
	Name: 8260 Ext. W Mber: W140921AA	water Master W/GRC)		
	Mame: 8260 Ext. W Mber: W140921AA Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene	
	mber: W140921AA			4-Bromofluorobenzene	
Batcĥ nu 7409270	mber: W140921AA Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8		
Batch nu	mber: W140921AA Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	93	

*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.



Analysis Report

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Quality Control Summary								
	Name: Chevron ed: 04/08/14 at	09•41 PM	Group	o Number:	1462605			
Reporte			Surrogate	Quality	Control			
LCS LCSD	102 101	100 102	98 98	96 96				
Limits:	80-116	77-113	80-113	78-113				
Analysis Name: PAHs in water Batch number: 14090WAK026		ers by SIM						
	Fluoranthene-d10	Benzo(a)pyrene-d12	1-Methylnaphthalene- d10					
7409270	93	95	91					
7409271	96	102	93					
7409272	94	102	91					
Blank LCS	95 94	106 109	94 97					
LCSD	98	113	98					
Limits:	59-128	62-141	70-134					
Batch nur	Name: NWTPH-Gx wa nber: 14087A53A Trifluorotoluene-F	ter C7-C12						
7409270 7409271	68 77							
7409271	68							
Blank	70							
LCS	74							
LCSD	73							
Limits:	63-135							
Batch nur	Name: NWTPH-Gx wa nber: 14090B53A Trifluorotoluene-F	ter C7-C12						
7409269	68							
Blank	71 75							
LCS LCSD	75							
Limits:	63-135							
	Name: PCBs in Wat nber: 140870013A Tetrachloro-m-xylene	er 8082 Decachlorobiphenyl						
7409270	107	82						
7409270	95	70						
7409272	110	80						
Blank	77	45						
LCS	65	44						
LCSD	108	89						
Limits:	49-141	36-153						

*- 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: 04/08/14 at 09:41 PM Group Number: 1462605

Surrogate Quality Control

Analysis Name: EDB, DBCP, 1,2,3-TCP 8011 Batch number: 140870017A 1,1,2,2-

	Tetrachloroethane
7409270 7409271 7409272 Blank DUP LCS LCSD MS	108 127 109 110 112 108 107 109
Limits:	46-136
Analysis Batch nu	Name: NWTPH-Dx water w/ 10g Si Gel mber: 140910003A Orthoterphenyl
7409270 7409271 7409272 Blank LCS LCSD	86 83 96 88 102 94
Limits:	50-150
	Name: NWTPH-Dx water mber: 140910004A Orthoterphenyl
7409270 7409271 7409272 Blank LCS LCSD	113 104 104 103 106 104
Limits:	50-150

*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.

Chevron Northwest Region Analysis Request/Chain of Custody

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Chevron PM MHO	LEIDOSRS	Lead Const	ultant Rus	sell S	hrop	shire o	Surface		6	D Nap				Ŋ	dnu		Method	ζζ			S	Must meet low	est detection	
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Consultant Project Mgr. Deanna L. Ha	rding, (deanna@g	rinc.com)									ates		NWTPH-Dx with Silica Gel Cleanup	NWTPH-Dx without Silica Gel Cleanup	WA EPH	Diss.	HOCC		N.	EN	Confirm MTBE		6
Consultant Phone # (925) 551-744 4	4 x180	~		Г		Potable	NPDES	Air	ber of	8021		Oxygenates		ith Silic	ithout (al	é M	Ø.	2	N.	Confirm all hits		st hit
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2 Sample Identification		Coll Date	ected Time	Grab	Composite		Water	0 I	Total	BTEX +	8260 full scan		NWTPH-Gx	IWTPH	IWTPH	WA VPH	Lead	EO	E)	5	10	6) Rem	arks	
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Lancaster Laboratories Environmental

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)
С	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)	Ĺ	liter(s)
m3	cubic meter(s)	μL	microliter(s)
		pg/L	picogram/liter

- < less than The number following the sign is the <u>limit of quantitation</u>, 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 ≥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.

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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

August 18, 2014

Project: 93883

Submittal Date: 06/28/2014 Group Number: 1485336 PO Number: 0015155135 Release Number: HORNE State of Sample Origin: WA

Client Sample Description QA Water MW-5 Grab Groundwater MW-6 Grab Groundwater MW-7 Grab Groundwater Lancaster Labs (LL) # 7515452 7515453 7515454 7515455

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





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Respectfully Submitted,

Amek Carts

Amek Carter Specialist

(717) 556-7252



Analysis Report

Account

LL Sample # WW 7515452

11260

LL Group # 1485336

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: QA Water Facility# 93883 Job# 385894 1702 East Yakima Avenue - Yakima, WA

Project Name: 93883

Collected: 06/27/2014

Submitted: 06/28/2014 09:50 Reported: 08/18/2014 15:00

EYYQA

Chevron 6001 Bollinger Canyon Road L4310 San Ramon CA 94583

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	
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Ethylbenzene	100-41-4	N.D.	0.5	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10335	Toluene	108-88-3	N.D.	0.5	1
10335	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Vol	Latiles 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 Tim	me	Analyst	Dilution Factor
10335	BTEX/MTBE	SW-846 8260B	1	W141821AA	07/01/2014	12:22	Sarah A Guill	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W141821AA	07/01/2014	12:22	Sarah A Guill	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH- Gx	1	14181A20A	07/01/2014	12:31	Miranda P Tillinghast	1
01146	GC VOA Water Prep	SW-846 5030B	1	14181A20A	07/01/2014	12:31	Miranda P Tillinghast	1



Analysis Report

LL Sample # WW 7515453 LL Group # 1485336 Account # 11260

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Sample	Description:	MW - 5	Grab	Ground	water			
		Faci	lity#	93883	Job#	38!	5894	
		1702	East	Yakima	Avenue	- 6	Yakima,	WA

Project Name: 93883

Collected: 06/27/2014 11:10 by JP

Submitted: 06/28/2014 09:50 Reported: 08/18/2014 15:00 Chevron 6001 Bollinger Canyon Road L4310 San Ramon CA 94583

EYY05

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS	Volatiles SW-846 8	260B	ug/l	ug/l	
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Bromodichloromethane	75-27-4	N.D.	0.5	1
10335	Bromoform	75-25-2	N.D.	0.5	1
10335	Bromomethane	74-83-9	N.D.	0.5	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.5	1
10335	Chlorobenzene	108-90-7	N.D.	0.5	1
10335	Chloroethane	75-00-3	N.D.	0.5	1
10335	Chloroform	67-66-3	N.D.	0.5	1
10335	Chloromethane	74-87-3	N.D.	0.5	1
10335	Dibromochloromethane	124-48-1	N.D.	0.5	1
10335	1,2-Dichlorobenzene	95-50-1	N.D.	1	1
10335	1,3-Dichlorobenzene	541-73-1	N.D.	1	1
10335	1,4-Dichlorobenzene	106-46-7	N.D.	1	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.5	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.5	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.5	1
10335	1,2-Dichloropropane	78-87-5	N.D.	0.5	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.5	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.5	1
10335	Ethylbenzene	100-41-4	N.D.	0.5	1
10335	Freon 113	76-13-1	N.D.	2	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	2	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.5	1
10335	Tetrachloroethene	127-18-4	N.D.	0.5	1
10335	Toluene	108-88-3	N.D.	0.5	1
	1,1,1-Trichloroethane	71-55-6	N.D.	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1
10335	Trichloroethene	79-01-6	N.D.	0.5	1
10335	Trichlorofluoromethane	75-69-4	N.D.	0.5	1
10335	Vinyl Chloride	75-01-4	N.D.	0.5	1
10335	m+p-Xylene	179601-23-1	N.D.	0.5	1
10335	o-Xylene	95-47-6	N.D.	0.5	1
GC/MS	Semivolatiles SW-846 8	270C SIM	ug/l	ug/l	
08357	Benzo(a) anthracene	56-55-3	N.D.	0.010	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	1
08357		205-99-2	N.D.	0.010	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	1
08357	Chrysene	218-01-9	N.D.	0.010	1
	Dibenz (a, h) anthracene	53-70-3	N.D.	0.010	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	1
08357	2-Methylnaphthalene	91-57-6	0.013	0.010	1
08357	Naphthalene	91-20-3	N.D.	0.030	1
	thylnaphthalene was detected in				
	the samples as noted on the QC				
		-	-		

corrective action was taken:



Analysis Report

Account

LL Sample # WW 7515453 LL Group # 1485336

11260

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample	Description:	MW - 5	Grab	Ground	water			
		Facil	.ity#	93883	Job#	385	5894	
		1702	East	Yakima	Avenue	- 4	Yakima,	WA

Project Name: 93883

Collected: 06/27/2014 11:10	by JP	Chevron
		6001 Bollinger Canyon Road
Submitted: 06/28/2014 09:50		L4310
Reported: 08/18/2014 15:00		San Ramon CA 94583

EYY05

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
time firs the	sample was re-extracted outsi and the QC is compliant. Al t trial. Similar results wer exception of: thylnaphthalene was not detec	l results are repo e obtained in both	rted from the trials with		
				<i>i</i> -	
		-602 NWTPH-Gx	ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Mi	scellaneous SW-846	8011	ug/l	ug/l	
10398	Ethylene dibromide	106-93-4	N.D.	0.0097	1
Pesti	cides/PCBs SW-846	8082	ug/l	ug/l	
	PCB-1016	12674-11-2	N.D.	0.081	1
	PCB-1221	11104-28-2	N.D.	0.081	1
	PCB-1232	11141-16-5	N.D.	0.16	1
10227	PCB-1242	53469-21-9	N.D.	0.081	1
	PCB-1248	12672-29-6	N.D.	0.081	1
10227	PCB-1254	11097-69-1	N.D.	0.081	1
10227	PCB-1260	11096-82-5	N.D.	0.12	1
GC Pe	troleum ECY 97	-602 NWTPH-Dx	ug/l	ug/l	
Hydro	carbons modifi	ed			
-	Diesel Range Organics C12-C2		N.D.	29	1
	Heavy Range Organics C24-C40		N.D.	68	1
002/1	neavy namye erganres errer				-
GC Pe	troleum ECY 97	-602 NWTPH-Dx	ug/l	ug/l	
Hydro	carbons w/Si modifi	ed			
-	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
	HRO C24-C40 w/Si Gel	n.a.	N.D.	68	1
	reverse surrogate, capric aci	d, is present at <	18.		
Metal	s SW-846	6010B	ug/l	ug/l	
07049	Cadmium	7440-43-9	N.D.	0.33	1
07051	Chromium	7440-47-3	5.2	1.3	1
07055	Lead	7439-92-1	10.6	4.7	1
07061	Nickel	7440-02-0	2.6	1.6	1
07072	Zinc	7440-66-6	19.8	2.0	1

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.



Analysis Report

LL Sample # WW 7515453 LL Group # 1485336 Account # 11260

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description:	MW-5 Grab	Groundwater
	Facility#	93883 Job# 385894
	1702 East	Yakima Avenue – Yakima, WA

Project Name: 93883

Collected: 06/27/2014 11:10 by JP

Submitted: 06/28/2014 09:50 Reported: 08/18/2014 15:00 Chevron 6001 Bollinger Canyon Road L4310 San Ramon CA 94583

EYY05

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
10335	8260 Ext. Water Master w/GRO	SW-846 8260B	1	W141821AA	07/01/2014	18:58	Sarah A Guill	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W141821AA	07/01/2014	18:58	Sarah A Guill	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	14181WAA026	07/07/2014	06:05	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	14181WAA026	06/30/2014	15:00	Seth A Farrier	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH- Gx	1	14181A20A	07/01/2014	19:13	Miranda P Tillinghast	1
01146	GC VOA Water Prep	SW-846 5030B	1	14181A20A	07/01/2014	19:13	Miranda P Tillinghast	1
10398	EDB by 8011	SW-846 8011	1	141830009A	07/08/2014	00:29	Matthew S Listner	1
10227	PCBs in Water 8082	SW-846 8082	1	141810010A	07/01/2014	01:11	Monica M Souders	1
11117	PCB Waters Extraction	SW-846 3510C	1	141810010A	06/30/2014	14:30	Seth A Farrier	1
07786	EDB Extraction	SW-846 8011	1	141830009A	07/02/2014	15:00	Kelli M Barto	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH- Dx modified	1	141820018A	07/04/2014	05:34	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH- Dx modified	1	141820019A	07/07/2014	21:02	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH- Dx 06/97	1	141820019A	07/02/2014	09:00	David S Schrum	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH- Dx 06/97	1	141820018A	07/02/2014	09:00	David S Schrum	1
07049	Cadmium	SW-846 6010B	1	141881848001	07/11/2014	15:06	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	141881848001	07/11/2014	15:06	Eric L Eby	1
07055	Lead	SW-846 6010B	1	141881848001	07/11/2014	15:06	Eric L Eby	1
07061	Nickel	SW-846 6010B	1	141881848001	07/11/2014	15:06	Eric L Eby	1
07072	Zinc	SW-846 6010B	1	141881848001	07/11/2014	15:06	Eric L Eby	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	141881848001	07/09/2014	11:11	Micaela L Dishong	1



Analysis Report

LL Sample # WW 7515454 LL Group # 1485336 Account # 11260

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample	Description:	MW - 6	Grab	Ground	water			
		Faci	lity#	93883	Job#	38!	5894	
		1702	East	Yakima	Avenue	-	Yakima,	WA

Project Name: 93883

Collected: 06/27/2014 10:15 by JP

Submitted: 06/28/2014 09:50 Reported: 08/18/2014 15:00 Chevron 6001 Bollinger Canyon Road L4310 San Ramon CA 94583

EYY06

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS	Volatiles SW-846 82	60B	ug/l	ug/l	
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Bromodichloromethane	75-27-4	N.D.	0.5	1
10335	Bromoform	75-25-2	N.D.	0.5	1
10335	Bromomethane	74-83-9	N.D.	0.5	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.5	1
10335	Chlorobenzene	108-90-7	N.D.	0.5	1
10335	Chloroethane	75-00-3	N.D.	0.5	1
10335	Chloroform	67-66-3	N.D.	0.5	1
10335	Chloromethane	74-87-3	N.D.	0.5	1
10335	Dibromochloromethane	124-48-1	N.D.	0.5	1
10335	1,2-Dichlorobenzene	95-50-1	N.D.	1	1
10335	1,3-Dichlorobenzene	541-73-1	N.D.	1	1
	1,4-Dichlorobenzene	106-46-7	N.D.	1	1
	1,1-Dichloroethane	75-34-3	N.D.	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
	1,1-Dichloroethene	75-35-4	N.D.	0.5	1
	cis-1,2-Dichloroethene	156-59-2	N.D.	0.5	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.5	1
10335	1,2-Dichloropropane	78-87-5	N.D.	0.5	1
	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.5	1
	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.5	1
	Ethylbenzene	100-41-4	N.D.	0.5	1
	Freon 113	76-13-1	N.D.	2	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	2	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.5	1
10335	Tetrachloroethene	127-18-4	N.D.	0.5	1
10335	Toluene	108-88-3	N.D.	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.5	1
	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1
10335	Trichloroethene	79-01-6	N.D.	0.5	1
10335	Trichlorofluoromethane	75-69-4	N.D.	0.5	1
10335	Vinyl Chloride	75-01-4	N.D.	0.5	1
10335	m+p-Xylene	179601-23-1	N.D.	0.5	1
10335	o-Xylene	95-47-6	N.D.	0.5	1
GC/MS	Semivolatiles SW-846 82	70C STM	ug/l	ug/l	
08357		56-55-3	N.D.	0.010	1
	Benzo (a) pyrene	50-32-8	N.D.	0.010	1
	Benzo (b) fluoranthene	205-99-2	N.D.	0.010	1
	Benzo (k) fluoranthene	207-08-9	N.D.	0.010	1
	Chrysene	218-01-9	N.D.	0.010	1
	Dibenz(a,h)anthracene	53-70-3	N.D. N.D.	0.010	1
	Indeno (1, 2, 3-cd) pyrene	193-39-5	N.D.	0.010	1
	1-Methylnaphthalene	90-12-0	N.D.	0.010	1
08357		90-12-0 91-57-6	N.D. 0.012	0.010	1
08357	1 1	91-20-3	N.D.	0.030	1
	thylnaphthalene was detected in t			0.030	1
	the samples as noted on the OC s				

with the samples as noted on the QC Summary. The following corrective action was taken:



Analysis Report

LL Sample # WW 7515454 LL Group # 1485336 Account # 11260

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample	Description:	MW - 6	Grab	Ground	water			
		Facil	ity#	93883	Job#	385	5894	
		1702	East	Yakima	Avenue	- 4	Yakima,	WA

Project Name: 93883

Collected: 06/27/2014 10:15 by JP	Chevron
	6001 Bollinger Canyon Road
Submitted: 06/28/2014 09:50	L4310
Reported: 08/18/2014 15:00	San Ramon CA 94583

EYY06

CAT No.	Analysis Name		CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
time firs the	sample was re-extract and the QC is compli- t trial. Similar re- exception of: thylnaphthalene was n	iant. All res sults were obt	sults are repo cained in both	rted from the trials with		
aa						
	latiles	ECY 97-602		ug/l	ug/l	_
08273	NWTPH-Gx water C7-C	12	n.a.	N.D.	50	1
GC Mi	scellaneous	SW-846 801	1	ug/l	ug/l	
10398	Ethylene dibromide		106-93-4	N.D.	0.0097	1
Pesti	cides/PCBs	SW-846 808	32	ug/l	ug/l	
10227	PCB-1016		12674-11-2	N.D.	0.081	1
	PCB-1221		11104-28-2	N.D.	0.081	1
	PCB-1232		11141-16-5	N.D.	0.16	1
10227	PCB-1242		53469-21-9	N.D.	0.081	1
	PCB-1248		12672-29-6	N.D.	0.081	1
10227	PCB-1254		11097-69-1	N.D.	0.081	1
10227	PCB-1260		11096-82-5	N.D.	0.12	1
GC Pe	troleum	ECY 97-602	NWTPH-Dx	ug/l	ug/l	
	carbons	modified				
-	Diesel Range Organi		n.a.	N.D.	29	1
	Heavy Range Organic		n.a.	N.D.	67	1
	_			<i>/-</i>	-	
GC Pe	troleum	ECY 97-602	2 NWTPH-Dx	ug/l	ug/l	
Hydro	carbons w/Si	modified				
12005	DRO C12-C24 w/Si Ge	1	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Ge	1	n.a.	N.D.	67	1
The	reverse surrogate, ca	apric acid, is	s present at <	1%.		
Metal	S	SW-846 601	L0B	ug/l	ug/l	
07049	Cadmium		7440-43-9	N.D.	0.33	1
07051	Chromium		7440-47-3	N.D.	1.3	1
07055	Lead		7439-92-1	N.D.	4.7	1
07061	Nickel		7440-02-0	N.D.	1.6	1
07072	Zinc		7440-66-6	N.D.	2.0	1

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.



Analysis Report

LL Sample # WW 7515454 LL Group # 1485336 Account # 11260

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description:	MW-6 Grab	Groundwater
	Facility#	93883 Job# 385894
	1702 East	Yakima Avenue – Yakima, WA

Project Name: 93883

Collected: 06/27/2014 10:15 by JP

Submitted: 06/28/2014 09:50 Reported: 08/18/2014 15:00 6001 Bollinger Canyon Road L4310 San Ramon CA 94583

Chevron

EYY06

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
10335	8260 Ext. Water Master w/GRO	SW-846 8260B	1	W141821AA	07/01/2014	19:21	Sarah A Guill	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W141821AA	07/01/2014	19:21	Sarah A Guill	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	14181WAA026	07/07/2014	06:33	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	14181WAA026	06/30/2014	15:00	Seth A Farrier	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH- Gx	1	14181A20A	07/01/2014	19:41	Miranda P Tillinghast	1
01146	GC VOA Water Prep	SW-846 5030B	1	14181A20A	07/01/2014	19:41	Miranda P Tillinghast	1
10398	EDB by 8011	SW-846 8011	1	141830009A	07/08/2014	00:44	Matthew S Listner	1
10227	PCBs in Water 8082	SW-846 8082	1	141810010A	07/01/2014	01:23	Monica M Souders	1
11117	PCB Waters Extraction	SW-846 3510C	1	141810010A	06/30/2014	14:30	Seth A Farrier	1
07786	EDB Extraction	SW-846 8011	1	141830009A	07/02/2014	15:00	Kelli M Barto	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH- Dx modified	1	141820018A	07/04/2014	04:29	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH- Dx modified	1	141820019A	07/07/2014	21:23	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH- Dx 06/97	1	141820019A	07/02/2014	09:00	David S Schrum	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH- Dx 06/97	1	141820018A	07/02/2014	09:00	David S Schrum	1
07049	Cadmium	SW-846 6010B	1	141891848005	07/11/2014	03:43	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	141891848005	07/11/2014	03:43	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	141891848005	07/11/2014	03:43	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	141891848005	07/11/2014	03:43	Tara L Snyder	1
07072	Zinc	SW-846 6010B	1	141891848005	07/11/2014	03:43	Tara L Snyder	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	141891848005	07/09/2014	11:17	Micaela L Dishong	1



Analysis Report

LL Sample # WW 7515455 LL Group # 1485336 Account # 11260

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample	Description:	MW - 7	Grab	Ground	water			
		Faci	lity#	93883	Job#	38!	5894	
		1702	East	Yakima	Avenue	- 4	Yakima,	WA

Project Name: 93883

Collected: 06/27/2014 12:08 by JP

Submitted: 06/28/2014 09:50 Reported: 08/18/2014 15:00 Chevron 6001 Bollinger Canyon Road L4310 San Ramon CA 94583

EYY07

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS	Volatiles SW-846 82	260B	ug/l	ug/l	
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Bromodichloromethane	75-27-4	N.D.	0.5	1
10335	Bromoform	75-25-2	N.D.	0.5	1
10335	Bromomethane	74-83-9	N.D.	0.5	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.5	1
10335	Chlorobenzene	108-90-7	N.D.	0.5	1
10335	Chloroethane	75-00-3	N.D.	0.5	1
10335	Chloroform	67-66-3	N.D.	0.5	1
10335	Chloromethane	74-87-3	N.D.	0.5	1
10335	Dibromochloromethane	124-48-1	N.D.	0.5	1
10335	1,2-Dichlorobenzene	95-50-1	N.D.	1	1
10335	1,3-Dichlorobenzene	541-73-1	N.D.	1	1
10335	1,4-Dichlorobenzene	106-46-7	N.D.	1	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.5	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.5	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.5	1
10335	1,2-Dichloropropane	78-87-5	N.D.	0.5	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.5	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.5	1
10335	Ethylbenzene	100-41-4	N.D.	0.5	1
10335	Freon 113	76-13-1	N.D.	2	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	2	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.5	1
10335	Tetrachloroethene	127-18-4	N.D.	0.5	1
10335	Toluene	108-88-3	N.D.	0.5	1
	1,1,1-Trichloroethane	71-55-6	N.D.	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1
10335	Trichloroethene	79-01-6	N.D.	0.5	1
10335	Trichlorofluoromethane	75-69-4	N.D.	0.5	1
10335	Vinyl Chloride	75-01-4	N.D.	0.5	1
10335	m+p-Xylene	179601-23-1	N.D.	0.5	1
10335	o-Xylene	95-47-6	N.D.	0.5	1
GC/MS	Semivolatiles SW-846 82	270C SIM	ug/l	ug/l	
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	1
08357	Benzo (a) pyrene	50-32-8	N.D.	0.010	1
08357	1 1	205-99-2	N.D.	0.010	1
08357		207-08-9	N.D.	0.010	1
08357	Chrysene	218-01-9	N.D.	0.010	1
	Dibenz (a, h) anthracene	53-70-3	N.D.	0.010	1
	Indeno (1, 2, 3-cd) pyrene	193-39-5	N.D.	0.010	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	1
08357	2-Methylnaphthalene	91-57-6	0.011	0.010	1
08357		91-20-3	N.D.	0.030	1
	thylnaphthalene was detected in				-
	the samples as noted on the OC				

with the samples as noted on the QC Summary. The following corrective action was taken:



Analysis Report

Account

LL Sample # WW 7515455 LL Group # 1485336

11260

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample	Description:	MW - 7	Grab	Ground	water			
		Faci	lity#	93883	Job#	385	5894	
		1702	East	Yakima	Avenue	-	Yakima,	WA

Project Name: 93883

Collected:	06/27/2014	12:08	by JP	Chevron
				6001 Bollinger Canyon Road
Submitted:	06/28/2014	09:50		L4310
Reported:	08/18/2014	15:00		San Ramon CA 94583

EYY07

CAT No.	Analysis Name		CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
time firs the	sample was re-extracte and the QC is complia t trial. Similar resu exception of: thylnaphthalene was no	nt. All realts were ob	sults are repo tained in both	rted from the trials with		
GC Vo	latiles B	ECY 97-60 2	2 NWTPH-Gx	ug/l	ug/l	
	NWTPH-Gx water C7-C12		n.a.	N.D.	50	1
GC Mi	scellaneous S	5W-846 803	11	ug/l	ug/l	
10398	Ethylene dibromide		106-93-4	N.D.	0.0097	1
Pesti	cides/PCBs S	5W-846 808	32	ug/l	ug/l	
10227	PCB-1016		12674-11-2	N.D.	0.080	1
10227	PCB-1221		11104-28-2	N.D.	0.080	1
10227	PCB-1232		11141-16-5	N.D.	0.16	1
10227	PCB-1242		53469-21-9	N.D.	0.080	1
10227	PCB-1248		12672-29-6	N.D.	0.080	1
10227	PCB-1254		11097-69-1	N.D.	0.080	1
10227	PCB-1260		11096-82-5	N.D.	0.12	1
GC Pe	troleum H	ECY 97-602	2 NWTPH-Dx	ug/l	ug/l	
Hydro	carbons n	nodified				
-	Diesel Range Organics		n.a.	N.D.	29	1
	Heavy Range Organics		n.a.	N.D.	67	1
GC Pe	troleum H	ECY 97-602	2 NWTPH-Dx	ug/l	ug/l	
Hvdro	carbons w/Si n	nodified				
-	DRO C12-C24 w/Si Gel		n.a.	N.D.	29	1
	HRO C24-C40 w/Si Gel		n.a.	N.D.	67	1
	reverse surrogate, cap	ric acid, i				
Metal	s S	SW-846 603	LOB	ug/l	ug/l	
07049	Cadmium		7440-43-9	N.D.	0.33	1
07051	Chromium		7440-47-3	N.D.	1.3	1
07055	Lead		7439-92-1	N.D.	4.7	1
07061	Nickel		7440-02-0	N.D.	1.6	1
07072	Zinc		7440-66-6	7.6	2.0	1

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.



Analysis Report

LL Sample # WW 7515455 LL Group # 1485336 Account # 11260

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description:	MW-7 Grab	Groundwater
	Facility#	93883 Job# 385894
	1702 East	Yakima Avenue – Yakima, WA

Project Name: 93883

Collected: 06/27/2014 12:08 by JP

Submitted: 06/28/2014 09:50 Reported: 08/18/2014 15:00 6001 Bollinger Canyon Road L4310 San Ramon CA 94583

Chevron

EYY07

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
10335	8260 Ext. Water Master w/GRO	SW-846 8260B	1	W141821AA	07/01/2014	19:45	Sarah A Guill	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W141821AA	07/01/2014	19:45	Sarah A Guill	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	14181WAA026	07/07/2014	07:01	Brian K Graham	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	14181WAA026	06/30/2014	15:00	Seth A Farrier	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH- Gx	1	14181A20A	07/01/2014	20:10	Miranda P Tillinghast	1
01146	GC VOA Water Prep	SW-846 5030B	1	14181A20A	07/01/2014	20:10	Miranda P Tillinghast	1
10398	EDB by 8011	SW-846 8011	1	141830009A	07/08/2014	01:00	Matthew S Listner	1
10227	PCBs in Water 8082	SW-846 8082	1	141810010A	07/01/2014	01:35	Monica M Souders	1
11117	PCB Waters Extraction	SW-846 3510C	1	141810010A	06/30/2014	14:30	Seth A Farrier	1
07786	EDB Extraction	SW-846 8011	1	141830009A	07/02/2014	15:00	Kelli M Barto	1
08271	NWTPH-Dx water	ECY 97-602 NWTPH- Dx modified	1	141820018A	07/04/2014	04:51	Christine E Dolman	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH- Dx modified	1	141820019A	07/07/2014	21:45	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH- Dx 06/97	1	141820019A	07/02/2014	09:00	David S Schrum	1
11197	WA DRO NW DX Ext (Non SG)	ECY 97-602 NWTPH- Dx 06/97	1	141820018A	07/02/2014	09:00	David S Schrum	1
07049	Cadmium	SW-846 6010B	1	141891848005	07/11/2014	03:47	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	141891848005	07/11/2014	03:47	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	141891848005	07/11/2014	03:47	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	141891848005	07/11/2014	03:47	Tara L Snyder	1
07072	Zinc	SW-846 6010B	1	141891848005	07/11/2014	03:47	Tara L Snyder	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	141891848005	07/09/2014	11:17	Micaela L Dishong	1



Analysis Report

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Quality Control Summary

Client Name: Chevron Reported: 08/18/14 at 03:00 PM Group Number: 1485336

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>	Blank <u>Result</u>	Blank <u>MDL</u>	Report <u>Units</u>	LCS <u>%REC</u>	LCSD <u>%REC</u>	LCS/LCSD <u>Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: W141821AA	Sample numbe	er(s): 751	5452-7515	455				
Benzene	N.D.	0.5	uq/l	99	98	78-120	1	30
Bromodichloromethane	N.D.	0.5	ug/l	90	91	73-120	1	30
Bromoform	N.D.	0.5	ug/1	78	79	61-120	1	30
Bromomethane	N.D.	0.5	uq/l	110	110	58-120	0	30
Carbon Tetrachloride	N.D.	0.5	ug/l	97	97	74-130	Õ	30
Chlorobenzene	N.D.	0.5	ug/1	100	101	80-120	1	30
Chloroethane	N.D.	0.5	ug/1	105	101	56-120	4	30
Chloroform	N.D.	0.5	ug/1 ug/1	96	96	80-122	1	30
Chloromethane	N.D.	0.5	ug/1 ug/1	106	114	63-120	7	30
Dibromochloromethane	N.D. N.D.	0.5	ug/1 ug/1	92	114 90	72-120	2	30
1,2-Dichlorobenzene	N.D. N.D.	1.	ug/1 ug/1	92 97	98	80-120	1	30
1,3-Dichlorobenzene	N.D.	1.	ug/l	96	96	80-120	1	30
1,4-Dichlorobenzene	N.D.	1.	ug/l	98	98	80-120	1	30
1,1-Dichloroethane	N.D.	0.5	ug/l	96	94	80-120	2	30
1,2-Dichloroethane	N.D.	0.5	ug/l	99	97	65-135	2	30
1,1-Dichloroethene	N.D.	0.5	ug/l	98	97	76-124	1	30
cis-1,2-Dichloroethene	N.D.	0.5	ug/l	99	99	80-120	0	30
trans-1,2-Dichloroethene	N.D.	0.5	ug/l	100	101	80-120	1	30
1,2-Dichloropropane	N.D.	0.5	ug/l	97	95	80-120	2	30
cis-1,3-Dichloropropene	N.D.	0.5	ug/l	92	92	80-120	0	30
trans-1,3-Dichloropropene	N.D.	0.5	ug/l	90	91	76-120	1	30
Ethylbenzene	N.D.	0.5	ug/l	96	96	79-120	0	30
Freon 113	N.D.	2.	ug/l	93	93	67-127	0	30
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	93	93	75-120	0	30
Methylene Chloride	N.D.	2.	ug/l	99	98	80-120	1	30
1,1,2,2-Tetrachloroethane	N.D.	0.5	ug/l	91	91	70-120	1	30
Tetrachloroethene	N.D.	0.5	uq/l	97	107	80-120	10	30
Toluene	N.D.	0.5	ug/l	100	101	80-120	1	30
1,1,1-Trichloroethane	N.D.	0.5	uq/1	95	96	66-126	1	30
1,1,2-Trichloroethane	N.D.	0.5	ug/l	95	96	80-120	2	30
Trichloroethene	N.D.	0.5	ug/1	99	100	80-120	1	30
Trichlorofluoromethane	N.D.	0.5	ug/1	112	115	65-130	2	30
Vinyl Chloride	N.D.	0.5	ug/1 ug/1	106	106	63-120	0	30
m+p-Xylene	N.D.	0.5	ug/1 ug/1	96	96	80-120	0	30
o-Xylene	N.D.	0.5	ug/1 ug/1	94	96	80-120	2	30
	N.D.			95	96		1	30
Xylene (Total)	N.D.	0.5	ug/l	95	96	80-120	T	30
Batch number: 14181WAA026	Sample numbe							
Benzo(a) anthracene	N.D.	0.010	ug/l	91	92	79-122	1	30
Benzo(a)pyrene	N.D.	0.010	ug/l	93	93	80-121	0	30
Benzo(b) fluoranthene	N.D.	0.010	ug/l	98	101	79-136	3	30
Benzo(k)fluoranthene	N.D.	0.010	ug/l	96	95	81-131	1	30
Chrysene	N.D.	0.010	ug/l	98	101	84-118	2	30

*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.



Analysis Report

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Quality Control Summary

Client Name: Chevron Reported: 08/18/14 at 03:	00 PM	G	roup Nur	mber: 14	485336			
1 , ,	Blank	Blank	Report	LCS	LCSD	LCS/LCSD		
<u>Analysis Name</u>	<u>Result</u>	MDL	<u>Units</u>	<u>%REC</u>	<u>%REC</u>	<u>Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Dibenz(a,h)anthracene	N.D.	0.010	ug/l	90	93	66-133	4	30
Indeno(1,2,3-cd)pyrene	N.D.	0.010	ug/l	95	94	68-132	1	30
1-Methylnaphthalene	N.D.	0.010	ug/l	96	91	86-130	5	30
2-Methylnaphthalene	0.010	0.010	ug/l	96	93	81-131	3	30
Naphthalene	N.D.	0.030	ug/l	93	88	82-122	6	30
Batch number: 14181A20A	Sample numb	per(s): 75	15452-7515	455				
NWTPH-Gx water C7-C12	N.D.	50.	ug/l	104	106	75-135	2	30
Batch number: 141830009A	Sample numb	per(s): 75	15453-7515	455				
Ethylene dibromide	N.D.	0.010	ug/l	67	109	60-140	48*	20
Batch number: 141810010A	Sample numb	$per(q) \cdot 75$	15453-7519	455				
PCB-1016	N.D.	0.080	uq/1	97	105	60-117	7	30
PCB-1221	N.D.	0.080	ug/1	27	105	00 11,	,	50
PCB-1232	N.D.	0.16	ug/1					
PCB-1242	N.D.	0.080	uq/l					
PCB-1248	N.D.	0.080	uq/l					
PCB-1254	N.D.	0.080	ug/1					
PCB-1260	N.D.	0.12	ug/l	100	109	67-128	8	30
		() ==	-					
Batch number: 141820018A	Sample numb							
Diesel Range Organics C12-C24	N.D.	30.	ug/l	67	73	50-113	8	20
Heavy Range Organics C24-C40	N.D.	70.	ug/l					
Batch number: 141820019A	Sample numb							
DRO C12-C24 w/Si Gel	N.D.	30.	ug/l	71	87	32-117	21*	20
HRO C24-C40 w/Si Gel	N.D.	70.	ug/l					
Batch number: 141881848001	Sample numb	per(s): 75	15453					
Cadmium	N.D.	0.33	ug/l	107		90-112		
Chromium	N.D.	1.3	ug/l	106		90-110		
Lead	N.D.	4.7	ug/l	107		88-116		
Nickel	N.D.	1.6	ug/l	110		90-117		
Zinc	N.D.	2.0	ug/l	105		90-110		
Batch number: 141891848005	Sample numb	per(s): 75	15454-7515	455				
Cadmium	N.D.	0.33	ug/l	102		90-112		
Chromium	N.D.	1.3	ug/l	102		90-110		
Lead	N.D.	4.7	ug/l	103		88-116		
Nickel	N.D.	1.6	ug/l	105		90-117		
Zinc	N.D.	2.0	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>	MS <u>%REC</u>	MSD <u>%REC</u>	MS/MSD <u>Limits</u>	<u>RPD</u>	RPD <u>MAX</u>	BKG <u>Conc</u>	DUP <u>Conc</u>	DUP <u>RPD</u>	Dup RPD <u>Max</u>
Batch number: 141830009A Ethylene dibromide	Sample 355 (2)	number(s)	: 7515453 60-140	-75154	55 UNSP	K: P517349 N.D.	BKG: P5173 N.D.	50 0 (1)	30

*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.



Analysis Report

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Page 3 of 5

Quality Control Summary

Client Name: Chevron Reported: 08/18/14 at 03:00 PM Group Number: 1485336

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>	MS <u>%REC</u>	MSD <u>%REC</u>	MS/MSD Limits	<u>RPD</u>	RPD <u>MAX</u>	BKG <u>Conc</u>	DUP <u>Conc</u>	DUP <u>RPD</u>	Dup RPD <u>Max</u>
Batch number: 141881848001	Sample			UNSPK:		48 BKG:			
Cadmium	93	87	75-122	6	20	N.D.	N.D.	0 (1)	20
Chromium	93	86	76-120	8	20	3.8	3.6	7 (1)	20
Lead	98	102	75-125	4	20	N.D.	N.D.	0 (1)	20
Nickel	94	86	79-123	8	20	N.D.	N.D.	0 (1)	20
Zinc	127*	116	85-117	9	20	5.9	6.0	3 (1)	20
Batch number: 141891848005	Sample	number(s)	: 7515454	-751545	5 UNSF	K: P5180	17 BKG: P5180)17	
Cadmium	99	100	75-122	1	20	N.D.	N.D.	0 (1)	20
Chromium	99	101	76-120	1	20	N.D.	N.D.	0 (1)	20
Lead	99	98	75-125	1	20	N.D.	N.D.	0 (1)	20
Nickel	102	103	79-123	1	20	N.D.	N.D.	0 (1)	20
Zinc	98	99	85-117	1	20	N.D.	N.D.	0 (1)	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.

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene	
7515452	100	102	101	98	
7515453	100	102	99	96	
7515454	99	101	99	95	
7515455	99	101	98	96	
Blank	99	98	100	97	
LCS	100	97	101	99	
LCSD	99	103	101	101	
	80-116 8 Name: PAHs in wa 1 Mber: 14181WAA026		80-113	78-113	
Analysis	Name: PAHs in wa	ters by SIM	80-113 1-Methylnaphthalene- d10	78-113	
Analysis Batch nu	Name: PAHs in wa Mber: 14181WAA026	ters by SIM	1-Methylnaphthalene-	78-113	
Analysis Batch nu	s Name: PAHs in wa umber: 14181WAA026 Fluoranthene-d10	ters by SIM Benzo(a)pyrene-d12	1-Methylnaphthalene- d10	78-113	
Analysis Batch nu 7515453 7515454	Name: PAHs in wa mber: 14181WAA026 Fluoranthene-d10 74	ters by SIM Benzo(a)pyrene-d12	1-Methylnaphthalene- d10 78	78-113	
Analysis	Name: PAHs in wa mber: 14181WAA026 Fluoranthene-d10 74 90	ters by SIM Benzo(a)pyrene-d12 74 94	1-Methylnaphthalene- d10 78 81	78-113	
Analysis Batch nu 7515453 7515454 7515455	Name: PAHs in wa mber: 14181WAA026 Fluoranthene-d10 	ters by SIM Benzo(a)pyrene-d12 74 94 88	1-Methylnaphthalene- d10 78 81 77	78-113	
Analysis Batch nu 7515453 7515454 7515455 Blank	Name: PAHs in wa mber: 14181WAA026 Fluoranthene-d10 74 90 86 90	ters by SIM Benzo(a)pyrene-d12 74 94 88 99	1-Methylnaphthalene- d10 78 81 77 88	78-113	

Analysis Name: NWTPH-Gx water C7-C12 Batch number: 14181A20A

*- 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: 08/18/14 at 03:00 PM Group Number: 1485336

4 at 03:00 PM Surrogate Quality Control

Trifluorotoluene-F

	Trifluorotoluene-F	
7515452	92	
7515453	92	
7515454	92	
7515455	94	
Blank	88	
LCS	93	
LCSD	98	
Limits:	63-135	
	Name: PCBs in Wat mber: 141810010A	er 8082
240011 114	Tetrachloro-m-xylene	Decachlorobiphenyl
7515453	96	46
7515454	98	68
7515455	99	53
Blank	81	70
LCS	90	69
LCSD	97	75
Limits:	49-141	36-153
Analysis	Name: EDB, DBCP,	1,2,3-TCP 8011
Batch nu	mber: 141830009A	
	1,1,2,2-	
	Tetrachloroethane	
7515453	103	
7515454	100	
7515455	103	
Blank	108	
DUP	111	
LCS LCSD	86 102	
MS	84	
Limits:	46-136	
	Name: NWTPH-Dx wa	ter
Batch nu	mber: 141820018A	
	Orthoterphenyl	
7515453	80	
7515454	83	
7515455	81	
Blank	78	
LCS	87	
LCSD	93	
Limits:	50-150	

Analysis Name: NWTPH-Dx water w/ 10g Si Gel Batch number: 141820019A

*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.





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Page 5 of 5

Quality Control Summary

Client Name: Chevron Reported: 08/18/14 at 03:00 PM Group Number: 1485336

03:00 PM Surrogate Quality Control

Orthoterphenyl

7515453	90
7515454	96
7515455	100
Blank	84
LCS	97
LCSD	122
Limits:	50-150

*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.

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	Lancaster Laboratories	5	A	cct. # _	1 d	$\omega \zeta$)	Grou I	p # <u>1</u> 4 nstructio	18 ons on i	53 reverse	Side co	2_Sa	oratori ample nd with o	# 7	51 numbers	54 s.	50	1-5	S			
1)	Client Inform	nation			K	4)	Matrix			(5)			A	naly	ses	Req	uest	ed					
Facility # SS#9-3883-	OML G-R#3858	WBS 394					/		1				2	Ì						-	Q	SCR #:	
ite Address 1702 East Y	akima Avenue,	YAKIMA, W								Naphth			20		4					62	$\left \begin{array}{c} \mathcal{O} \\ \mathcal{O} \end{array} \right $	Results in Dry	-
Chevron PM MHO	LEIDOSF	Lead Cons	ultant Rus	ssell	Shro		Gro gi nd Surface						1	Þ	dnu		Method			N.	a	Must meet low	est detection
consultant/Office Gettler-Rya	n, Inc., 6805 Sie	rra Court, Si	uite G, D	ublin,	CA	ра 945	มัย 68 68		ainers	8260 N			HVOC	leanup	el Clea			ETHOS		SHC		compounds	
Consultant Project Mgr. Deanna L. H	larding, (deanna	a@grinc.con	n)						Containers			ates	$\left \right\rangle$	a Gel C	silica Ge	ЕРН	Diss.	Ner	Ì	NA	SIM	Confirm MTBE	+ Naphthalene
Consultant Phone # (925) 551-74	144 x180			Г			Potable NPDES	Air	er of	8021		Oxygenates	M	h Silic	hout S	WA			Ø		2	Confirm all hits	by 8260
Sampler		-1. Qu	NE	3	site		Pot NP		Number	+ MTBE	scan		ğ	Dx wit	Dx wit		Total	7.41	\emptyset	HH.	80	Run ov	
2) Sample Identificatio	on		ected Time	Grab	Composite	Soil	Water	Oil	Total N	BTEX + I	8260 full scan		NWTPH-Gx	NWTPH-Dx with Silica Gel Cleanup	NWTPH-Dx without Silica Gel Cleanup	WA VPH	-ead	10	Ð	C K	\rangle	(6) Rem	arks
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	MU· 7	2 1/	1015	X			X		14	X	<u> </u>		X	X	X			X	<u>×</u>	X	쉿		
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7) Turnaround Time Standard	5 day	4 day		neiiiiqu	ished b	A	K/	_)	Date	27.	14	Time	øø		Receiv `\						Date	Time
72 hour	48 hour	EDF/ED 24 hour	D	Relinqu	ished b	y .	(Date			Timé			Receiv	ed by				_	Date	Time
B Data Package (circ	cle if required)	EDD (circle if r	equired)	Relinq	uished	l by C	Commerci	al Ca	rrier:							Recejy	ed by	>				Date	Time
Type I - Full	1 1 1	CVX-RTBU-FI_05	(default)	UF		Υ		dEx			Otł		-			_	Æ	50			17	628/14	950
Type VI (Raw Data)		Other:			Ten	npei	rature U	lpon	Rec	eipt	<u>),8</u> .	-2.5	<u>s</u> °	С		Cu	stod	y Se	als I	ntact	?	Yes	No

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2 Sample Identification		Coll Date	ected Time	Grab	Composite	Soil	Water	lic	Total	BTEX +	8260 full scan		NWTPH-Gx	NWTPH	NWTPH	WA VPH	Lead	10	ω	20		6) Rem	arks	
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	NW7		11,62				X		16				×	X	X			_X	×	×	X	The RI	9 SA	inple
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72 hour	48 hour	EDF/EP	D	Relinqu	ulshed	by	1			Date	-	jy	Time			Receiv	/ed by	ar portania ar				Date	Time	
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Lancaster Laboratories Environmental

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)
С	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)	Ĺ	liter(s)
m3	cubic meter(s)	μL	microliter(s)
		pg/L	picogram/liter

- < less than The number following the sign is the <u>limit of quantitation</u>, 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 ≥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.

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Appendix D: MTCA Method B Calculations Using MTCATPH11.1





Technical Memorandum

To: Project File From: Russ Shropshire

Re: Evaluation of Soil Sampling Results Under Method B Using MTCATPH 11.1 Alders Chevron / Former Chevron Service Station No. 93883 1702 East Yakima Avenue, Yakima, Washington (VCP #CE0391)

This memorandum presents the approach, input, and results of an evaluation of soil sampling results, which was performed for the above-referenced site using the Washington State Department of Ecology's MTCATPH 11.1 workbook tool. These calculations were performed in accordance with the Ecology's guidance document, *Workbook Tool for Calculating Soil and Ground Water Cleanup Levels under the Model Toxics Control Act Cleanup Regulation: User's Guide for MTCATPH 11.1 & MTCASGL 11.0*, dated December 2007 (Ecology Workbook).

Approach

Analytical results from two soil samples (MW-5-10 and MW-6-8) were input into the MTCATPH 11.1 workbook in order to evaluate the potential human health risk associated with exposure to the petroleum product composition existing under current conditions at the site. The two samples selected for this analysis contained the highest concentrations of petroleum-range hydrocarbon contamination detected in soil during the August 2013 monitoring well installation event at the site.

Results of four consecutive quarters of groundwater monitoring provide empirical evidence that residual petroleum impacts in soil at the site do not impact groundwater quality. Therefore, evaluation of the leaching pathway for protection of groundwater was not included as part of this analysis. Instead, the workbook was used to determine the total measured TPH soil concentration based on fractional analysis results, and to calculate and assess the Hazard Index and Total Risk for a soil direct contact exposure pathway for the specific petroleum composition found in each sample.

Model Inputs/Assumptions

The following inputs and assumptions were used in the MTCATPH11.1 calculation worksheet:

• Soil Concentration Data

- Half Detection Limits For concentrations that were below the detection limit but have been detected on the property in other samples, one-half the detection limit was used.
- **Zero Values** A zero value was entered for petroleum fractions that have not been detected in any sample at the site.
- **Overlapping Higher Values** Volatile petroleum hydrocarbons (VPH) and extractable petroleum hydrocarbons (EPH) can have overlapping values. The higher value was used for the fraction if there is an overlap between these two methods.
- Double Counting The petroleum fractions include hazardous substances that may also be individually quantified, depending upon the type of mixture(s) present at a site (e.g. naphthalene). If one or more hazardous substances are included in one of the TPH Equivalent Carbon (EC) fractions, then those fractions must be subtracted from the appropriate EC-fraction concentrations. Otherwise, the model is "double-counting" that particular substance. Double counting was avoided for EC fractions in the model. Table 3-3 of the Ecology Workbook provides information on the individual substances that are represented by a particular EC fraction.
- Site-Specific Hydrogeological Data The site-specific hydrogeological parameters are considered in calculating soil concentrations that are protective of groundwater. However, for this evaluation the MTCATPH workbook was used only to evaluate the soil direct contact exposure pathway. Therefore, the values entered for these parameters have bearing on the results of the analysis. Default values were assigned for each of these parameters.
 - **Total Soil Porosity** The default value of "0.43" was used.
 - Volumetric Water Content The default value of "0.30" was used.
 - Soil Bulk Density The default value of "1.50" was used.
 - Fraction Soil Organic Carbon (FOC) The default value of "0.001" was used.
 - **Dilution Factor** This parameter has two default values: "20" for soil within the unsaturated zone and "1" for soil within the saturated zone. A default value of "1" was used.

Results

The following table provides a summary of results for the MTCATPH workbook analysis. As these data show, based on consideration of the site-specific petroleum compositions found in the two samples tested, the Measured TPH Soil Concentration for samples MW-5-10 and MW-6-8 were significantly lower than the Protective TPH Soil Concentrations that were determined to be protective of human health for a direct contact exposure scenario. Therefore, both samples pass the RISK and Hazard Index criteria established by MTCA for the direct contact exposure pathway.

Sample ID	Measured TPH Soil Conc. (mg/kg)	Protective TPH Soil Conc. (mg/kg)	RISK @ Measured TPH Soil Conc.	HI @ Measured TPH Soil Conc.	Measured TPH Soil Conc. Pass or Fail?
MW-5-10	1,850.755	3,372.59	3.229E-07	5.488E-01	Pass
MW-6-8	441.143	4,104.53	7.141E-08	1.075E-01	Pass

Attachments

- A1 Soil Cleanup Levels: Worksheet for Soil Data Entry Sample MW-5-10
- A2.1B Worksheet for Calculating Soil Cleanup Levels for Protection of Human Health: (Soil Direct Contact Pathway) Sample MW-5-10
- A1 Soil Cleanup Levels: Worksheet for Soil Data Entry Sample MW-6-8
- A2.1B Worksheet for Calculating Soil Cleanup Levels for Protection of Human Health: (Soil Direct Contact Pathway) Sample MW-6-8

Washington State Department of Ecology, Toxics Cleanup Program: Soil Cleanup Level for TPH Sites - Main Data Entry Form and Calculation Summary

A1 Soil Cleanup Levels: Worksheet for Soil Data Entry: Refer to WAC 173-340-720, 740,745, 747, 750

<u>1. Enter Site Information</u>

Date: 03/12/15 Site Name: Former Chevron Service Station No. 93883 Sample Name: MW-5-10

2. Enter Soil Concentra	tion Measured		Notes for Data Entry Set Default Hydrogeology			
Chemical of Concern	Measured Soil Conc	Composition	Clear All Soil Concentration Data Entry Cells			
or Equivalent Carbon Group	dry basis	Ratio				
	mg/kg	%	Restore All Soil Concentration Data cleared previously			
Petroleum EC Fraction	6 6					
AL_EC >5-6	0	0.00%				
AL_EC >6-8	0	0.00%	REMARK:			
AL_EC >8-10	12.3	0.66%	1) Half detection limits used for benzene, ethylbenzene, and toluene.			
AL_EC >10-12	98	5.30%				
AL_EC >12-16	590	31.88%	2) AL_EC>5-6, AL_EC>6-8, n-hexane, MTBE, EDB, and EDC have never			
AL_EC >16-21	560	30.26%	been detected on the site so a value of zero was entered.			
AL_EC >21-34	320	17.29%	3) Double counting was avoided for E-C fractions.			
AR_EC >8-10	10.29	0.56%	5) Double counting was avoided for E-C fractions.			
AR_EC >10-12	5.49	0.30%	4) Default values were used for total porosity, fractional organic carbon, soil			
AR_EC >12-16	49.8	2.69%	bulk density, and dilution factor.			
AR_EC >16-21	110	5.94%				
AR_EC >21-34	90.7892	4.91%				
Benzene	0.011	0.00%				
Toluene	0.022	0.00%				
Ethylbenzene	0.022	0.00%				
Total Xylenes	0.11	0.01%				
Naphthalene	0.51	0.03%	1			
1-Methyl Naphthalene	1.2	0.06%				
2-Methyl Naphthalene	2	0.11%				
n-Hexane	0	0.00%				
MTBE	0	0.00%				
Ethylene Dibromide (EDB)	0	0.00%				
1,2 Dichloroethane (EDC)	0	0.00%				
Benzo(a)anthracene	0.021	0.00%				
Benzo(b)fluoranthene	0.042	0.00%				
Benzo(k)fluoranthene	0.0088	0.00%				
Benzo(a)pyrene	0.023	0.00%				
Chrysene	0.093	0.01%				
Dibenz(a,h)anthracene	0.01	0.00%				
Indeno(1,2,3-cd)pyrene	0.013	0.00%				
Sum	1850.755	100.00%				
2 Enter 6:4- 6:6: 11		. 4				
<u>3. Enter Site-Specific H</u>						
Total soil porosity:	0.43	Unitless				
Volumetric water content:	0.3	Unitless				
Volumetric air content:	0.13	Unitless				
Soil bulk density measured:	1.5	kg/L				
Fraction Organic Carbon:	0.001	Unitless				
Dilution Factor:	1	Unitless				
4. Target TPH Ground Wa		<u>f adjusted)</u>				
If you adjusted the target TPH gro	und water	~				
concentration, enter adjusted		ug/L				
value here:						

A2. 1B Worksheet for Calculating Soil Cleanup Levels for Protection of Human Health: (Soil Direct Contact Pathway) Method B: Unrestricted Land Use (WAC 173-340-740)

Date: 3/12/2015

Site Name: Former Chevron Service Station No. 93883

Sample Name: MW-5-10

	Current Condition					Adjusted Cor	ndition		TEST CURRENT CONDITION
Chemical of Concern or EC	Measured Soil								Measured TPH Soil Conc, mg/kg= 1850.755
group	Conc	HQ	RISK	Pass or Fail?	Soil Conc being	HQ	RISK	Pass or Fail?	HI= 5.488E-01
	@dry basis				tested				RISK= 3.229E-07
	mg/kg	unitless	unitless		mg/kg	unitless	unitless		Pass or Fail? Pass
Petroleum EC Fraction									Check Residual Saturation (WAC340-747(10))
AL_EC >5-6	0				0.00E+00				
AL_EC >6-8	0				0.00E+00				CALCULATE PROTECTIVE CONDITION
AL_EC >8-10	12.3	5.55E-03			2.24E+01	1.01E-02			
AL_EC >10-12	98	4.42E-02			1.79E+02	8.05E-02			This tool allows the user to calculate protective TPH soil concentration based on various soil quality criteria. The Workbook
	590	3.54E-01			1.08E+03	6.45E-01			uses the same composition ratio as for the Calculate Protective
AL_EC >16-21	560	5.04E-03			1.02E+03	9.18E-03			measured data. TPH Soil Conc
AL_EC >21-34	320	2.88E-03			5.83E+02	5.25E-03			
AR_EC >8-10	10.29	1.39E-03			1.88E+01	2.54E-03			
AR_EC >10-12	5.49	3.71E-03			1.00E+01	6.77E-03			Selected Criterion: @HI=1
AR_EC >12-16	49.8	1.79E-02			9.07E+01	3.27E-02			Most Stringent? YES
AR_EC >16-21	110	6.60E-02			2.00E+02	1.20E-01			Protctive TPH Soil Conc, mg/kg = 3372.59
AR_EC >21-34	90.7892	4.09E-02			1.65E+02	7.44E-02			HI = 1.00E + 00
Benzene	0.011	3.44E-05	6.06E-10		2.00E-02	6.27E-05	1.10E-09		RISK = 5.88E-07
Toluene	0.022	3.66E-06			4.01E-02	6.68E-06			
Ethylbenzene	0.022	2.95E-06			4.01E-02	5.37E-06			
Total Xylenes	0.11	7.38E-06			2.00E-01	1.34E-05			TEST ADJUSTED CONDITION
Naphthalene	0.51	4.21E-04			9.29E-01	7.68E-04			This tool allows the user to test whether a
1-Methyl Naphthalene	1.2	3.08E-04			2.19E+00	5.62E-04			particular TPH soil concentration is protective
2-Methyl Naphthalene	2	6.42E-03			3.64E+00	1.17E-02			of human health. The Workbook uses the Test Adjusted
n-Hexane	0				0.00E+00	0.00E+00			same composition ratio as for the measured TPH Soil Conc data.
MTBE	0				0.00E+00				
Ethylene Dibromide (EDB)	0		0.00E+00		0.00E+00	0.00E+00	0.00E+00		
1,2 Dichloroethane (EDC)	0		0.00E+00		0.00E+00	0.00E+00	0.00E+00		Tested TPH Soil Conc, mg/kg =
Benzo(a)anthracene	0.021		2.03E-08	For	3.83E-02		3.69E-08	For	HI =
Benzo(b)fluoranthene	0.042		4.05E-08	all	7.65E-02		7.38E-08	all	RISK =
Benzo(k)fluoranthene	0.0088		8.49E-09	cPAHs	1.60E-02		1.55E-08	cPAHs	Pass or Fail?
Benzo(a)pyrene	0.023		2.22E-07		4.19E-02		4.04E-07		
Chrysene	0.093		8.97E-09		1.69E-01		1.63E-08		
Dibenz(a,h)anthracene	0.01		9.65E-09	Σ Risk=	1.82E-02		1.76E-08	Σ Risk=	
Indeno(1,2,3-cd)pyrene	0.013		1.25E-08	3.22E-07	2.37E-02		2.29E-08	5.87E-07	
Sum	1850.755	5.49E-01	3.23E-07		3.37E+03	1.00E+00	5.88E-07		

Washington State Department of Ecology, Toxics Cleanup Program: Soil Cleanup Level for TPH Sites - Main Data Entry Form and Calculation Summary

A1 Soil Cleanup Levels: Worksheet for Soil Data Entry: Refer to WAC 173-340-720, 740,745, 747, 750

<u>1. Enter Site Information</u>

Date: 03/12/15 Site Name: Former Chevron Service Station No. 93883 Sample Name: MW-6-8

L. Enter Soil Concentration MeasuredChemical of ConcernMeasured Soil Concor Equivalent Carbon Groupdy basisRatiomg/kgmg/kg%Clear All Soil Concentration Data Entry CellsNu_EC > 5-60U_EC > 5-60U_EC > 6-80U_EC > 10-1210U_EC > 10-1210U_EC > 10-12110U_EC > 10-1213.74%U_EC > 10-120.557U_EC > 10-120.557U_EC > 10-120.357U_EC > 10-120.328U_EC > 10-120.328U_EC > 10-120.038U_EC > 10-120.038U_EC > 10-120.355U_EC > 10-120.336U_EC > 10-120.336U_E EC > 10-120.336
or Equivalent Carbon Group dry basis Ratio mg/kg % Petroleum EC Fraction
Improve The system Retroleum EC Fraction 0.00% AL_EC >5-6 0 0.00% AL_EC >6-8 0 0.00% AL_EC >8-10 1.4 0.32% AL_EC >10-12 10 2.27% AL_EC >10-12 110 24.94% AL_EC >16-21 140 31.74% AL_EC >16-21 140 31.74% AL_EC >10-12 0.557 0.13% R_EC >8-10 1.3425 0.30% R_EC >10-12 0.557 0.13% R_EC >16-21 23 5.21% R_EC >12-34 34.94525 7.92% Senzene 0.0145 0.00% Oluen 0.028 0.01% ValthNaphthalene 0.023 0.02% Ambthalene 0.0033 0.02% Altex 0 0.00% Althene 0 0.00% Althene 0 0.00% Althene 0.0035 0.00% Althene 0.00395<
$L_{L}EC > 5-6$ 0 0.00% $L_{L}EC > 8-10$ 1.4 0.32% $L_{L}EC > 8-10$ 1.4 0.32% $L_{L}EC > 10-12$ 10 2.27% $L_{L}EC > 12-16$ 110 24.94% $L_{L}EC > 12-16$ 1.3425 0.30% $R_{L}EC > 10-12$ 0.557 0.13% $R_{L}EC > 10-12$ 0.557 0.13% $R_{L}EC > 10-12$ 0.557 0.13% $R_{L}EC > 16-21$ 23 5.21% $R_{L}EC > 21-34$ 34.94525 7.92% $V_{R}_{L}EC > 21-34$ 34.94525 7.92% V_{L}_{R} 0.0145 0.00% V_{1} 0.028 0.01% V_{1} 0.028 0.01% V_{2} 0.0145 0.00% V_{2} 0.0295 0.01% V_{2} 0.015 0.03% V_{2} 0.000% 0.00% V_{2}
$AL_EC > 6-8$ 0 0.00% REMARK: $AL_EC > 8-10$ 1.4 0.32% 1) Half detection limits used for benzene, ethylbenzene, $AL_EC > 10-12$ 10 2.27% $AL_EC > 6-8$, $AR_EC > 8-10$, $AR_EC > 10-12$, benzo(a)pyrene, bibenzo(k)fluoranthene, benzo(a)pyrene, bibenzo(a,h)anthr $AL_EC > 16-21$ 140 31.74% $AL_EC > 21-34$ 110 24.94% $AL_EC > 10-12$ 0.557 0.13% $AL_EC > 10-12$ 0.557 0.13% $R_EC > 10-12$ 0.557 0.13% $a3.94525$ 7.92% $3)$ Double counting was avoided for E-C fractions. $R_EC > 21-34$ 34.94525 7.92% $3)$ Double counting was avoided for tc-C fractions. $R_EC > 21.34$ 34.94525 7.92% $4)$ Default values were used for total porosity, fractional to bulk density, and dilution factor. δ_{11} benzene 0.028 0.01% δ_{11} δ_{12} δ_{12} benzence 0.0295 0.01% δ_{11} δ_{12} δ_{12} benzence 0.00% 0.00% δ_{12} δ_{12} δ_{12} benzence 0.00395 0.00% δ_{12} δ_{12} δ_{12} δ_{12
$AL_EC > 8-10$ 1.4 0.32% $AL_EC > 10-12$ $1)$ Half detection limits used for benzene, ethylbenzene, $AL_EC > 10-12$ $AL_EC > 10-12$ 110 2.27% 2.49% $AL_EC > 6-8, AR_EC > 8-10, AR_EC > 10-12, benzo(a)anthbenzo(a)pyrene, Dibenz(a,h)anthrindeno(1,2,3-cd)pyrene.AL_EC > 10-1211024.94\%31.74\%31.74\%benzo(k)fluoranthene, benzo(a)pyrene, Dibenz(a,h)anthrindeno(1,2,3-cd)pyrene.AL_EC > 10-120.5570.13\%3.8E > 21-2169.457AR_EC > 10-120.5570.13\%3.8E > 21-3434.94525AR_EC > 21-3434.945257.92\%Benzene0.01450.00\%30.02\%Outure0.0280.01\%0.01\%Outure0.0280.01\%Outure0.0280.01\%Outal Xylenes0.02950.01\%Aughthalene0.0150.03\%-Methyl Naphthalene0.150.03\%-Hexane00.00\%ATBE00.00\%Benzo(a)nthracene0.003950.00\%Benzo(a)fluoranthene0.003950.00\%Benzo(a)fluoranthene0.0190.00\%Chylene0.003950.00\%$
$AL_EC > 10 \cdot 12$ 10 2.27% $AL_EC > 10 \cdot 12$ $AL_EC > 10 \cdot 12$, benzo(a)anth benzo(k)fluoranthene, benzo(a)pyrene, Dibenz(a,h)anthr Indeno(1,2,3-cd)pyrene. $AL_EC > 16 \cdot 21$ 140 31.74% $AL_EC > 21 \cdot 34$ 110 24.94% $AL_EC > 21 \cdot 34$ 110 24.94% $AL_EC > 21 \cdot 34$ 110 24.94% $AR_EC > 10 \cdot 12$ 0.557 0.13% $AL_EC > 56$, $AL_EC > 6.8$, n -hexane, MTBE, EDB, and been detected on the site so a value of zero was entered been detected on the site so a value of zero was entered been detected on the site so a value of zero was entered been detected on the site so a value of zero was entered been detected on the site so a value of zero was entered been detected on the site so a value of zero was entered been detected on the site so a value of zero was entered been detected on the site so a value of zero was entered been detected on the site so a value of zero was entered bulk density, and dilution factor. NR_EC > 16 \cdot 21 23 5.21% R_EC > 21 \cdot 34 34.94525 7.92% Benzene 0.0145 0.00% Yulpes 0.028 0.01% Yulpes 0.0295 0.01% Yulpes 0.0295 0.01% Yulpes 0 0.00% Yulpes 0 0.00% Yulpes 0 0
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$R_{\rm L}EC > 8-10$ 1.34250.30%been detected on the site so a value of zero was entered $R_{\rm L}EC > 10-12$ 0.5570.13%3)3)Double counting was avoided for E-C fractions. $R_{\rm L}EC > 12-16$ 9.4572.14%3)Double counting was avoided for E-C fractions. $R_{\rm L}EC > 16-21$ 235.21%4)Default values were used for total porosity, fractional bulk density, and dilution factor.Senzene0.01450.00%0.01%Total Xylenes0.0280.01%0.01%Nethyl Naphthalene0.150.03%0.02%-Methyl Naphthalene0.150.03%0.01%-Hexane00.00%0.00%2. Dichloroethane (EDC)00.00%Benzo(a)anthracene0.0160.00%Benzo(k)fluoranthene0.0160.00%Benzo(k)fluoranthene0.0190.00%Chrysene0.0190.00%
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Naphthalene 0.043 0.01% -Methyl Naphthalene 0.093 0.02% -Methyl Naphthalene 0.15 0.03% -Hexane 0 0.00% -Hexane 0 0.00% ATBE 0 0.00% Cthylene Dibromide (EDB) 0 0.00% 2 Dichloroethane (EDC) 0 0.00% Benzo(a)anthracene 0.00395 0.00% Benzo(b)fluoranthene 0.00395 0.00% Benzo(k)fluoranthene 0.00395 0.00% Benzo(a)pyrene 0.00395 0.00% Chrysene 0.019 0.00%
-Methyl Naphthalene 0.093 0.02% -Methyl Naphthalene 0.15 0.03% -Hexane 0 0.00% -Hexane 0 0.00% ATBE 0 0.00% Ethylene Dibromide (EDB) 0 0.00% 2 Dichloroethane (EDC) 0 0.00% Benzo(a)anthracene 0.00395 0.00% Benzo(b)fluoranthene 0.016 0.00% Benzo(k)fluoranthene 0.00395 0.00% Benzo(a)pyrene 0.00395 0.00%
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Barbonide (EDB) 0 0.00% ,2 Dichloroethane (EDC) 0 0.00% Benzo(a)anthracene 0.00395 0.00% Benzo(b)fluoranthene 0.016 0.00% Benzo(k)fluoranthene 0.00395 0.00% Benzo(a)pyrene 0.00395 0.00% Chrysene 0.019 0.00%
,2 Dichloroethane (EDC) 0 0.00% Benzo(a)anthracene 0.00395 0.00% Benzo(b)fluoranthene 0.016 0.00% Benzo(k)fluoranthene 0.00395 0.00% Benzo(a)pyrene 0.00395 0.00% Chrysene 0.019 0.00%
,2 Dichloroethane (EDC) 0 0.00% Benzo(a)anthracene 0.00395 0.00% Benzo(b)fluoranthene 0.016 0.00% Benzo(k)fluoranthene 0.00395 0.00% Benzo(a)pyrene 0.00395 0.00% Chrysene 0.019 0.00%
Benzo(b)fluoranthene 0.016 0.00% Benzo(k)fluoranthene 0.00395 0.00% Benzo(a)pyrene 0.00395 0.00% Chrysene 0.019 0.00%
Benzo(b)fluoranthene 0.016 0.00% Benzo(k)fluoranthene 0.00395 0.00% Benzo(a)pyrene 0.00395 0.00% Chrysene 0.019 0.00%
Benzo(a)pyrene 0.00395 0.00% Chrysene 0.019 0.00%
Chrysene 0.019 0.00%
Chrysene 0.019 0.00%
Dibenz(a,b)anthracene 0.00395 0.00%
ndeno(1,2,3-cd)pyrene 0.00395 0.00%
Sum 441.1425 100.00%
8. Enter Site-Specific Hydrogeological Data
otal soil porosity: 0.43 Unitless
Volumetric water content: 0.3 Unitless
Volumetric air content: 0.13 Unitless
oil bulk density measured: 1.5 kg/L
raction Organic Carbon: 0.001 Unitless
Dilution Factor: 1 Unitless
I. Target TPH Ground Water Concentation (if adjusted)
f you adjusted the target TPH ground water
oncentration, enter adjusted ug/L

A2. 1B Worksheet for Calculating Soil Cleanup Levels for Protection of Human Health: (Soil Direct Contact Pathway) Method B: Unrestricted Land Use (WAC 173-340-740)

Date: 3/12/2015

Site Name: Former Chevron Service Station No. 93883

Sample Name: MW-6-8

	Current Condition				Adjusted Condition				TEST CURRENT CONDITION
Chemical of Concern or EC	Measured Soil								Measured TPH Soil Conc, mg/kg= 441.143
group	Conc	HQ	RISK	Pass or Fail?	Soil Conc being tested	HQ	RISK	Pass or Fail?	HI= 1.075E-01
	@dry basis				lesteu				RISK= 7.141E-08
	mg/kg	unitless	unitless		mg/kg	unitless	unitless		Pass or Fail? Pass
Petroleum EC Fraction									
AL_EC >5-6	0				0.00E+00				
AL_EC >6-8	0				0.00E+00				CALCULATE PROTECTIVE CONDITION
AL_EC >8-10	1.4	6.31E-04			1.30E+01	5.88E-03			This tool allows the user to calculate
AL_EC >10-12	10	4.51E-03			9.30E+01	4.20E-02			This tool allows the user to calculate protective TPH soil concentration based on various soil quality criteria. The Workbook uses the same composition ratio as for the Calculate Protective
AL_EC >12-16	110	6.60E-02			1.02E+03	6.14E-01			uses the same composition ratio as for the Calculate Protective
AL_EC >16-21	140	1.26E-03			1.30E+03	1.17E-02			measured data. TPH Soil Conc
AL_EC >21-34	110	9.90E-04			1.02E+03	9.21E-03			
AR_EC >8-10	1.3425	1.82E-04			1.25E+01	1.69E-03			
AR_EC >10-12	0.557	3.77E-04			5.18E+00	3.51E-03			Selected Criterion: @HI=1
AR_EC >12-16	9.457	3.40E-03			8.80E+01	3.17E-02			Most Stringent? YES
AR_EC >16-21	23	1.38E-02			2.14E+02	1.28E-01			Protetive TPH Soil Conc, mg/kg = 4104.53
AR_EC >21-34	34.94525	1.57E-02			3.25E+02	1.46E-01			HI = 1.00E + 00
Benzene	0.0145	4.54E-05	7.98E-10		1.35E-01	4.22E-04	7.43E-09		RISK = 6.64E-07
Toluene	0.028	4.66E-06			2.61E-01	4.34E-05			
Ethylbenzene	0.028	3.75E-06			2.61E-01	3.49E-05			
Total Xylenes	0.0295	1.98E-06			2.74E-01	1.84E-05			TEST ADJUSTED CONDITION
Naphthalene	0.043	3.55E-05			4.00E-01	3.30E-04			This tool allows the user to test whether a
1-Methyl Naphthalene	0.093	2.39E-05			8.65E-01	2.22E-04			particular TPH soil concentration is protective
2-Methyl Naphthalene	0.15	4.82E-04			1.40E+00	4.48E-03			of human health. The Workbook uses the Test Adjusted
n-Hexane	0				0.00E+00	0.00E+00			same composition ratio as for the measured TPH Soil Conc data.
MTBE	0				0.00E+00				
Ethylene Dibromide (EDB)	0		0.00E+00		0.00E+00	0.00E+00	0.00E+00		
1,2 Dichloroethane (EDC)	0		0.00E+00		0.00E+00	0.00E+00	0.00E+00		Tested TPH Soil Conc, mg/kg =
Benzo(a)anthracene	0.00395		3.81E-09	For	3.68E-02		3.55E-08	For	HI =
Benzo(b)fluoranthene	0.016		1.54E-08	all	1.49E-01		1.44E-07	all	RISK =
Benzo(k)fluoranthene	0.00395		3.81E-09	cPAHs	3.68E-02		3.55E-08	cPAHs	Pass or Fail?
Benzo(a)pyrene	0.00395		3.81E-08		3.68E-02		3.55E-07		
Chrysene	0.019		1.83E-09		1.77E-01		1.71E-08		
Dibenz(a,h)anthracene	0.00395		3.81E-09	$\Sigma Risk=$	3.68E-02		3.55E-08	Σ Risk=	
Indeno(1,2,3-cd)pyrene	0.00395		3.81E-09	7.06E-08	3.68E-02		3.55E-08	6.57E-07	
Sum	441.1425	1.07E-01	7.14E-08		4.10E+03	1.00E+00	6.64E-07		