RESULTS SHEET

RISK-BASED SOIL CONCENTRATION CALCULATIONS:

Indoor exposure soil conc., carcinogen (µg/kg)	Indoor exposure soil conc., noncarcinogen (µg/kg)	Risk-based indoor exposure soil conc., (µg/kg)	Soil saturation conc., C_{sat} (µg/kg)	Final indoor exposure soil conc., (µg/kg)
NA	NA	NA	3.70E+05	NA

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
1.7E-07	NA

MESSAGE AND ERROR SUMMARY BELOW: (DO NOT USE RESULTS IF ERRORS ARE PRESENT)

SCROLL DOWN TO "END"

END

DATA ENTRY SHEET

SL-ADV
Version 3.0; 02/03

Reset to Defaults

CALCULATE RISK-BASED SOIL CONCENTRATION (enter "X" in "YES" box)

YES

OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL SOIL CONCENTRATION (enter "X" in "YES" box and initial soil conc. below)

YES X

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial soil conc., C_R (µg/kg)	Chemica
71432	1.42E+00	Benzene

MORE ↓

ENTER Average soil temperature, T_S (°C)	ENTER Depth below grade to bottom of enclosed space floor, L_F (cm)	ENTER Depth below grade to top of contamination, L_t (cm)	ENTER Depth below grade to bottom of contamination, (enter value of 0 if value is unknown) L_b (cm)	ENTER Totals must add up to value of L_t (cell G28) Thickness of soil stratum A, h_A (cm)	ENTER Thickness of soil stratum B, h_B (cm)	ENTER Thickness of soil stratum C, (Enter value or 0) h_C (cm)	ENTER Soil stratum A SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined stratum A soil vapor permeability, k_v (cm^2)
15	15.24	60.96	427	60.96	0		SL		

MORE ↓

ENTER Stratum A SCS soil type	ENTER Stratum A soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Stratum A soil total porosity, n^A (unitless)	ENTER Stratum A soil water-filled porosity, θ_w^A (cm^3/cm^3)	ENTER Stratum A soil organic carbon fraction, f_{oc}^A (unitless)	ENTER Stratum B SCS soil type	ENTER Stratum B soil dry bulk density, ρ_b^B (g/cm^3)	ENTER Stratum B soil total porosity, n^B (unitless)	ENTER Stratum B soil water-filled porosity, θ_w^B (cm^3/cm^3)	ENTER Stratum B soil organic carbon fraction, f_{oc}^B (unitless)	ENTER Stratum C SCS soil type	ENTER Stratum C soil dry bulk density, ρ_b^C (g/cm^3)	ENTER Stratum C soil total porosity, n^C (unitless)	ENTER Stratum C soil water-filled porosity, θ_w^C (cm^3/cm^3)	ENTER Stratum C soil organic carbon fraction, f_{oc}^C (unitless)
Lookup Soil Parameters					Lookup Soil Parameters					Lookup Soil Parameters				
SL	1.62	0.387	0.103	0.002										

MORE ↓

ENTER Enclosed space floor thickness, L_{crack} (cm)	ENTER Soil-bldg. pressure differential, ΔP ($g/cm\text{-}s^2$)	ENTER Enclosed space floor length, L_B (cm)	ENTER Enclosed space floor width, W_B (cm)	ENTER Enclosed space height, H_B (cm)	ENTER Floor-wall seam crack width, w (cm)	ENTER Indoor air exchange rate, ER (1/h)	ENTER Average vapor flow rate into bldg. OR Leave blank to calculate Q_{soil} (L/m)
15.24	40	1829	990	304.9	0.0038	0.25	5

ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)
70	30	30	182	1.0E-06	1
				Used to calculate risk-based soil concentration.	

END

RESULTS SHEET

RISK-BASED SOIL CONCENTRATION CALCULATIONS:

Indoor exposure soil conc., carcinogen (µg/kg)	Indoor exposure soil conc., noncarcinogen (µg/kg)	Risk-based indoor exposure soil conc., (µg/kg)	Soil saturation conc., C_{sat} (µg/kg)	Final indoor exposure soil conc., (µg/kg)
NA	NA	NA	3.70E+05	NA

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
7.0E-08	NA

MESSAGE AND ERROR SUMMARY BELOW: (DO NOT USE RESULTS IF ERRORS ARE PRESENT)

SCROLL DOWN TO "END"

END

Attachments

Attachment A:
Rittenhouse-Zeman & Associates 1989

UNDERGROUND STORAGE TANK REMOVAL AND SOILS EXCAVATION

CHEVRON U.S.A.
SERVICE Station No.1122

Peace Portal & "G" Street
Blaine, Washington

Prepared For

Chevron U.S.A. Inc.

W-6420

November, 1989

12/12/89

RITTENHOUSE-ZEMAN & ASSOCIATES

Geotechnical & Environmental Consultants

RZA

RZA

RITTENHOUSE-ZEMAN & ASSOCIATES, INC.
Geotechnical & Environmental Consultants
1400 140th Avenue N.E.
Bellevue, Washington 98005-4594
(206) 746-8020/FAX (206) 746-6364

12 December 1989

W-6420

Chevron U.S.A., Inc.
P.O. Box 220
Seattle, Washington 98111

Attention: Mr. Myron Smith

Subject: Underground Storage Tank Removal and Excavation Summary Report
Chevron Service Station #1122
Peace Portal and "G" Street
Blaine, Washington

Gentlemen:

We are pleased to present herein a copy of the above referenced report. This summary report presents our observations of underground storage tank removal procedures other excavations and related activities conducted at the project site. Verbal authorization for our participation in this project was provided by Mr. Myron Smith of Chevron U.S.A., Inc. We appreciate the opportunity to be of continuing service to Chevron U.S.A., Inc. Should you have any questions regarding this report, please call us at your earliest convenience.

Respectfully submitted,

RITTENHOUSE-ZEMAN & ASSOCIATES, INC.

Jon N. Sondergaard, P.G.
Senior Environmental Geologist

Underground Storage Tank Removal and Excavation Summary Report

Chevron Service Station #1122
Peace Portal and "G" Street
Blaine, Washington

Prepared for

Chevron U.S.A., Inc.
P.O. Box 220
Seattle, Washington 98111

Prepared by

Rittenhouse-Zeman & Associates, Inc.
1400 140th Avenue N.E.
Bellevue, Washington 98005

December, 1989
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W-6420

UNDERGROUND STORAGE TANK REMOVAL AND
EXCAVATION SUMMARY REPORT
CHEVRON SERVICE STATION #1122
PEACE PORTAL AND "G" STREET
BLAINE, WASHINGTON

1.0 SUMMARY

The following report presents the results of our observation, sampling and analyses performed at the above referenced site in association with recent remodeling and underground storage tank (UST) removal activities. A brief summary of the significant findings outlined in this report are presented below:

- Soil samples were collected from the sidewalls and bottom of the new UST excavation located behind (east) the existing retail building. Analysis of these soil samples indicated BTEX concentrations below the method detection limits and TPH concentrations below 198 mg/kg except for sample S-4. Sample S-4 was collected from the west sidewall of the excavation, about 7 feet west of the heating fuel tank location, and exhibited a TPH concentration of 306 mg/kg.

- Soil samples collected from the heating fuel tank excavation consisted of a sidewall composite sample and a bottom sample. The sidewall composite sample (S-15) exhibited a TPH concentration of 361 mg/kg and the bottom sample (S-16) exhibited a TPH concentration of 36 mg/kg.

- Soil samples collected from the sidewalls of the excavation at the former gasoline UST location exhibited, upon analysis, TPH concentrations below 119 mg/kg and detectable concentrations of BTEX. Approximately 9,200 gallons of mixed fuel and water were removed from the excavation and disposed by ChemPro Environmental fo Bellingham, Washington.

- Soil samples were collected from the bottom of the waste oil tank (S-35) and from obviously impacted soil at the northeast corner of the excavation (S-34). Soil sample S-35 exhibited detectable concentrations of TPH (32.2 mg/kg) and total chromium (24.0 mg/kg) and concentrations of total organic halogens, total lead and PCB below the method detection limits. Soil sample S-34 exhibited a TPH concentration of 3,146 mg/kg.

- Soil samples were collected from beneath each pump island (S-20 and S-22) and beneath the drive through areas (S-19 and S-21). The soil samples from beneath the pump islands exhibited TPH concentrations of 63 mg/kg (S-22) and 2,813 mg/kg (S-20) with detectable concentrations of BTEX. Soil sample S-21 from the center drive through exhibited a TPH concentration of 3,392 mg/kg and detectable concentrations of BTEX. Soil sample S-19, located beneath the west pump island near the west property line, exhibited TPH and BTEX concentrations below the method detection limits.

- Soil samples collected from the base and sidewalls of the hydraulic hoist excavation exhibited TPH concentrations below 74.3 mg/kg except soil sample S-25 located at the south end of the excavation. Soil sample S-25 exhibited a TPH concentration of 2,906 mg/kg.

- A monitoring well was installed at the east end of the former gasoline UST excavation, to monitor surface water or fugitive product migration into the former UST location.

- An in-situ, bio-venting system was installed in the area of the pump islands, drive throughs and former gasoline UST excavation to remediate residual petroleum hydrocarbons remaining in soil at these locations.

- Approximately 100 to 200 cubic yards of excavated soil containing detectable concentrations of petroleum hydrocarbons was transported to Fife Sand and Gravel of Tacoma, Washington for treatment and disposal. Approximately 150 cubic yards of excavated soil containing detectable

concentrations of waste oil and hydraulic fluid were transported to the Kitsap County Landfill for disposal.

This summary is presented for introductory purposes and should only be used in conjunction with the full text of this report. The project description, site conditions, analytical techniques and observations are presented within the remainder of this report.

2.0 INTRODUCTION

This report was prepared to summarize our activities performed at Chevron Service Station #1122 in Blaine, Washington. Rittenhouse-Zeman & Associates, Inc. (RZA) activities at the site began on 4 October 1989 and our last site visit occurred on 16 November 1989. We visited the site five times within this period and the length of the visits ranged from a few hours to several days.

Our first site observation activities occurred on 4 and 5 October 1989. During this time an excavation for new underground fuel storage tanks (UST) was being accomplished. This excavation is located to the east of the retail building's northeast corner (see Figure 1). Our objectives during this activity were to obtain soil samples from the sidewalls and bottom of the excavation for submittal to an analytical laboratory for quantification of petroleum hydrocarbon concentrations, to observe and, using field screening methods, possibly delineate any petroleum hydrocarbon impacted soils uncovered during the excavation and to report our observations and the results of the chemical analysis to Chevron U.S.A., Inc.

3.0 NEW UST EXCAVATION

When we arrived at the site on the morning of 4 October 1989, the contractor had just begun excavating a small area, (3x3x3) adjacent to the retail building. At this time, no noticeable product odor nor staining was evident in the soils comprising the excavation sidewalls. The upper 12 to 18 inches of the excavation revealed fill containing debris such as bricks, bottles and various sticks or roots.

The following day, 5 October 1989, we arrived at the site in the morning and approximately three-fourths of the excavation had been completed. Petroleum hydrocarbon impacted soils removed from the excavation were loaded directly into

trucks and transported to Fife Sand and Gravel of Tacoma, Washington for disposal. The soils removed consisted of an upper fill, a lower sandy silt, and near the base of the excavation, a silty clay. The total depth of the excavation ranged from approximately 12 feet to 16 feet below the existing ground surface. The upper layer of fill was 1 to 3 feet thick, the middle layer of sandy silt was 5 to 6 feet thick, and the lower silty clay extended below these depths to the base of the excavation.

We observed the remaining excavation operation. A slight petroleum hydrocarbon odor was detected along with possible staining in the sidewall of the southwest corner of the excavation. This odor and staining appear to be limited to pockets within the fill soils at this corner. The heating oil tank was located approximately 7 feet west of the west excavation sidewall. No other obviously stained soil or petroleum hydrocarbon odors were detected elsewhere within the excavation.

Soil samples were obtained from the four sidewalls and the bottom of the excavation at the approximate locations shown on Figure 1. These samples were field tested with an organic vapor meter (OVM) to evaluate relative petroleum hydrocarbon levels within the headspace of each sample jar. This was accomplished by filling a clean jar about half full of soil, covering it with tin foil, agitating the jar, and then inserting the OVM's probe through the foil, to obtain a reading. Additionally, soil samples submitted for analysis were placed in laboratory prepared jars and transported in a chilled cooler under chain of custody procedures to an analytical laboratory for testing. The samples were tested for benzene, toluene, ethylbenzene, and xylene (BTEX) by EPA Method 8020 and for total petroleum hydrocarbons (TPH) by EPA Method 418.1.

OVM head space measurements for soil samples collected from this excavation ranged from 0 to 180 parts per million (ppm). Detectable petroleum hydrocarbon vapor concentrations were exhibited in soil samples obtained from the upper excavation sidewall closest to the retail building. All other soil samples exhibited no detectable petroleum hydrocarbon vapor concentrations using the field headspace screening methods. Analytical laboratory testing indicated that all samples associated with this excavation exhibited BTEX concentrations below the method detection limits of 0.05 mg/kg. Analytical laboratory results for TPH ranged from below the method detection limit of 5 ppm to 306 ppm. The highest TPH concentration indicated was associated with

the upper sidewall closest to the retail building (Sample S-4). Lower sidewall and base samples exhibited TPH concentrations ranging from below the method detection limits as high as 9.1 ppm. Analytical test results from the new tank excavation are summarized in Table 1.

Following the excavation activities, field observations and laboratory testing it appears that the new tank excavation is generally free of petroleum hydrocarbon contamination. Exceptions to this appear to be associated with the upper fill soils primarily near the retail building. These fill soils were 1 to 3 feet in thickness. One sample taken in this fill adjacent to the building exhibited TPH concentrations above current WDOE action levels (200 ppm).

4.0 UST REMOVAL OBSERVATIONS

Our second period of on-site work began on 16 October 1989 and ended on 19 October 1989. During this time, the heating oil tank was removed, the old fuel tanks were removed or abandoned in place, the pump island and associated paving were removed, the hydraulic hoists were removed, and the waste oil tank was removed. When we arrived at the site, the new gasoline tanks were in-place in the previously accomplished excavation located behind the building and washed rock backfill was level with the upper surface of the new tanks. We performed soil sampling and analyses at excavations which previously contained underground heating fuel tank, gasoline tanks, waste oil tank, pump island piping, and hydraulic lift hoists. Analytical test results on soil samples collected from these excavations are summarized in Table 2.

4.1 Heating Fuel Tank

We observed the removal of the 550-gallon heating oil tank and obtained sidewall composite and excavation base samples (S-15 and S-16) from this excavation at the approximate locations shown on Figure 2. Petroleum hydrocarbon odor and stained soil were detected in the upper 1 foot of fill located along the south and west sides of the excavation. The remaining sidewalls, base, and sandy tank backfill were observed to be free of odor and staining. OVM field measurements indicated non-detectable concentrations of petroleum hydrocarbon vapors in the sidewall and base samples which were also analyzed for TPH using EPA Method 418.1. TPH concentrations of soil samples collected from this excavation ranged from 36 ppm (S-16) to 361 ppm (S-15).

The original sand backfill, which was observed to be free of petroleum hydrocarbon impacts, was returned to the excavation, which remained partially filled as of our 30 October 1989 site visit.

4.2 Gasoline Underground Storage Tanks

Four gasoline UST's were located to the north of the station building. The tanks consisted of one 3,000 gallon unleaded, one 7,500 gallon regular, one 8,000 gallon supreme and one 10,000 gallon regular. The pavement was removed in the vicinity of the four gasoline tanks along the northern edge of the property. Once the pavement was removed, pea gravel backfill was observed throughout the area. Strong petroleum hydrocarbon odors were detected along with visible staining of this fill. Field measurements for hydrocarbon vapors on the gravel fill using a OVM photoionization detector indicator vapor concentrations ranging from 50 to 300 ppm. One hundred to two hundred yards of gravel fill material from this excavation were hauled to Fife Sand and Gravel for landfarming and disposal. A composite sample of this fill was collected and analytical laboratory testing (TPH by EPA SW-846/8015 and BTEX by EPA SW-846/8020) indicated a TPH concentration of 119 ppm and BTEX concentrations less than 10 mg/kg. Analytical laboratory testing of samples obtained from the sidewalls indicated TPH concentrations ranging from below the method detection limit of 10 ppm to 141 ppm. BTEX concentrations ranged from below the method detection limit (less than 0.5 mg/kg) to 16.0 mg/kg. Soil samples S-28 and S-29 collected from this excavation were not submitted for analysis.

The 3,000-gallon and a 10,000-gallon gasoline tanks were removed, while the 7,500-gallon and the 8,000-gallon tank were abandoned in place. According to the contractor, the underground storage tanks removed from the site were decommissioned and prepared for safe transport from the site prior to our arrival. The 7,500 gallon tank and the 8,000 gallon tank were abandoned in place because the south ends of both tanks were located beneath the foundation of existing station structures. The two tanks abandoned in place were filled with a lean concrete mix. Those portions of the two tanks exposed appeared to be in good shape but they could not be fully examined. Both tanks removed from the ground appeared to have maintained their structural integrity with no holes or cracks readily observable. The 10,000-gallon fiberglass tank could not be fully examined as it was broken up during its removal.

Once the tanks were removed from the excavation, we observed approximately 0.1 feet of free phase petroleum hydrocarbons on water accumulated in the tank excavation. Before backfilling the excavation, all free product and associated standing water was removed and hauled off-site for treatment and disposal by Chempro, Inc. Approximately 9,200 gallons of mixed water and some product was removed.

In our opinion, the water present in the tank excavation represented predominantly surface water infiltration which had accumulated around the tanks over time. The native soils comprising the excavation sidewalls consisted of relatively low permeability clayey silty and clay which are not likely to transmit significant qualities of groundwater. In our opinion, the relatively low permeability of the native soils would limit migration of water and fugitive product, if any, which had accumulated in the tank excavation.

4.3 Waste Oil Tank Excavation

An approximately 500 gallon waste oil tank situated near the building's southeast corner was removed. Petroleum hydrocarbon odors and stained soil were noticed in the original backfill associated with the tank and near the building's southeast corner. Field measurements using the OVM indicated petroleum hydrocarbon vapor concentrations for the base, west, south and east sidewalls to be in the 0-20 ppm range. The northern sidewall exhibited petroleum hydrocarbon vapor concentrations, as measured with the OVM, ranging from 50 ppm to 300 ppm.

Analytical testing using EPA Method 418.1 indicated a TPH soil concentration of 150 ppm in a composite sample of the stockpiled soils removed from around the waste oil tank. Also detected in the sample from this stockpile were total organic halogen concentrations less than the 10 mg/kg detectable limit and PCB concentrations less than the 1 mg/kg detection limit. A composite soil sample collected from the base of the waste oil tank excavation exhibited a TPH concentration of 32.2 mg/kg, a total organic halogen content of less than 10 mg/kg, a total chromium concentration of 24 mg/kg, a total lead concentration of less than 0.5 mg/kg, and PCB concentrations less then the method detection limit of 1mg/kg. Soil sample S-34, collected from obviously impacted soil located in the northeast corner of the waste oil tank excavation, exhibited a TPH concentration of 3,146 mg/kg. Soil sample S-36 collected from this excavation was not

submitted for analysis. Approximately 20 cubic yards of soil removed from the waste oil tank excavation was hauled to Kitsap County Landfill for disposal.

5.0 Pump Island Excavation

The pump islands and associated paved drive areas located west of the station building were also removed. Underlying the pavement was a gravel fill overlying at least 3 feet of debris-laden silty fill. Both the gravel base and underlying fill exhibited petroleum hydrocarbon odors and staining. The fill soils were underlain by native silt and clay deposits. Surficial sampling was performed (S-19, S-20, S-21, and S-22) and both field screening and laboratory testing was conducted. Field vapor measurements of between 50 ppm and 250 ppm were encountered using the OVM. Analytical laboratory testing showed TPH concentrations ranging from below the detectable level of 10 ppm to 3,392 ppm. The lowest concentration was from a sample (S-19) taken at the far western edge of the site. The highest concentration was from the central drive area between the two pump islands (S-21). Soil sample S-20 collected from beneath the west pump island exhibited a TPH concentration of 2,831 mg/kg. BTEX concentrations ranged from below the method detection limits of 0.05 mg/kg to 18.2 mg/kg. TPH analyses were accomplished using modified EPA Method 8015 and BTEX analyses using EPA Method 8020.

Due to the porous nature of the fill soil, RZA recommended leaving in-place much of the petroleum hydrocarbon impacted soils in the pump island area and installing a bio-venting system in the pump island, drive through, and old tank excavation areas to accomplish in-situ remediation. In-situ remediation of petroleum hydrocarbon impacted soils is well suited to this area because the fill soil is porous, the primary petroleum hydrocarbons present is gasoline and the proximity of the impacted soils to structural footings makes removal of the soils impractical.

We returned to the site on 30 October 1989 to sample two stockpiles of soils related to trenching efforts for the utility lines, the product lines, and the bio-venting system. We obtained two composite samples from the two stockpiles for analytical laboratory analysis. This analysis of the two samples showed TPH concentrations of 561 ppm and 806 ppm (TPH by 418.1). Approximately 50 cubic yards of the soil was subsequently hauled to Kitsap County Landfill for disposal.

The bio-venting system was partially in-place and some of the trenches were backfilled. We observed portions of the installation activity for the bio-venting system. Installation of the system appeared to be adequate and the piping was, at this time, finished in the drive areas near the pump islands. The northern-most section of pipe along with the loop near the monitoring well were not yet in place. A description of the bio-venting system installation is presented subsequently.

6.0 Hydraulic Hoist Removal

We observed the removal of three hydraulic hoists from within the south end retail building. A remote fill for the waste oil tank was also located in the southeast corner of the retail building. Strong petroleum hydrocarbon odors and stained soils were encountered in the sand backfill associated with these hoists. Approximately 75 cubic yards of impacted soil were removed from the southern two-thirds of the building's interior. Field screening by the OVM indicated hydrocarbon vapor concentrations at the base of the excavation ranging from 20 ppm in the north to 300 ppm in the south. Analytical laboratory analysis for TPH using EPA method 418.1 indicated soil concentrations ranging from 20.6 ppm to 2,906 ppm, with the highest concentration in the south (soil sample S-25).

Analytical laboratory analysis of a composite sample of the stockpiled soil removed from the interior of the building showed a TPH concentration of 10,003 ppm. The sample also exhibited a total halogen content below the detection limit of 10 mg/kg, a total chromium concentration of 9.3 mg/kg and a total lead concentration of 10.3 mg/kg. No PCB's were detected above the detection limit of 1 mg/kg. Soil excavated from the hoist area was hauled to the Kitsap County Landfill for disposal. Observation and field screening indicated no other visibly TPH impacted soil within the footprint of the building. The southeast corner could not be checked because the floor slab there remained in place.

7.0 MONITORING WELL INSTALLATION

A monitoring well was installed in the gasoline UST excavation near the abandoned 7,500-gallon gasoline tank (see Figure 2 for location). The well will be used to monitor for the presence of groundwater and residual free phase petroleum hydrocarbons in the former tank excavation. The monitoring well (MW-1) consists of a 4-inch diameter PVC

well assembly including 5 feet of slotted well screen (0.020 inch slot size) and about 7 feet of blank PVC riser. The well was constructed in the tank excavation prior to backfilling. A concrete-bentonite seal was installed at the surface and the well covered within a protective steel monument. We requested and received from the Washington State Department of Ecology (WDOE) a waiver from the Minimum Standards for Construction and Maintenance of Wells for this installation. A copy of the waiver approval is included in Appendix A and an as-built diagram of the well is shown on Figure 3.

8.0 BIO-VENTING SYSTEM INSTALLATION

The approximate location of the bio-venting system is shown on Figure 4. The bio-venting system is intended to remediate residual petroleum hydrocarbons remaining in shallow fill soil beneath the pump islands and drive through areas and pea gravel fill remaining in the former gasoline UST excavation.

The bio-venting system consists of 4-inch diameter, fabric-wrapped, flexible, perforated PVC pipe buried in shallow 1 to 2 feet deep trenches. The trenches containing the bio-venting system vent pipe connects to a blank 4-inch diameter PVC manifold pipe north of the retail building. The manifold pipe runs east-west towards the northeast corner of the site where it will connect to the blower/stack assemble. The blower stack assembly will be located adjacent to an existing light standard at the northeast corner of the property.

The manifold pipe will connect to a condensate tank which will collect free water entrained in the gas stream prior to emission from the exhaust stack. The bio-venting system will be driven by a 100 CFM regenerative blower capable of drawing a sustained vacuum comparable to 1 1/2 inches of mercury. Extracted petroleum hydrocarbon vapors will be emitted to the atmosphere via a 4-inch diameter, 15-feet tall PVC exhaust stack. The exhaust stack will be fitted within a MSA Toxguard combustible gas indicator which automatically monitors the off-gas concentrations. The Toxguard monitor will be set to automatically shut-down the bio-venting system should the emitted vapor concentrations exceed 20 percent of the lower explosive limit (LEL).

We are currently in the process of notifying the Northwest Air Pollution Agency (NWAPA) of the system installation and expect to receive their approved for system operation around the first fo December 1989. Installation of the blower/stack assembly is tentatively scheduled for the first two weeks in December 1989.

9.0 CONCLUSIONS AND RECOMMENDATIONS

Field observations and analytical testing indicate that soils containing elevated TPH concentrations remain in the vicinity of the west end of the heating fuel tank (beneath the existing building), the northeast corner of the waste oil tank excavation, the south end of the hydraulic hoist excavation, the west sidewall of the new tank excavation and beneath the pump islands. Analytical testing and field observations indicate soils remaining in the walls and bottom of the new tank excavation and the former tank excavation exhibit TPH concentrations less then 198 mg/kg.

Soil remaining beneath the pump islands and drive through exhibited TPH concentrations up to 3,392 mg/kg and detectable concentrations of BTEX. Soils remaining in the west and north portions of the former UST excavation also contain detectable BTEX concentrations.

Soil containing elevated petroleum hydrocarbon concentration and excavated from the pump island and gasoline UST excavations was transported to Fife Sand and Gravel of Tacoma, Washington for treatment and disposal. Soil containing elevated TPH concentrations and excavated from the hoist and waste oil tank excavations was transported to the Kitsap County Landfill for disposal. Approximately 300 to 350 cubic yards of soil was transported off-site for disposal.

A bio-venting system was installed in the area of the pump island, drive through and former UST excavation. The in-situ bio-venting system is designed to remediated gasoline impacted soils remaining in the subsurface at the site. We anticipate the bio-venting system will be fully operational in mid-December 1989.

Native soils at the site typically consist of relatively low permeability silt and clay. Field observations and testing indicate fugitive petroleum hydrocarbons generally have been retained within the permeable tank backfill enclosed by the relatively low permeability

native soil. No groundwater was observed in any of the excavations. In our opinion, water encountered in the former UST excavation consisted of surface water infiltration accumulated in the permeable gravel backfill around the tanks. Little or no groundwater seepage is expected from the shallow, native silt and clay soils observed elsewhere on-site.

We recommend a series of soil borings be accomplished around the perimeter of the property. The purpose of the borings would be to collect soil samples for analyses and confirm that no shallow groundwater exists beneath the site. Selected soil samples collected from the borings would be analyzed for petroleum hydrocarbons to evaluate if fugitive hydrocarbons have migrated to the property boundaries.

We also recommend that monitoring well MW-1 be measured for water and petroleum hydrocarbons on a quarterly basis. Monitoring of the off-gas concentrations from the bio-venting system should also be monitored quarterly, with weekly recording of the Toxguard monitor LEL measurements, if possible.

We estimate that bio-venting of the subsurface should significantly reduce petroleum hydrocarbon concentrations within approximately on year of continuous operation. Periodic measurement and recording of the bio-venting system off-gas concentrations will help to refine this estimate. Once system off-gas concentrations are reduced consistently to below 2 percent LEL, soil samples should be collected from the pump island/drive through and former UST excavation area, and analyzed for petroleum hydrocarbon concentrations to evaluate the progress of the remediation.

We appreciate the opportunity to be of continued service to Chevron U.S.A. Inc. Should you have any questions regarding this report, please call us at your earliest convenience.

Respectfully submitted,

RITTENHOUSE-ZEMAN & ASSOCIATES, INC.

John Coleman
Environmental Geologist

Jon N. Sondergaard, P.G.
Senior Environmental Geologist

Kurt W. Groesch, P.E.
Associate

JC:cao1

W-6420

Table 1. Summary of Analytical Test Results on Soil Collected from the New Tank Excavation

			Volatile Aromatic Concentrations in mg/kg**			
Sample No.	Depth (ft)	TPH (mg/kg)*	Benzene	Toluene	Ethyl benzen	Xylenes
S-1	0-3	86.8	<0.05	<0.05	<0.05	<0.05
S-2	0-3	198.0	<0.05	<0.05	<0.05	<0.05
S-3	0-3	6.9	<0.05	<0.05	<0.05	<0.05
S-4	0-3	306.0	<0.05	<0.05	<0.05	<0.05
S-5	12	<5.0	<0.05	<0.05	<0.05	<0.05
S-6	12	<5.0	<0.05	<0.05	<0.05	<0.05
S-7	12	<5.0	<0.05	<0.05	<0.05	<0.05
S-8	12	<5.0	<0.05	<0.05	<0.05	<0.05
S-9	13	<5.0	<0.05	<0.05	<0.05	<0.05
S-10	15	<5.0	<0.05	<0.05	<0.05	<0.05
S-11	13	<5.0	<0.05	<0.05	<0.05	<0.05
S-12	15	<5.0	<0.05	<0.05	<0.05	<0.05
S-13	13	<5.0	<0.05	<0.05	<0.05	<0.05
S-14	15	9.1	<0.05	<0.05	<0.05	<0.05

Note: * = TPH analyses by EPA Method 418.1

** = BTEX analyses by EPA Method 8020

W-6420

Table 2. Summary of Analytical Test Results on Soil Collected from UST, Hoist and Pump Island Removal

Heating Fuel Tank Excavation

Sample No.	Depth (ft)	TPH by EPA 8015 (mg/kg)	TPH by EPA 418.1(mg/kg)	Volatile Aromatic Concnetrations in mg/kg* Benzene	Toluene	Ethyl benzene	Xylenes
S-15	3	---	361.0	---	---	---	---
S-16	5	---	36.0	---	---	---	---

Pump Island Excavation

Sample No.	Depth (ft)	TPH by EPA 8015 (mg/kg)	TPH by EPA 418.1(mg/kg)	Volatile Aromatic Concnetrations in mg/kg* Benzene	Toluene	Ethyl benzene	Xylenes
S-19	0-1	<10.0	---	<0.05	<0.05	<0.05	<0.05
S-20	0-1	2,813.0	---	0.88	3.79	2.08	179.00
S-21	0-1	3,392.0	---	<0.05	32.40	13.80	227.00
S-22	0-1	63.0	---	0.07	0.06	0.09	0.26

Lift Hoist Excavation

Sample No.	Depth (ft)	TPH by EPA 8015 (mg/kg)	TPH by EPA 418.1(mg/kg)	Volatile Aromatic Concnetrations in mg/kg* Benzene	Toluene	Ethyl benzene	Xylenes
S-18	2	---	33.9	---	---	---	---
S-23	4	---	74.3	---	---	---	---
S-24	3	---	20.6	---	---	---	---
S-25	3	---	2,906.0	---	---	---	---

Gasoline UST Excavation

Sample No.	Depth (ft)	TPH by EPA 8015 (mg/kg)	TPH by EPA 418.1(mg/kg)	Volatile Aromatic Concnetrations in mg/kg* Benzene	Toluene	Ethyl benzene	Xylenes
S-30	4	102.0	---	8.66	16.00	2.12	15.90
S-31	6	141.0	---	6.70	9.38	0.92	8.94
S-32	5	44.0	---	0.21	0.14	<0.05	0.17
S-33	5	<10.0	---	<0.05	<0.05	<0.05	<0.05

Waste Oil Tank Excavation

Sample No.	Depth (ft)	TPH by EPA 8015 (mg/kg)	TPH by EPA 418.1(mg/kg)	Total Organic Halogens	Total Lead	Total Chromium	PCB
S-34	3	---	3,146.0	---	---	---	---
S-35	8	---	32.2	<10.0	<0.5	24.00	<1.0

Stockpiled Soils

Sample No.	Origin	TPH by EPA 8015 (mg/kg)	TPH by EPA 418.1(mg/kg)	Total Organic Halogens	Total Lead	Total Chromium	PCB
S-26	Hoist	---	10,003.0	<10.0	10.30	9.30	<1.0
S-37	Waste Oil	---	150.0	<10.0	25.80	19.40	<1.0

Sample No.	Origin	TPH by EPA 8015 (mg/kg)	TPH by EPA 418.1(mg/kg)	Volatile Aromatic Concnetrations in mg/kg* Benzene	Toluene	Ethyl benzene	Xylenes
S-38	Pump Islands	561.0	---	0.23	2.30	4.60	59.30
S-39	Pump Islands	806.0	---	<0.05	2.94	3.75	18.20

Note: * = BTEX analyses by EPA Method 8020

APPENDIX A

WELL CONSTRUCTION WAIVER

RITTENHOUSE-ZEMAN & ASSOCIATES, INC.
Geotechnical & Environmental Consultants
1400 140th Avenue N.E.
Bellevue, Washington 98005-4594
(206) 746-8020/FAX (206) 746-6364

20 October 1989 W-6420

Washington State Department of Ecology
4250 150th Avenue Northeast
Redmond, Washington 98052

Attention: Mr. Jerry Liszak

Subject: Request for Wavier of Construction Standards
Chapter 173-160 WAC
200 East Portal Drive
Blaine, Washington

Mr. Liszak:

Rittenhouse-Zeman and Associates inc. (RZA) is writing this letter on behalf of Chevron U.S.A. Inc. to request a waiver from the Minimum Standards for Construction and Maintenance of Wells, Chapter 173-160 WAC. The proposed well which requires the waiver is to be constructed a the location of a former Chevron U.S.A. Inc. service station located at 200 East Portal Drive in Blaine, Washington. The site is located in Township 41 North, Range 1 East in the west-central portion of Section 31. The purpose of the well is to provide a monitoring well and possible extraction point for surface water infiltration which will accumulate in a former underground storage tank excavation which has been backfilled.. The approximate proposed location of the well is shown on Figure 1.

Specifically, we are requesting a waiver from Part Three, Section 173-160-550 concerning the design and construction of well seals for resource protection wells. The proposed well construction would involve placing the four-inch diameter PVC well assembly into an excavation previously dug for removal of underground gasoline storage tanks. Placement of the well in the open excavation would prohibit sealing the annular space around the well with bentonite as required in WAC 173-160-550 subsection 2. Our proposed well construction components are shown in Figure 2. A bentonite-cement surface seal could be placed as shown and the area around the well

head and over the excavated surface covered with two inches of asphaltic concrete. In our opinion, this would inhibit downward infiltration of surface water around the well casing.

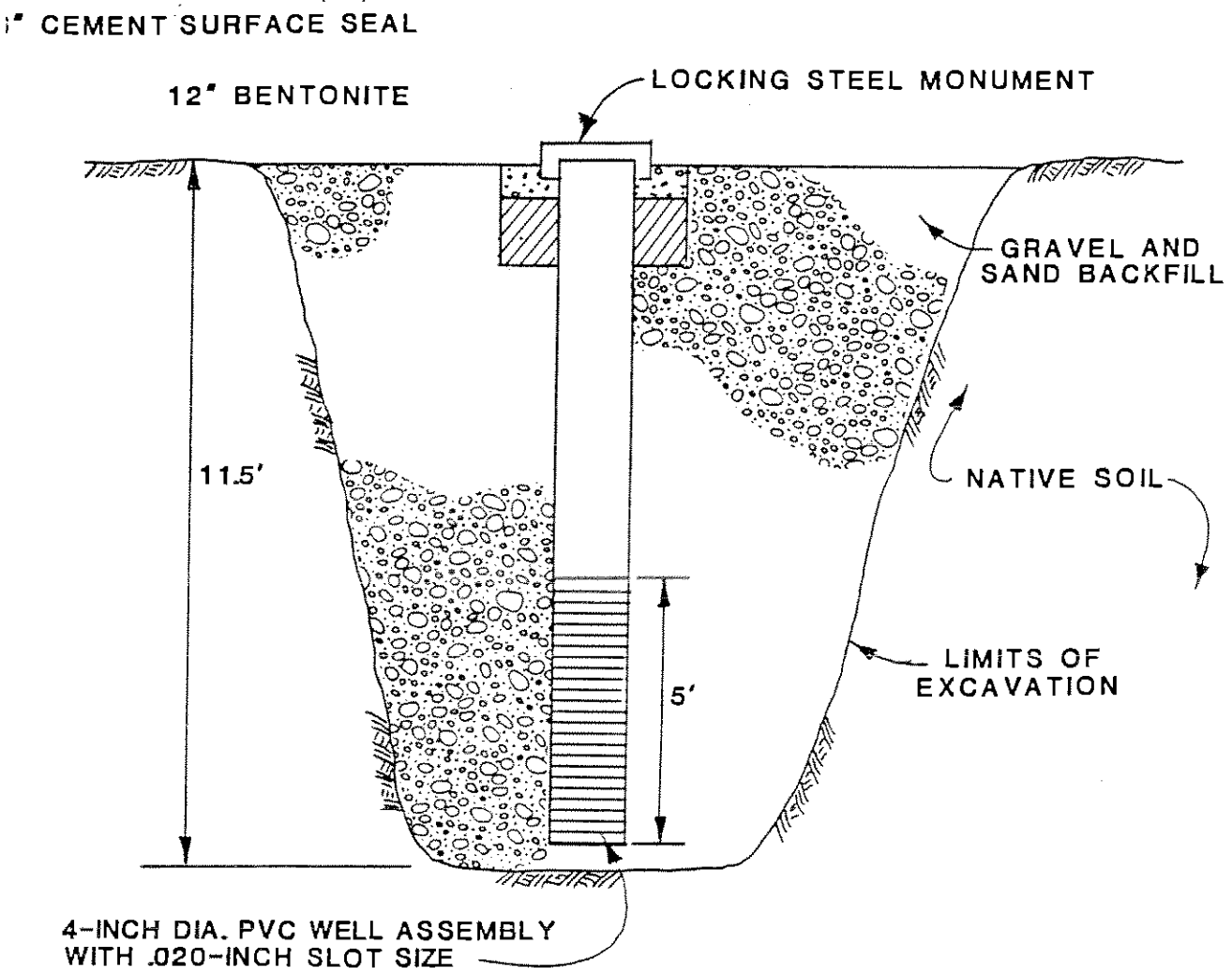
Your prompt attention to this request would be appreciated. The ability to construct a large diameter well within the excavation as backfilling occurs provides an immediate access point for monitoring and treatment of ground water beneath the site at a considerable cost savings to our client. The construction of this well is part of an on-going characterization and remediation of the subject site.

If you have any questions regarding this waiver request, please do not hesitate to call us at your earliest convenience.

Respectfully submitted,

RITTENHOUSE-ZEMAN AND ASSOCIATES INC.

Jon N. Sondergaard
Senior Environmental Geologist



CHEVRON U.S.A. INC.
SERVICE STATION No. 1122

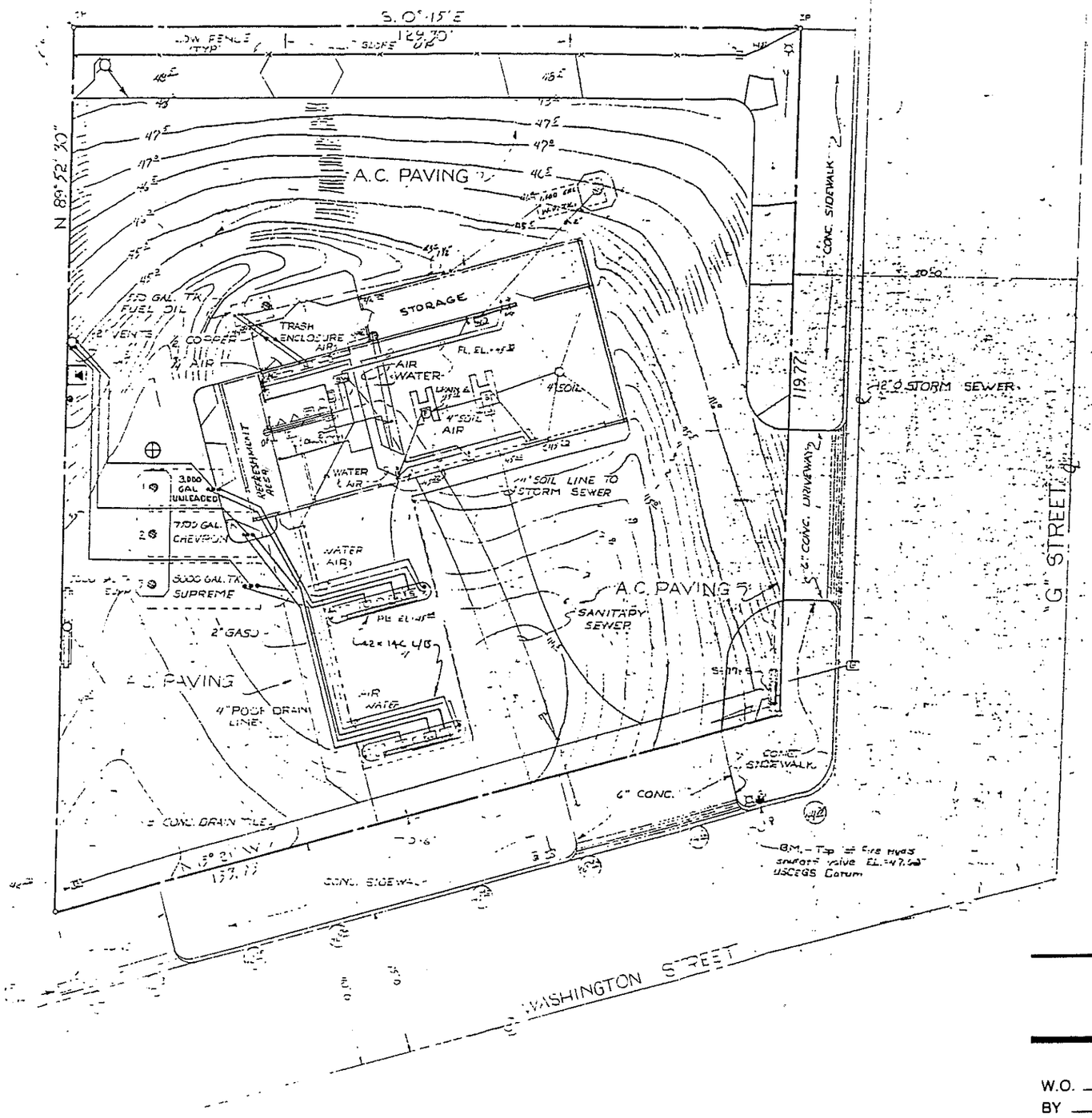
MONITORING WELL MW-1

FIGURE 2

W.O. W-6420
BY JNS
DATE OCT 1989
SCALE N.T.S.

RITTENHOUSE-ZEMAN & ASSOCIATES, INC.
Geotechnical & Hydrogeological Consultants
1400 140th Avenue N.E.
Bellevue, WA 98005

RZA



DRAWING BASED ON STANDARD OIL COMPANY OF CALIFORNIA PLAN DATED APR. 1, 1968.

LEGEND

⊕ APPROXIMATE LOCATION OF PROPOSED 4-IN. DIAMETER MONITORING WELL

0 20 40

APPROXIMATE SCALE IN FEET

CHEVRON U.S.A. INC.
SERVICE STATION No. 1122
BLAINE, WASHINGTON

PROPOSED MONITORING WELL LOCATION

FIGURE 1

W.O. W-6420
BY JNS
DATE OCT 1989
SCALE NOTED

RITTENHOUSE-ZEMAN & ASSOCIATES, INC.
Geotechnical & Environmental Consultants
1400 140th Avenue N.E.
Bellevue, Washington 98005

RZA

Attachment B:
Pacific Environmental Group, Inc., 1994

Chevron

Chevron U.S.A. Products Company
20500 Richmond Beach Drive NW
Seattle, WA 98177
Phone 206 542 9720

October 5, 1994

Mr. Ben Amoah-Forson
Department of Ecology
Northwest Regional Office
3190 160th Avenue SE
Bellevue, Washington 98008-5452

Re: Stage II Oversight Report
Chevron Fac. #60091122
Blaine, Washington

Dear Mr. Amoah-Forson:

Please find attached a copy of Pacific Environmental Group, Inc.'s (Pacific) September 9, 1994 report describing oversight and sampling performed at the above referenced facility during installation of Stage II vapor recovery equipment and an additional underground storage tank. Pacific was on site during trenching and excavation activities to field screen excavated soil and collect soil samples. In addition, water pumped into a temporary storage tank during excavation dewatering was sampled before and after treatment. Additional samples were collected and analyzed during the removal of a UST previously abandoned in place.

Given the installation of containment systems and continued operation of this service station as a Chevron facility, we do not propose any remedial action at this time. Should you have any questions, please feel free to contact me at 206-546-0523.

Very truly yours,

Timothy D. Johnson
Project Manager

Attachment

PACIFIC
ENVIRONMENTAL
GROUP INC.

September 9, 1994
Project 520-060.1A

Mr. Tim Johnson
Chevron U.S.A. Products Company
20500 Richmond Beach Dr. NW
Seattle, WA 98177

Re: Stage II Vapor Recovery System Installation and New UST Installation
Chevron Service Station No. 60091122
568 Peace Portal Drive
Blaine, Washington

Dear Mr. Johnson:

This letter presents the results of an environmental investigation conducted by Pacific Environmental Group, Inc. (PACIFIC) at Chevron U.S.A. Service Station 60091122, located at 568 Peace Portal Drive in Blaine, Washington (Figure 1). The purpose of this investigation was to assess and document soil quality with respect to petroleum hydrocarbons at the site during the installation of fuel lines, Stage II vapor recovery equipment, and one new underground storage tank (UST). Services were provided by PACIFIC under Chevron Contract No. CB6C930506NWX, Release No. 1067710.

Field activities were performed at the site by PACIFIC between March 30 and May 12, 1994. The scope of work for the environmental investigation consisted of the following tasks:

- Preparing a site safety plan in accordance with OSHA regulations to reflect on-site sampling activities.
- Field screening of the open trenches and stockpiled soil using a photo-ionization detector (PID).
- Collecting soil samples from UST and trench excavation locations based on PID readings and in compliance with Washington State Department of Ecology (Ecology) guidelines.

Missing first page

- Documenting the removal and condition of an abandoned UST encountered during trenching activities.
- Collecting samples from excavation groundwater pumped into a portable storage tank (Baker Tank).
- Collecting samples from water in the abandoned UST discovered during excavation.
- Submitting soil samples, water samples, and appropriate documentation to a Chevron approved laboratory for analysis.
- Obtaining permits to treat and discharge water.
- Treating water collected in a Baker Tank.
- Preparing this letter report.

SITE DESCRIPTION

The Chevron site is situated at 568 Peace Portal Drive in Blaine, Washington (Figure 1). Three USTs are located in a common excavation in the northeastern corner of the property. One additional 12,000-gallon UST was placed along the northern periphery of this common excavation during the scope of this investigation. Regular leaded, regular unleaded, and supreme unleaded gasoline are stored in the existing USTs. The new UST will store regular unleaded gasoline. One used oil UST is located southeast of the station building. Another 2,000-gallon undocumented UST was enconntered and removed during trenching activities. At least three other pre-existing USTs have been previously removed from the site and at least two other USTs have been abandoned in place.

UNDERGROUND STORAGE TANK INSTALLATION

During the week of March 28, 1994, A.L. Sleister and Sons Construction, Inc. (Sleister) completed an excavation for the new UST. This excavation was located north of the existing gasoline UST excavation. Depth to water was approximately seven feet below grade in the excavations on-site. Approximately 13,000 gallons of water were pumped into a Baker Tank from the existing UST complex prior to beginning the new UST excavation. Approximately 3,000 gallons of additional water were pumped into a Baker Tank from the new UST excavation during the emplacement of the new 12,000 gallon double-walled fiberglass UST.

STAGE II VAPOR RECOVERY RETROFIT

During the week of April 11, 1994, Sleister began installation of the Stage II vapor recovery system. The scope of work performed by Sleister included fuel/vapor recovery line trenching, electrical conduit trenching, system installation, line-testing, and backfilling. A total of approximately 150 linear feet of trenching and an area exposing a portion of the gasoline UST complex were excavated to accommodate the fuel/vapor recovery lines. Another 70 linear feet of trenching were excavated to accommodate electrical conduits.

UNDERGROUND STORAGE TANK REMOVAL

PACIFIC documented the removal of an undocumented 2,000-gallon UST encountered during trenching activities. The UST contained approximately 1,500 gallons of water. The water was sampled and transferred into an on-site Baker Tank. PACIFIC observed the UST removal procedure. The UST removed was a single-walled steel tank with surface corrosion and pitting. There were no visible holes. The final dimensions of the excavation were 13 feet by 9 feet by 8 feet deep. Two sidewall soil samples (SSW-1 and ESW-1) were collected at 7.5 feet below grade from the south and east sidewalls, respectively. The sampling followed guidelines presented in Section 5, Table 5-2, of the Department of Ecology "Guidance for Site Checks and Site Assessments for Underground Storage Tanks". A water sample (TPW-1) was also collected from standing water in the bottom of the excavation. This sample was collected in lieu of a bottom soil sample according to Sections 5.2.3 and 5.3 of the guidance document referenced above.

SOIL SCREENING, EXCAVATING, AND SAMPLING

Trenches for the fuel lines and vapor recovery lines were excavated along the inside of each of the two pump islands. The trenching extended to the east to join the USTs in an excavation uncovering a portion of the UST complex (Figure 1). Trenches to accommodate electrical conduits were also excavated along the outside of the two pump islands. The fuel/vapor recovery line trenching ranged from approximately 6.0 to 10.0 feet wide and depths ranged from approximately 3.0 to 5.0 feet deep. The electrical conduit trenching was approximately 2.0 feet wide and approximately 2.0 feet deep. A total of approximately 125 cubic yards (cy.) of material excavated during trenching activities was stockpiled in two separate stockpiles (Stockpile 3 and Stockpile 4) along the excavated trenches. The material excavated from the trenches, from the UST removal excavation, and from the UST installation excavation, consisted primarily of native medium to coarse grained sand with trace layers of interbedded clay, mixed with varying amounts of imported pea gravel. Material excavated from the UST complex consisted of pea gravel.

Trench Screening

Following excavation of the trenches, soil in the trenches was screened for the presence of volatile organic compounds (VOCs) using a Thermo Environmental Instruments Model 580B PID. The results of this testing are considered to be semi-quantitative, since the PID does not provide compound-specific measurements. Soil sampling and PID field screening methodology is presented in Attachment A.

Soil with PID readings above background levels was identified in the trenches along the eastern and western pump island and in a localized area leading to the UST complex.

Trench Sampling

In accordance with Ecology sampling guidelines, a total of six soil samples (T1-4, T2-3, T3-3, T4-3, T5-3, T6-3, and T6-4) were collected from the trenches along the pump islands and leading to the UST complex. Soil sample locations are shown on Figure 1.

Soil Sample T1-4 was collected from the fuel/vapor recovery line trench leading from the pump islands to the UST complex where elevated PID readings were noted. Sample T2-3 was collected from the fuel/vapor recovery line trench leading from the pump islands to the UST complex. Soil Samples T3-3 and T4-3 were collected from the fuel/vapor recovery line trench along the eastern pump island where elevated PID readings were noted. Soil Samples T5-3, T6-3 and T-6-4 were collected from the fuel/vapor recovery line trench along the western pump island. Soil Sample T6-4 was collected one foot below T6-3 to delineate the extent of vertical migration of petroleum constituents. Soil sample locations are shown on Figure 1.

Underground Storage Tank Complex Excavation

The UST complex was uncovered, exposing the top of all three previously existing USTs and the newly emplaced UST. Excavated material from the UST excavation consisted of pea gravel. PID readings in the UST excavation were consistently at background levels.

Soil Stockpiles

Material excavated during construction operations was stockpiled on-site in five separate stockpiles (SP-1 through SP-4 and TSP).

Stockpile SP-1 contained approximately 500 cy. of sand and clay generated during excavation for the new UST. Five soil samples (SP-1A through SP-1E) were collected from Stockpile SP-1 and submitted for analysis.

Stockpile SP-2 contained approximately 10 cy. of sand and pea gravel excavated from beneath the concrete slab around the fills of the existing USTs. One soil sample (SP-2) was collected from Stockpile SP-2 and submitted for analysis.

Stockpile SP-3 contained approximately 45 cy. of sand and clay generated from trenching activities along the pump islands. Field observations indicated that this soil was above cleanup levels and it was segregated from other soils. Two soil samples (SP-3A and SP-3B) were collected from Stockpile SP-3 and submitted for analysis.

Stockpile SP-4 contained approximately 80 cy. of sand and pea gravel generated during the trenching along the pump islands and leading to the UST complex. Three soil samples (SP-4A through SP4-C) were collected from Stockpile SP-4 and submitted for analysis.

Stockpile TSP contained approximately 25 cy. of sand and clay generated during the removal of the encountered UST. Two soil samples (TSP-1 and TSP-2) were collected from TSP and submitted for analysis.

The stockpiled soil from Stockpile 1 and Stockpile 2, with reported TPH concentrations below MTCA Method A cleanup levels, was transported to Wilder Landfill in Whatcom County, Washington.

The soil from Stockpile 3, the Tank-pull Stockpile (TSP), and the soil from Stockpile SP-4 with reported TPH concentrations above MTCA Method A cleanup levels was transported to Holnam Ideal Division (Holnam)of Seattle, Washington. The portion of Stockpile SP-4 which was below MTCA Method A cleanup levels was transported to Wilder Landfill in Whatcom County, Washington.

WATER SAMPLING, TREATMENT, AND DISPOSAL

During the installation of the new 12,000-gallon UST, Sleister pumped approximately 13,000 gallons of groundwater from the existing gasoline UST complex and stored the water in an on-site Baker Tank. Approximately 3,000 gallons of water was also pumped into the Baker Tank from the new UST excavation during the emplacement of the UST. Groundwater stored on-site in the 16,500-gallon Baker Tank was sampled (BT-1) and submitted for analysis. Analytical results identified concentrations of BTEX exceeding those limits specified by the City of Blaine Public Works for disposal to the sanitary sewer. The water was treated in the Baker Tank with a portable air sparging unit. Air sparging involves blowing air from an air compressor through the water to volatilize the BTEX compounds. Air sparging was performed with permission from the Northwest Air Pollution Control Authority and in accordance with their guidelines. Following treatment, the water was resampled BT-1(B) and submitted for analysis. Analytical results

indicated concentrations below those limits specified by the City of Blaine Public Works and the water was subsequeutly discharged at a controlled flow rate to the sanitary sewer.

Followiug discharge, approximately 1,500 gallons of liquid was pumped from the abandoned 2,000-gallon UST and stored in the Baker Tank. The portable air sparging unit, in compliance with Northwest Air Pollution Control Authority guidelines, was used to treat the water . Three events of air sparging and sampling (Samples BT-2, BT-2B, and BT-2C) were required before concentrations below the limits specified by the City of Blaine Public Works were achieved. Following treatment, the water was discharged at a controlled flow rate to the sanitary sewer. During both discharges, the water flow was metered to obtain accurate gallonage discharged. A representative from the City of Blaine Public Works was present on-site to document the gallonage discharged to the sanitary sewer. Groundwater sampling procedures are included in Attachment A.

CHEMICAL ANALYSES

Based on field PID readings and discussions with Chevron, PACIFIC submitted fifteen soil samples for analysis by a state certified laboratory. Seven water samples were also submitted for analysis by a state certified laboratory. Soil and water samples were analyzed for some or all of the following parameters:

PARAMETER	METHOD
Total petroleum hydrocarbons as diesel and oils	Washington Method WTPH-D + extended
Total petroleum hydrocarbons as gasoline (TPH-gasoline)	Washington Method WTPH-G
Benzene, toluene, ethylbenzene and xylenes (BTEX compounds)	EPA Method 8020
Total lead	EPA Method 7421

The soil samples were analyzed by Analytical Technologies, Inc. of Renton, Washington.

Analytical Results

Soil sample analytical results are presented in Table 1. Water sample analytical results are presented in Table 2. Laboratory methods, analytical reports, and chain-of-custody documentation are contained in Attachment B.

CONCLUSIONS

Analytical results for Trench Samples T3-3, T5-3, T6-3, and T6-4 indicate that concentrations of TPH-gasoline and one or more of the BTEX compounds exceed MTCA Method A cleanup levels.

Analytical results for the soil sample collected from the eastern sidewall (ESW-1) of the UST excavation indicate that the concentration of benzene exceeds the MTCA Method A cleanup level. Analytical results for the soil sample collected from the southern sidewall of the UST removal excavation indicate that the concentrations of TPH-gasoline and the BTEX compounds are below MTCA Method A cleanup levels.

Neither concentrations of TPH-gasoline nor any BTEX compounds were detected above laboratory reporting limits in the soil samples collected from Stockpile 1 and Stockpile 2.

Analytical results for Stockpile 3, Stockpile 4 and Stockpile TSP indicate that concentrations of TPH-gasoline exceed MTCA Method A cleanup levels.

The stockpiled soil with reported TPH concentrations below MTCA Method A cleanup levels was transported to Wilder Landfill in Whatcom County, Washington. The approximately 45 cy. of soil from Stockpile SP-3 and approximately 30 cy. of soil from Stockpile SP-4 with reported TPH concentrations above MTCA Method A cleanup levels was transported to Holnam Ideal Division of Seattle, Washington.

Approximately 16,000 gallons of groundwater was treated with a portable air sparging unit and subsequently discharged to the sanitary sewer.

Approximately 1,500 gallons of water was pumped from the UST encountered during trenching and was treated with a portable air sparging unit and subsequently discharged to the sanitary sewer.

Groundwater exceeding MTCA Method A cleanup levels for TPH-gasoline and the BTEX compounds was identified in the excavation generated during the UST removal.

PACIFIC appreciates this opportunity to be of continuing service. Should you have any questions regarding the contents of this report, please call.

Sincerely,

Pacific Environmental Group, Inc.

Matt Miller for
Brett Amero
Staff Geologist

John Johnson CHMM, REP
Project Manager

Attachments: Table 1 - Soil Analytical Results
Table 2 - Water Analytical Results
Figure 1 - Soil Sample Location Map
Attachment A - Investigative Procedures
Attachment B - Laboratory Analytical Methods and Reports
Chain-of-Custody Documentation

TABLE 1
SOIL ANALYTICAL RESULTS
CHEVRON U.S.A. SERVICE STATION 60091122

TPH-Gasoline - Washington Method WTPH-G
BTEX Compounds - EPA Method 8020
TPH-Diesel, TPH-Oil - Washington Method WTPH-D + extended
Concentration in mg/kg (ppm)

				PARAMETER					
Sample I.D.	Location	Date	Depth (feet)	TPH-Diesel + extended	TPH-Gasoline	Benzene	Toluene	Ethyl-benzene	Xylenes
T1-4	Product line trench	4/18/94	4.0	NA	48	0.09	0.1	0.1	2.2
T2-3	Product line trench	4/18/94	3.0	NA	ND	ND	ND	ND	0.1
T3-3	Product line trench	4/18/94	3.0	NA	5,700	5.8	29	36	260
T4-3	Product line trench	4/18/94	3.0	NA	ND	ND	ND	ND	ND
T5-3	Product line trench	4/18/94	3.0	NA	1,070	0.4	3.3	2.1	44.3
T6-3	Product line trench	4/18/94	3.0	NA	853	4.64	22.1	6.2	57.5
T6-4	Product line trench	4/18/94	4.0	NA	121	5.36	10.9	1.3	10.8
SP-1A	Stockpile 1	4/5/94	-	ND	ND	ND	ND	ND	ND
SP-1B	Stockpile 1	4/5/94	-	ND	ND	ND	ND	ND	0.2
SP-1C	Stockpile 1	4/5/94	-	ND	ND	ND	ND	ND	ND
SP-1D	Stockpile 1	4/5/94	-	ND	ND	ND	ND	ND	ND
SP-1E	Stockpile 1	4/5/94	-	ND	ND	ND	ND	ND	ND
SP-2	Stockpile 2	4/18/94	-	NA	ND	ND	ND	ND	ND

(continued)

TABLE 1
SOIL ANALYTICAL RESULTS
CHEVRON U.S.A. SERVICE STATION 60091122

TPH-Gasoline - Washington Method WTPH-G
BTEX Compounds - EPA Method 8020
TPH-Diesel, TPH-Oil - Washington Method WTPH-D + extended
Concentration in mg/kg (ppm)

				PARAMETER					
Sample I.D.	**Location**	**Date**	**Depth (feet)**	**TPH-Diesel + extended**	**TPH-Gasoline**	**Benzene**	**Toluene**	**Ethyl-benzene**	**Xylenes**
SP-3A	Stockpile 3	4/18/94	-	NA	701	8.45	45.9	10.2	72.2
SP-3B	Stockpile 3	4/18/94	-	NA	285	0.05	0.2	0.2	9.6
SP-4A	Stockpile 4	4/18/94	-	NA	ND	ND	ND	ND	ND
SP-4B	Stockpile 4	4/18/94	-	NA	ND	ND	ND	ND	ND
SP-4C	Stockpile 4	4/18/94	-	NA	121	0.15	ND	ND	1.3
SSW-1	South sidewall of excavation	4/26/94	7.5	NA	ND	ND	ND	ND	0.5
ESW-1	East sidewall of excavation	4/26/94	7.5	NA	13	0.77	ND	0.4	1.6
TSP-1	Tank-pull stockpile	4/26/94	-	NA	1,260	0.58	24.0	14.4	95.3
TSP-2	Tank-pull stockpile	4/26/94	-	NA	79	ND	0.1	ND	3.2
MTCA Method A Cleanup levels:				**200**	**100**	**0.5**	**40**	**20**	**20**
Reporting Limits				**25/100**	**5.0**	**0.05**	**0.1**	**0.1**	**0.1**

NOTES: ND - Not Detected
NA - Not Analyzed

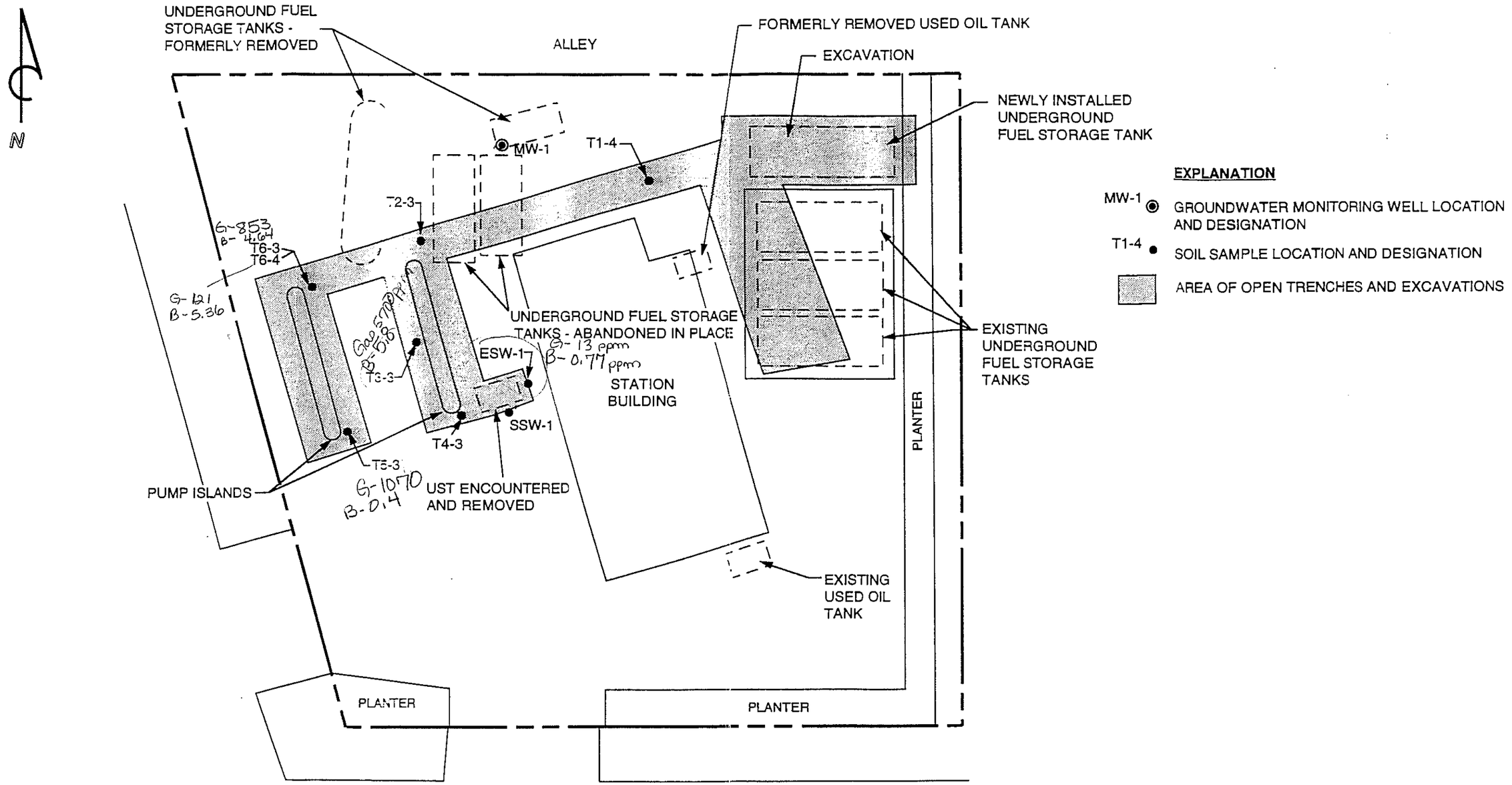
TABLE 2
WATER ANALYTICAL RESULTS
CHEVRON U.S.A. SERVICE STATION 60091122

TPH-Diesel, TPH-Oil - Washington Method WTPH-D + extended
TPH-Gasoline - Washington Method WTPH-G
BTEX Compounds - EPA Method 8020
Total Lead - EPA Method 7421

Concentrations in ug/L (ppb)

		PARAMETER						
Sample I.D.	**Sample Date**	**TPH-Diesel + extended**	**TPH-Gasoline**	**Benzene**	**Toluene**	**Ethyl-benzene**	**Xylenes**	**Total Lead**
BT-1	3/30/94	400/ND	1,150	111	86	19	78	3.0
BT-1(B)	4/6/94	350/ND	ND	ND	ND	ND	ND	NA
Tank^	4/18/94	2,160/ND	56,000	3,400	5,900	261	9,700	NA
BT-2	4/29/94	3,800/1,730	2,310	5.2	39	19	132	NA
BT-2B	5/6/94	6,950/3,540	2,320	8.8	37	14	110	NA
BT-2C	5/12/94	4,160/2,420	490	ND	ND	9	5	103
TPW-1	4/26/94	NA	220,000	1,300	11,000	3,300	30,000	NA
City of Blaine Discharge Limits		**100,000***	**100,000***	**100****	**100****	**100****	**100****	-
MTCA Method A Cleanup Levels:		**NA**	**1,000**	**5**	**40**	**30**	**20**	**5**
Reporting Limits:		**250/750**	**50/100**	**0.5**	**1**	**1**	**1**	**2**

NOTES: ND - Not Detected
NA - Not Analyzed
Certified Analytical Results are attached
^ Water sample collected directly from UST
* - Discharge limit for TPH-Gasoline, TPH-Diesel, and TPH-Oil combined
** - Discharge limit for all BTEX compounds combined



SOURCE: EMCON NORTHWEST, INC., FIGURE 2, SITE PLAN

PACIFIC ENVIRONMENTAL GROUP, INC.

APPROXIMATE SCALE
0 10 20 FEET

CHEVRON U.S.A. SERVICE STATION 60091122
568 Peace Portal Drive
Blaine, Washington

SOIL SAMPLE LOCATION MAP

FIGURE: 1
PROJECT: 520-060.1A

Attachment C:
Delta Environmental Consultants, Inc., 2001

Delta
Environmental
Consultants, Inc.

1200-112th Avenue N.E.
Suite C-146
Bellevue, Washington 98004-3769
425/450-7726
FAX: 425/450-8837

October 3, 2001
Project CW91122-A

Mr. Brett Hunter
Chevron Products Company
6001 Bollinger Canyon Rd
Building V, Room 1144
San Ramon, CA 94583-0904

Re: Sub-surface Environmental Investigation
Chevron Service Station 9-1122
568 Peace Portal Drive
Blaine, Washington

Dear Mr. Hunter:

This letter presents the results of an environmental investigation conducted by Delta Environmental Consultants, Inc. (Delta) at Chevron Service Station 9-1122, located at the address referenced above (Figure 1). The purpose of this investigation was to assess and document the soil and groundwater quality with respect to petroleum hydrocarbons at the site.

The scope of work for the environmental investigation was performed between April 24, 2001 and June 19, 2001 and consisted of the following tasks:

- Create the Site Health and Safety Plan.
- Drill four exploratory soil borings (B-1 to B-4).
- Install a two-inch diameter groundwater monitoring well in each of the soil borings (MW-1 and MW-4).
- Collect soil samples from selected intervals in the soil borings.
- Field screen soil samples using a photo-ionization detector (PID).
- Develop the newly installed wells.
- Survey the elevations of the newly installed wells with respect to an arbitrary site datum.

- Collect groundwater samples from the newly installed wells (MW-1 to MW-4).
- Submit soil and groundwater samples and appropriate documentation to a Chevron approved laboratory for analysis.
- Dispose of drill cuttings in accordance with the current Department of Ecology guidelines.

SITE DESCRIPTION

The Chevron Service Station is an operating facility located at 568 Peace Portal Dive in Blaine, Washington. The area surrounding the site consists of a residence to the east, a commercial building complex to the south, Peace Portal Memorial Park to the west and a retail service station to the north. Four gasoline underground storage tanks (USTs) are located in a common excavation in the northeast corner of the site. The service station building is located in the center of the site. The fuel dispensers are located west of the station building.

SOIL BORING INSTALLATION AND SAMPLING

Cascade Drilling, Inc. (Cascade) of Woodinville, Washington installed four exploratory soil borings (B-1 to B-4) on April 24, 2001. The borings were drilled to total depths between 16.5 feet and 21.5 feet below grade (bg). The soil borings were drilled using a hollow-stem auger drill rig, and logged by a Delta environmental engineer using the Unified Soil Classification System. Soil samples were collected in 5-foot intervals to the total depths explored in the borings. Soil samples for chemical analysis were retained in laboratory-supplied glass jars with Teflon® lined lids. The soil samples were placed on ice for transport and submitted to North Creek Analytical, Inc. (NCA) in Bothell, Washington for chemical analyses. Sample preservation techniques are described in Attachment A.

Soil samples were field screened for the presence of hydrocarbons using a Perkin Elmer Photovac Model 2020 photo-ionization detector (PID) with a 10.0 electron volt (eV) lamp. Field screening methodology is described in Attachment A. PID results for the soil samples collected from soil borings ranged from non-detect to 13 parts per million (ppm). The results of this field screening are also recorded on the soil boring logs included in Attachment B. It should be noted that the PID measurements are considered semi-quantitative data since the instrument detects all organic compounds with ionization potentials less than 10 eV.

MONITORING WELL INSTALLATION

The four exploratory soil borings were converted to groundwater monitoring wells (MW-1 to MW-4) by the installation of 2-inch diameter, schedule 40 PVC casing with 0.010 inch factory slotted screen. The well screen was placed across the saturated zone in

each well and extended from approximately 5 feet to 15 feet bg. The annular space of each well was packed with a graded 2x12 silica sand. The sand pack was placed across the entire screened interval, extending approximately two feet above the top of the screens. The annular space of each well was then sealed with hydrated bentonite chips to approximately 1.5 feet bg. A plug-type locking device and waterproof monument set in concrete was installed at the top of each monitoring well. Refer to the boring logs in Attachment B for specific information on well construction.

The elevations of wells MW-1 through MW-4 were surveyed to the nearest 0.01 foot with respect to an arbitrary datum established for the site. A survey reference mark was scribed on the lip of each monitoring well casing with a permanent marker. The arbitrary datum established at the site was assigned an elevation of 100.00 feet. Surveyed elevations are presented in Table 1 of the Gettler-Ryan Inc (GR) data packet included in Attachment C. The survey field data sheet is presented in Attachment B.

MONITORING WELL DEVELOPMENT AND SAMPLING

Monitoring wells MW-1 through MW-4 were developed on May 3, 2001 by bailing each well with a disposable 1.5-inch diameter bailer. Well development procedures are presented in Attachment A. The well development field data sheet is included in Attachment B.

GROUNDWATER SAMPLING

A representative of GR performed water level measurements and groundwater sampling on June 19, 2001. The groundwater results are presented in the GR data packet included in Attachment C.

ANALYTICAL PARAMETERS

Soil and groundwater samples were analyzed for one or more of the following parameters:

PARAMETER	METHOD
Total Petroleum Hydrocarbons as gasoline	Northwest Method NWTPH-gasoline
Total Petroleum Hydrocarbons as diesel and oil	Northwest Method NWTPH-Dx w/silica gel clean-up
Benzene, toluene, ethylbenzene, and xylenes (BTEX compounds)	EPA Method 8021B
Methyl tert-butyl ether	EPA Method 8021B (MTBE)
Total lead (Soil)	EPA 6000/7000 Series Methods

Dissolved Lead (Water)	EPA 6000/7000 Series Methods

The soil and groundwater samples were analyzed by North Creek Analytical, Inc., of Bothell, Washington.

SOIL ANALYTICAL RESULTS

Concentrations of TPH-diesel and TPH-oil were not detected above laboratory reporting limits in the soil samples submitted for analysis from Borings B-1 through B-4. TPH-gasoline was detected in soil samples submitted for B-2, B-3 and the stockpile sample at 151 milligrams per kilogram (mg/kg), 6.94 mg/kg, and 134 mg/kg, respectively. One or more BTEX compounds were detected in soil samples from borings B-2, B-3, B-4 and the stockpile sample at concentrations ranging from 0.0657 mg/kg to 12.4 mg/kg. The stockpile sample contained a total lead concentration of 6.40 mg/kg. Soil sample analytical results are presented in Table 1. Laboratory methods, analytical reports, and chain-of-custody documentation are contained in Attachment D.

GROUNDWATER ANALYTICAL RESULTS

Concentrations of TPH-gasoline were detected in the groundwater samples collected from wells MW-1, MW-2 and MW-3 at 192 parts per billion (ppb), 40,200 ppb and 2,290 ppb, respectively. One or more BTEX compounds were detected in wells MW-1, MW-2 and MW-3 at concentrations ranging from 0.550 ppb to 3,200 ppb. Concentrations of TPH-diesel were detected in well MW-2 at 791 ppb. The analytical laboratory noted that the TPH-diesel concentration was primarily due to an overlap from the gasoline range product. The groundwater results are presented in the GR data packet included in Attachment C.

SUBSURFACE CONDITIONS

Soils encountered in the investigation consisted predominantly of loose to medium dense silty sand underlain by soft inorganic clay. PID measurements in the soil samples screened ranged from non-detectable levels to 13 ppm.

Depth to groundwater was measured in Wells MW-1 through MW-4 on June 19, 2001. Depth to groundwater in the wells on this date ranged between 4.04 feet to 9.42 feet below top of well casing.

FINDINGS AND CONCLUSIONS

Soil sample concentrations from borings B-1, B-3 and B-4 did not exceed the Washington State Model Toxics Control Act (MTCA) Method A cleanup levels in effect on the date of this project for TPH-gasoline, TPH-diesel, and BTEX compounds. The detected concentrations of TPH-gasoline and benzene in the five foot sample submitted for analysis

from boring B-2 and the stockpile sample exceeded the respective MTCA Method A cleanup levels.

TPH-oil was not detected above laboratory reporting limits in the groundwater samples submitted for analysis. Detected concentrations of TPH-gasoline and BTEX compounds in groundwater samples collected from well MW-2 exceeded the MTCA Method A cleanup levels. The detected concentration of TPH-diesel in well MW-2 did not exceed the MTCA Method A cleanup level. The detected concentration of TPH-gasoline in the groundwater sample collected from well MW-3 exceeded the MTCA Method A cleanup level.

Groundwater elevations on June 19, 2001 ranged from 90.58 feet to 94.67 feet. The inferred groundwater migration direction on this date was towards the northwest at a gradient of approximately 0.08 ft/ft. The groundwater elevations are based on an arbitrary project datum of 100.00 feet. Groundwater elevation contours are presented on Figure 1 of the GR date packet.

The drill cuttings were compiled in 55-gallon drums and stored on site. On June 18, 2001, the 1.93 tons of soil generated during assessment was transported off site by Envirotech Systems of Lynnwood, Washington to TPS Technologies of Tacoma, Washington for disposal. The soil disposal weight ticket is included in Attachment B.

Delta appreciates this opportunity to be of continuing service. If you have any questions regarding the contents of this report, please call.

Sincerely,

Delta Environmental Consultants, Inc.

Shawn Madison
Environmental Engineer

Matthew Miller
Project Manager

Attachments: Table 1 - Soil Analytical Results
Figure 1 - Site Map
Attachment A - Investigative Procedures
Attachment B - Boring Logs/Field Data Sheets/Soil Disposal Weight Ticket
Attachment C - Gettler - Ryan Groundwater Monitoring and Sampling Data
Attachment D - Laboratory Analytical Methods and Reports
Chain-of-Custody Documentation

cc: John Wietfeld - Washington State Department of Ecology
Michael Hill - Hill's Chevron

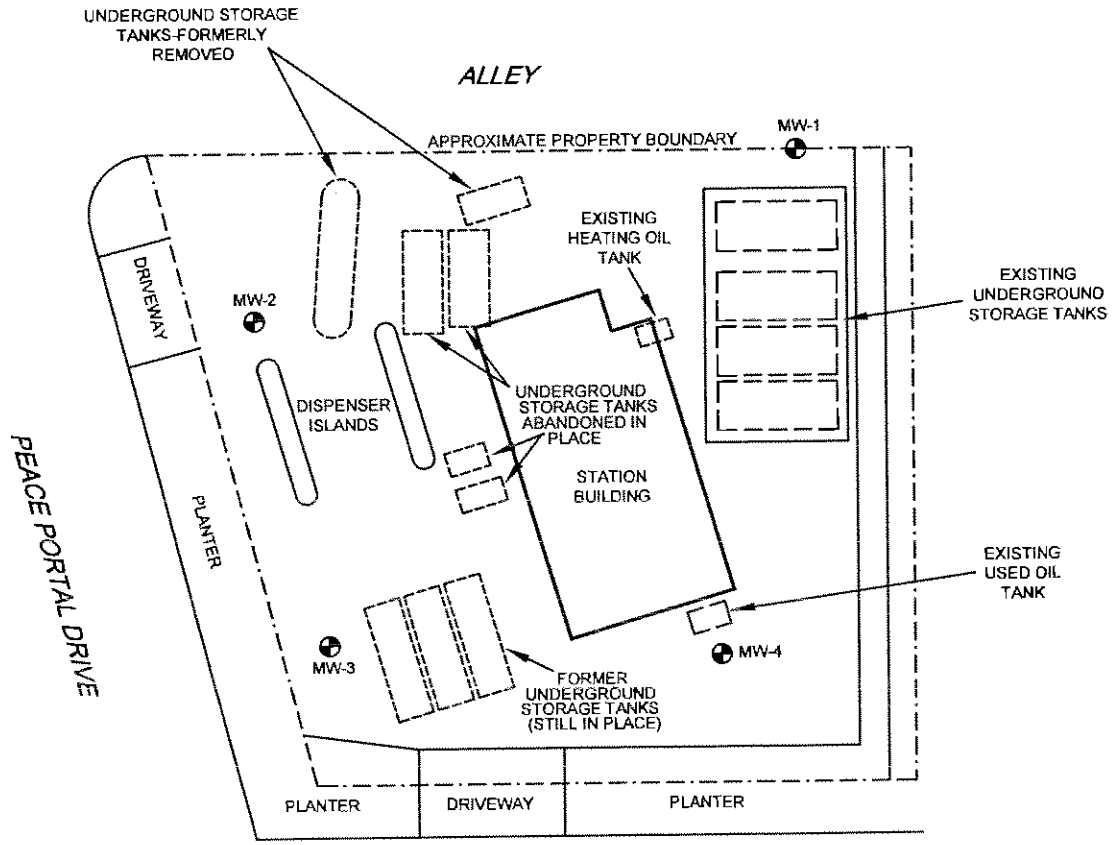
TABLE 1
SOIL ANALYTICAL RESULTS

Chevron Service Station 91122
568 Peace Portal Drive
Blaine, WA

Sample I.D.	Date	TPH-Gasoline (mg/kg)	TPH-Diesel (mg/kg)	TPH-Oil (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Total Lead (mg/kg)
B-1-5	04/24/01	ND	ND	ND	ND	ND	ND	ND	NA
B-2-5	04/24/01	151	ND	ND	1.42	2.51	1.74	12.4	NA
B-3-5	04/24/01	6.94	ND	ND	ND	0.0657	ND	0.220	NA
B-4-5	04/24/01	ND	ND	ND	ND	ND	ND	0.109	NA
Stock Pile	04/24/01	134	10.6	ND	0.642	0.954	1.01	7.96	6.40
MTCA Method A Cleanup Levels:		**100**	**200.00**	**200.00**	**0.5**	**40**	**20**	**20**	**250**
Laboratory Reporting Limits:		**5.00-20.00**	**10.00**	**25.00**	**0.0500-0.200**	**0.0500-0.200**	**0.0500-0.200**	**0.100-0.400**	**0.370**

Concentrations in milligrams per kilograms (mg/kg)
ND = Not detected at the laboratory reporting limits
NA = Not Analyzed
Boring locations are shown on Figure 1
Certified Analytical Results are attached
TPH as Gasoline - Analysis by Northwest Method NWTPH-Gx
TPH as Diesel and oil - Analysis by Northwest Method NWTPH-Dx (extended) with Acid/Silica Gel Clean-up
BTEX Compounds - Analysis by EPA Method 8021B
Total Lead - Analysis by EPA 6000/7000 Series Methods

QA/QC MM 8/21/01



LEGEND:

MW-1 MONITORING WELL LOCATION AND DESIGNATION

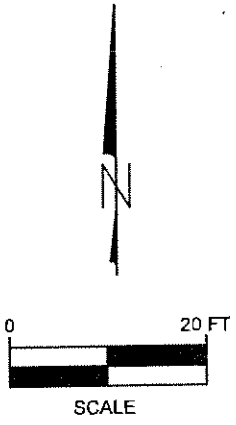


FIGURE 1

SITE MAP

CHEVRON SERVICE STATION NO. 9-1122

568 PEACE PORTAL DRIVE

BLAINE, WASHINGTON

PROJECT NO. CW91-122	DRAWN BY M.L. 5/31/01
FILE NO. 9-1122-1	PREPARED BY S.M.
REVISION NO. 1	REVIEWED BY

Delta Environmental Consultants, Inc.

ATTACHMENT A

INVESTIGATIVE PROCEDURES

ATTACHMENT A

Exploratory Boring Installation

The four soil borings were drilled on April 24, 2001 by Cascade Drilling Inc., of Woodinville, Washington. The borings were drilled using eight-inch diameter hollow-stem auger drilling equipment. A Delta Environmental engineer using the Unified Soil Classification System and standard geologic techniques logged the borings. Boring logs are presented in Attachment B. Soil samples for logging and chemical analysis were collected at five-foot depth intervals by advancing a 2-inch inside diameter split-spoon sampler into undisturbed soil beyond the tip of the auger. The sampler was driven a maximum of 18 inches using a 140-pound hammer with a 30-inch drop. Soil samples for chemical analysis were retained in laboratory-supplied glass jars with Teflon® lined lids. The samples were placed on ice for transport to the laboratory accompanied by chain-of-custody documentation presented in Attachment C. The split-spoon sampler was cleaned by washing in a detergent solution followed by a clean water rinse and distilled water rinse. All drilling equipment was steam-cleaned between each boring location.

Organic Vapor Screening

Soil samples were screened in the field for ionizable organic compounds using a Perkin Elmer Photovac Model 2020 photo-ionization detector with a 10 eV light source. The test procedure involved collecting a discrete soil sample from the split spoon , and placing it in a resealable bag. The bag was allowed to warm to ambient temperature for approximately twenty minutes, then the bag was pierced and the head-space within the bag was tested for total organic vapor, measured in parts per million, (ppm; volume/volume). The detection limit of the instrument ranges from 0.1 ppm to 2,000 ppm. It should be noted that the PID measurements are considered semi-quantitative data since the instrument detects all organic compounds with ionization potentials less than 10 electron volts (eV).

Well Development

The development procedure for groundwater monitoring wells MW-1 through MW-4 consisted of lowering a bailer through the well until striking the surface of the water, and continuing to lower the bailer to the bottom of the well. As the bailer is pulled up through the water column, the action of the bailer produces an outward surge of water that is forced from the borehole through the well screen and into the formation. This tends to break up any bridging that has developed within the formation. As the bailer is repeatedly raised and lowered through the well, the surging action created in the borehole causes the particulate matter outside the well intake to flow into the well. The water is then pumped from the well using a centrifugal pump or bailer. Continued pumping or bailing removes the particulate matter from the well. The bailing or pumping procedure is repeated until approximately 10 casing volumes of water is removed. Groundwater was treated on site by filtering the water through granular activated carbon, and subsequently discharged. Well development data sheets are included in Attachment B.

Groundwater Sampling

The groundwater sampling procedure consisted of first measuring the water level and visually checking for the presence of separate-phase hydrocarbons and sheens using a clear, single-use, disposable polyethylene bailers. Each well was then purged of a minimum of three casing volumes of water (or until dry) by bailing. Groundwater samples were collected using disposable polyethylene bailers. The samples were placed into appropriate EPA-approved containers, labeled, logged onto chain-of-custody documents, and transported on ice to North Creek Analytical Inc. laboratory in Bothell, Washington. Purge water was treated on site by filtering the water through granular activated carbon, and subsequently discharged. Field data sheets and Chain-of-Custody documentation are presented in the GR data packet in Attachment C.

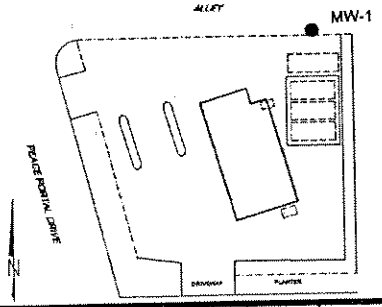
ATTACHMENT B

BORING LOGS

FIELD DATA SHEETS

SOIL DISPOSAL WEIGHT TICKETS

WELL/BORING LOCATION MAP



Delta Environmental Consultants, Inc.

WELL/BORING: B-1/MW-1

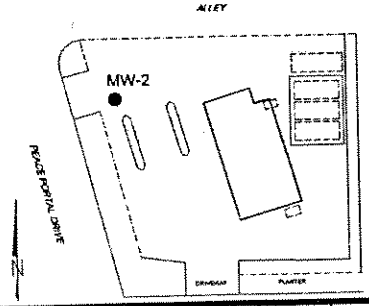
DATE: 4/24/2001	DRILLING METHOD: Hollow Stem Auger
PROJECT: CW 91122	SAMPLING METHOD: DM Split Spoon
CLIENT: Chevron 91122	BORING DIAMETER: 8"
LOCATION: 568 Peace Portal Drive	BORING DEPTH: 16.5'
CITY: Blaine	WELL CASING: SCH 40 PVC 2"
STATE: WA	WELL SCREEN: 5 to 15' (0.010")
DRILLER: Cascade	SAND PACK: 3-16.5' (2X12)

CASING ELEVATION	100.00
DATE:	5/3/2001
DWT	8.34

DESCRIPTION/LOGGED BY: SHAWN MADISON

WELL/BORING COMPLETION	FIRST	STABILIZED	MOISTURE	PID (ppm)	DENSITY BLOWS / 6"	DEPTH (FEET)	RECOVERY	SAMPLE INTERVAL	USCS SYMBOL	GRAPHIC	DESCRIPTION
Concrete / Bentonite / Sand	▽	▼ 8.34	WT	0	5 5 5	1–5			SM		SILTY SAND: dark yellowish brown; 40% fines; very fine to fine sand; loose; no odor
			WT	0	3 2 2	10–11			CH		INORGANIC CLAY: gray; high plasticity; 20% very fine sand; soft; no odor
			WT	0	3 3 3	15–16			CH		INORGANIC CLAY: gray; high plasticity; 20% very fine sand; soft; no odor,

WELL/BORING LOCATION MAP



Delta Environmental Consultants, Inc.

WELL/BORING: B-2/MW-2

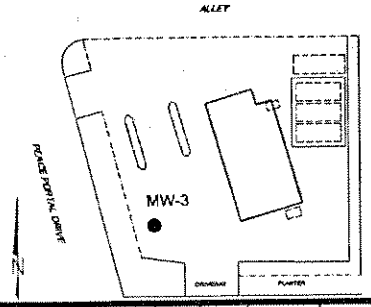
DATE: 4/24/2001	DRILLING METHOD: Hollow Stem Auger
PROJECT: CW 91122	SAMPLING METHOD: DM Split Spoon
CLIENT: Chevron 91122	BORING DIAMETER: 8"
LOCATION: 568 Peace Portal Drive	BORING DEPTH: 21.5'
CITY: Blaine	WELL CASING: SCH 40 PVC 2"
STATE: WA	WELL SCREEN: 5 to 15' (0.010")
DRILLER: Cascade	SAND PACK: 3-21.5' (2X12)

CASING ELEVATION	97.01
DATE:	5/3/2001
DWT	3.72

DESCRIPTION/LOGGED BY: SHAWN MADISON

WELL/BORING COMPLETION	FIRST ▽	STABILIZED ▼	MOISTURE	PID (ppm)	DENSITY BLOWS / 6"	DEPTH (FEET)	RECOVERY	SAMPLE INTERVAL	USCS SYMBOL	GRAPHIC	
Concrete / Bentonite / Sand		3.72				1–4					
	▽		DP	11	5 6 6	5–6			SM		SILTY SAND: greenish gray; 40% fines; very fine to fine sand; hydrocarbon like odor; loose
						7–9					
			WT	0	4 3 3	10–11			CH		INORGANIC CLAY: gray; high plasticity; 20% very fine to fine sand; no odor; soft
						12–14					
			WT	0	2 3 2	15–16			CH		INORGANIC CLAY: gray; high plasticity; 20% very fine to fine sand; no odor; soft
						17–19					
			WT	0	1 1 1	20–21			CH		INORGANIC CLAY: gray; high plasticity; 20% very fine to fine sand; no odor; very soft
						22					

WELL/BORING LOCATION MAP



Delta Environmental Consultants, Inc.

WELL/BORING: B-3/MW-3

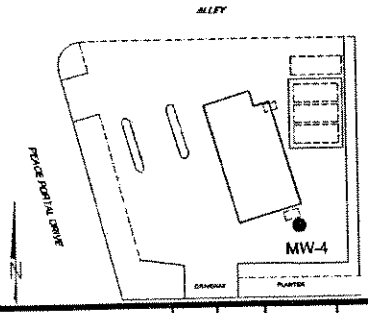
DATE: 4/24/2001	DRILLING METHOD: Hollow Stem Auger
PROJECT: CW 91122	SAMPLING METHOD: DM Split Spoon
CLIENT: Chevron 91122	BORING DIAMETER: 8"
LOCATION: 568 Peace Portal Drive	BORING DEPTH: 16.5'
CITY: Blaine	WELL CASING: SCH 40 PVC 2"
STATE: WA	WELL SCREEN: 5 to 15' (0.010")
DRILLER: Cascade	SAND PACK: 3-16.5' (2X12)

CASING ELEVATION	98.29
DATE:	5/3/2001
DWT	4.37

DESCRIPTION/LOGGED BY: SHAWN MADISON

WELL/BORING COMPLETION	FIRST	STABILIZED	MOISTURE	PID (ppm)	DENSITY BLOWS / 6"	DEPTH (FEET)	RECOVERY	SAMPLE INTERVAL	USCS SYMBOL	GRAPHIC	DESCRIPTION
Concrete / Bentonite / Sand	▽	▼ 4.37	WT	13	7 10 8	1–6			SM		SILTY SAND: gray; 25% fines; very fine to fine sand; medium dense; hydrocarbon like odor
			WT	11	2 2 2	10–11			CH		INORGANIC CLAY: gray; high plasticity; 20% very fine to fine sand; soft; hydrocarbon like odor
			WT	0	2 2 2	15–16			CH		INORGANIC CLAY: gray; high plasticity; 20% very fine to fine sand; soft

WELL/BORING LOCATION MAP



Delta Environmental Consultants, Inc.

WELL/BORING: B-4/MW-4

DATE: 4/24/2001	DRILLING METHOD: Hollow Stem Auger
PROJECT: CW 91122	SAMPLING METHOD: DM Split Spoon
CLIENT: Chevron 91122	BORING DIAMETER: 8"
LOCATION: 568 Peace Portal Drive	BORING DEPTH: 16.5'
CITY: Blaine	WELL CASING: SCH 40 PVC 2"
STATE: WA	WELL SCREEN: 5 to 15' (0.010")
DRILLER: Cascade	SAND PACK: 3-16.5' (2X12)

CASING ELEVATION	99.81
DATE:	5/3/2001
DWT	4.65

DESCRIPTION/LOGGED BY: SHAWN MADISON

WELL/BORING COMPLETION	FIRST	STABILIZED	MOISTURE	PID (ppm)	DENSITY BLOWS / 6"	DEPTH (FEET)	RECOVERY	SAMPLE INTERVAL	USCS SYMBOL	GRAPHIC	DESCRIPTION
Concrete / Bentonite / Sand	▽	▼ 4.65	WT	0	2 3 4	1–5			SM		SILTY SAND: dark graynish brown; 25% fines; very fine to fine sand; lose; no tph odor
			WT	0	2 1 2	6–11			CH		INORGANIC CLAY: gray; high plasticity; 20% very fine to fine sand; very soft
			WT	0	2 1 1	12–16			CH		INORGANIC CLAY: gray; high plasticity; 20% very fine to fine sand; very soft
						17–22					

Well Development Data Sheet

Delta Project No. CW9122 Chevron Site No. 9-1122

Site Address Blanco Ave Field Rep. SM

Date 5/3/11

Well I.D.	Total Well Depth (TWD)	Depth To Water (DTW)	WD (TWD - DTW)	Multiplier For Ten Well Volumes 2" = 1.7, 4" = 6.6	Purge Volume (gal)	Actual Purge Volume	Development Method	Comments (Odor, Sheen, Clarity)
MW-1	15	8.34	6.66	1.7	11.322	11.5	Disposable Bailer	TPH like odor
MW-2	15	3.72	11.28	1.7	19.176	19.0	"	
MW-3	15	4.37	10.62	1.7	18.07	18.0	"	
MW-4	15	4.65	10.35	1.7	17.59	17.5	"	

MONITORING WELL SURVEY FORM

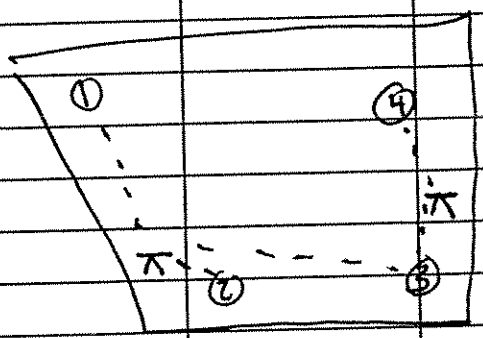
CHEVRON STATION NO. 9-1122 DELTA PROJECT NO. CW9122

ADDRESS FIELD PERSONNEL SM

Blanco CA DATE 5/3/11

**********ATTACH SITE PLAN TO THIS SHEET**********

LOCATION	ELEVATION	TOP	MIDDLE	BOTTOM	CHECK
MW-1	100.00	2.52	1.92	1.32	0.60 0.60
MW-2	97.01	5.03	4.91	4.79	0.12 0.12
MW-3	98.29	4.13	3.63	3.13	0.50 0.50
~~MW-3~~ (Turn)	98.29	7.03	6.91	6.79	0.12 0.12
MW-4	99.81	5.74	5.39	5.04	0.35 0.35



Manifest

TPS Technologies Soil Recycling
Non-Hazardous Soils

↓ Manifest # ↓

Date of Shipment:	Responsible for Payment:	Transporter Truck #:	Facility #:	Given by TPS:	Load #
	Generator		A03	03395	001

Generator and/or Consultant

Generator's Name and Billing Address:
CHEVRON PRODUCTS CO.
P.O. BOX 6004
ROOM V-1144
SAN RAMON, CA 94583-0712 USA

Generator's Phone #:
Person to Contact: BRETT HUNTER
FAX#: (925) 842-8595
Generator's US EPA ID No.
Customer Account Number with TPS: 1001373

Consultant's Name and Billing Address:
DELTA ENVIRONMENTAL
1200 - 112th AVENUE NE
SUITE #C146
BELLEVUE, WA 98004 USA

Consultant's Phone #: (425) 450-9425
Person to Contact: SHAWN MADISON
FAX#: (425) 450-8837
Customer Account Number with TPS: 3DELTEN

Generation Site (Transport from): *(name & address)*
CHEVRON STATION #9-1122
568 PEACE PORTAL DRIVE
BLAINE, WA 00000 USA

Site Phone #:
Person to Contact:
FAX#:
BTEX Levels
TPH Levels
AVG. Levels

Designated Facility (Transport to): *(name & address)*
TPS Technologies Inc.
2800 - 104th Street Court South
Lakewood, WA 98499 USA

Facility Phone #: (253)584-8430
Person to Contact: Renee Avelino
FAX#: (253)584-8309
Facility Permit Numbers: Rica Nelson

Transporter Name and Mailing Address:
ENVIROTECH SYSTEMS
3601 - 121st ST. SW
LYNNWOOD, WA 98037 USA

Transporter's Phone #: (800) 922-9395
Person to Contact: DON HUNT
FAX#: (425) 513-5839
Transporter's US EPA ID No.:
Transporter's DOT No.:
Customer Account Number with TPS: 3ESYSEM

Description of Soil	Moisture Content	Contaminated by:	Approx. Qty:	Description of Delivery	Gross Weight	Tare Weight	Net Weight
Sand ☐ Organic ☐ Clay ☐ Other ☐	0 - 10% ☐ 10 - 20% ☐ 20% - over ☐	Gas ☐ Diesel ☐ Other ☐	5	Drums	28540	24680	3860
Sand ☐ Organic ☐ Clay ☐ Other ☐	0 - 10% ☐ 10 - 20% ☐ 20% - over ☐	Gas ☐ Diesel ☐ Other ☐		NET TONS=	1.93		

List any exception to items listed above:

Generator's and/or consultant's certification: I/We certify that the soil referenced herein is taken entirely from those soils described in the Soil Data Sheet completed and certified by me/us for the Generation Site shown above and nothing has been added or done to such soil that would alter it in any way.

Print or Type Name: Generator ☐ Consultant ☐ —>
Signature and date: Month Day Year

Transporter

Transporter's certification: I/We acknowledge receipt of the soil described above and certify that such soil is being delivered in exactly the same condition as when received. I/We further certify that this soil is being directly transported from the Generation Site to the Designated Facility without off-loading, adding to, subtracting from or in any way delaying delivery to such site.

Print or Type Name: SCOTT R. CLWOSKY
Signature and date: Month 06 Day 18 Year 01

Recycling Facility

Discrepancies:

Recycling Facility certifies the receipt of the soil covered by this manifest except as noted above:

Print or Type Name: R. Avelino/R. Nelson
Signature and date: 6/18

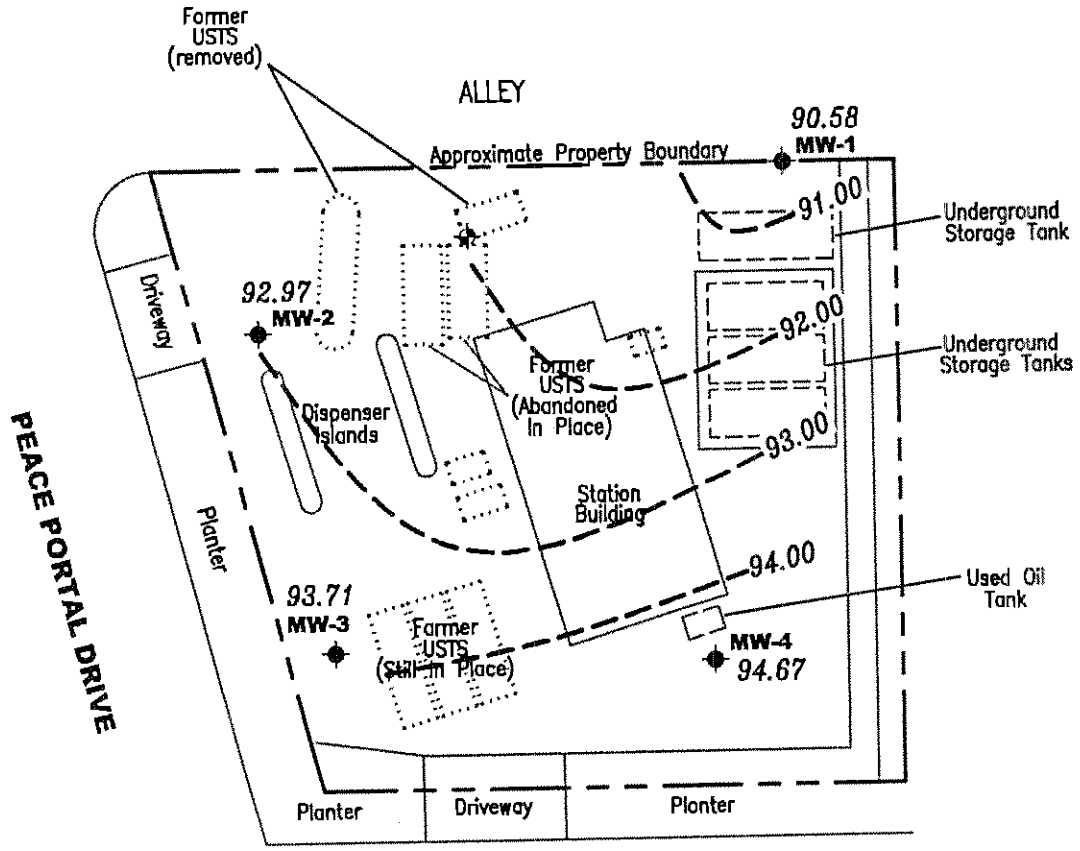
Please print or type.

TPS FACILITY COPY

ATTACHMENT C

GROUNDWATER MONITORING

AND SAMPLING DATA



EXPLANATION

- Groundwater monitoring well
- Groundwater monitoring well by PEG, Inc.
- 99.99 Groundwater elevation in feet referenced to an arbitrory datum
- 99.99 Groundwater elevation contour, dashed where inferred.

Approximate groundwater flow direction at a gradient of 0.08 Ft./Ft.

N

0 20

Scale in Feet

Source: Figure modified from drawing provided by Delta Environmental Consultants, Inc.

FIGURE 1

GETTLER - RYAN INC.
6747 Sierra Ct., Suite J
Dublin, CA 94568 (925) 551-7555

POTENTIOMETRIC MAP
Chevron Service Station #9-1122
568 Peace Portal Drive
Blaine, Washington

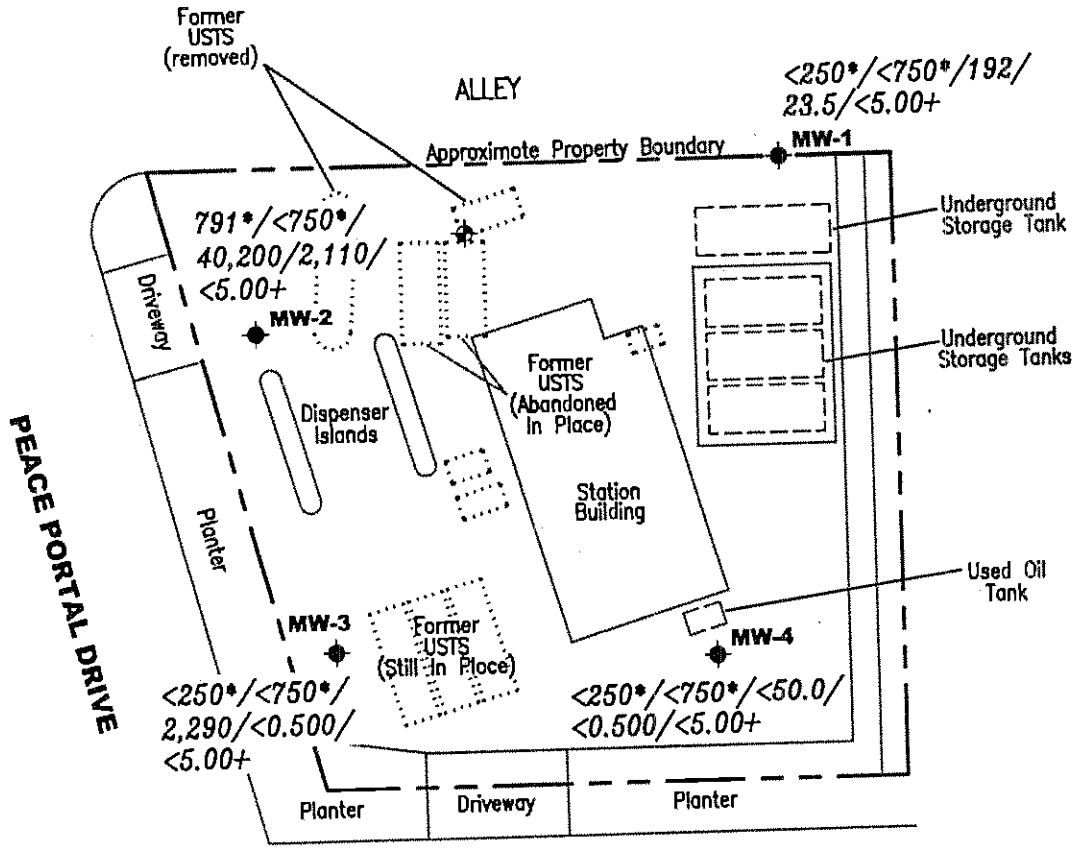
PROJECT NUMBER 386756

REVIEWED BY

DATE June 19, 2001

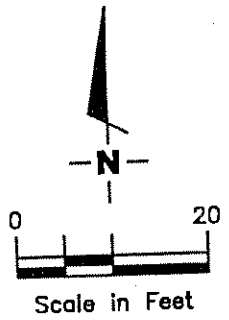
REVISED DATE

FILE NAME: P:\Enviro\Chevron\9-1122\Q01-9-1122.DWG | Layout Tab: Pot1



EXPLANATION

- Groundwater monitoring well
- Groundwater monitoring well by PEG, Inc.
- A/B/C/D/E — Total Petroleum Hydrocarbons (TPH) as Diesel/TPH as Oil/ TPH as Gasoline/Benzene/ MTBE concentrations in ppb
- * — w/silica gel cleanup
- + — MTBE by EPA Method 8260



Source: Figure modified from drawing provided by Delta Environmental Consultants, Inc.

FIGURE 2

CONCENTRATION MAP
Chevron Service Station #9-1122
568 Peace Portal Drive
Blaine, Washington

GETTLER - RYAN INC.
6747 Sierra Ct., Suite J
Dublin, CA 94568
(925) 551-7555

PROJECT NUMBER 386756
REVIEWED BY
DATE June 19, 2001
REVISED DATE

FILE NAME: P:\Enviro\Chevron\9-1122\001-9-1122.DWG | Layout Tab: Con1

Table 1

Groundwater Monitoring Data and Analytical Results

Chevron Service Station #9-1122

568 Peace Portal Drive

Blaine, Washington

WELL ID/ TOC* (ft.)	DATE	DTW (ft.)	GWE (ft.)	TPH-D (ppb)	TPH-O (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)	D. Lead (ppm)
MW-1												
100.00	05/03/01	8.34	91.66	--	--	--	--	--	--	--	--	--
	06/19/01	9.42	90.58	<250[1]	<750[1]	192	23.5	6.46	2.49	5.80	<5.00/<5.00[3]	<0.00100[4]
MW-2												
97.01	05/03/01	3.72	93.29	--	--	--	--	--	--	--	--	--
	06/19/01	4.04	92.97	791[1,2]	<750[1]	40,200	2,110	1,160	777	3,200	206/<5.00[3]	<0.00100[4]
MW-3												
98.29	05/03/01	4.37	93.92	--	--	--	--	--	--	--	--	--
	06/19/01	4.58	93.71	<250[1]	<750[1]	2,290	<0.500	0.550	3.25	6.15	<5.00/<5.00[3]	<0.00100[4]
MW-4												
99.81	05/03/01	4.65	95.16	--	--	--	--	--	--	--	--	--
	06/19/01	5.14	94.67	<250[1]	<750[1]	<50.0	<0.500	<0.500	<0.500	<1.00	<5.00/<5.00[3]	<0.00100[4]
Trip Blank												
TB-LB	06/19/01	--	--	--	--	<50.0	<0.500	<0.500	<0.500	<1.00	<5.00	--

	TPH-D	TPH-O	TPH-G	B	T	E	X	MTBE	D. LEAD
Standard Laboratory Reporting Limits:	250	750	50.0	0.500	0.500	0.500	1.0	--	0.00100
MTCA Method A Cleanup Levels:	1,000	1,000	1,000	5.0	40	30	20	--	--
Current Method:	WTPH-D + Extended		WTPH-G and EPA 8021						EPA 6020

Table 1

Groundwater Monitoring Data and Analytical Results

Chevron Service Station #9-1122
568 Peace Portal Drive
Blaine, Washington

EXPLANATIONS:

Groundwater monitoring data prior to June 15, 2001 was provided by Delta Environmental Consultants, Inc.

TOC = Top of Casing
(ft.) = Feet
DTW = Depth to Water
GWE = Groundwater Elevation
TPH-D = Total Petroleum Hydrocarbons as Diesel
TPH-O = Total Petroleum Hydrocarbons as Oil
TPH-G = Total Petroleum Hydrocarbons as Gasoline

B = Benzene
T = Toluene
E = Ethylbenzene
X = Xylenes
MTBE = Methyl tertiary butyl ether
D. Lead = Dissolved Lead

(ppb) = Parts per billion
(ppm) = Parts per million
-- = Not Measured/Not Analyzed
MTCA = Model Toxics Control Act Cleanup Regulations [WAC 173-340-720(2)(a)(I), as amended 12/93].

* TOC elevations have been surveyed in feet relative to an arbitrary datum..

1 TPH-D and TPH-O with silica gel cleanup.

2 Laboratory report indicates the results in the diesel organics range are primarily due to overlap from a gasoline range product.

3 MTBE by EPA Method 8260.

4 Laboratory report indicates the sample was laboratory filtered and not in the field as required by the methodology.

STANDARD OPERATING PROCEDURE - GROUNDWATER SAMPLING

Gettler-Ryan Inc. field personnel adhere to the following procedures for the collection and handling of groundwater samples prior to analysis by the analytical laboratory. Prior to sample collection, the type of analysis to be performed is determined. Loss prevention of volatile compounds is controlled and sample preservation for subsequent analysis is maintained.

Prior to sampling, the presence or absence of free-phase hydrocarbons is determined using an interface probe. Product thickness, if present, is measured to the nearest 0.01 foot and is noted in the field notes. In addition, static water level measurements are collected with the interface probe and are also recorded in the field notes.

After water levels are collected and prior to sampling, each well is purged a minimum of three well casing volumes of water using pre-cleaned pumps (stack, suction, Grundfos), or polyvinyl chloride bailers. Temperature, pH and electrical conductivity are measured a minimum of three times during the purging. Purging continues until these parameters stabilize. Purge water is treated by filtering the water through granular activated carbon and is subsequently discharged to the ground surface at the site.

Groundwater samples are collected using disposable bailers. The water samples are transferred from the bailer into appropriate containers. Pre-preserved containers, supplied by analytical laboratories, are used for all samples. Duplicate samples are collected for the laboratory to use in maintaining quality assurance/quality control standards. 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. 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.

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Chevron Facility # 9-1122 Job#: 386756

Address: 568 Peace Portal Dr. Date: 6/9-01

City: Blaine, WA Sampler: BWN

Well ID MW 1 Well Condition: OK

Well Diameter 2 in. Hydrocarbon Thickness: 0 ft. Amount Bailed (product/water): 0 (gal.)

Total Depth 15.50 ft.

Depth to Water 9.42 ft.

Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66	6" = 1.50	12" = 5.80

6.08 X VF .17 = 1 X 3 (case volume) = Estimated Purge Volume: 3 (gal.)

Purge Equipment: (Disposable Bailer) Bailer, Stack, Suction, Grundfos, Other:

Sampling Equipment: (Disposable Bailer) Bailer, Pressure Bailer, Grab Sample, Other:

Starting Time: 13:05 Weather Conditions: Sunny

Sampling Time: 13:20 Water Color: clear Odor: ND

Purging Flow Rate: gpm. Sediment Description:

Did well de-water? NO If yes; Time: Volume: (gal.)

Time	Volume (gal.)	pH	Conductivity µmhos/cm	Temperature °C	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
13:08	1	7.81	544	17.2			
13:11	2	7.76	536	17.0			
13:14	3	7.72	531	16.8			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW 1	5 VOA VIAL	Y	HCl	NCA	GOS/BTEX/MTBE by 8260
MW 1	1 Amber L	↓	NP	↓	TPH(D)+EXT w/ SG
MW 1	1 500mL PL.	↓	↓	↓	Diss. Lead

COMMENTS:

WELL MONITORING/SAMPLING FIELD DATA SHEET

Chevron Facility # 9-1122 Job#: 386756

Address: 568 Peace Portal Dr. Date: 6-19-07

City: Blaine, WA Sampler: BWN

Well ID MW 3 Well Condition: ok

Well Diameter 2 in. Hydrocarbon Thickness: 0 ft. Amount Bailed (product/water): 0 (gal.)

Total Depth 15.05 ft.

Depth to Water 4.58 ft.

Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66	6" = 1.50	12" = 5.80

10.47 X VF .17 = 1.78 X 3 (case volume) = Estimated Purge Volume: 5 (gal.)

Purge Equipment: (Disposable Bailer) Bailer, Stack, Suction, Grundfos, Other:

Sampling Equipment: (Disposable Bailer) Bailer, Pressure Bailer, Grab Sample, Other:

Starting Time: 12:00 Weather Conditions: sunny

Sampling Time: 12:20 Water Color: gray Odor: Slight

Purging Flow Rate: gpm. Sediment Description:

Did well de-water? no If yes; Time: Volume: (gal.)

Time	Volume (gal.)	pH	Conductivity µmhos/cm	Temperature °C	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
12:05	1.7	6.96	424	20.0			
12:10	3.4	6.89	411	19.6			
12:15	5	6.83	404	19.3			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW3	5 VOA VIAL	Y	HCl	NCA	Gas/BTEX/MtbE 8260
MW3	1 500mL PL	"	NP	"	Diss. Lead
MW3	1 Amber L	"	"	"	TPH(D)+Ext w/SG

COMMENTS:

Chain-of-Custody-Record

copy of Lab Report and COC to Chevron Contact: ☐ Yes ☐ No

Products Co.
OX 6004
non, CA 94583
25)842-8370

Chevron Facility Number #9-1122
Facility Address 568 Peace Portal Drive, Blaine, WA
Consultant Project Number 386756
Consultant Name Gettler-Ryan Inc
Address 6747 Sierra Court, Suite G, Dublin, CA 94568
Project Contact (Name) Deanna L. Harding
(Phone) 925-551-7555 (Fax Number) 925-551-7899

Chevron Contact (Name) MR. BRETT HUNTER
(Phone) 925-842-8695
Laboratory Name North Creek Analytical
Laboratory Service Order WO# BIF0573
Laboratory Service Code
Samples Collected by (Name) Ben Newton
Signature Ben Newton

State Method: ☐ CA ☐ OR ☒ WA ☐ NW Series ☐ CO ☐ UT

Number of Containers	Matrix S = Soil A = Air W = Water C = Charcoal	Sample Preservation	Date/Time	BTEX/MTBE+TPH GAS (8020 + 8015)	BTEX + TPH GAS (8020 + 8015)	TPH Diesel (8015)	Oxygenates (8260)	Purgeable Halocarbons (8010)	Purgeable Organics (8260)	Extractable Organics (8270)	Oil and Grease (5520)	Metals (ICAP or AA) Cd,Cr,Pb,Zn,Ni	BTEX (8020)	BTEX/MTBE/Naph. (8020)	TPH - HCID	TPH-D Extended w/Silica gel	MTBE by 8260	Diss. Lead				Remarks / Lab Sample No.
1	W	#4	6/9-01	X												X	X	X				BIF0573-01
7	"	"	"	X												X	X	X				02
7	"	"	"	X												X	X	X				03
7	"	"	"	X												X	X	X				04
7	"	"	"	X												X	X	X				05
7	↓	↓	↓																			

* Please filter for dissolved lead* BM

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time	Iced Y/N
Ben Newton	GR Inc	6/21-01 17:00				
Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time	Iced Y/N
Relinquished By (Signature)	Organization	Date/Time	Received For Laboratory By (Signature)		Date/Time	Iced Y/N
			Odette Weaver NCA		6/22/01	(Y)

Turn Around Time (Circle Choice)
24 Hrs.
48 Hrs.
5 Days
10 Days
As Contracted

2 & 0/0

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Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588

Gettler-Ryan Inc. - Dublin	Project: Chevron #9-1122	Reported:
6747 Sierra Court Suite G	Project Number: 386756	07/09/01 15:30
Dublin CA, 94568	Project Manager: Deanna Harding	

Diesel Hydrocarbons (C12-C24) and Heavy Oil (C24-C36 by WTPH-D (extended) with Silica Gel Clean-up

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (B1F0573-02) Water Sampled: 06/19/01 12:00 Received: 06/22/01 09:15									
Diesel Range Hydrocarbons	ND	0.250	mg/l	1	1F26017	06/26/01	07/06/01	WTPH-D	
Heavy Oil Range Hydrocarbons	ND	0.750	"	"	"	"	"	"	
Surrogate: 2-FBP	*84.9 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*82.4 %*	*50-150*			"	"	"	"	
MW-2 (B1F0573-03) Water Sampled: 06/19/01 12:00 Received: 06/22/01 09:15									
Diesel Range Hydrocarbons	0.791	0.250	mg/l	1	1F26017	06/26/01	07/06/01	WTPH-D	D-08
Heavy Oil Range Hydrocarbons	ND	0.750	"	"	"	"	"	"	
Surrogate: 2-FBP	*85.7 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*83.8 %*	*50-150*			"	"	"	"	
MW-3 (B1F0573-04) Water Sampled: 06/19/01 12:00 Received: 06/22/01 09:15									
Diesel Range Hydrocarbons	ND	0.250	mg/l	1	1F26017	06/26/01	07/06/01	WTPH-D	
Heavy Oil Range Hydrocarbons	ND	0.750	"	"	"	"	"	"	
Surrogate: 2-FBP	*84.3 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*84.6 %*	*50-150*			"	"	"	"	
MW-4 (B1F0573-05) Water Sampled: 06/19/01 12:00 Received: 06/22/01 09:15									
Diesel Range Hydrocarbons	ND	0.250	mg/l	1	1F26017	06/26/01	07/06/01	WTPH-D	
Heavy Oil Range Hydrocarbons	ND	0.750	"	"	"	"	"	"	
Surrogate: 2-FBP	*86.1 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*87.7 %*	*50-150*			"	"	"	"	

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Gettler-Ryan Inc. - Dublin 6747 Sierra Court Suite G Dublin CA, 94568	Project: Chevron #9-1122 Project Number: 386756 Project Manager: Deanna Harding	**Reported:** 07/09/01 15:30

Volatile Organic Compounds by EPA Method 8260B

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (B1F0573-02) Water Sampled: 06/19/01 12:00 Received: 06/22/01 09:15									
Methyl tert-butyl ether	ND	5.00	ug/l	1	1F25024	06/25/01	06/25/01	EPA 8260B	
Surrogate: 1,2-DCA-d4	*98.5 %*	*73-137*			"	"	"	"	
Surrogate: Toluene-d8	*96.5 %*	*75-124*			"	"	"	"	
Surrogate: 4-BFB	*102 %*	*77-120*			"	"	"	"	
MW-2 (B1F0573-03) Water Sampled: 06/19/01 12:00 Received: 06/22/01 09:15									
Methyl tert-butyl ether	ND	5.00	ug/l	1	1F25024	06/25/01	06/25/01	EPA 8260B	
Surrogate: 1,2-DCA-d4	*111 %*	*73-137*			"	"	"	"	
Surrogate: Toluene-d8	*100 %*	*75-124*			"	"	"	"	
Surrogate: 4-BFB	*107 %*	*77-120*			"	"	"	"	
MW-3 (B1F0573-04) Water Sampled: 06/19/01 12:00 Received: 06/22/01 09:15									
Methyl tert-butyl ether	ND	5.00	ug/l	1	1F25024	06/25/01	06/25/01	EPA 8260B	
Surrogate: 1,2-DCA-d4	*104 %*	*73-137*			"	"	"	"	
Surrogate: Toluene-d8	*102 %*	*75-124*			"	"	"	"	
Surrogate: 4-BFB	*98.0 %*	*77-120*			"	"	"	"	
MW-4 (B1F0573-05) Water Sampled: 06/19/01 12:00 Received: 06/22/01 09:15									
Methyl tert-butyl ether	ND	5.00	ug/l	1	1F25024	06/25/01	06/25/01	EPA 8260B	
Surrogate: 1,2-DCA-d4	*104 %*	*73-137*			"	"	"	"	
Surrogate: Toluene-d8	*98.5 %*	*75-124*			"	"	"	"	
Surrogate: 4-BFB	*100 %*	*77-120*			"	"	"	"	

North Creek Analytical - Bothell

Kirk Gendron For Robert Greer, Project Manager

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Gettler-Ryan Inc. - Dublin 6747 Sierra Court Suite G Dublin CA, 94568	Project: Chevron #9-1122 Project Number: 386756 Project Manager: Deanna Harding	**Reported:** 07/09/01 15:30

Gasoline Hydrocarbons by NWTPH-Gx and BTEX,M by EPA Method 8021B

North Creek Analytical - Spokane

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-3 (B1F0573-04) Water Sampled: 06/19/01 12:00 Received: 06/22/01 09:15									
GRO as Gasoline	**2290**	50.0	ug/l	1	1060229	06/29/01	06/29/01	NWTPH-Gx/8021B	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	**0.550**	0.500	"	"	"	"	"	"	
Ethylbenzene	**3.25**	0.500	"	"	"	"	"	"	
Xylenes (total)	**6.15**	1.00	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.00	"	"	"	"	"	"	S-02
Surrogate: 4-BFB (FID)	*164 %*	*50-150*			"	"	"	"	S-02
Surrogate: 4-BFB (PID)	*144 %*	*56-142*			"	"	"	"	
MW-4 (B1F0573-05) Water Sampled: 06/19/01 12:00 Received: 06/22/01 09:15									
GRO as Gasoline	ND	50.0	ug/l	1	1060229	06/29/01	06/29/01	NWTPH-Gx/8021B	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	1.00	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.00	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*96.0 %*	*50-150*			"	"	"	"	
Surrogate: 4-BFB (PID)	*110 %*	*56-142*			"	"	"	"	

North Creek Analytical - Bothell

Kirk Gendron For Robert Greer, Project Manager

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Gettler-Ryan Inc. - Dublin 6747 Sierra Court Suite G Dublin CA, 94568	Project: Chevron #9-1122 Project Number: 386756 Project Manager: Deanna Harding	Reported: 07/09/01 15:30

Dissolved Metals by EPA 6000/7000 Series Methods - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1G06036: Prepared 07/06/01 Using EPA 3005A										
Blank (1G06036-BLK1)										
Lead	ND	0.00100	mg/l							
LCS (1G06036-BS1)										
Lead	0.189	0.00100	mg/l	0.200		94.5	80-120			
LCS Dup (1G06036-BSD1)										
Lead	0.185	0.00100	mg/l	0.200		92.5	80-120	2.14	20	
Matrix Spike (1G06036-MS1)					Source: B1F0532-02					
Lead	0.198	0.00100	mg/l	0.200	ND	98.8	75-125			
Matrix Spike Dup (1G06036-MSD1)					Source: B1F0532-02					
Lead	0.192	0.00100	mg/l	0.200	ND	95.8	75-125	3.08	20	

North Creek Analytical - Bothell

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Gettler-Ryan Inc. - Dublin 6747 Sierra Court Suite G Dublin CA, 94568	Project: Chevron #9-1122 Project Number: 386756 Project Manager: Deanna Harding	Reported: 07/09/01 15:30

Gasoline Hydrocarbons by NWTPH-Gx and BTEX,M by EPA Method 8021B - Quality Control

North Creek Analytical - Spokane

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1060229: Prepared 06/29/01 Using EPA 5030B										
Blank (1060229-BLK1)										
GRO as Gasoline	ND	50.0	ug/l							
Benzene	ND	0.500	"							
Toluene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
Xylenes (total)	ND	1.00	"							
Methyl tert-butyl ether	ND	5.00	"							
Surrogate: 4-BFB (FID)	*23.6*		"	*25.0*		*94.4*	*50-150*			
Surrogate: 4-BFB (PID)	*28.7*		"	*25.0*		*115*	*56-142*			
LCS (1060229-BS1)							85-115			
GRO as Gasoline	960	50.0	ug/l							
Surrogate: 4-BFB (FID)	*31.5*		"	*25.0*		*126*	*50-150*			
LCS (1060229-BS2)										
Benzene	9.44	0.500	ug/l	10.0		94.4	85-115			
Toluene	9.12	0.500	"	10.0		91.2	85-115			
Ethylbenzene	10.5	0.500	"	10.0		105	85-115			
Xylenes (total)	31.3	1.00	"	30.0		104	85-115			
Methyl tert-butyl ether	10.0	5.00	"	10.0		100	70-120			
Surrogate: 4-BFB (PID)	*27.5*		"	*25.0*		*110*	*56-142*			
Duplicate (1060229-DUP1)					Source: S106110-04					
GRO as Gasoline	69.3	50.0	ug/l		ND				50	
Benzene	ND	0.500	"		ND				50	
Toluene	ND	0.500	"		ND				50	
Ethylbenzene	0.561	0.500	"		ND				50	
Xylenes (total)	1.17	1.00	"		ND				50	
Methyl tert-butyl ether	ND	5.00	"		ND				50	
Surrogate: 4-BFB (FID)	*24.8*		"	*25.0*		*99.2*	*50-150*			
Surrogate: 4-BFB (PID)	*27.5*		"	*25.0*		*110*	*56-142*			

North Creek Analytical - Bothell

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Gettler-Ryan Inc. - Dublin	Project: Chevron #9-1122	**Reported:**
6747 Sierra Court Suite G	Project Number: 386756	07/09/01 15:30
Dublin CA, 94568	Project Manager: Deanna Harding	

Notes and Definitions

D-08	Results in the diesel organics range are primarily due to overlap from a gasoline range product.
Q-02	The spike recovery for this QC sample is outside of NCA established control limits due to sample matrix interference.
Q-06	RPD values are not controlled at sample concentrations less than 5 times the reporting limit.
Q-30	This sample was laboratory filtered since it was not field filtered as is required by the methodology.
S-02	The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain c
custody document. This analytical report must be reproduced in its entiret

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ATTACHMENT D

LABORATORY ANALYTICAL METHODS AND REPORTS

CHAIN-OF-CUSTODY DOCUMENTATION

ATTACHMENT D

Laboratory Analytical Methods

Analysis for TPH-gasoline was performed according to Northwest Method NWTPH-G. Analysis for TPH-diesel extended was performed according to Northwest Method NWTPH-Dx with silica gel cleanup. Benzene, toluene, ethylbenzene, and xylenes analysis was performed in accordance with EPA Method 8021B. Methyl tert-butyl ether analysis was performed in accordance with EPA Method 8021B with confirmation by EPA Method 8260. A methanol solvent extraction was used for the WTPH-G analysis with final detection by gas chromatography using a flame-ionization detector. A headspace or purge and trap technique was utilized for BTEX analysis. Final detection was by gas chromatography using a photoionization detector. Analysis for total lead and dissolved lead was performed according to EPA 6000/7000 Series Methods.

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Delta Environmental 1200 112th Ave. NE C146 Bellevue WA, 98004	Project: Chevron #9-1122 Project Number: CW91122 Project Manager: Matt Miller	**Reported:** 05/08/01 16:29

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B-1-5	B1D0684-01	Soil	04/24/01 09:55	04/25/01 16:30
B-2-5	B1D0684-04	Soil	04/24/01 12:10	04/25/01 16:30
B-3-5	B1D0684-08	Soil	04/24/01 15:00	04/25/01 16:30
B-4-5	B1D0684-11	Soil	04/24/01 17:00	04/25/01 16:30
Stockpile	B1D0684-14	Soil	04/24/01 12:00	04/25/01 16:30

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Delta Environmental 1200 112th Ave. NE C146 Bellevue WA, 98004	Project: Chevron #9-1122 Project Number: CW91122 Project Manager: Matt Miller	**Reported:** 05/08/01 16:29

Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-1-5 (B1D0684-01) Soil Sampled: 04/24/01 09:55 Received: 04/25/01 16:30									
Gasoline Range Hydrocarbons	ND	5.00	mg/kg dry	1	1D30013	04/30/01	04/30/01	NWTPH-Gx/8021B	
Benzene	ND	0.0500	"	"	"	"	"	"	
Toluene	ND	0.0500	"	"	"	"	"	"	
Ethylbenzene	ND	0.0500	"	"	"	"	"	"	
Xylenes (total)	ND	0.100	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*81.1 %*	*50-150*			"	"	"	"	
Surrogate: 4-BFB (PID)	*78.0 %*	*50-150*			"	"	"	"	
B-2-5 (B1D0684-04) Soil Sampled: 04/24/01 12:10 Received: 04/25/01 16:30									
Gasoline Range Hydrocarbons	**151**	10.0	mg/kg dry	2	1D30013	04/30/01	04/30/01	NWTPH-Gx/8021B	
Benzene	**1.42**	0.100	"	"	"	"	"	"	
Toluene	**2.51**	0.100	"	"	"	"	"	"	
Ethylbenzene	**1.74**	0.100	"	"	"	"	"	"	
Xylenes (total)	**12.4**	0.200	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*121 %*	*50-150*			"	"	"	"	
Surrogate: 4-BFB (PID)	*91.3 %*	*50-150*			"	"	"	"	
B-3-5 (B1D0684-08) Soil Sampled: 04/24/01 15:00 Received: 04/25/01 16:30									
Gasoline Range Hydrocarbons	**6.94**	5.00	mg/kg dry	1	1D30013	04/30/01	05/01/01	NWTPH-Gx/8021B	
Benzene	ND	0.0500	"	"	"	"	"	"	
Toluene	**0.0657**	0.0500	"	"	"	"	"	"	
Ethylbenzene	ND	0.0500	"	"	"	"	"	"	
Xylenes (total)	**0.220**	0.100	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*79.7 %*	*50-150*			"	"	"	"	
Surrogate: 4-BFB (PID)	*78.2 %*	*50-150*			"	"	"	"	

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Delta Environmental 1200 112th Ave. NE C146 Bellevue WA, 98004	Project: Chevron #9-1122 Project Number: CW91122 Project Manager: Matt Miller	**Reported:** 05/08/01 16:29

Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-4-5 (B1D0684-11) Soil Sampled: 04/24/01 17:00 Received: 04/25/01 16:30									
Gasoline Range Hydrocarbons	ND	5.00	mg/kg dry	1	1D30013	04/30/01	05/01/01	NWTPH-Gx/8021B	
Benzene	ND	0.0500	"	"	"	"	"	"	
Toluene	ND	0.0500	"	"	"	"	"	"	
Ethylbenzene	ND	0.0500	"	"	"	"	"	"	
Xylenes (total)	**0.109**	0.100	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*76.7 %*	*50-150*			"	"	"	"	
Surrogate: 4-BFB (PID)	*79.2 %*	*50-150*			"	"	"	"	
Stockpile (B1D0684-14) Soil Sampled: 04/24/01 12:00 Received: 04/25/01 16:30									
Gasoline Range Hydrocarbons	**134**	20.0	mg/kg dry	4	1D30013	04/30/01	04/30/01	NWTPH-Gx/8021B	
Benzene	**0.642**	0.200	"	"	"	"	"	"	
Toluene	**0.954**	0.200	"	"	"	"	"	"	
Ethylbenzene	**1.01**	0.200	"	"	"	"	"	"	
Xylenes (total)	**7.96**	0.400	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*120 %*	*50-150*			"	"	"	"	
Surrogate: 4-BFB (PID)	*87.1 %*	*50-150*			"	"	"	"	

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Delta Environmental 1200 112th Ave. NE C146 Bellevue WA, 98004	Project: Chevron #9-1122 Project Number: CW91122 Project Manager: Matt Miller	**Reported:** 05/08/01 16:29

Semivolatile Petroleum Products by NWTPH-Dx with Acid/Silica Gel Clean-up

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-1-5 (B1D0684-01) Soil Sampled: 04/24/01 09:55 Received: 04/25/01 16:30									
Diesel Range Hydrocarbons	ND	10.0	mg/kg dry	1	1E04003	05/04/01	05/05/01	NWTPH-Dx SG	
Lube Oil Range Hydrocarbons	ND	25.0	"	"	"	"	"	"	
Surrogate: 2-FBP	*77.2 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*88.2 %*	*50-150*			"	"	"	"	
B-2-5 (B1D0684-04) Soil Sampled: 04/24/01 12:10 Received: 04/25/01 16:30									
Diesel Range Hydrocarbons	ND	10.0	mg/kg dry	1	1E04003	05/04/01	05/04/01	NWTPH-Dx SG	
Lube Oil Range Hydrocarbons	ND	25.0	"	"	"	"	"	"	
Surrogate: 2-FBP	*84.0 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*93.9 %*	*50-150*			"	"	"	"	
B-3-5 (B1D0684-08) Soil Sampled: 04/24/01 15:00 Received: 04/25/01 16:30									
Diesel Range Hydrocarbons	ND	10.0	mg/kg dry	1	1E04003	05/04/01	05/04/01	NWTPH-Dx SG	
Lube Oil Range Hydrocarbons	ND	25.0	"	"	"	"	"	"	
Surrogate: 2-FBP	*80.4 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*91.3 %*	*50-150*			"	"	"	"	
B-4-5 (B1D0684-11) Soil Sampled: 04/24/01 17:00 Received: 04/25/01 16:30									
Diesel Range Hydrocarbons	ND	10.0	mg/kg dry	1	1E04003	05/04/01	05/04/01	NWTPH-Dx SG	
Lube Oil Range Hydrocarbons	ND	25.0	"	"	"	"	"	"	
Surrogate: 2-FBP	*81.9 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*90.6 %*	*50-150*			"	"	"	"	
Stockpile (B1D0684-14) Soil Sampled: 04/24/01 12:00 Received: 04/25/01 16:30									
Diesel Range Hydrocarbons	**10.6**	10.0	mg/kg dry	1	1E04003	05/04/01	05/04/01	NWTPH-Dx SG	
Lube Oil Range Hydrocarbons	ND	25.0	"	"	"	"	"	"	
Surrogate: 2-FBP	*82.6 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*92.8 %*	*50-150*			"	"	"	"	

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Delta Environmental	Project: Chevron #9-1122	
1200 112th Ave. NE C146	Project Number: CW91122	**Reported:**
Bellevue WA, 98004	Project Manager: Matt Miller	05/08/01 16:29

Total Metals by EPA 6000/7000 Series Methods
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Stockpile (B1D0684-14) Soil Sampled: 04/24/01 12:00 Received: 04/25/01 16:30									
Lead	**6.40**	0.370	mg/kg dry	1	1E02027	05/02/01	05/03/01	EPA 6020	

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Delta Environmental 1200 112th Ave. NE C146 Bellevue WA, 98004	Project: Chevron #9-1122 Project Number: CW91122 Project Manager: Matt Miller	**Reported:** 05/08/01 16:29

Physical Parameters by APHA/ASTM/EPA Methods
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-1-5 (B1D0684-01) Soil Sampled: 04/24/01 09:55 Received: 04/25/01 16:30									
Dry Weight	**78.7**	1.00	%	1	1D30031	04/30/01	05/01/01	BSOPSPL003R07	
B-2-5 (B1D0684-04) Soil Sampled: 04/24/01 12:10 Received: 04/25/01 16:30									
Dry Weight	**80.4**	1.00	%	1	1D30031	04/30/01	05/01/01	BSOPSPL003R07	
B-3-5 (B1D0684-08) Soil Sampled: 04/24/01 15:00 Received: 04/25/01 16:30									
Dry Weight	**76.5**	1.00	%	1	1D30031	04/30/01	05/01/01	BSOPSPL003R07	
B-4-5 (B1D0684-11) Soil Sampled: 04/24/01 17:00 Received: 04/25/01 16:30									
Dry Weight	**72.2**	1.00	%	1	1D30031	04/30/01	05/01/01	BSOPSPL003R07	
Stockpile (B1D0684-14) Soil Sampled: 04/24/01 12:00 Received: 04/25/01 16:30									
Dry Weight	**77.3**	1.00	%	1	1D30031	04/30/01	05/01/01	BSOPSPL003R07	

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Delta Environmental 1200 112th Ave. NE C146 Bellevue WA, 98004	Project: Chevron #9-1122 Project Number: CW91122 Project Manager: Matt Miller	**Reported:** 05/08/01 16:29

Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1D30013: Prepared 04/30/01 Using EPA 5030B (MeOH)										
Blank (1D30013-BLK1)										
Gasoline Range Hydrocarbons	ND	5.00	mg/kg wet							
Benzene	ND	0.0500	"							
Toluene	ND	0.0500	"							
Ethylbenzene	ND	0.0500	"							
Xylenes (total)	ND	0.100	"							
Surrogate: 4-BFB (FID)	*3.84*		"	*4.00*		*96.0*	*50-150*			
Surrogate: 4-BFB (PID)	*3.70*		"	*4.00*		*92.5*	*50-150*			
LCS (1D30013-BS1)										
Gasoline Range Hydrocarbons	24.7	5.00	mg/kg wet	25.0		98.8	70-130			
Surrogate: 4-BFB (FID)	*3.85*		"	*4.00*		*96.2*	*50-150*			
Duplicate (1D30013-DUP1)					**Source: B1D0684-04**					
Gasoline Range Hydrocarbons	179	10.0	mg/kg dry		151			17.0	50	
Surrogate: 4-BFB (FID)	*5.91*		"	*4.97*		*119*	*50-150*			
Duplicate (1D30013-DUP2)					**Source: B1D0684-14**					
Gasoline Range Hydrocarbons	114	20.0	mg/kg dry		134			16.1	50	
Surrogate: 4-BFB (FID)	*6.25*		"	*5.18*		*121*	*50-150*			
Matrix Spike (1D30013-MS1)					**Source: B1D0684-01**					
Benzene	0.453	0.0500	mg/kg dry	0.636	ND	71.2	60-140			
Toluene	0.487	0.0500	"	0.636	ND	72.8	60-140			
Ethylbenzene	0.506	0.0500	"	0.636	ND	78.8	60-140			
Xylenes (total)	1.55	0.100	"	1.91	ND	80.0	60-140			
Surrogate: 4-BFB (PID)	*3.87*		"	*5.08*		*76.2*	*50-150*			
Matrix Spike Dup (1D30013-MSD1)					**Source: B1D0684-01**					
Benzene	0.506	0.0500	mg/kg dry	0.636	ND	79.6	60-140	11.1	20	
Toluene	0.547	0.0500	"	0.636	ND	82.2	60-140	11.6	20	
Ethylbenzene	0.563	0.0500	"	0.636	ND	87.8	60-140	10.7	20	
Xylenes (total)	1.74	0.100	"	1.91	ND	90.0	60-140	11.6	20	
Surrogate: 4-BFB (PID)	*4.40*		"	*5.08*		*86.6*	*50-150*			

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Delta Environmental 1200 112th Ave. NE C146 Bellevue WA, 98004	Project: Chevron #9-1122 Project Number: CW91122 Project Manager: Matt Miller	**Reported:** 05/08/01 16:29

Semivolatile Petroleum Products by NWTPH-Dx with Acid/Silica Gel Clean-up - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1E04003: Prepared 05/04/01 Using EPA 3550B										
Blank (1E04003-BLK1)										
Diesel Range Hydrocarbons	ND	10.0	mg/kg wet							
Lube Oil Range Hydrocarbons	ND	25.0	"							
Surrogate: 2-FBP	*7.78*		"	*10.7*		*72.7*	*50-150*			
Surrogate: Octacosane	*8.52*		"	*10.7*		*79.6*	*50-150*			
LCS (1E04003-BS1)										
Diesel Range Hydrocarbons	58.9	10.0	mg/kg wet	66.7		88.3	50-150			
Surrogate: 2-FBP	*8.61*		"	*10.7*		*80.5*	*50-150*			
Duplicate (1E04003-DUP1)					**Source: B1D0684-01**					
Diesel Range Hydrocarbons	ND	10.0	mg/kg dry		ND			72.6	50	Q-05
Lube Oil Range Hydrocarbons	ND	25.0	"		ND			35.3	50	
Surrogate: 2-FBP	*10.9*		"	*13.6*		*80.1*	*50-150*			
Surrogate: Octacosane	*11.8*		"	*13.6*		*86.8*	*50-150*			
Duplicate (1E04003-DUP2)					**Source: B1E0089-02**					
Diesel Range Hydrocarbons	10.7	10.0	mg/kg dry		ND			47.3	50	
Lube Oil Range Hydrocarbons	ND	25.0	"		ND			6.94	50	
Surrogate: 2-FBP	*8.46*		"	*11.7*		*72.3*	*50-150*			
Surrogate: Octacosane	*10.2*		"	*11.7*		*87.2*	*50-150*			

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Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588

Delta Environmental	Project: Chevron #9-1122	
1200 112th Ave. NE C146	Project Number: CW91122	**Reported:**
Bellevue WA, 98004	Project Manager: Matt Miller	05/08/01 16:29

Total Metals by EPA 6000/7000 Series Methods - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1E02027: Prepared 05/02/01 Using EPA 3050B										
Blank (1E02027-BLK1)										
Lead	ND	0.500	mg/kg wet							
LCS (1E02027-BS1)										
Lead	26.1	0.500	mg/kg wet	25.0		104	80-120			
Matrix Spike (1E02027-MS1)					**Source: B1D0782-01**					
Lead	299	1.82	mg/kg dry	19.2	262	193	70-130			Q-15
Matrix Spike Dup (1E02027-MSD1)					**Source: B1D0782-01**					
Lead	296	1.84	mg/kg dry	19.3	262	176	70-130	1.01	20	Q-15

Jeanne Garthwaite, Project Manager

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Delta Environmental	Project: Chevron #9-1122	
1200 112th Ave. NE C146	Project Number: CW91122	**Reported:**
Bellevue WA, 98004	Project Manager: Matt Miller	05/08/01 16:29

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1D30031: Prepared 04/30/01 Using Dry Weight										
Blank (1D30031-BLK1)										
Dry Weight	100	1.00	%							

Jeanne Garthwaite, Project Manager

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Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
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541.383.9310 fax 541.382.7588

Delta Environmental 1200 112th Ave. NE C146 Bellevue WA, 98004	Project: Chevron #9-1122 Project Number: CW91122 Project Manager: Matt Miller	**Reported:** 05/08/01 16:29

Notes and Definitions

Q-05	Analyses are not controlled on RPD values from sample concentrations less than 10 times the reporting limit.
Q-15	Analyses are not controlled on matrix spike RPD and/or percent recoveries when the sample concentration is significantly higher than the spike level.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

nca
North Creek Analytical, Inc.
Environmental Laboratory Network
www.ncalabs.com

11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8223 (425) 420-9200 FAX 420-9210
East 11115 Montgomery, Suite B, Spokane, WA 98206-4776 (509) 924-9200 FAX 924-9290
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20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 (541) 383-9310 FAX 382-7588

B1D0654

CHEVRON U.S.A., Inc. CHAIN OF CUSTODY REPORT

CHEVRON INFORMATION

Facility Number: 9-1122
Site Address: 568 Peace Portal Drive
City, State, ZIP: Blaine WA
Service Code:
Service Order:
Cost Element: 75100100
Chevron Project Manager:

☐ Site Assesment
☐ Remediation
☐ O & M
☐ GWM

CONSULTANT INFORMATION

Name: Delta ENV Project# CW9122
Address: 1200 112th AVE NE C-146
Bellevue WA
Phone: 425-450-9425 Fax: 450-8837
Project Manager: MATT MILLER Airbill#:
Sample Collection by: Shawn Madison

Laboratory Turnaround Time

☐ 1 Business Day
☐ 3 Business Days
☐ 5 Business Days
☒ 10 Business Days
☐ 3 Day Air Samples (Please Select One)

☐ AK ☐ OR ☐ WA ☒ NW Series

SAMPLE IDENTIFICATION	SAMPLING DATE / TIME	MATRIX (W,S,O)	# OF CON-TAINERS	TPH-HCID	TPH-Gas	BTEX Only EPA 8021 Mod.	TPH-Gas + BTEX	TPH-Diesel	TPH-Diesel Extended	TPH-Diesel-Ext. w/SG Cleanup	Halogen. Volatiles EPA 8021	Pesticides/PCBs or PCBs Only	GC/MS Volatiles EPA 8260	GC/MS Semi Vols. EPA 8270	PAH's: 8270 SIM or 8310	Lead: Total or Dissolved	TCLP or RCRA Metals (8)	NCA SAMPLE NUMBER
1. B-4-5	4-24-1 1700	S	2				X			X								
2. B-4-10	4-24-1 1710																	
3. B-4-15	4-24-1 1715																	
4. Stockpile	4-24-1		1				X			X						X		
5.																		
6.																		
7.																		
8.																		
9.																		
10.																		

Relinquished by:	Firm:	Date & Time	Received by:	Firm:	Date & Time
1. Shawn Madison	Delta	4/25/01	Bill	NCA	4/25/01 13:05
2. Bill		4/25/01 16:36	Shawn Madison	NCA	4-25-01 16:30
3.					N/D

Additional Comments:

SAMPLES WERE NOT @ 2-6C UPON RECEIPT
10.2

Chev CoC, Rev. 3.3, 2/99

Attachment D:
Gettler Ryan, Inc., 2008

GETTLER-RYAN INC.

TRANSMITTAL

November 17, 2008
G-R #386756

TO: Mr. Peter Catterall
SAIC
18912 North Creek Parkway, Suite 101
Bothell, Washington 98011

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

RE: Chevron Service Station
#9-1122
568 Peace Portal Drive
Blaine, Washington

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DATED	DESCRIPTION
4	November 13, 2008	Groundwater Monitoring and Sampling Report **Event of September 24 and 25, 2008**

COMMENTS:

Pursuant to your request, we are providing you with copies of the above referenced report for **your use and distribution to the following:**

Ms. Olivia Skance, Chevron Environmental Management Company, 6111 Bollinger Canyon Road, Room 3636, San Ramon, CA 94583
Mr. Issac Standen, WDOE, Southwest Regional Office, Toxics Cleanup Program, P.O. Box 47600, Olympia, WA 98504-7600
Mr. Mike Hill, Michael Hill's, Inc., 568 Peace Portal Drive, Blaine, WA 98230

☐ Current Site Check List included.

Enclosure

trans/9-1122-OS

GETTLER-RYAN INC.

CHEVRON - SITE CHECK LIST

Facility#:	**Chevron #9-1122**	Date:	9.25.07
Address:	**568 Peace Portal Drive**		
City/St.:	**Blaine, WA**		
Status of Site:	Active Chevron Station		

DRUMS: Please list below ALL DRUMS @ site: i.e., drum description, condition, labeling, contents, location of drum:

#	Description	Condition	Labeling	Contents	Location
	NO				
	DRUMS				

WELLS: Please check the condition of ALL WELLS @ site: i.e., well box condition, well plug, well lock, etc.:

Well ID	Well Box	Bolts	Well Plug	Well Lock	Other
MW-1	OK	OK	OK	OK	
MW-2		↓		↓	
MW-3					
MW-4		Replaced			
MW-5		OK		↓	
MW-6				Replaced	
MW-7				OK	
MW-8					
MW-9T					
MW-8T					
MW-9T					
MW-10T	↓	↓	↓	↓	

Additional Comments/Observations:

GETTLER-RYAN INC.

November 13, 2008
Job #386756

Ms. Olivia Skance
Chevron Environmental Management Company
6111 Bollinger Canyon Road, Room 3636
San Ramon, CA 94583

RE: Event of September 24 and 25, 2008
Groundwater Monitoring & Sampling Report
Chevron Facility #9-1122
568 Peace Portal Drive
Blaine, Washington

Dear Ms. Skance:

This report documents the most recent groundwater monitoring and sampling event performed by Gettler-Ryan Inc. (G-R) at the referenced site. All field work was conducted in accordance with G-R Standard Operating Procedure - Groundwater Sampling (attached).

Static groundwater levels were measured and the wells were checked for the presence of separate-phase hydrocarbons. Separate-phase hydrocarbons were not present in any of the wells. Static water level data and groundwater elevations are presented in Table 1 and a Potentiometric Map is included as Figure 1.

Groundwater samples were collected from the monitoring wells and submitted to a state certified laboratory for analyses. The field data sheets for this event are attached. Analytical results are presented in the table(s) listed below. The chain of custody document and laboratory analytical reports are attached. Purge water was treated by filtration through granular activated carbon and was subsequently discharged.

Please call if you have any questions or comments regarding this report. Thank you.

Sincerely,

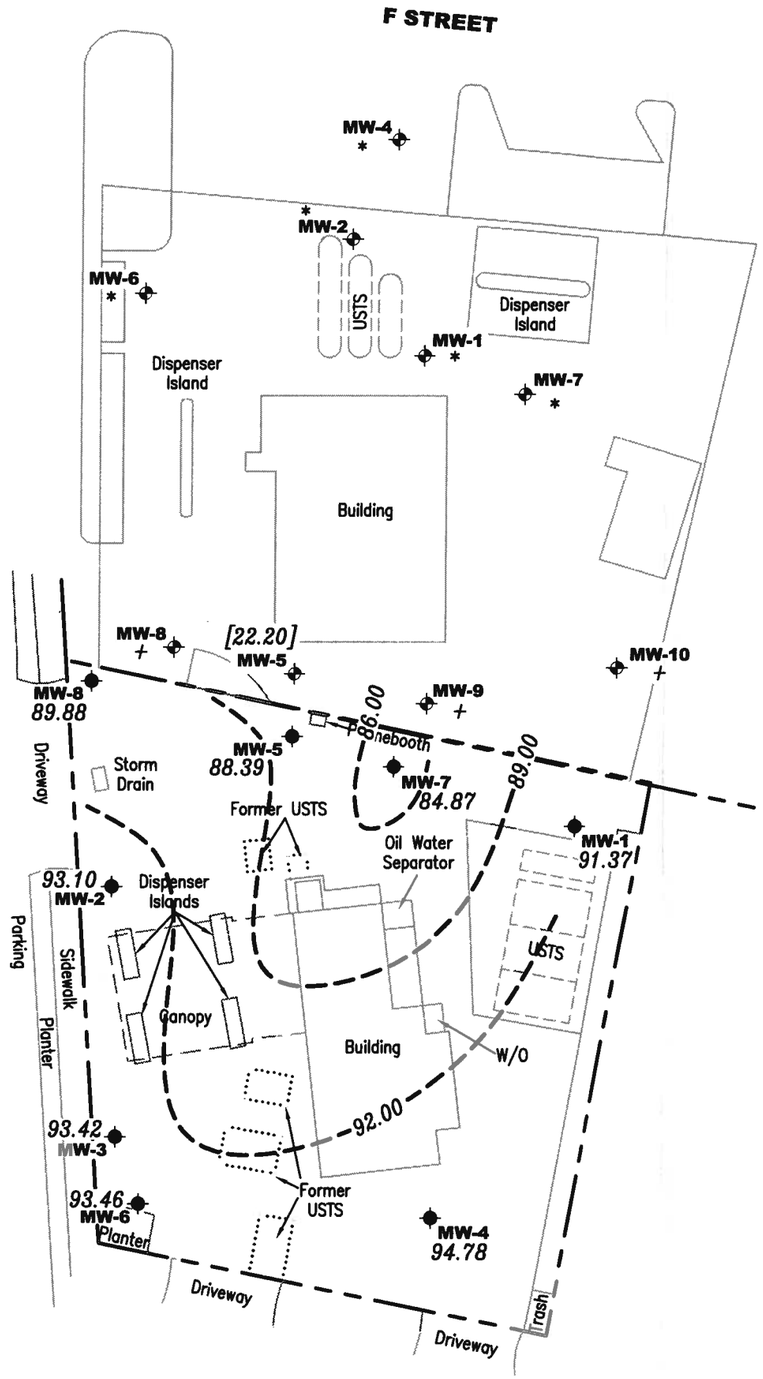
Deanna L. Harding
Project Coordinator

Douglas J. Lee
Senior Geologist, L.G. No. 2660

State of Washington
2660
Licensed Geologist
Douglas J. Lee

6747 Sierra Court, Suite J • **Dublin**, CA 94568 • (925) 551-7555 • Fax (925) 551-7888
3140 Gold Camp Drive, Suite 170 • **Rancho Cordova**, CA 95670 • (916) 631-1300 • Fax (916) 631-1317
1364 N. McDowell Blvd., Suite B2 • **Petaluma**, CA 94954 • (707) 789-3255 • Fax (707) 789-3218

Figure 1:	Potentiometric Map
Table 1:	Groundwater Monitoring Data and Analytical Results
Table 2:	Groundwater Monitoring Analytical Results -PAHs
Table 3:	Groundwater Analytical Results - PCBs
Table 4:	Groundwater Analytical Results - PAHs
Table 5:	Groundwater Analytical Results - VOCs
Table 6:	Groundwater Monitoring Data and Analytical Results – Tesoro Service Station
Attachments:	Standard Operating Procedure - Groundwater Sampling
	Field Data Sheets
	Chain of Custody Document and Laboratory Analytical Reports



Source: Figure modified from drawing provided by SAIC, Fifgure 1, Site Plan, Dated: 09/03/2008.

EXPLANATION

- Groundwater monitoring well (Chevron)
- Groundwater monitoring well (Tesoro)
- *99.99* Groundwater elevation in feet referenced to an arbitrary site datum
- --99.99-- Groundwater elevation contour, dashed where inferred
- *[99.99]* Not used in contouring
- \+ TOC not available
- * Not part of monitoring/ sampling program

Approximate groundwater flow direction at a gradient of 0.06 to 0.1 Ft./Ft.

Note:
Tesoro wells are designated with a T suffix on the chain of custody, field sheets, and tables. The T is to differentiate the two sites similar naming conventions. Wells on the map keep original designations for consistency with installation documentation and history.

For example Tesoro well MW-5 is MW-5T.

N

0 40

Scale in Feet

FIGURE 1

POTENTIOMETRIC MAP
Chevron Service Station #9-1122
568 Peace Portal Drive
Blaine, Washington

REVISED DATE

DATE
September 24 and 25, 2008

GETTLER-RYAN INC.
6747 Sierra Court, Suite J
Dublin, CA 94568 (925) 551-7555

PROJECT NUMBER
386756

REVIEWED BY

FILE NAME: P:\Enviro\Chevron\9-1122\008-9-1122.DWG | Layout Tab: Pot3

Table 1

Groundwater Monitoring Data and Analytical Results

Chevron Service Station #9-1122

568 Peace Portal Drive

Blaine, Washington

WELL ID/ DATE		TOC* (ft.)	DTW (ft.)	GWE (ft.)	TPH-D (µg/L)	TPH-O (µg/L)	TPH-G (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	D. LEAD (µg/L)
MW-1													
05/03/01		100.00	8.34	91.66	--	--	--	--	--	--	--	--	--
06/19/01		100.00	9.42	90.58	<250[1]	<750[1]	192	23.5	6.46	2.49	5.80	<5.00/<5.00[3]	<0.00100[4]
08/19/01		100.00	11.37	88.63	<250[1]	<500[1]	<50.0	1.06	0.624	<0.500	<1.00	<1.00/<5.00[3]	--
11/28/01		100.00	9.24	90.76	<250[1]	<500[1]	190	46.9	8.09	0.924	2.94	1.96/<5.00[3]	--
02/18/02		100.00	7.50	92.50	<250[1]	<750[1]	570	20	4.2	4.6	3.4	<2.5/<2[3]	--
05/20/02	NP	100.00	9.30	90.70	<250[1]	<750[1]	1,000	23	6.5	10	4.2	<2.5	--
08/16/02	NP	100.00	11.88	88.12	<250[1]	<250[1]	100	14	2.1	1.0	<1.5	<2.5	--
11/17/02	NP	100.00	11.95	88.05	<250[1]	<250[1]	<50	1.0	<0.50	<0.50	<1.5	<2.5	--
02/07/03	NP	100.00	8.49	91.51	<250[1]	<750[1]	95	4.1	<0.50	<0.50	<1.5	<2.5	--
05/21/03	NP	100.00	8.68	91.32	<250[1]	<250[1]	600	7.7	1.1	2.1	<1.5	<2.5	--
11/15/03	NP	100.00	9.78	90.22	<250[1]	<250[1]	<50	1.9	<0.5	<0.5	<1.5	<2.5	--
02/07/04	NP	100.00	6.91	93.09	<250[1]	<250[1]	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
05/08/04	NP	100.00	8.72	91.28	<250[1]	<250[1]	430	16	1.3	2.4	1.8	3.0/<2[3]	--
08/14/04	NP	100.00	11.18	88.82	<250[1]	<250[1]	<50	14	0.8	0.6	<1.5	<2.5	--
11/26/04	NP	100.00	6.68	93.32	<250[1]	<250[1]	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
02/24/05	NP	100.00	6.46	93.54	<250[1]	<250[1]	<50	17	0.5	<0.5	2.9	<2.5	--
06/10/05	NP	100.00	9.26	90.74	<250[1]	<250[1]	110	22	0.9	0.5	1.7	<2.5	--
08/02/05	NP	100.00	10.53	89.47	<250[1]	<250[1]	<50	1.6	<0.5	<0.5	<1.5	<2.5	--
10/15/05	NP	100.00	11.81	88.19	<80[1]	<100[1]	<48	<0.5	<0.5	<0.5	<1.5	<2.5	--
02/11/06	NP	100.00	6.31	93.69	<82[1]	<100[1]	<48	<0.5	<0.5	<0.5	<1.5	<2.5	--
08/02/07	NP	100.00	8.98	91.02	520[1]	<98[1]	<50	4.2	<0.5	<0.5	<1.5	--	--
09/24-25/08[10]	**PER**	**100.00**	**8.63**	**91.37**	**<80[1]**	**<100[1]**	**120**	**1**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	--
MW-2													
05/03/01		97.01	3.72	93.29	--	--	--	--	--	--	--	--	--
06/19/01		97.01	4.04	92.97	791[1,2]	<750[1]	40,200	2,110	1,160	777	3,200	206/<5.00[3]	<0.00100[4]
08/19/01		97.01	4.15	92.86	<250[1]	<500[1]	29,300	3,490	1,010	1,460	4,790	245/<5.00[3]	--
11/28/01		97.01	4.42	92.59	513[1,2]	<500[1]	23,800	3,490	334	1,560	3,720	192/78.7[3,5]	--
11/28/01	R	--	--	--	--	--	--	--	--	--	--	--/97.9[3]	--
02/18/02		97.01	3.94	93.07	1,800[1]	<750[1]	25,000	2,700	240	1,500	3,400	98/110[3]	--
05/20/02	NP	97.01	4.28	92.73	1,600[1]	<1,000[1]	25,000	1,800	110	1,400	2,900	72/50[3]	--
08/16/02	NP	97.01	4.19	92.82	2,400[1]	<250[1]	25,000	2,000	89	1,200	2,500	140/80[3]	--
11/17/02	NP	97.01	5.39	91.62	1,500[1]	<250[1]	24,000	2,600	130	1,300	2,700	<100	--

Table 1

Groundwater Monitoring Data and Analytical Results

Chevron Service Station #9-1122

568 Peace Portal Drive

Blaine, Washington

WELL ID/ DATE		TOC* (ft.)	DTW (ft.)	GWE (ft.)	TPH-D (µg/L)	TPH-O (µg/L)	TPH-G (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	D. LEAD (µg/L)
MW-2 (cont)													
02/07/03	NP	97.01	5.39	91.62	1,700[1]	<750[1]	27,000	2,700	130	1,500	2,900	<200	--
05/21/03	NP	97.01	5.65	91.36	1,300[1]	<250[1]	28,000	2,300	93	1,400	2,600	150/90[3]	--
11/15/03	NP	97.01	3.31	93.70	1,400[1]	<250[1]	25,000	2,200	110	1,300	2,700	240/82[3]	--
02/07/04	NP	97.01	3.56	93.45	1,500[1]	<250[1]	24,000	2,700	130	1,600	2,900	220/66[3]	--
05/08/04	NP	97.01	3.96	93.05	1,800[1]	260[1]	22,000	1,700	69	1,400	2,600	190/61[3]	--
08/14/04	NP	97.01	4.30	92.71	1,700[1]	330[1]	21,000	2,000	74	1,400	2,600	<200	--
11/26/04	NP	97.01	3.98	93.03	1,100[1,6]	<490[1]	21,000	2,400	82	1,200	2,100	<2.5	--
02/24/05	NP	97.01	3.63	93.38	570[1]	<250[1]	23,000	1,800	87	1,500	2,600	<100	--
06/10/05	NP	97.01	3.52	93.49	1,800[1]	<250[1]	21,000	1,500	58	1,200	2,000	<100	--
08/02/05	NP	97.01	4.14	92.87	1,600[1,7]	310[1]	23,000	1,700	67	1,300	2,400	130	--
10/15/05	NP	97.01	4.26	92.75	1,100[1,8]	<500[1]	19,000	2,300	63	1,400	2,000	<50	--
02/11/06	NP	97.01	3.72	93.29	1,200[1,8]	<100[1]	22,000	2,100	84	1,500	2,300	<200	--
08/02/07	NP	97.01	3.69	93.32	1,500[1]	<480[1]	15,000	1,400	52	1,400	1,200	--	--
09/24-25/08[10]	**PER**	**97.02**	**3.92**	**93.10**	**1,200[1]**	**<500[1]**	**14,000**	**1,700**	**57**	**1,600**	**615**	**54**	**4.5**
MW-3													
05/03/01		98.29	4.37	93.92	--	--	--	--	--	--	--	--	--
06/19/01		98.29	4.58	93.71	<250[1]	<750[1]	2,290	<0.500	0.550	3.25	6.15	<5.00/<5.00[3]	<0.00100[4]
08/19/01		98.29	5.03	93.26	<250[1]	<500[1]	383	<0.500	<0.500	<0.500	3.58	<1.00/<5.00[3]	--
11/28/01		98.29	4.17	94.12	<250[1]	<500[1]	343	<0.500	<0.500	<0.500	4.31	<1.00/<5.00[3]	--
02/18/02		98.29	4.49	93.80	350[1]	<750[1]	510	<0.50	<0.50	0.69	<1.5	<2.5/<2[3]	--
05/20/02	NP	98.29	4.65	93.64	310[1]	<750[1]	760	<0.50	1.0	2.6	<1.5	<2.5	--
08/16/02	NP	98.29	5.08	93.21	280[1]	<250[1]	220	<0.50	<0.50	<0.50	<1.5	<2.5	--
11/17/02	NP	98.29	4.59	93.70	<250[1]	<250[1]	310	<0.50	<0.50	<0.50	<1.5	<2.5	--
02/07/03	NP	98.29	4.38	93.91	<250[1]	<750[1]	350	<0.50	<0.50	<0.50	<1.5	<2.5	--
05/21/03	NP	98.29	4.31	93.98	<250[1]	<250[1]	400	<0.5	<0.5	<0.5	1.7	<2.5	--
11/15/03	NP	98.29	4.53	93.76	260[1]	<250[1]	240	<0.5	<0.5	<0.5	<1.5	<2.5	--
02/07/04	NP	98.29	4.11	94.18	250[1]	<250[1]	360	<0.5	<0.5	<0.5	<1.5	<2.5	--
05/08/04	NP	98.29	4.75	93.54	280[1]	<250[1]	110	<0.5	<0.5	<0.5	<1.5	<2.5	--
08/14/04	NP	98.29	5.06	93.23	270[1]	<250[1]	100	<0.5	<0.5	<0.5	<1.5	<2.5	--
11/26/04	NP	98.29	3.76	94.53	<250[1]	<250[1]	560	<0.5	<0.5	<1.0	<1.5	<2.5	--
02/24/05	NP	98.29	4.34	93.95	<250[1]	<250[1]	330	<0.5	<0.5	<1.0	<3.0	<2.5	--
06/10/05	NP	98.29	4.31	93.98	<250[1]	<250[1]	250	<0.5	<0.5	<0.5	<1.5	<2.5	--

Table 1

Groundwater Monitoring Data and Analytical Results

Chevron Service Station #9-1122

568 Peace Portal Drive

Blaine, Washington

WELL ID/ DATE		TOC* (ft.)	DTW (ft.)	GWE (ft.)	TPH-D (µg/L)	TPH-O (µg/L)	TPH-G (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	D. LEAD (µg/L)
MW-3 (cont)													
08/02/05	NP	98.29	4.98	93.31	260[1]	<250[1]	140	<0.5	<0.5	<0.5	<1.5	<2.5	--
10/15/05	NP	98.29	4.06	94.23	200[1,9]	200[1]	250	<0.5	<0.5	<0.5	<1.5	<2.5	--
02/11/06	NP	98.29	4.22	94.07	110[1,8]	<100[1]	390	<0.5	<0.5	<0.5	<2.0	<2.5	--
08/02/07	NP	98.29	4.73	93.56	740[1]	<97[1]	200	<0.5	<2.0	<0.5	<1.5	--	--
09/24-25/08[10]	**PER**	**98.31**	**4.89**	**93.42**	**99[1]**	**<99[1]**	**350**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**--**
MW-4													
05/03/01		99.81	4.65	95.16	--	--	--	--	--	--	--	--	--
06/19/01		99.81	5.14	94.67	<250[1]	<750[1]	<50.0	<0.500	<0.500	<0.500	<1.00	<5.00/<5.00[3]	<0.00100[4]
08/19/01		99.81	6.01	93.80	475[1,2]	<500[1]	<50.0	<0.500	<0.500	<0.500	<1.00	<1.00/<5.00[3]	--
11/28/01		99.81	4.24	95.57	<250[1]	<500[1]	<50.0	<0.500	<0.500	<0.500	<1.00	<1.00/<5.00[3]	--
02/18/02		99.81	3.98	95.83	<250[1]	<750[1]	<50	<0.50	<0.50	<0.50	<1.5	<2.5/<2[3]	--
05/20/02		99.81	5.05	94.76	--	--	--	--	--	--	--	--	--
08/16/02		99.81	6.01	93.80	--	--	--	--	--	--	--	--	--
11/17/02		99.81	5.22	94.59	--	--	--	--	--	--	--	--	--
02/07/03		99.81	4.86	94.95	--	--	--	--	--	--	--	--	--
05/21/03		99.81	4.78	95.03	--	--	--	--	--	--	--	--	--
11/15/03		99.81	5.02	94.79	--	--	--	--	--	--	--	--	--
02/07/04		99.81	4.62	95.19	--	--	--	--	--	--	--	--	--
05/08/04		99.81	5.19	94.62	--	--	--	--	--	--	--	--	--
08/14/04		99.81	5.91	93.90	--	--	--	--	--	--	--	--	--
11/26/04		99.81	3.84	95.97	--	--	--	--	--	--	--	--	--
02/24/05		99.81	4.85	94.96	--	--	--	--	--	--	--	--	--
06/10/05		99.81	4.81	95.00	--	--	--	--	--	--	--	--	--
08/02/05		99.81	5.79	94.02	--	--	--	--	--	--	--	--	--
10/15/05		99.81	4.52	95.29	--	--	--	--	--	--	--	--	--
02/11/06		99.81	4.69	95.12	--	--	--	--	--	--	--	--	--
08/02/07		99.81	5.22	94.59	430[1]	<97[1]	<50	<0.5	<0.5	<0.5	<1.5	--	--
09/24-25/08[10]	**PER**	**100.15**	**5.37**	**94.78**	**<79[1]**	**<99[1]**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**--**

Table 1

Groundwater Monitoring Data and Analytical Results

Chevron Service Station #9-1122

568 Peace Portal Drive

Blaine, Washington

WELL ID/ DATE		TOC* (ft.)	DTW (ft.)	GWE (ft.)	TPH-D (µg/L)	TPH-O (µg/L)	TPH-G (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	D. LEAD (µg/L)
MW-5													
09/24-25/08[10]	**PER**	**97.33**	**8.94**	**88.39**	**1,100[1]**	**<99[1]**	**9,600**	**380**	**24**	**320**	**940**	**13**	**4.6**
MW-6													
09/24-25/08[10]	**PER**	**99.01**	**5.55**	**93.46**	**700[1]**	**120[1]**	**6,800**	**13**	**2**	**170**	**430**	**0.6**	**--**
MW-7													
09/24-25/08[10]	**PER**	**98.21**	**13.34**	**84.87**	**<79[1]**	**<99[1]**	**120**	**160**	**3**	**7**	**3**	**24**	**--**
MW-8													
09/24-25/08[10]	**PER**	**95.62**	**5.74**	**89.88**	**<79[1]**	**<99[1]**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**--**
TRIP BLANK													
06/19/01		--	--	--	--	--	<50.0	<0.500	<0.500	<0.500	<1.00	<5.00	--
08/19/01		--	--	--	--	--	<50.0	<0.500	<0.500	<0.500	<1.00	<1.00	--
11/28/01		--	--	--	--	--	<50.0	<0.500	<0.500	<0.500	<1.00	<1.00	--
02/18/02		--	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5	--
05/20/02		--	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5	--
QA													
08/16/02		--	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5	--
11/17/02		--	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5	--
02/07/03		--	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5	--
05/21/03		--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
11/15/03		--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
02/07/04		--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
05/08/04		--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
08/14/04		--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
11/26/04		--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
02/24/05		--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
06/10/05		--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
08/02/05		--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--

Table 1

Groundwater Monitoring Data and Analytical Results

Chevron Service Station #9-1122

568 Peace Portal Drive

Blaine, Washington

WELL ID/ DATE	TOC* (ft.)	DTW (ft.)	GWE (ft.)	TPH-D (µg/L)	TPH-O (µg/L)	TPH-G (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	D. LEAD (µg/L)
QA (cont)												
10/15/05	--	--	--	--	--	<48	<0.5	<0.5	<0.5	<1.5	<2.5	--
02/11/06	--	--	--	--	--	<48	<0.5	<0.5	<0.5	<1.5	<2.5	--
08/02/07	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	--	--
09/24-25/08[10]	--	--	--	--	--	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	--

	TPH-D	TPH-O	TPH-G	B	T	E	X	MTBE	D. LEAD
Standard Laboratory Reporting Limits:	**250**	**250**	**50**	**0.5**	**0.5**	**0.5**	**1.5**	**2.5**	**0.00100**
MTCA Method A Cleanup Levels:	**500**	**500**	**800/1,000**	**5**	**1,000**	**700**	**1,000**	**20**	–
Current Method:	**NWTPH-D + Extended**		**NWTPH-G and EPA 8260**						**EPA 6020**

Table 1

Groundwater Monitoring Data and Analytical Results

Chevron Service Station #9-1122

568 Peace Portal Drive

Blaine, Washington

EXPLANATIONS:

Groundwater monitoring data and laboratory analytical results prior to September 25, 2008, was provided by SAIC.

TOC = Top of Casing
(ft.) = Feet
DTW = Depth to Water
GWE = Groundwater Elevation
TPH-D = Total Petroleum Hydrocarbons as Diesel
TPH-O = Total Petroleum Hydrocarbons as Oil
TPH-G = Total Petroleum Hydrocarbons as Gasoline
B = Benzene
T = Toluene
E = Ethylbenzene
X = Xylenes
MTBE = Methyl tertiary butyl ether
D. LEAD = Dissolved Lead
(µg/L) = Micrograms per liters
(mg/L) = milligrams per liter
-- = Not Measured/Not Analyzed
R = Re-analysis
NP = No purge
QA = Quality Assurance/Trip Blank
MTCA = Model Toxics Control Act Cleanup Regulations [WAC 173-340-720(2)(a)(I), as amended 02/01].
PER = Peristaltic Pump

* TOC elevations provided by SAIC on October 24, 2008. TOC elevations have been surveyed in feet relative to an arbitrary datum.

1 TPH-D and TPH-O with silica gel cleanup.

2 Laboratory report indicates the results in the diesel organics range are primarily due to overlap from a gasoline range product.

3 MTBE by EPA Method 8260.

4 Laboratory report indicates the sample was laboratory filtered and not in the field as required by the methodology.

5 Laboratory report indicates estimated value due to result exceeding the calibration range of the analysis.

6 Laboratory report indicates the observed sample pattern is not typical of diesel/#2 fuel oil.

7 Laboratory report indicates the observed sample pattern includes #2 fuel/diesel and an additional pattern which elutes earlier and later in the DRO range.

8 Laboratory report indicates the observed sample pattern is not typical of #2 fuel/diesel. It elutes in the DRO range earlier than #2 fuel.

9 Laboratory report indicates the observed sample pattern includes #2 fuel/diesel and an additional pattern which elutes later in the DRO range.

10 BTEX and MTBE by EPA Method 8260.

Table 2

Groundwater Analytical Results

Chevron Service Station #9-1122

568 Peace Portal Drive

Blaine, Washington

WELL ID / DATE	C-5-C-6 Aliphatic Hydrocarbons (µg/L)	C-6-C-8 Aliphatic Hydrocarbons (µg/L)	C-8-C-10 Aliphatic Hydrocarbons (µg/L)	C-8-C-10 Aromatic Hydrocarbons (µg/L)	>C10-C12 Aliphatic (µg/L)	>C12-C16 Aliphatic (µg/L)	>C16-C21 Aliphatic (µg/L)	>C21-C34 Aliphatic (µg/L)	>C10-C12 Aromatic (µg/L)	>C12-C16 Aromatic (µg/L)	>C16-C21 Aromatic (µg/L)	>C21-C34 Aromatic (µg/L)
MW-2												
09/24-25/08	**1,310**	**3,810**	**1,060**	**2,360**	**84**	**<9.8**	**<9.8**	**<9.8**	**1,500**	**560**	**<110**	**<150**
MW-5												
09/24-25/08	**223**	**1,570**	**1,220**	**2,190**	**280**	**30**	**<9.8**	**57**	**910**	**310**	**<54**	**<74**

EXPLANATIONS

(µg/L) = Micrograms per liter

ANALYTICAL METHODS:

EPM analyzed by ECY-94-602

Table 3

Groundwater Analytical Results - PCBs

Chevron Service Station #9-1122

568 Peace Portal Drive

Blaine, Washington

WELL ID / DATE	PCB-1016 (µg/L)	PCB-1221 (µg/L)	PCB-1232 (µg/L)	PCB-1242 (µg/L)	PCB-1248 (µg/L)	PCB-1254 (µg/L)	PCB-1260 (µg/L)
MW-2							
09/24-25/08	<0.098	<0.098	<0.20	<0.098	<0.098	<0.098	<0.098
MW-5							
09/24-25/08	<0.098	<0.098	<0.20	<0.098	<0.098	<0.098	<0.098

EXPLANATIONS

(µg/L) = Micrograms per liters

PCB = Polychlorinated biphenyls

ANALYSIS METHODS:

EPA Method SW-846 8082

Table 4

Groundwater Analytical Results PAHs

Chevron Service Station #9-1122

568 Peace Portal Drive

Blaine, Washington

WELL ID / DATE	BENZO (a) ANTHRACENE (µg/L)	CHRYSENE (µg/L)	BENZO (b) FLUORANTHENE (µg/L)	BENZO (k) FLUORANTHENE (µg/L)	BENZO (a) PYRENE	INDENO (1,2,3-cd) PYRENE (µg/L)	DIBENZ (a,h) ANTHRACENE (µg/L)
MW-2							
09/24-25/08	**<0.0098**	**<0.0098**	**<0.0098**	**<0.0098**	**<0.0098**	**<0.0098**	**<0.0098**
MW-5							
09/24-25/08	**<0.10**	**<0.10**	**<0.10**	**<0.10**	**<0.10**	**<0.10**	**<0.10**

EXPLANATIONS

(µg/L) = Micrograms per liters

PAH = Polynuclear Aromatic Hydrocarbons

ANALYSIS METHODS:

EPA Method SW-846 8270C

Table 5

Groundwater Analytical Results VOCs

Chevron Service Station #9-1122

568 Peace Portal Drive

Blaine, Washington

WELL ID / DATE	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	1,1-Dichloroethene (µg/L)	trans-1,2-Dichloroethene (µg/L)	cis-1,2-Dichloroethene (µg/L)	Chloroform (µg/L)	1,1,1-Trichloroethane (µg/L)	Trichloroethene (µg/L)	Bromodichloromethane (µg/L)	Isopropylbenzene (µg/L)	n-Propylbenzene (µg/L)	1,3,5-Trimethylbenzene (µg/L)	1,2,4-Trimethylbenzene (µg/L)	sec-Butylbenzene (µg/L)	p-Isopropyltoluene (µg/L)	n-Butylbenzene (µg/L)	Naphthalene (µg/L)
MW-2																				
09/24-25/08	**1,700**	**57**	**1,600**	**615**	**54**	**<2**	**<2**	**<2**	**<2**	**<2**	**<2**	**<2**	**74**	**190**	**40**	**130**	**9**	**2**	**17**	**560**
MW-5																				
09/24-25/08[1]	**380**	**24**	**320**	**940**	**13**	**<0.8**	**<0.8**	**<0.8**	**<0.8**	**<0.8**	**<1**	**<1**	**22**	**43**	**140**	**440**	**4**	**6**	**7**	**130**

EXPLANATIONS

(µg/L) = Micrograms per liters

VOC = Volatile Organic Compounds

ANALYTICAL METHODS:

Volatile Organic Compounds analyzed by 8260

♦ **All other VOCs by EPA Method 8260B were less than the reporting limit unless noted.**

[1] Laboratory report indicates Acetone at 21 ug/L, 2-Butanone at 5 ug/L, 4-Methyl-2-pentanone at 4 ug/L and 2-Hexanone at 6 ug/L.

Table 6

Groundwater Monitoring Data and Analytical Results

Tesoro Service Station
530 Peace Portal Drive
Blaine, Washington

WELL ID/ DATE		TOC* (ft.)	DTW (ft.)	GWE (ft.)	TPH-D (µg/L)	TPH-O (µg/L)	TPH-G (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	D. LEAD (mg/L)
MW-5T													
09/24-25/08[2]	PER	25.82	3.62	22.20	<83[1]	<100[1]	<50	<0.5	<0.5	<0.5	<0.5	<0.5	–
MW-8T													
09/24-25/08	PER	–	5.96	–	NOT SAMPLED DUE TO INSUFFICIENT WATER				–	–	–	–	–
MW-9T													
09/24-25/08	PER	–	4.54	–	NOT SAMPLED DUE TO INSUFFICIENT WATER				–	–	–	–	–
MW-10T													
09/24-25/08[2]	PER	–	4.35	–	<83[1]	<100[1]	<50	<0.5	<0.5	<0.5	<0.5	<0.5	–

Table 6

Groundwater Monitoring Data and Analytical Results

Tesoro Service Station #9-1122

530 Peace Portal Drive

Blaine, Washington

EXPLANATIONS:

TOC = Top of Casing
(ft.) = Feet
DTW = Depth to Water
GWE = Groundwater Elevation
TPH-D = Total Petroleum Hydrocarbons as Diesel
TPH-O = Total Petroleum Hydrocarbons as Oil
TPH-G = Total Petroleum Hydrocarbons as Gasoline
B = Benzene
T = Toluene
E = Ethylbenzene
X = Xylenes
MTBE = Methyl tertiary butyl ether
D. LEAD = Dissolved Lead
(µg/L) = Micrograms per liters
(mg/L) = milligrams per liter
-- = Not Measured/Not Analyzed
R = Re-analysis
NP = No purge
QA = Quality Assurance/Trip Blank
MTCA = Model Toxics Control Act Cleanup Regulations [WAC 173-340-720(2)(a)(I), as amended 02/01].
PER = Peristaltic pump

* TOC elevations have been surveyed in feet relative to an arbitrary datum.

[1] TPH-D and TPH-O with silica gel cleanup.

[2] BTEX and MTBE by Method 8260.

STANDARD OPERATING PROCEDURE - GROUNDWATER SAMPLING

Gettler-Ryan Inc. field personnel adhere to the following procedures for the collection and handling of groundwater samples prior to analysis by the analytical laboratory. Prior to sample collection, the type of analysis to be performed is determined. Loss prevention of volatile compounds is controlled and sample preservation for subsequent analysis is maintained.

Prior to sampling, the presence or absence of free-phase hydrocarbons is determined using an interface probe. Product thickness, if present, is measured to the nearest 0.01 foot and is noted in the field notes. In addition, all depth to water level measurements are collected with a static water level indicator and are also recorded in the field notes, prior to purging and sampling any wells.

After water levels are collected and prior to sampling, temperature, pH and electrical conductivity are measured. If purging is to occur, each well is purged a minimum of three well casing volumes of water using pre-cleaned pumps (stack, suction, Grundfos), or disposable bailers. The measurements are taken a minimum of three times during the purging. Purging continues until these parameters stabilize. Purge water is treated by filtering the water through granular activated carbon and is subsequently discharged to the ground surface at the site.

Groundwater samples are collected using disposable bailers. The water samples are transferred from the bailer into appropriate containers. Pre-preserved containers, supplied by analytical laboratories, are used for all samples. Duplicate samples are collected for the laboratory to use in maintaining quality assurance/quality control standards. 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. 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.

Standard Operating Procedure, Low-Flow Purging and Sampling

This procedure is designed to assist the user in taking representative groundwater samples from groundwater monitoring wells. Samples will be collected using low-flow (minimal drawdown) purging and sampling methods as 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."

The field sampler's objective is to purge and sample the well so that the water that is discharged from the pump, and subsequently collected, is representative of the formation water from the aquifer's identified zone of interest.

The wells to be sampled are equipped with QED Well Wizard™ bladder (squeeze-type) pumps or Peristaltic Pumps Each bladder pump or the suction inlet tubing of the peristaltic pump is positioned with its inlet located within the screened interval of the well. The down well equipment includes a bladder pump or Teflon-lined PE (polyethylene) tubing.

Initial Pump Flow Test Procedures

If possible, the optimum flow rate for each well will be established during well development or redevelopment, or in advance of the actual sampling event. The monitoring well must be gauged for Static Water Level (SWL) prior to the installation of the pump and before pumping of any water from the well. The measurement will be documented on a Low Flow Ground Water Sample Collection Record, or field data sheet.

After pump installation, and confirmation that the SWL has returned to its original level (as determined prior to pump installation), the bladder pump or peristaltic pump should be started at a discharge rate between 100 ml to 300 ml per minute without any in-line flow cell connected. The water level in the well casing must be monitored continuously for any change from the original measurement. If significant drawdown is observed, the pump's flow rate should be incrementally reduced until the SWL drawdown ceases and stabilizes. Total drawdown from the initial (static) water level should not exceed 25% of the distance between pump inlet location and the top of the well screen. (For example, if a well has a 10-foot screen zone and the pump inlet is located mid-screen; the maximum drawdown should be 1.25 feet.) In any case, the water level in the well should not be lowered below the top of the screen/intake zone of the well.

Once the specific well's optimum discharge rate, without an in-line flow cell connected, has been determined and documented, the in-line flow cell system to be used is connected to the well discharge and the control settings required to achieve the well's optimum discharge rate are determined with the in-line flow cell connected. (Due to the system's back-pressure, the discharge rate will be decreased by 10-20%). All control settings are to be documented on the gauging and sampling sheet as specific to that particular well's ID and will be utilized for its subsequent purging and sampling events.

Purge and Sampling Events

Prior to the initiation of purging a well, the SWL will be measured and documented. The pump will be started utilizing its documented control settings and its discharge rate will be confirmed by volumetric discharge measurement with the in-line flow cell connected. If necessary, any minor modifications to the control settings to achieve the well's optimum discharge rate will be documented on the gauging sheet. When the optimum pump flow rate has been established, the SWL draw down has stabilized within the required range and at least one pump system volume (bladder volume + discharge tubing volume) has been purged, begin taking field measurements for pH, temperature (T), conductivity (Ec), oxygen reduction potential (ORP) and dissolved oxygen (DO) using a "QED" Model MP-20 in-line flow cell, or other multi-parameter meter. All water chemistry field measurements will be documented on the field data sheet. Measurements should be taken every three to five minutes until stabilization has been achieved. Stabilization is achieved after all parameters have stabilized for three consecutive readings. In lieu of measuring all five parameters, a minimum subset would include pH, conductivity and dissolved oxygen. Three consecutive measurements indicating stability should be within:

Temperature	± 10%
pH	± 0.1 units
Conductance	± 03

When water quality parameters have stabilized, and there has been no change in the stabilized SWL (ie. No continuous draw down), sample collection may begin.

Equipment List

The following equipment is needed to conduct low flow purging and sampling:

- Bladder pump installed within the well's screened interval
- Pump controller and air source set to operate at the specific well's documented optimum discharge rate
- In-line flow cell and meter(s) with connection fittings and tubing to measure water quality
- Water level probe or installed dedicated water level measurement system
- Sample containers appropriate for the analytical requirements
- Low Flow Ground Water Sample Collection Record, or field data sheets
- 300-500 milliliter graduated cylinder or measuring cup
- 5 gallon bucket(s) for collecting purge water
- Wristwatch with second hand or stopwatch
- Sufficient cleaning and decontamination supplies if portable water level probe is utilized
- Peristaltic pump & tubing, in place of bladder pump, if applicable
- Multi-parameter meter, in place of in-line flow cell, if applicable

Procedure QED Bladder Pumps

1. Calibrate all field instruments at the start of each day's deployment per the instrument manufacturer's instructions. Record calibration data on the "Field Instruments Calibration Documentation Form."
2. Drive to the first well scheduled to be sampled (typically the least contaminated). Make notes in the field logbook, describing the well condition and activity in the vicinity of the well. Decontaminate the portable water gauging probe by washing with phosphate-free detergent, rinsing with potable water.
3. Measure the depth to water from the surveyed reference mark on the wellhead and record the measurement on the gauging and sampling sheet. Lock the water level meter in place so that the level can be monitored during purging and sampling. When placing the probe in the well, take precautions to not disturb or agitate the water.
4. Connect the compressed air source's airline to the pump controller's "AIR IN" connection (If utilizing a gas-engine operated compressor, locate the compressor at least 25 feet, down wind from the wellhead).
5. Connect the pump controller "AIR OUT" air-line to the bladder pump's air supply fitting at the wellhead.
6. Connect the pump discharge line to the in-line flow cell's "IN" fitting.
7. Connect the flow cell's "OUT" line and secure to drain the purge water into the purge water collection container.
8. Start the air supply to the pump. Set the pump controller settings to the documented settings for the specific well. Confirm the flow rate is equal to the well's established optimum flow rate. Modify as necessary (documenting any required modifications).
9. Monitor the water level and confirm that the SWL draw down has stabilized within the well's allowable limits.
10. After a single pump-system's volume (bladder volume + discharge tubing volume) has been adequately purged, read and record water quality field measurements every three to five minutes until all parameters have stabilized within their allowable ranges for at least three consecutive measurements. When stabilization has been achieved, sample collection may begin.
11. Disconnect the flow cell, and it's tubing, from the pump discharge line before collecting samples. Decrease the pump rate to 100 milliliters per minute or less by lowering the controller's air pressure setting prior to collecting samples for volatiles. Utilize the QED Model 400 Controller's 'MANUAL SAMPLE' button to ensure minimized sample exposure to the ambient air. Refer to

the task instructions for the correct order and procedures for filling sample containers. Place the samples in a cooler with enough ice to keep them at 4 degrees Centigrade.

12. Once samples for volatiles have been collected, re-establish pump flow rate to the original purge flow rate by inputting the documented controller settings for the well without the in-line flow cell connected and collect remaining samples.
13. When all sample containers have been filled, make a final measurement of the well's SWL and record the measurement on the gauging and sampling sheet. If the well has a "QED" dedicated bottom sounder, measure the well's total depth and record the measurement, as well.
14. Measure and record total purge volume collected. Consolidate generated purge water.
15. Remove and decontaminate the portable water level probe with phosphate-free detergent, rinsing with potable water.
16. Disconnect the controller air supply to the pump.
17. Secure the pump's discharge line/discharge adapter in the wellhead.
18. Secure the wellhead cover and secure with its lock. Move equipment to next well to be sampled.
19. At the end of each day, post calibrate all field instruments and record the measurements on the "Field Calibration Documentation Form".
20. Clean and decontaminate the in-line flow cell with phosphate-free detergent, rinsing with potable water.

Procedure Peristaltic Pump

1. Record all depth to water readings on field data sheets
2. Calibrate all field instruments according to manufacturer's directions.
3. Setup pump and install silicone tubing in the roller head.
4. Place suction tubing at desired intake level in well, (mid screen) and attach to pump silicone tubing.
5. Attach tubing at discharge side of pump head and connect to flow cell inlet. Place discharge Tubing from flow cell into collection container.
6. Start pump and adjust flow rate to achieve flow without depressing water level more than necessary (approx. 0.30').
7. Record parameter readings after parameters have stabilized (3 consecutive readings that fall within the acceptance criteria).
8. Stop pump and disconnect flow cell prior to collecting samples. Restart pump and set flow rate to minimum (approximately 100ml/min).
9. Change all tubing between wells and repeat procedure.

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #9-1122 Job Number: 386756
Site Address: 568 Peace Portal Drive Event Date: 9-24-08 - 9-25-08 (inclusive)
City: Blaine, WA Sampler: ML

Well ID MW- 1 Date Monitored: 9-24-08
Well Diameter 2 in.
Total Depth 15.70 ft.
Depth to Water 8.63 ft.

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

☐ Check if water column is less than 0.50 ft.

7.07 xVF ___ = ___ x3 case volume = Estimated Purge Volume: ___ gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 10.04

Purge Equipment:
Disposable Bailer ___
Stainless Steel Bailer ___
Stack Pump ___
Suction Pump ___
Grundfos ___
Peristaltic Pump X
QED Bladder Pump ___
Other: ___

Sampling Equipment:
Disposable Bailer ___
Pressure Bailer ___
Discrete Bailer ___
Peristaltic Pump X
QED Bladder Pump ___
Other: ___

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

Start Time (purge): 0800 Weather Conditions: Rain
Sample Time/Date: 0830 / 9-25-08 Water Color: Cloudy Odor: Y / N
Approx. Flow Rate: 150 ml/ gpm. Sediment Description: None
Did well de-water? No If yes, Time: ___ Volume: ___ gal. DTW @ Sampling: 10.00

Time (2400 hr.)	Volume (gal.) L	pH	Conductivity (µmhos/cm - µS)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	DTW
0810	1.5	7.15	368	15.9			9.57
0815	2	7.10	360	16.1			9.83
0820	2.5	7.09	361	16.1			10.09

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW- 1	6 x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	2 x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc

COMMENTS: Pump Set Depth ~ 11 Feet

Add/Replaced Lock: ___ Add/Replaced Plug: ___ Add/Replaced Bolt: ___

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WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #9-1122 | Job Number: 386756
Site Address: 568 Peace Portal Drive | Event Date: 9-24-08 - 9-25-08 (inclusive)
City: Blaine, WA | Sampler: ML

Well ID: MW-2 | Date Monitored: 9-24-08
Well Diameter: 2 in.
Total Depth: 15.36 ft.
Depth to Water: 3.92 ft.

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

☐ Check if water column is less then 0.50 ft.

11.44 xVF ___ = ___ x3 case volume = Estimated Purge Volume: ___ gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 6.20

Purge Equipment:
- Disposable Bailer: ___
- Stainless Steel Bailer: ___
- Stack Pump: ___
- Suction Pump: ___
- Grundfos: ___
- Peristaltic Pump: X
- QED Bladder Pump: ___
- Other: ___

Sampling Equipment:
- Disposable Bailer: ___
- Pressure Bailer: ___
- Discrete Bailer: ___
- Peristaltic Pump: X
- QED Bladder Pump: ___
- Other: ___

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

Start Time (purge): 1105 | Weather Conditions: Rain
Sample Time/Date: 1135 9-24-08 | Water Color: Cloudy | Odor: (Y) / N
Approx. Flow Rate: 150 ml/gpm. | Sediment Description: light
Did well de-water? NO If yes, Time: ___ Volume: ___ gal. DTW @ Sampling: 5.92

Time (2400 hr.)	Volume (gal.) L	pH	Conductivity (µmhos/cm - µS)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	DTW
1115	1.5	6.82	6006	16.8			5.06
1118	2	6.85	610	17.0			5.45
1121	2.5	6.87	614	17.1			5.92

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-2	6 x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)/EDB/EDC/NAPHthalene(8
	2 x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc
	3 X Voa Vial	"	"	"	Full List (8260)
	3 X VOA Vial	"	"	"	VPH (ECY97-602 WA VPH)
	1 x 500ml Poly	"	HNO_3	"	Total Lead (6020)
	2 x 1L amber	"	Na_2SO_3	"	cPAH's (8270)
	2 x 1L Amber	"	"	"	PCB's (8082)
	2 x 1L Amber	"	HCL	"	EPH (ECY97-602 WA EPH)

COMMENTS: Pump Set Depth - 1 foot

Add/Replaced Lock: ___ Add/Replaced Plug: ___ Add/Replaced Bolt: ___

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/Facility#: Chevron #9-1122 | Job Number: 386756
Site Address: 568 Peace Portal Drive | Event Date: 9-24-08 - 9-26-08 (inclusive)
City: Blaine, WA | Sampler: ML

Well ID: MW-3 | Date Monitored: 9-24-08
Well Diameter: 2 in.
Total Depth: 15.25 ft.
Depth to Water: 4.89 ft. ☐ Check if water column is less than 0.50 ft.

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

10.36 xVF — = — x3 case volume = Estimated Purge Volume: — gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 6.96

Purge Equipment:

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

Sampling Equipment:

Disposable Bailer	
Pressure Bailer	
Discrete Bailer	
Peristaltic Pump	X
QED Bladder Pump	
Other:	

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

Start Time (purge): 1015 | Weather Conditions: Rain
Sample Time/Date: 1045 / 9-24-08 | Water Color: Cloudy | Odor: Y / N
Approx. Flow Rate: 150 ml/min. | Sediment Description: light
Did well de-water? no If yes, Time: — Volume: — gal. DTW @ Sampling: 6.59

Time (2400 hr.)	Volume (gal.) L	pH	Conductivity (µmhos/cm - µS)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	DTW
1025	1.5	6.73	542	17.0			5.93
1028	2	6.70	540	17.7			6.41
1031	2.5	6.71	539	17.2			6.59

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-3	6 x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	2 x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc

COMMENTS: Pump Set Depth - 10 Feet

Add/Replaced Lock: — Add/Replaced Plug: — Add/Replaced Bolt: —

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: **Chevron #9-1122** Job Number: **386756**

Site Address: **568 Peace Portal Drive** Event Date: 9-24-08 - 7-25-08 (inclusive)

City: **Blaine, WA** Sampler: ML

Well ID: MW-4 Date Monitored: 9-24-08

Well Diameter: 2 in.

Total Depth: 15.37 ft.

Depth to Water: 5.37 ft. ☐ Check if water column is less then 0.50 ft.

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

10.00 xVF — = — x3 case volume = Estimated Purge Volume: — gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 7.39

Purge Equipment:

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

Sampling Equipment:

Disposable Bailer	
Pressure Bailer	
Discrete Bailer	
Peristaltic Pump	X
QED Bladder Pump	
Other:	

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

Start Time (purge): 0830 Weather Conditions: Rain

Sample Time/Date: 0900 / 9-24-08 Water Color: Clear Odor: Y / (N)

Approx. Flow Rate: 150 ml/gpm. Sediment Description: none

Did well de-water? NO If yes, Time: — Volume: — gal. DTW @ Sampling: [redacted] 6.01

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm (µS))	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	DTW
0840	1.5	7.07	343	15.5			5.76
0843	2	7.06	341	15.6			5.90
0846	2.5	7.06	341	15.7			6.01

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-4	6 x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	2 x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc

COMMENTS: Pump Set Depth - 10 feet

Add/Replaced Lock: — Add/Replaced Plug: — Add/Replaced Bolt: 1

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #9-1122 Job Number: 386756
Site Address: 568 Peace Portal Drive Event Date: 9-24-25-08 (inclusive)
City: Blaine, WA Sampler: ML

Well ID MW-5 Date Monitored: 9-24-08
Well Diameter 2 in.
Total Depth 19.00 ft.
Depth to Water 8.94 ft. ☐ Check if water column is less then 0.50 ft.
10.06 xVF ___ = ___ x3 case volume = Estimated Purge Volume: ___ gal.
Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 10.95

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

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

Sampling Equipment:
Disposable Bailer
Pressure Bailer
Discrete Bailer
Peristaltic Pump X
QED Bladder Pump
Other:

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

Start Time (purge): ~~1220~~ 1215 Weather Conditions: Rain
Sample Time/Date: 1245 9-24-08 Water Color: Cloudy Odor: Y / N
Approx. Flow Rate: 150 mL/ ~~gpm~~. Sediment Description: Tight
Did well de-water? No If yes, Time: ___ Volume: ___ gal. DTW @ Sampling: 10.72

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm - µS)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	DTW
1225	1.5	6.81	869	16.9			10.07
1228	2	6.76	869	17.0			10.41
1231	2.5	6.77	871	17.0			10.72

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-5	6 x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260) / EDB / EDC / NAPHTHALENE (826
	2 x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc
	3 x Voa Vial		"		FULL LIST (8260)
	3 x Voa Vial		"		VPH (ECY97-602 WA VPH)
	1 x Sterile poly		HNO_3		Total Lead (6020)
	2 x 1L Amber		$NaOH+ZnAc$		CPAH's (8270)
	2 x "		"		PCB's (8082)
	2 x "		HCL		EPH (ECY97-602 WA EPH)

COMMENTS: Pump Set Depth - 14 feet

Add/Replaced Lock: ___ Add/Replaced Plug: ___ Add/Replaced Bolt: ___

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #9-1122 Job Number: 386756
Site Address: 568 Peace Portal Drive Event Date: 9-24/25-08 (inclusive)
City: Blaine, WA Sampler: ML

Well ID MW-6 Date Monitored: 9-24-08
Well Diameter 2 in.
Total Depth 18.00 ft.
Depth to Water 5.55 ft.

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

☐ Check if water column is less then 0.50 ft.

12.45 xVF 0.17 = 2.12 x3 case volume = Estimated Purge Volume: 6.36 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 8.04

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

Sampling Equipment:
Disposable Bailer
Pressure Bailer
Discrete Bailer
Peristaltic Pump Y
QED Bladder Pump
Other:

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

Start Time (purge): 0925 Weather Conditions: Rain
Sample Time/Date: 0955 9-24-08 Water Color: Cloudy Odor: Y / N
Approx. Flow Rate: 150 ml/~~gpm~~. Sediment Description: light
Did well de-water? NO If yes, Time: Volume: gal. DTW @ Sampling: 7.07

Time (2400 hr.)	Volume (~~gal~~ L)	pH	Conductivity (µmhos/cm - ~~µS~~)	Temperature (°C / F)	D.O. (mg/L)	ORP (mV)	DTW
0935	1.5	6.64	438	16.4			6.51
0938	2	6.64	441	16.5			6.82
0941	2.5	6.65	440	16.5			7.07

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-6	6 x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	2 x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc

COMMENTS: Pump Set Depth - 11 feet

Add/Replaced Lock: X Add/Replaced Plug: Add/Replaced Bolt:

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #9-1122 Job Number: 386756
Site Address: 568 Peace Portal Drive Event Date: 9-24-08 - 9-25-08 (inclusive)
City: Blaine, WA Sampler: mL

Well ID MW-7 Date Monitored: 9-24-08
Well Diameter 2 in.
Total Depth 17.92 ft.
Depth to Water 13.34 ft. ☐ Check if water column is less then 0.50 ft.

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

4.58 xVF ___ = ___ x3 case volume = Estimated Purge Volume: ___ gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 14.25

Purge Equipment:
Disposable Bailer ___
Stainless Steel Bailer ___
Stack Pump ___
Suction Pump ___
Grundfos ___
Peristaltic Pump X
QED Bladder Pump ___
Other: ___

Sampling Equipment:
Disposable Bailer ___
Pressure Bailer ___
Discrete Bailer ___
Peristaltic Pump X
QED Bladder Pump ___
Other: ___

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

Start Time (purge): 1355 Weather Conditions: Rain
Sample Time/Date: 1425 / 9-24-08 Water Color: Cloudy Odor: Y / (N)
Approx. Flow Rate: 150 ml/min. Sediment Description: light
Did well de-water? No If yes, Time: ___ Volume: ___ gal. DTW @ Sampling: 14.20

Time (2400 hr.)	Volume (gal.) L	pH	Conductivity (µmhos/cm - µS)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	DTW
1405	1.5	6.90	502	16.2			13.69
1408	2	6.86	508	16.9			13.98
1411	2.5	6.84	511	16.4			14.20

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-7	6 x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	2 x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc

COMMENTS: Pump Set Depth - 15 feet

Add/Replaced Lock: ___ Add/Replaced Plug: ___ Add/Replaced Bolt: ___

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #9-1122 Job Number: 386756
Site Address: 568 Peace Portal Drive Event Date: 9-24-08 : 7-25-08 (inclusive)
City: Blaine, WA Sampler: MC

Well ID MW-8 Date Monitored: 9.24.08
Well Diameter 2 in.
Total Depth 18.50 ft.
Depth to Water 5.74 ft.

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

☐ Check if water column is less then 0.50 ft.

12.76 xVF ~ = ~ x3 case volume = Estimated Purge Volume: ~ gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 8.29

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

Sampling Equipment:
Disposable Bailer
Pressure Bailer
Discrete Bailer
Peristaltic Pump X
QED Bladder Pump
Other:

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

Start Time (purge): 1305 Weather Conditions: Rain
Sample Time/Date: 1335 9-24-08 Water Color: Cloudy Odor: Y / N
Approx. Flow Rate: 150 ml/min. Sediment Description: light
Did well de-water? NO If yes, Time: Volume: gal. DTW @ Sampling: 7.86

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm (µS))	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	DTW
1315	1.5	6.96	536	16.7			6.89
1318	2	6.92	541	16.8			7.41
1321	2.5	6.91	543	16.8			7.86

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-8	6 x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	2 x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc

COMMENTS: Pump Set Depth - 11 feet

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

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #9-1122 Job Number: 386756
Site Address: 568 Peace Portal Drive Event Date: 9-24/9-25-08 (inclusive)
City: Blaine, WA Sampler: MC

Well ID MW-5T Date Monitored: 9-24-08
Well Diameter 2 in.
Total Depth 11.50 ft.
Depth to Water 3.62 ft.

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

☐ Check if water column is less then 0.50 ft.

7.88 xVF ___ = ___ x3 case volume = Estimated Purge Volume: ___ gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 5.19

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

Sampling Equipment:
Disposable Bailer
Pressure Bailer
Discrete Bailer
Peristaltic Pump X
QED Bladder Pump
Other:

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

Start Time (purge): 1445 Weather Conditions: Rain
Sample Time/Date: 1545 / 9-24-08 Water Color: Clear Odor: Y / (N)
Approx. Flow Rate: 150 ml/ gpm. Sediment Description: None
Did well de-water? No If yes, Time: ___ Volume: ___ gal. DTW @ Sampling: 5.15

Time (2400 hr.)	Volume (gal.) L	pH	Conductivity (µmhos/cm - µS)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	DTW
1451	1	6.74	594	15.1			4.81
1454	1.5	6.70	590	15.0			5.07
1457	2	6.68	591	15.0			5.39

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-5T	6 x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	2 x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc

COMMENTS: pump set depth ~ 7 feet

Add/Replaced Lock: ___ Add/Replaced Plug: ___ Add/Replaced Bolt: ___

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #9-1122 Job Number: 386756
Site Address: 568 Peace Portal Drive Event Date: 9/24 - 9/25/08 (inclusive)
City: Blaine, WA Sampler: ANC

Well ID MW- 8T
Well Diameter 4 in.
Total Depth 11.85 ft.
Depth to Water 5.96 ft.
5.89 xVF ___ = ___

Date Monitored: 9-24-08

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

☐ Check if water column is less then 0.50 ft.

x3 case volume = Estimated Purge Volume: ___ gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 7.13

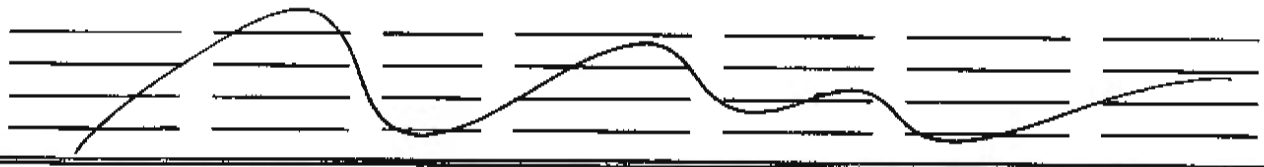
Purge Equipment:
Disposable Bailer
Stainless Steel Bailer
Stack Pump
Suction Pump
Grundfos
Peristaltic Pump X
QED Bladder Pump
Other:

Sampling Equipment:
Disposable Bailer
Pressure Bailer
Discrete Bailer
Peristaltic Pump X
QED Bladder Pump
Other:

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

Start Time (purge): 1150 Weather Conditions: Rain
Sample Time/Date: — / — Water Color: — Odor: Y / N
Approx. Flow Rate: 150 ml/ gpm. Sediment Description: ~
Did well de-water? Yes If yes, Time: 1655 Volume: 750 ml gal. DTW @ Sampling: —

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm - µS)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)



LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-	x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)/EDB/EDC/ Naphthalene(8260)
	x voa vial	YES	HCL	LANCASTER	FULL LIST VOC'S(8260)
	x voa vial	YES	HCL	LANCASTER	VPH(ECY97 - 602 WA VPH)
	x 1 Liter Amber	YES	HCL	LANCASTER	TPH-Dx w/sgc
	x 1 Liter Amber	YES	HCL	LANCASTER	EPH(ECY97 - 602 WA EPH
	x 1 Liter Amber	YES	Na2S2O3	LANCASTER	cPAH's (8270)
	x 1 Liter Amber	YES	Na2S2O3	LANCASTER	PCB'S (8082)
	x 500ml Poly	YES	HNO3	LANCASTER	TOTAL LEAD (6020)

COMMENTS: Well Dewatered on 9-24-08, returned next day to Sample, Insufficient water to Sample.

Add/Replaced Lock: ___ Add/Replaced Plug: ___ Add/Replaced Bolt: ___

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #9-1122 | Job Number: 386756
Site Address: 568 Peace Portal Drive | Event Date: 9/24 - 9/25/08 (inclusive)
City: Blaine, WA | Sampler: MK

Well ID: MW-9T
Well Diameter: 4 in.
Total Depth: 8.61 ft.
Depth to Water: 4.54 ft.
4.07 xVF ____ = ____ x3 case volume = Estimated Purge Volume: ____ gal.
Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 5.35

Date Monitored: 9.24.08

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

☐ Check if water column is less then 0.50 ft.

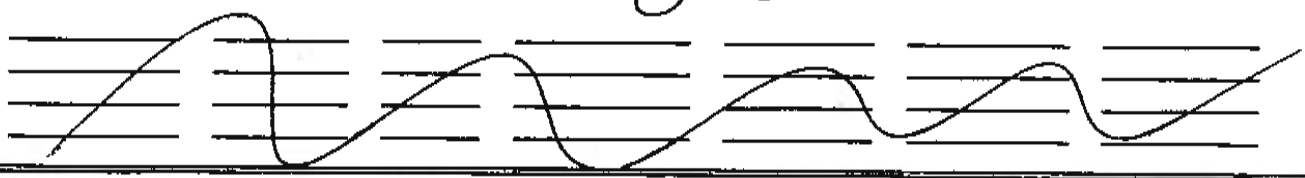
Purge Equipment:
Disposable Bailer
Stainless Steel Bailer
Stack Pump
Suction Pump
Grundfos
Peristaltic Pump: Y
QED Bladder Pump
Other:

Sampling Equipment:
Disposable Bailer
Pressure Bailer
Discrete Bailer
Peristaltic Pump: X
QED Bladder Pump
Other:

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

Start Time (purge): 1625 | Weather Conditions: Rain
Sample Time/Date: - / - | Water Color: - | Odor: Y / N -
Approx. Flow Rate: 150 mL/ppm. | Sediment Description: -
Did well de-water? YES If yes, Time: 1630 Volume: 750 mL DTW @ Sampling: -

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm (µS))	Temperature (C / F)	D.O. (mg/L)	ORP (mV)



LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-9T	x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc

COMMENTS: Broken Stock Well Dewatered on 9-24-08, returned next day to Sample, insufficient water to Sample.

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

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #9-1122 | Job Number: 386756
Site Address: 568 Peace Portal Drive | Event Date: 9/24 - 9/25-08 (inclusive)
City: Blaine, WA | Sampler: MC

Well ID: MW- 10T | Date Monitored: 9.24.08
Well Diameter: 4 in.
Total Depth: 11.92 ft.
Depth to Water: 4.35 ft.

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

☐ Check if water column is less then 0.50 ft.

7.57 xVF ~ = ~ x3 case volume = Estimated Purge Volume: ~ gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 5.86

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

Sampling Equipment:
Disposable Bailer
Pressure Bailer
Discrete Bailer
Peristaltic Pump X
QED Bladder Pump
Other:

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

Start Time (purge): 1605 | Weather Conditions: Rain
Sample Time/Date: 0915 9-25-08 | Water Color: Clear | Odor: Y / (N)
Approx. Flow Rate: 150 ml/min. | Sediment Description: None
Did well de-water? YES If yes, Time: 1612 Volume: 1L DTW @ Sampling: 5.11

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm (µS))	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
1615	1.5					

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW- 10T	4 x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	1 x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc

COMMENTS: Only able to collect enough water during sampling to fill 1 x 1 Liter amber for NWTPH-Dx.

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

Chevron Northwest Region Analysis Request/Chain of Custody

Lancaster Laboratories
Where quality is a science.

For Lancaster Laboratories use only
Acct. #: 11260 Sample #: 5481472-82 SCR#: ______
Group# 1112142

Facility #: SS#9-1122 (OML) G-R#386756
Site Address: 568 Peace Portal Drive, BLAINE, WA
Chevron PM: ~~BH~~ DS 9/19/08 Lead Consultant: SAICPC
Consultant/Office: G-R, Inc., 6747 Sierra Court, Suite J, Dublin, Ca. 94568
Consultant Prj. Mgr.: Deanna L. Harding (deanna@grinc.com)
Consultant Phone #: 925-551-7555 Fax #: 925-551-7899
Sampler: Mike Lombard
Service Order #: ______ ☐ Non SAR: ______

Matrix: Soil / Water (☐ Potable ☐ NPDES) / ☐ Oil ☐ Air

Analyses Requested

Sample Identification	Date Collected	Time Collected	Grab	Composite	Soil	Water	Oil ☐ Air ☐	Total Number of Containers	BTEX + MTBE 8021 ☐ 8260 ☒ Naphth ☐ (H)	VOC's (8260) 8260 full scan (H)	Oxygenates	NW TPH Gx (H)	NW TPH Dx ☐ Extended Rng. ☒ Silica Gel Cleanup (H)	Lead Total ☒ Diss. ☐ Method 6020 (N)	VPH/EPH (8/97-602 WA) (N)	NWTPH H HCID ☐ quantification	EDB/EDC/NAPHTHALENE (8260) (H)	cPAH's (8270) (O)	PCB's (8082) (O)	
QA			X			X		2	X			X								
MW-1	9-25-08	0830	X			X		8	X			X	X							
MW-2	9-24-08	1135	X			X		8	X	X		X	X	X	X		X	X	X	
MW-3	9-24-08	1045	X			X		8	X			X	X							
MW-4	9-24-08	0900	X			X		8	X			X	X							
MW-5	9-24-08	1245	X			X		8	X	X		X	X	X	X		X	X	X	
MW-6	9-24-08	0955	X			X		8	X			X	X							
MW-7	9-24-08	1425	X			X		8	X			X	X							
MW-8	9-24-08	1335	X			X		8	X			X	X							
[illegible]	[illegible]	[illegible]	[illegible]			[illegible]		[illegible]	[illegible]			[illegible]	[illegible]							
[illegible]	[illegible]	[illegible]	[illegible]			[illegible]		[illegible]	[illegible]			[illegible]	[illegible]							

Preservative Codes
H = HCl T = Thiosulfate
N = HNO_3 B = NaOH
S = H_2SO_4 O = Other

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

Comments / Remarks

Turnaround Time Requested (TAT) (please circle)
(STD. TAT) 72 hour 48 hour
24 hour 4 day 5 day

Data Package Options (please circle if required) **EDF/EDD**
QC Summary Type I - Full
Type VI (Raw Data) Disk / EDD
WIP (RWQCB) Standard Format
Disk ______ Other.

Relinquished by:	Date	Time	Received by:	Date	Time
[signature]	9-25-08	1500			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by Commercial Carrier: UPS (FedEx) Other ______			Received by: Sheila Morgan	9-26-08	0920
Temperature Upon Receipt 2.0 - 4.0 °C			Custody Seals Intact? (Yes) No		

Lancaster Laboratories, Inc., 2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 (717) 656-2300
Copies: White and yellow should accompany samples to Lancaster Laboratories. The pink copy should be retained by the client.

3468 Rev. 8/8/01

Chevron Northwest Region Analysis Request/Chain of Custody

Lancaster Laboratories
Where quality is a science.

Acct. #: 11260 For Lancaster Laboratories use only Sample #: 5481472-82 SCR#: ______

Group# 1112142

Facility #: SS#9-1122-OML G-R#386756

Site Address: 568 Peace Portal Drive, BLAINE, WA

Chevron PM: BH OS Lead Consultant: SAICPC

Consultant/Office: G-R, Inc., 6747 Sierra Court, Suite J, Dublin, Ca. 94568

Consultant Prj. Mgr.: Deanna L. Harding (deanna@grinc.com)

Consultant Phone #: 925-551-7555 Fax #: 925-551-7899

Sampler: Mike Lombard

Service Order #: ______ ☐ Non SAR: ______

Analyses Requested — Preservation Codes: H (BTEX + MTBE), H (TPH G), H (TPH D)

Sample Identification	Date Collected	Time Collected	Grab	Composite	Soil	Water (☐ Potable ☐ NPDES)	Oil ☐ Air ☐	Total Number of Containers	BTEX + MTBE 8021 ☐ 8260 ☒ Naphth ☐	8260 full scan	Oxygenates	NW TPH G	NW TPH D ☐ Extended Rng. ☐ Silica Gel Cleanup	Lead Total ☐ Diss. ☐ Method	VPH/EPH	NWTPH H HCID ☐ quantification
[redacted]																
MW-5T	9-24-08	1545	X			X		8	X			X	X			
MW-10T	9-25-08	0915	X			X		7	X			X	X			

Preservative Codes
H = HCl T = Thiosulfate
N = HNO_3 B = NaOH
S = H_2SO_4 O = Other

☐ J value reporting needed
☐ Must meet lowest detection limits possible for 8260 compounds

8021 MTBE Confirmation
☐ Confirm MTBE + Naphthalene
☐ Confirm highest hit by 8260
☐ Confirm all hits by 8260
☐ Run ____ oxy's on highest hit
☐ Run ____ oxy's on all hits

Comments / Remarks

Turnaround Time Requested (TAT) (please circle)
STD. TAT (circled) 72 hour 48 hour
24 hour 4 day 5 day

Data Package Options (please circle if required) **EDF/EDD**
QC Summary Type I - Full
Type VI (Raw Data) Disk / EDD
WIP (RWQCB) Standard Format
Disk ______ Other.

Relinquished by:	Date	Time	Received by:	Date	Time
[signature]	9-26-08	1800			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by Commercial Carrier: UPS FedEx (circled) Other ______			Received by: [signature]	9-26-08	0920
Temperature Upon Receipt 2.0-4.0 C°			Custody Seals Intact? Yes (circled) No		

Lancaster Laboratories, Inc., 2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 (717) 656-2300
Copies: White and yellow should accompany samples to Lancaster Laboratories. The pink copy should be retained by the client.

3468 Rev. 8/6/01

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

ANALYTICAL RESULTS

Prepared for:

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

925-842-8582

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

SAMPLE GROUP

The sample group for this submittal is 1112142. Samples arrived at the laboratory on Friday, September 26, 2008. The PO# for this group is 0015024861 and the release number is SKANCE.

Client Description	Lancaster Labs Number
QA Water Sample	5481472
MW-1 Grab Water Sample	5481473
MW-2 Grab Water Sample	5481474
MW-3 Grab Water Sample	5481475
MW-4 Grab Water Sample	5481476
MW-5 Grab Water Sample	5481477
MW-6 Grab Water Sample	5481478
MW-7 Grab Water Sample	5481479
MW-8 Grab Water Sample	5481480
MW-5T Grab Water Sample	5481481
MW-10T Grab Water Sample	5481482

ELECTRONIC COPY TO SAIC c/o Gettler-Ryan Attn: Cheryl Hansen

Lancaster Laboratories

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Analysis Report

Questions? Contact your Client Services Representative
Jill M Parker at (717) 656-2300

Respectfully Submitted,

Chad A. Moline
Group Leader

Lancaster Laboratories

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Analysis Report

Lancaster Laboratories Sample No. WW5481472 **Group No. 1112142**

QA Water Sample
Facility# 91122 Job# 386756
568 Peace Portal Drive-Blaine, WA
Collected:09/24/2008

Account Number: 11260

Submitted: 09/26/2008 09:20
Reported: 10/16/2008 at 14:35
Discard: 11/16/2008

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

PORQA

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08273	TPH by NWTPH-Gx waters					
01645	TPH by NWTPH-Gx waters	n.a.	N.D.	50	ug/l	1
06054	BTEX+MTBE by 8260B					
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	ug/l	1
05401	Benzene	71-43-2	N.D.	0.5	ug/l	1
05407	Toluene	108-88-3	N.D.	0.5	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.	0.5	ug/l	1
06310	Xylene (Total)	1330-20-7	N.D.	0.5	ug/l	1

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 Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
08273	TPH by NWTPH-Gx waters	ECY 97-602 NWTPH-Gx modified	1	10/02/2008 11:58	Carrie E Youtzy	1
06054	BTEX+MTBE by 8260B	SW-846 8260B	1	10/02/2008 05:47	Michael A Ziegler	1
01146	GC VOA Water Prep	SW-846 5030B	1	10/02/2008 11:58	Carrie E Youtzy	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	10/02/2008 05:47	Michael A Ziegler	1

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Lancaster Laboratories Sample No. WW5481473 **Group No. 1112142**

MW-1 Grab Water Sample
Facility# 91122 Job# 386756
568 Peace Portal Drive-Blaine, WA
Collected:09/25/2008 08:30 by ML

Account Number: 11260

Submitted: 09/26/2008 09:20
Reported: 10/16/2008 at 14:35
Discard: 11/16/2008

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

PORM1

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
02211	TPH by NWTPH-Dx(water) w/SiGel					
02095	Diesel Range Organics	n.a.	N.D.	80	ug/l	1
02096	Heavy Range Organics	n.a.	N.D.	100	ug/l	1
08273	TPH by NWTPH-Gx waters					
01645	TPH by NWTPH-Gx waters	n.a.	120	50	ug/l	1
06054	BTEX+MTBE by 8260B					
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	ug/l	1
05401	Benzene	71-43-2	1	0.5	ug/l	1
05407	Toluene	108-88-3	N.D.	0.5	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.	0.5	ug/l	1
06310	Xylene (Total)	1330-20-7	N.D.	0.5	ug/l	1

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 Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
02211	TPH by NWTPH-Dx(water) w/SiGel	ECY 97-602 NWTPH-Dx modified	1	10/04/2008 00:15	Diane V Do	1
08273	TPH by NWTPH-Gx waters	ECY 97-602 NWTPH-Gx modified	1	10/02/2008 13:25	Carrie E Youtzy	1
06054	BTEX+MTBE by 8260B	SW-846 8260B	1	10/02/2008 06:12	Michael A Ziegler	1
01146	GC VOA Water Prep	SW-846 5030B	1	10/02/2008 13:25	Carrie E Youtzy	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	10/02/2008 06:12	Michael A Ziegler	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	10/02/2008 08:45	Kerrie A Freeburn	1

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Analysis Report

Lancaster Laboratories Sample No. WW5481474 **Group No. 1112142**

MW-2 Grab Water Sample
Facility# 91122 Job# 386756
568 Peace Portal Drive-Blaine, WA
Collected:09/24/2008 11:35 by ML

Account Number: 11260

Submitted: 09/26/2008 09:20
Reported: 10/16/2008 at 14:35
Discard: 11/16/2008

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

PORM2

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
06035	Lead	7439-92-1	4.5	0.050	ug/l	1
02211	TPH by NWTPH-Dx(water) w/SiGel					
02095	Diesel Range Organics	n.a.	1,200	400	ug/l	5
02096	Heavy Range Organics	n.a.	N.D.	500	ug/l	5
05665	WA - VPH waters					
05328	Methyl t-butyl ether	1634-04-4	N.D.	5.0	ug/l	5
05537	Benzene	71-43-2	1,570	5.0	ug/l	5
05539	Toluene	108-88-3	62.4	5.0	ug/l	5
05542	Ethylbenzene	100-41-4	1,510	5.0	ug/l	5
05544	m,p-Xylenes	1330-20-7	618	10.0	ug/l	5
05548	o-Xylene	95-47-6	35.3	5.0	ug/l	5
05552	C5-C6 Aliphatic Hydrocarbons	n.a.	1,310	125	ug/l	5
05642	C6-C8 Aliphatic Hydrocarbons	n.a.	3,810	125	ug/l	5
05644	C8-C10 Aliphatic Hydrocarbons	n.a.	1,060	125	ug/l	5
05645	C8-C10 Aromatic Hydrocarbons	n.a.	2,360	125	ug/l	5
	The n-decane %drift value for the calibration check standard associated with the sample was outside the method criteria (+/-20%)at 20.8%. This should have no adverse effect on the data.					
05979	WA EPH in Water					
05980	>C10 - C12 Aliphatic	n.a.	84	9.8	ug/l	1
05981	>C12 - C16 Aliphatic	n.a.	N.D.	9.8	ug/l	1
05982	>C16 - C21 Aliphatic	n.a.	N.D.	9.8	ug/l	1
05983	>C21 - C34 Aliphatic	n.a.	N.D.	9.8	ug/l	1
05984	>C10 - C12 Aromatic	n.a.	1,500	98	ug/l	10
05985	>C12 - C16 Aromatic	n.a.	560	98	ug/l	10
05986	>C16 - C21 Aromatic	n.a.	N.D.	110	ug/l	10
05987	>C21 - C34 Aromatic	n.a.	N.D.	150	ug/l	10
08273	TPH by NWTPH-Gx waters					
01645	TPH by NWTPH-Gx waters	n.a.	14,000	250	ug/l	5
00173	PCBs in Water					
00639	PCB-1016	12674-11-2	N.D.	0.098	ug/l	1

Lancaster Laboratories Sample No. WW5481474 **Group No. 1112142**

MW-2 Grab Water Sample
Facility# 91122 Job# 386756
568 Peace Portal Drive-Blaine, WA
Collected:09/24/2008 11:35 by ML

Account Number: 11260

Submitted: 09/26/2008 09:20
Reported: 10/16/2008 at 14:35
Discard: 11/16/2008

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

PORM2

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
05407	Toluene	108-88-3	57	1	ug/l	2
05408	1,1,2-Trichloroethane	79-00-5	N.D.	2	ug/l	2
05409	Tetrachloroethene	127-18-4	N.D.	2	ug/l	2
05410	1,3-Dichloropropane	142-28-9	N.D.	2	ug/l	2
05411	Dibromochloromethane	124-48-1	N.D.	2	ug/l	2
05412	1,2-Dibromoethane	106-93-4	N.D.	1	ug/l	2
05413	Chlorobenzene	108-90-7	N.D.	2	ug/l	2
05414	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	2	ug/l	2
05415	Ethylbenzene	100-41-4	1,600	10	ug/l	20
05416	m+p-Xylene	1330-20-7	580	1	ug/l	2
05417	o-Xylene	95-47-6	35	1	ug/l	2
05418	Styrene	100-42-5	N.D.	2	ug/l	2
05419	Bromoform	75-25-2	N.D.	2	ug/l	2
05420	Isopropylbenzene	98-82-8	74	2	ug/l	2
05421	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	2	ug/l	2
05422	Bromobenzene	108-86-1	N.D.	2	ug/l	2
05423	1,2,3-Trichloropropane	96-18-4	N.D.	2	ug/l	2
05424	n-Propylbenzene	103-65-1	190	2	ug/l	2
05425	2-Chlorotoluene	95-49-8	N.D.	2	ug/l	2
05426	1,3,5-Trimethylbenzene	108-67-8	40	2	ug/l	2
05427	4-Chlorotoluene	106-43-4	N.D.	2	ug/l	2
05428	tert-Butylbenzene	98-06-6	N.D.	2	ug/l	2
05429	1,2,4-Trimethylbenzene	95-63-6	130	2	ug/l	2
05430	sec-Butylbenzene	135-98-8	9	2	ug/l	2
05431	p-Isopropyltoluene	99-87-6	2	2	ug/l	2
05432	1,3-Dichlorobenzene	541-73-1	N.D.	2	ug/l	2
05433	1,4-Dichlorobenzene	106-46-7	N.D.	2	ug/l	2
05434	n-Butylbenzene	104-51-8	17	2	ug/l	2
05435	1,2-Dichlorobenzene	95-50-1	N.D.	2	ug/l	2
05436	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	4	ug/l	2
05437	1,2,4-Trichlorobenzene	120-82-1	N.D.	2	ug/l	2
05438	Hexachlorobutadiene	87-68-3	N.D.	4	ug/l	2
05439	Naphthalene	91-20-3	560	2	ug/l	2
05440	1,2,3-Trichlorobenzene	87-61-6	N.D.	2	ug/l	2
08202	EPA SW 846/8260 - Water					
02010	Methyl Tertiary Butyl Ether	1634-04-4	54	1	ug/l	2
06302	Acetone	67-64-1	41	12	ug/l	2
06303	Carbon Disulfide	75-15-0	N.D.	2	ug/l	2
06305	2-Butanone	78-93-3	N.D.	6	ug/l	2
06306	trans-1,3-Dichloropropene	10061-02-6	N.D.	2	ug/l	2

Lancaster Laboratories Sample No. WW5481474 **Group No. 1112142**

MW-2 Grab Water Sample
Facility# 91122 Job# 386756
568 Peace Portal Drive-Blaine, WA
Collected:09/24/2008 11:35 by ML

Account Number: 11260

Submitted: 09/26/2008 09:20
Reported: 10/16/2008 at 14:35
Discard: 11/16/2008

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6001 Bollinger Canyon Road
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San Ramon CA 94583

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CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
00640	PCB-1221	11104-28-2	N.D.	0.098	ug/l	1
00641	PCB-1232	11141-16-5	N.D.	0.20	ug/l	1
00642	PCB-1242	53469-21-9	N.D.	0.098	ug/l	1
00643	PCB-1248	12672-29-6	N.D.	0.098	ug/l	1
00644	PCB-1254	11097-69-1	N.D.	0.098	ug/l	1
00645	PCB-1260	11096-82-5	N.D.	0.098	ug/l	1
08357	PAHs in waters by SIM					
08374	Benzo(a)anthracene	56-55-3	N.D.	0.0098	ug/l	1
08375	Chrysene	218-01-9	N.D.	0.0098	ug/l	1
08376	Benzo(b)fluoranthene	205-99-2	N.D.	0.0098	ug/l	1
08377	Benzo(k)fluoranthene	207-08-9	N.D.	0.0098	ug/l	1
08378	Benzo(a)pyrene	50-32-8	N.D.	0.0098	ug/l	1
08379	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.0098	ug/l	1
08380	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0098	ug/l	1
05382	EPA SW846/8260 (water)					
05384	Dichlorodifluoromethane	75-71-8	N.D.	4	ug/l	2
05385	Chloromethane	74-87-3	N.D.	2	ug/l	2
05386	Vinyl Chloride	75-01-4	N.D.	2	ug/l	2
05387	Bromomethane	74-83-9	N.D.	2	ug/l	2
05388	Chloroethane	75-00-3	N.D.	2	ug/l	2
05389	Trichlorofluoromethane	75-69-4	N.D.	4	ug/l	2
05390	1,1-Dichloroethene	75-35-4	N.D.	2	ug/l	2
05391	Methylene Chloride	75-09-2	N.D.	4	ug/l	2
05392	trans-1,2-Dichloroethene	156-60-5	N.D.	2	ug/l	2
05393	1,1-Dichloroethane	75-34-3	N.D.	2	ug/l	2
05394	2,2-Dichloropropane	594-20-7	N.D.	2	ug/l	2
05395	cis-1,2-Dichloroethene	156-59-2	N.D.	2	ug/l	2
05396	Chloroform	67-66-3	N.D.	2	ug/l	2
05397	Bromochloromethane	74-97-5	N.D.	2	ug/l	2
05398	1,1,1-Trichloroethane	71-55-6	N.D.	2	ug/l	2
05399	Carbon Tetrachloride	56-23-5	N.D.	2	ug/l	2
05400	1,1-Dichloropropene	563-58-6	N.D.	2	ug/l	2
05401	Benzene	71-43-2	1,700	10	ug/l	20
05402	1,2-Dichloroethane	107-06-2	N.D.	1	ug/l	2
05403	Trichloroethene	79-01-6	N.D.	2	ug/l	2
05404	1,2-Dichloropropane	78-87-5	N.D.	2	ug/l	2
05405	Dibromomethane	74-95-3	N.D.	2	ug/l	2
05406	Bromodichloromethane	75-27-4	N.D.	2	ug/l	2

Lancaster Laboratories Sample No. WW5481474 **Group No. 1112142**

MW-2 Grab Water Sample
Facility# 91122 Job# 386756
568 Peace Portal Drive-Blaine, WA
Collected:09/24/2008 11:35 by ML

Account Number: 11260

Submitted: 09/26/2008 09:20
Reported: 10/16/2008 at 14:35
Discard: 11/16/2008

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San Ramon CA 94583

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CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
06307	cis-1,3-Dichloropropene	10061-01-5	N.D.	2	ug/l	2
06308	4-Methyl-2-pentanone	108-10-1	N.D.	6	ug/l	2
06309	2-Hexanone	591-78-6	N.D.	6	ug/l	2

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 Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	10/07/2008 08:33	Parker D Lindstrom	1
02211	TPH by NWTPH-Dx(water) w/SiGel	ECY 97-602 NWTPH-Dx modified	1	10/07/2008 12:26	Diane V Do	5
05665	WA - VPH waters	ECY 97-602 WA VPH	1	10/08/2008 14:50	K. Robert Caulfeild-James	5
05979	WA EPH in Water	ECY 97-602 WA EPH	1	10/15/2008 12:10	Gordon A Lodde	10
05979	WA EPH in Water	ECY 97-602 WA EPH	1	10/15/2008 13:00	Gordon A Lodde	1
08273	TPH by NWTPH-Gx waters	ECY 97-602 NWTPH-Gx modified	1	10/02/2008 13:46	Carrie E Youtzy	5
00173	PCBs in Water	SW-846 8082	1	10/03/2008 02:49	Jamie L Brillhart	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	09/30/2008 05:56	Linda M Hartenstine	1
05382	EPA SW846/8260 (water)	SW-846 8260B	1	10/07/2008 15:22	Emily R Styer	2
05382	EPA SW846/8260 (water)	SW-846 8260B	1	10/07/2008 15:45	Emily R Styer	20
08202	EPA SW 846/8260 - Water	SW-846 8260B	1	10/07/2008 15:22	Emily R Styer	2
00497	Silica Gel Fractionation MA HC	SW-846 3630C modified	1	10/02/2008 14:45	Denise L Trimby	1
00813	BNA Water Extraction	SW-846 3510C	1	09/29/2008 16:30	Kevin P Love	1
00817	Water Sample Pest. Extraction	SW-846 3510C	1	09/29/2008 23:20	Olivia I Santiago	1
01146	GC VOA Water Prep	SW-846 5030B	1	10/02/2008 13:46	Carrie E Youtzy	5
01163	GC/MS VOA Water Prep	SW-846 5030B	1	10/07/2008 15:22	Emily R Styer	2
01163	GC/MS VOA Water Prep	SW-846 5030B	2	10/07/2008 15:45	Emily R Styer	20
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	10/02/2008 18:00	Elaine F Stoltzfus	1
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	10/01/2008 09:40	Denise K Conners	1
07326	EPH Water Extraction	ECY 97-602 WA EPH	1	10/02/2008 14:50	Kelli M Barto	1

Lancaster Laboratories Sample No. WW5481474 **Group No. 1112142**

MW-2 Grab Water Sample
Facility# 91122 Job# 386756
568 Peace Portal Drive-Blaine, WA
Collected:09/24/2008 11:35 by ML

Submitted: 09/26/2008 09:20
Reported: 10/16/2008 at 14:35
Discard: 11/16/2008

PORM2

Account Number: 11260

Chevron
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Analysis Report

Lancaster Laboratories Sample No. WW5481475 **Group No. 1112142**

MW-3 Grab Water Sample
Facility# 91122 Job# 386756
568 Peace Portal Drive-Blaine, WA
Collected:09/24/2008 10:45 by ML

Account Number: 11260

Submitted: 09/26/2008 09:20
Reported: 10/16/2008 at 14:35
Discard: 11/16/2008

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

PORM3

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
02211	TPH by NWTPH-Dx(water) w/SiGel					
02095	Diesel Range Organics	n.a.	99	79	ug/l	1
02096	Heavy Range Organics	n.a.	N.D.	99	ug/l	1
08273	TPH by NWTPH-Gx waters					
01645	TPH by NWTPH-Gx waters	n.a.	350	50	ug/l	1
06054	BTEX+MTBE by 8260B					
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	ug/l	1
05401	Benzene	71-43-2	N.D.	0.5	ug/l	1
05407	Toluene	108-88-3	N.D.	0.5	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.	0.5	ug/l	1
06310	Xylene (Total)	1330-20-7	N.D.	0.5	ug/l	1

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 Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
02211	TPH by NWTPH-Dx(water) w/SiGel	ECY 97-602 NWTPH-Dx modified	1	10/03/2008 14:09	Diane V Do	1
08273	TPH by NWTPH-Gx waters	ECY 97-602 NWTPH-Gx modified	1	10/02/2008 14:30	Carrie E Youtzy	1
06054	BTEX+MTBE by 8260B	SW-846 8260B	1	10/02/2008 06:37	Michael A Ziegler	1
01146	GC VOA Water Prep	SW-846 5030B	1	10/02/2008 14:30	Carrie E Youtzy	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	10/02/2008 06:37	Michael A Ziegler	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	10/02/2008 18:00	Elaine F Stoltzfus	1

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Analysis Report

Lancaster Laboratories Sample No. WW5481476 **Group No. 1112142**

MW-4 Grab Water Sample
Facility# 91122 Job# 386756
568 Peace Portal Drive-Blaine, WA
Collected:09/24/2008 09:00 by ML

Account Number: 11260

Submitted: 09/26/2008 09:20
Reported: 10/16/2008 at 14:35
Discard: 11/16/2008

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

POR-4

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
02211	TPH by NWTPH-Dx(water) w/SiGel					
02095	Diesel Range Organics	n.a.	N.D.	79	ug/l	1
02096	Heavy Range Organics	n.a.	N.D.	99	ug/l	1
08273	TPH by NWTPH-Gx waters					
01645	TPH by NWTPH-Gx waters	n.a.	N.D.	50	ug/l	1
06054	BTEX+MTBE by 8260B					
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	ug/l	1
05401	Benzene	71-43-2	N.D.	0.5	ug/l	1
05407	Toluene	108-88-3	N.D.	0.5	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.	0.5	ug/l	1
06310	Xylene (Total)	1330-20-7	N.D.	0.5	ug/l	1

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 Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
02211	TPH by NWTPH-Dx(water) w/SiGel	ECY 97-602 NWTPH-Dx modified	1	10/03/2008 14:29	Diane V Do	1
08273	TPH by NWTPH-Gx waters	ECY 97-602 NWTPH-Gx modified	1	10/02/2008 14:52	Carrie E Youtzy	1
06054	BTEX+MTBE by 8260B	SW-846 8260B	1	10/03/2008 05:44	Michael A Ziegler	1
01146	GC VOA Water Prep	SW-846 5030B	1	10/02/2008 14:52	Carrie E Youtzy	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	10/03/2008 05:44	Michael A Ziegler	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	10/02/2008 18:00	Elaine F Stoltzfus	1

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Analysis Report

Lancaster Laboratories Sample No. WW5481477 **Group No. 1112142**

MW-5 Grab Water Sample
Facility# 91122 Job# 386756
568 Peace Portal Drive-Blaine, WA
Collected:09/24/2008 12:45 by ML

Account Number: 11260

Submitted: 09/26/2008 09:20
Reported: 10/16/2008 at 14:35
Discard: 11/16/2008

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

POR-5

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
06035	Lead	7439-92-1	4.6	0.050	ug/l	1
02211	TPH by NWTPH-Dx(water) w/SiGel					
02095	Diesel Range Organics	n.a.	1,100	79	ug/l	1
02096	Heavy Range Organics	n.a.	N.D.	99	ug/l	1
05665	WA - VPH waters					
05328	Methyl t-butyl ether	1634-04-4	21.4	1.0	ug/l	1
05537	Benzene	71-43-2	404	1.0	ug/l	1
05539	Toluene	108-88-3	28.4	1.0	ug/l	1
05542	Ethylbenzene	100-41-4	362	1.0	ug/l	1
05544	m,p-Xylenes	1330-20-7	679	2.0	ug/l	1
05548	o-Xylene	95-47-6	174	1.0	ug/l	1
05552	C5-C6 Aliphatic Hydrocarbons	n.a.	223	25.0	ug/l	1
05642	C6-C8 Aliphatic Hydrocarbons	n.a.	1,570	25.0	ug/l	1
05644	C8-C10 Aliphatic Hydrocarbons	n.a.	1,220	25.0	ug/l	1
05645	C8-C10 Aromatic Hydrocarbons	n.a.	2,190	25.0	ug/l	1
	The n-decane %drift value for the calibration check standard associated with the sample was outside the method criteria (+/-20%)at 20.8%. This should have no adverse effect on the data.					
05979	WA EPH in Water					
05980	>C10 - C12 Aliphatic	n.a.	280	9.8	ug/l	1
05981	>C12 - C16 Aliphatic	n.a.	30	9.8	ug/l	1
05982	>C16 - C21 Aliphatic	n.a.	N.D.	9.8	ug/l	1
05983	>C21 - C34 Aliphatic	n.a.	57	9.8	ug/l	1
05984	>C10 - C12 Aromatic	n.a.	910	49	ug/l	5
05985	>C12 - C16 Aromatic	n.a.	310	49	ug/l	5
05986	>C16 - C21 Aromatic	n.a.	N.D.	54	ug/l	5
05987	>C21 - C34 Aromatic	n.a.	N.D.	74	ug/l	5
08273	TPH by NWTPH-Gx waters					
01645	TPH by NWTPH-Gx waters	n.a.	9,600	250	ug/l	5
00173	PCBs in Water					
00639	PCB-1016	12674-11-2	N.D.	0.098	ug/l	1

Lancaster Laboratories Sample No. WW5481477 **Group No. 1112142**

MW-5 Grab Water Sample
Facility# 91122 Job# 386756
568 Peace Portal Drive-Blaine, WA
Collected:09/24/2008 12:45 by ML

Account Number: 11260

Submitted: 09/26/2008 09:20
Reported: 10/16/2008 at 14:35
Discard: 11/16/2008

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POR-5

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
00640	PCB-1221	11104-28-2	N.D.	0.098	ug/l	1
00641	PCB-1232	11141-16-5	N.D.	0.20	ug/l	1
00642	PCB-1242	53469-21-9	N.D.	0.098	ug/l	1
00643	PCB-1248	12672-29-6	N.D.	0.098	ug/l	1
00644	PCB-1254	11097-69-1	N.D.	0.098	ug/l	1
00645	PCB-1260	11096-82-5	N.D.	0.098	ug/l	1
08357	PAHs in waters by SIM					
08374	Benzo(a)anthracene	56-55-3	N.D.	0.10	ug/l	10
08375	Chrysene	218-01-9	N.D.	0.10	ug/l	10
08376	Benzo(b)fluoranthene	205-99-2	N.D.	0.10	ug/l	10
08377	Benzo(k)fluoranthene	207-08-9	N.D.	0.10	ug/l	10
08378	Benzo(a)pyrene	50-32-8	N.D.	0.10	ug/l	10
08379	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.10	ug/l	10
08380	Dibenz(a,h)anthracene	53-70-3	N.D.	0.10	ug/l	10
	Due to the sample matrix an initial dilution was necessary to perform the analysis. Therefore, the reporting limits for the GC/MS semivolatile compounds were raised.					
05382	EPA SW846/8260 (water)					
05384	Dichlorodifluoromethane	75-71-8	N.D.	2	ug/l	1
05385	Chloromethane	74-87-3	N.D.	1	ug/l	1
05386	Vinyl Chloride	75-01-4	N.D.	1	ug/l	1
05387	Bromomethane	74-83-9	N.D.	1	ug/l	1
05388	Chloroethane	75-00-3	N.D.	1	ug/l	1
05389	Trichlorofluoromethane	75-69-4	N.D.	2	ug/l	1
05390	1,1-Dichloroethene	75-35-4	N.D.	0.8	ug/l	1
05391	Methylene Chloride	75-09-2	N.D.	2	ug/l	1
05392	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	ug/l	1
05393	1,1-Dichloroethane	75-34-3	N.D.	1	ug/l	1
05394	2,2-Dichloropropane	594-20-7	N.D.	1	ug/l	1
05395	cis-1,2-Dichloroethene	156-59-2	N.D.	0.8	ug/l	1
05396	Chloroform	67-66-3	N.D.	0.8	ug/l	1
05397	Bromochloromethane	74-97-5	N.D.	1	ug/l	1
05398	1,1,1-Trichloroethane	71-55-6	N.D.	0.8	ug/l	1
05399	Carbon Tetrachloride	56-23-5	N.D.	1	ug/l	1
05400	1,1-Dichloropropene	563-58-6	N.D.	1	ug/l	1
05401	Benzene	71-43-2	380	5	ug/l	10
05402	1,2-Dichloroethane	107-06-2	N.D.	0.5	ug/l	1
05403	Trichloroethene	79-01-6	N.D.	1	ug/l	1

Lancaster Laboratories Sample No. WW5481477 **Group No. 1112142**

MW-5 Grab Water Sample
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568 Peace Portal Drive-Blaine, WA
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Account Number: 11260

Submitted: 09/26/2008 09:20
Reported: 10/16/2008 at 14:35
Discard: 11/16/2008

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POR-5

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
05404	1,2-Dichloropropane	78-87-5	N.D.	1	ug/l	1
05405	Dibromomethane	74-95-3	N.D.	1	ug/l	1
05406	Bromodichloromethane	75-27-4	N.D.	1	ug/l	1
05407	Toluene	108-88-3	24	0.5	ug/l	1
05408	1,1,2-Trichloroethane	79-00-5	N.D.	0.8	ug/l	1
05409	Tetrachloroethene	127-18-4	N.D.	0.8	ug/l	1
05410	1,3-Dichloropropane	142-28-9	N.D.	1	ug/l	1
05411	Dibromochloromethane	124-48-1	N.D.	1	ug/l	1
05412	1,2-Dibromoethane	106-93-4	N.D.	0.5	ug/l	1
05413	Chlorobenzene	108-90-7	N.D.	0.8	ug/l	1
05414	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	1	ug/l	1
05415	Ethylbenzene	100-41-4	320	5	ug/l	10
05416	m+p-Xylene	1330-20-7	760	5	ug/l	10
05417	o-Xylene	95-47-6	180	0.5	ug/l	1
05418	Styrene	100-42-5	N.D.	1	ug/l	1
05419	Bromoform	75-25-2	N.D.	1	ug/l	1
05420	Isopropylbenzene	98-82-8	22	1	ug/l	1
05421	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	ug/l	1
05422	Bromobenzene	108-86-1	N.D.	1	ug/l	1
05423	1,2,3-Trichloropropane	96-18-4	N.D.	1	ug/l	1
05424	n-Propylbenzene	103-65-1	43	1	ug/l	1
05425	2-Chlorotoluene	95-49-8	N.D.	1	ug/l	1
05426	1,3,5-Trimethylbenzene	108-67-8	140	1	ug/l	1
05427	4-Chlorotoluene	106-43-4	N.D.	1	ug/l	1
05428	tert-Butylbenzene	98-06-6	N.D.	1	ug/l	1
05429	1,2,4-Trimethylbenzene	95-63-6	440	10	ug/l	10
05430	sec-Butylbenzene	135-98-8	4	1	ug/l	1
05431	p-Isopropyltoluene	99-87-6	6	1	ug/l	1
05432	1,3-Dichlorobenzene	541-73-1	N.D.	1	ug/l	1
05433	1,4-Dichlorobenzene	106-46-7	N.D.	1	ug/l	1
05434	n-Butylbenzene	104-51-8	7	1	ug/l	1
05435	1,2-Dichlorobenzene	95-50-1	N.D.	1	ug/l	1
05436	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	2	ug/l	1
05437	1,2,4-Trichlorobenzene	120-82-1	N.D.	1	ug/l	1
05438	Hexachlorobutadiene	87-68-3	N.D.	2	ug/l	1
05439	Naphthalene	91-20-3	130	1	ug/l	1
05440	1,2,3-Trichlorobenzene	87-61-6	N.D.	1	ug/l	1
08202	EPA SW 846/8260 - Water					
02010	Methyl Tertiary Butyl Ether	1634-04-4	13	0.5	ug/l	1
06302	Acetone	67-64-1	21	6	ug/l	1

Lancaster Laboratories Sample No. WW5481477 **Group No. 1112142**

MW-5 Grab Water Sample
Facility# 91122 Job# 386756
568 Peace Portal Drive-Blaine, WA
Collected:09/24/2008 12:45 by ML

Account Number: 11260

Submitted: 09/26/2008 09:20
Reported: 10/16/2008 at 14:35
Discard: 11/16/2008

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POR-5

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
06303	Carbon Disulfide	75-15-0	N.D.	1	ug/l	1
06305	2-Butanone	78-93-3	5	3	ug/l	1
06306	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	ug/l	1
06307	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	ug/l	1
06308	4-Methyl-2-pentanone	108-10-1	4	3	ug/l	1
06309	2-Hexanone	591-78-6	6	3	ug/l	1

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 Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	10/07/2008 08:36	Parker D Lindstrom	1
02211	TPH by NWTPH-Dx(water) w/SiGel	ECY 97-602 NWTPH-Dx modified	1	10/03/2008 14:48	Diane V Do	1
05665	WA - VPH waters	ECY 97-602 WA VPH	1	10/08/2008 16:13	K. Robert Caulfeild-James	1
05979	WA EPH in Water	ECY 97-602 WA EPH	1	10/15/2008 13:51	Gordon A Lodde	5
05979	WA EPH in Water	ECY 97-602 WA EPH	1	10/15/2008 14:43	Gordon A Lodde	1
08273	TPH by NWTPH-Gx waters	ECY 97-602 NWTPH-Gx modified	1	10/02/2008 15:13	Carrie E Youtzy	5
00173	PCBs in Water	SW-846 8082	1	10/03/2008 03:02	Jamie L Brillhart	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	09/30/2008 15:55	Timothy J Trees	10
05382	EPA SW846/8260 (water)	SW-846 8260B	1	10/07/2008 14:35	Emily R Styer	1
05382	EPA SW846/8260 (water)	SW-846 8260B	1	10/07/2008 14:58	Emily R Styer	10
08202	EPA SW 846/8260 - Water	SW-846 8260B	1	10/07/2008 14:35	Emily R Styer	1
00497	Silica Gel Fractionation MA HC	SW-846 3630C modified	1	10/02/2008 14:45	Denise L Trimby	1
00813	BNA Water Extraction	SW-846 3510C	1	09/29/2008 16:30	Kevin P Love	1
00817	Water Sample Pest. Extraction	SW-846 3510C	1	09/29/2008 23:20	Olivia I Santiago	1
01146	GC VOA Water Prep	SW-846 5030B	1	10/02/2008 15:13	Carrie E Youtzy	5
01163	GC/MS VOA Water Prep	SW-846 5030B	1	10/07/2008 14:35	Emily R Styer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	2	10/07/2008 14:58	Emily R Styer	10
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	10/02/2008 18:00	Elaine F Stoltzfus	1

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Analysis Report

Lancaster Laboratories Sample No. WW5481477 **Group No. 1112142**

MW-5 Grab Water Sample
Facility# 91122 Job# 386756
568 Peace Portal Drive-Blaine, WA
Collected:09/24/2008 12:45 by ML

Account Number: 11260

Submitted: 09/26/2008 09:20
Reported: 10/16/2008 at 14:35
Discard: 11/16/2008

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POR-5

06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	10/01/2008 09:40	Denise K Conners	1
07326	EPH Water Extraction	ECY 97-602 WA EPH	1	10/02/2008 14:50	Kelli M Barto	1

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Analysis Report

Lancaster Laboratories Sample No. WW5481478 **Group No. 1112142**

MW-6 Grab Water Sample
Facility# 91122 Job# 386756
568 Peace Portal Drive-Blaine, WA
Collected:09/24/2008 09:55 by ML

Account Number: 11260

Submitted: 09/26/2008 09:20
Reported: 10/16/2008 at 14:35
Discard: 11/16/2008

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POR6-

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
02211	TPH by NWTPH-Dx(water) w/SiGel					
02095	Diesel Range Organics	n.a.	700	80	ug/l	1
02096	Heavy Range Organics	n.a.	120	100	ug/l	1
08273	TPH by NWTPH-Gx waters					
01645	TPH by NWTPH-Gx waters	n.a.	6,800	250	ug/l	5
06054	BTEX+MTBE by 8260B					
02010	Methyl Tertiary Butyl Ether	1634-04-4	0.6	0.5	ug/l	1
05401	Benzene	71-43-2	13	0.5	ug/l	1
05407	Toluene	108-88-3	2	0.5	ug/l	1
05415	Ethylbenzene	100-41-4	170	5	ug/l	10
06310	Xylene (Total)	1330-20-7	430	5	ug/l	10

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 Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
02211	TPH by NWTPH-Dx(water) w/SiGel	ECY 97-602 NWTPH-Dx modified	1	10/03/2008 17:05	Diane V Do	1
08273	TPH by NWTPH-Gx waters	ECY 97-602 NWTPH-Gx modified	1	10/02/2008 20:31	Carrie E Youtzy	5
06054	BTEX+MTBE by 8260B	SW-846 8260B	1	10/03/2008 06:08	Michael A Ziegler	1
06054	BTEX+MTBE by 8260B	SW-846 8260B	1	10/03/2008 06:32	Michael A Ziegler	10
01146	GC VOA Water Prep	SW-846 5030B	1	10/02/2008 20:31	Carrie E Youtzy	5
01163	GC/MS VOA Water Prep	SW-846 5030B	1	10/03/2008 06:08	Michael A Ziegler	1
01163	GC/MS VOA Water Prep	SW-846 5030B	2	10/03/2008 06:32	Michael A Ziegler	10
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	10/02/2008 18:00	Elaine F Stoltzfus	1

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Analysis Report

Lancaster Laboratories Sample No. WW5481478 **Group No. 1112142**

MW-6 Grab Water Sample
Facility# 91122 Job# 386756
568 Peace Portal Drive-Blaine, WA
Collected:09/24/2008 09:55 by ML

Account Number: 11260

Submitted: 09/26/2008 09:20
Reported: 10/16/2008 at 14:35
Discard: 11/16/2008

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POR6-

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Analysis Report

Lancaster Laboratories Sample No. WW5481479 **Group No. 1112142**

MW-7 Grab Water Sample
Facility# 91122 Job# 386756
568 Peace Portal Drive-Blaine, WA
Collected:09/24/2008 14:25 by ML

Account Number: 11260

Submitted: 09/26/2008 09:20
Reported: 10/16/2008 at 14:35
Discard: 11/16/2008

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POR7-

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
02211	TPH by NWTPH-Dx(water) w/SiGel					
02095	Diesel Range Organics	n.a.	N.D.	79	ug/l	1
02096	Heavy Range Organics	n.a.	N.D.	99	ug/l	1
08273	TPH by NWTPH-Gx waters					
01645	TPH by NWTPH-Gx waters	n.a.	120	50	ug/l	1
06054	BTEX+MTBE by 8260B					
02010	Methyl Tertiary Butyl Ether	1634-04-4	24	0.5	ug/l	1
05401	Benzene	71-43-2	160	0.5	ug/l	1
05407	Toluene	108-88-3	3	0.5	ug/l	1
05415	Ethylbenzene	100-41-4	7	0.5	ug/l	1
06310	Xylene (Total)	1330-20-7	3	0.5	ug/l	1

State of Washington Lab Certification No. C259

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Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
02211	TPH by NWTPH-Dx(water) w/SiGel	ECY 97-602 NWTPH-Dx modified	1	10/03/2008 15:28	Diane V Do	1
08273	TPH by NWTPH-Gx waters	ECY 97-602 NWTPH-Gx modified	1	10/02/2008 15:57	Carrie E Youtzy	1
06054	BTEX+MTBE by 8260B	SW-846 8260B	1	10/03/2008 06:55	Michael A Ziegler	1
01146	GC VOA Water Prep	SW-846 5030B	1	10/02/2008 15:57	Carrie E Youtzy	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	10/03/2008 06:55	Michael A Ziegler	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	10/02/2008 18:00	Elaine F Stoltzfus	1

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Analysis Report

Lancaster Laboratories Sample No. WW5481480 **Group No. 1112142**

MW-8 Grab Water Sample
Facility# 91122 Job# 386756
568 Peace Portal Drive-Blaine, WA
Collected:09/24/2008 13:35 by ML

Account Number: 11260

Submitted: 09/26/2008 09:20
Reported: 10/16/2008 at 14:35
Discard: 11/16/2008

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POR8-

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
02211	TPH by NWTPH-Dx(water) w/SiGel					
02095	Diesel Range Organics	n.a.	N.D.	79	ug/l	1
02096	Heavy Range Organics	n.a.	N.D.	99	ug/l	1
08273	TPH by NWTPH-Gx waters					
01645	TPH by NWTPH-Gx waters	n.a.	N.D.	50	ug/l	1
06054	BTEX+MTBE by 8260B					
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	ug/l	1
05401	Benzene	71-43-2	N.D.	0.5	ug/l	1
05407	Toluene	108-88-3	N.D.	0.5	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.	0.5	ug/l	1
06310	Xylene (Total)	1330-20-7	N.D.	0.5	ug/l	1

State of Washington Lab Certification No. C259

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Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
02211	TPH by NWTPH-Dx(water) w/SiGel	ECY 97-602 NWTPH-Dx modified	1	10/03/2008 15:47	Diane V Do	1
08273	TPH by NWTPH-Gx waters	ECY 97-602 NWTPH-Gx modified	1	10/02/2008 16:18	Carrie E Youtzy	1
06054	BTEX+MTBE by 8260B	SW-846 8260B	1	10/03/2008 07:19	Michael A Ziegler	1
01146	GC VOA Water Prep	SW-846 5030B	1	10/02/2008 16:18	Carrie E Youtzy	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	10/03/2008 07:19	Michael A Ziegler	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	10/02/2008 18:00	Elaine F Stoltzfus	1

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Analysis Report

Lancaster Laboratories Sample No. WW5481481 **Group No. 1112142**

MW-5T Grab Water Sample
Facility# 91122 Job# 386756
568 Peace Portal Drive-Blaine, WA
Collected:09/24/2008 15:45 by ML

Account Number: 11260

Submitted: 09/26/2008 09:20
Reported: 10/16/2008 at 14:35
Discard: 11/16/2008

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POR5T

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
02211	TPH by NWTPH-Dx(water) w/SiGel					
02095	Diesel Range Organics	n.a.	N.D.	83	ug/l	1
02096	Heavy Range Organics	n.a.	N.D.	100	ug/l	1
08273	TPH by NWTPH-Gx waters					
01645	TPH by NWTPH-Gx waters	n.a.	N.D.	50	ug/l	1
06054	BTEX+MTBE by 8260B					
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	ug/l	1
05401	Benzene	71-43-2	N.D.	0.5	ug/l	1
05407	Toluene	108-88-3	N.D.	0.5	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.	0.5	ug/l	1
06310	Xylene (Total)	1330-20-7	N.D.	0.5	ug/l	1

State of Washington Lab Certification No. C259

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Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
02211	TPH by NWTPH-Dx(water) w/SiGel	ECY 97-602 NWTPH-Dx modified	1	10/03/2008 16:07	Diane V Do	1
08273	TPH by NWTPH-Gx waters	ECY 97-602 NWTPH-Gx modified	1	10/02/2008 16:40	Carrie E Youtzy	1
06054	BTEX+MTBE by 8260B	SW-846 8260B	1	10/03/2008 07:43	Michael A Ziegler	1
01146	GC VOA Water Prep	SW-846 5030B	1	10/02/2008 16:40	Carrie E Youtzy	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	10/03/2008 07:43	Michael A Ziegler	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	10/02/2008 18:00	Elaine F Stoltzfus	1

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Analysis Report

Lancaster Laboratories Sample No. WW5481482 **Group No. 1112142**

MW-10T Grab Water Sample
Facility# 91122 Job# 386756
568 Peace Portal Drive-Blaine, WA
Collected:09/25/2008 09:15 by ML

Account Number: 11260

Submitted: 09/26/2008 09:20
Reported: 10/16/2008 at 14:35
Discard: 11/16/2008

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PO10T

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
02211	TPH by NWTPH-Dx(water) w/SiGel					
02095	Diesel Range Organics	n.a.	N.D.	83	ug/l	1
02096	Heavy Range Organics	n.a.	N.D.	100	ug/l	1
08273	TPH by NWTPH-Gx waters					
01645	TPH by NWTPH-Gx waters	n.a.	N.D.	50	ug/l	1
06054	BTEX+MTBE by 8260B					
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	ug/l	1
05401	Benzene	71-43-2	N.D.	0.5	ug/l	1
05407	Toluene	108-88-3	N.D.	0.5	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.	0.5	ug/l	1
06310	Xylene (Total)	1330-20-7	N.D.	0.5	ug/l	1

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 Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
02211	TPH by NWTPH-Dx(water) w/SiGel	ECY 97-602 NWTPH-Dx modified	1	10/03/2008 16:26	Diane V Do	1
08273	TPH by NWTPH-Gx waters	ECY 97-602 NWTPH-Gx modified	1	10/02/2008 17:02	Carrie E Youtzy	1
06054	BTEX+MTBE by 8260B	SW-846 8260B	1	10/03/2008 08:07	Michael A Ziegler	1
01146	GC VOA Water Prep	SW-846 5030B	1	10/02/2008 17:02	Carrie E Youtzy	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	10/03/2008 08:07	Michael A Ziegler	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	10/02/2008 18:00	Elaine F Stoltzfus	1

Lancaster Laboratories

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Analysis Report

Quality Control Summary

Client Name: Chevron
Group Number: 1112142
Reported: 10/16/08 at 02:35 PM

Matrix QC may not be reported if 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.

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 082730012A	Sample number(s): 5481474,5481477							
PCB-1016	N.D.	0.10	ug/l	86	86	69-114	0	30
PCB-1221	N.D.	0.10	ug/l					
PCB-1232	N.D.	0.20	ug/l					
PCB-1242	N.D.	0.10	ug/l					
PCB-1248	N.D.	0.10	ug/l					
PCB-1254	N.D.	0.10	ug/l					
PCB-1260	N.D.	0.10	ug/l	76	78	34-142	3	30
Batch number: 08273WAB026	Sample number(s): 5481474,5481477							
Benzo(a)anthracene	N.D.	0.010	ug/l	95	96	72-114	1	30
Chrysene	N.D.	0.010	ug/l	97	97	76-116	0	30
Benzo(b)fluoranthene	N.D.	0.010	ug/l	92	93	69-123	1	30
Benzo(k)fluoranthene	N.D.	0.010	ug/l	88	91	72-122	3	30
Benzo(a)pyrene	N.D.	0.010	ug/l	87	89	64-115	2	30
Indeno(1,2,3-cd)pyrene	N.D.	0.010	ug/l	86	88	69-124	2	30
Dibenz(a,h)anthracene	N.D.	0.010	ug/l	86	88	71-125	2	30
Batch number: 082746050003A	Sample number(s): 5481474,5481477							
Lead	N.D.	0.050	ug/l	101		90-115		
Batch number: 082750023A	Sample number(s): 5481473							
Diesel Range Organics	N.D.	80.	ug/l	73	76	61-106	5	20
Heavy Range Organics	N.D.	100.	ug/l					
Batch number: 082760002A	Sample number(s): 5481474-5481482							
Diesel Range Organics	N.D.	80.	ug/l	84	78	61-106	8	20
Heavy Range Organics	N.D.	100.	ug/l					
Batch number: 082760012A	Sample number(s): 5481474,5481477							
>C10 - C12 Aliphatic	N.D.	10.	ug/l	88	85	30-137	3	30
>C12 - C16 Aliphatic	N.D.	10.	ug/l	94	94	68-116	0	30
>C16 - C21 Aliphatic	N.D.	10.	ug/l	100	100	81-116	0	30
>C21 - C34 Aliphatic	N.D.	10.	ug/l	105	100	44-133	5	30
>C10 - C12 Aromatic	N.D.	10.	ug/l	80	90	30-140	12	30
>C12 - C16 Aromatic	N.D.	10.	ug/l	83	92	30-149	10	30
>C16 - C21 Aromatic	N.D.	11.	ug/l	90	100	30-148	11	30
>C21 - C34 Aromatic	N.D.	15.	ug/l	88	97	57-127	10	30
Batch number: 08276A20A	Sample number(s): 5481472-5481482							
TPH by NWTPH-Gx waters	N.D.	50.	ug/l	104	101	75-135	2	30
Batch number: 08280A01A	Sample number(s): 5481474,5481477							
Methyl t-butyl ether	N.D.	1.0	ug/l	100	98	70-130	2	50
Benzene	N.D.	1.0	ug/l	101	99	70-130	1	50
Toluene	N.D.	1.0	ug/l	102	100	70-130	1	50
Ethylbenzene	N.D.	1.0	ug/l	103	101	70-130	2	50

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

Quality Control Summary

Client Name: Chevron Group Number: 1112142
Reported: 10/16/08 at 02:35 PM

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
m,p-Xylenes	N.D.	2.0	ug/l	106	104	70-130	1	50
o-Xylene	N.D.	1.0	ug/l	102	101	70-130	2	50
C5-C6 Aliphatic Hydrocarbons	N.D.	25.0	ug/l	92	79	70-130	14	50
C6-C8 Aliphatic Hydrocarbons	N.D.	25.0	ug/l	97	95	70-130	2	50
C8-C10 Aliphatic Hydrocarbons	N.D.	25.0	ug/l	105	107	70-130	1	50
C8-C10 Aromatic Hydrocarbons	N.D.	25.0	ug/l	106	104	70-130	1	50
Batch number: D082765AA	Sample number(s): 5481476,5481478-5481482							
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	86		73-119		
Benzene	N.D.	0.5	ug/l	94		78-119		
Toluene	N.D.	0.5	ug/l	99		85-115		
Ethylbenzene	N.D.	0.5	ug/l	96		82-119		
Xylene (Total)	N.D.	0.5	ug/l	97		83-113		
Batch number: W082811AA	Sample number(s): 5481474,5481477							
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	103		73-119		
Dichlorodifluoromethane	N.D.	2.	ug/l	122		45-158		
Chloromethane	N.D.	1.	ug/l	98		47-133		
Vinyl Chloride	N.D.	1.	ug/l	89		62-128		
Bromomethane	N.D.	1.	ug/l	68		50-128		
Chloroethane	N.D.	1.	ug/l	83		56-128		
Trichlorofluoromethane	N.D.	2.	ug/l	111		60-137		
1,1-Dichloroethene	N.D.	0.8	ug/l	103		76-122		
Methylene Chloride	N.D.	2.	ug/l	98		85-120		
trans-1,2-Dichloroethene	N.D.	0.8	ug/l	101		83-117		
1,1-Dichloroethane	N.D.	1.	ug/l	101		83-127		
2,2-Dichloropropane	N.D.	1.	ug/l	108		74-130		
cis-1,2-Dichloroethene	N.D.	0.8	ug/l	103		84-117		
Chloroform	N.D.	0.8	ug/l	107		77-125		
Bromochloromethane	N.D.	1.	ug/l	107		83-121		
1,1,1-Trichloroethane	N.D.	0.8	ug/l	126		83-127		
Carbon Tetrachloride	N.D.	1.	ug/l	114		77-130		
1,1-Dichloropropene	N.D.	1.	ug/l	103		84-116		
Benzene	N.D.	0.5	ug/l	99		78-119		
1,2-Dichloroethane	N.D.	0.5	ug/l	114		69-135		
Trichloroethene	N.D.	1.	ug/l	101		87-117		
1,2-Dichloropropane	N.D.	1.	ug/l	95		80-117		
Dibromomethane	N.D.	1.	ug/l	104		87-117		
Bromodichloromethane	N.D.	1.	ug/l	97		83-121		
Toluene	N.D.	0.5	ug/l	97		85-115		
1,1,2-Trichloroethane	N.D.	0.8	ug/l	98		86-113		
Tetrachloroethene	N.D.	0.8	ug/l	99		76-118		
1,3-Dichloropropane	N.D.	1.	ug/l	97		84-119		
Dibromochloromethane	N.D.	1.	ug/l	93		78-119		
1,2-Dibromoethane	N.D.	0.5	ug/l	96		81-114		
Chlorobenzene	N.D.	0.8	ug/l	98		85-115		
1,1,1,2-Tetrachloroethane	N.D.	1.	ug/l	100		83-114		
Ethylbenzene	N.D.	0.5	ug/l	97		82-119		
m+p-Xylene	N.D.	0.5	ug/l	97		83-113		
o-Xylene	N.D.	0.5	ug/l	99		83-113		
Styrene	N.D.	1.	ug/l	95		82-111		
Bromoform	N.D.	1.	ug/l	85		69-118		
Isopropylbenzene	N.D.	1.	ug/l	99		80-113		
1,1,2,2-Tetrachloroethane	N.D.	1.	ug/l	92		72-119		
Bromobenzene	N.D.	1.	ug/l	94		82-110		

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

Quality Control Summary

Client Name: Chevron Group Number: 1112142
Reported: 10/16/08 at 02:35 PM

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
1,2,3-Trichloropropane	N.D.	1.	ug/l	96		78-117		
n-Propylbenzene	N.D.	1.	ug/l	93		78-119		
2-Chlorotoluene	N.D.	1.	ug/l	93		78-115		
1,3,5-Trimethylbenzene	N.D.	1.	ug/l	94		78-116		
4-Chlorotoluene	N.D.	1.	ug/l	92		80-112		
tert-Butylbenzene	N.D.	1.	ug/l	93		74-114		
1,2,4-Trimethylbenzene	N.D.	1.	ug/l	95		78-117		
sec-Butylbenzene	N.D.	1.	ug/l	93		72-120		
p-Isopropyltoluene	N.D.	1.	ug/l	94		72-118		
1,3-Dichlorobenzene	N.D.	1.	ug/l	94		81-114		
1,4-Dichlorobenzene	N.D.	1.	ug/l	92		84-116		
n-Butylbenzene	N.D.	1.	ug/l	91		75-120		
1,2-Dichlorobenzene	N.D.	1.	ug/l	94		81-112		
1,2-Dibromo-3-chloropropane	N.D.	2.	ug/l	94		65-121		
1,2,4-Trichlorobenzene	N.D.	1.	ug/l	99		65-114		
Hexachlorobutadiene	N.D.	2.	ug/l	93		62-119		
Naphthalene	N.D.	1.	ug/l	98		61-116		
1,2,3-Trichlorobenzene	N.D.	1.	ug/l	98		67-114		
Acetone	N.D.	6.	ug/l	109		40-200		
Carbon Disulfide	N.D.	1.	ug/l	92		69-119		
2-Butanone	N.D.	3.	ug/l	88		63-157		
trans-1,3-Dichloropropene	N.D.	1.	ug/l	91		79-114		
cis-1,3-Dichloropropene	N.D.	1.	ug/l	93		78-114		
4-Methyl-2-pentanone	N.D.	3.	ug/l	87		63-126		
2-Hexanone	N.D.	3.	ug/l	81		61-140		
Batch number: Z082754AA	Sample number(s): 5481472-5481473,5481475							
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	102		73-119		
Benzene	N.D.	0.5	ug/l	96		78-119		
Toluene	N.D.	0.5	ug/l	101		85-115		
Ethylbenzene	N.D.	0.5	ug/l	97		82-119		
Xylene (Total)	N.D.	0.5	ug/l	99		83-113		

Sample Matrix Quality Control

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

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 082746050003A	Sample number(s): 5481474,5481477 UNSPK: P481567 BKG: P481567								
Lead	99	102	75-125	3	20	N.D.	N.D.	0 (1)	20
Batch number: 08276A20A	Sample number(s): 5481472-5481482 UNSPK: P482891								
TPH by NWTPH-Gx waters	107		63-154						
Batch number: D082765AA	Sample number(s): 5481476,5481478-5481482 UNSPK: P479876								
Methyl Tertiary Butyl Ether	210*	164*	69-127	10	30				
Benzene	92	97	83-128	5	30				
Toluene	99	100	83-127	2	30				
Ethylbenzene	95	101	82-129	6	30				
Xylene (Total)	97	101	82-130	4	30				

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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron Group Number: 1112142
Reported: 10/16/08 at 02:35 PM

Sample Matrix Quality Control

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

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: W082811AA	Sample number(s): 5481474,5481477 UNSPK: P481572								
Methyl Tertiary Butyl Ether	112	106	69-127	5	30				
Dichlorodifluoromethane	134	135	52-192	0	30				
Chloromethane	107	107	58-157	0	30				
Vinyl Chloride	99	100	68-147	1	30				
Bromomethane	70	73	54-140	4	30				
Chloroethane	89	94	60-140	4	30				
Trichlorofluoromethane	125	125	68-163	0	30				
1,1-Dichloroethene	122	108	87-145	12	30				
Methylene Chloride	109	99	79-133	10	30				
trans-1,2-Dichloroethene	118	106	82-133	10	30				
1,1-Dichloroethane	116	108	85-135	7	30				
2,2-Dichloropropane	125	118	79-146	6	30				
cis-1,2-Dichloroethene	116	108	83-126	7	30				
Chloroform	121	112	83-139	8	30				
Bromochloromethane	116	113	82-129	3	30				
1,1,1-Trichloroethane	142	135	81-142	5	30				
Carbon Tetrachloride	130	123	82-149	5	30				
1,1-Dichloropropene	120	113	86-134	6	30				
Benzene	114	105	83-128	8	30				
1,2-Dichloroethane	127	119	70-143	6	30				
Trichloroethene	115	107	83-136	7	30				
1,2-Dichloropropane	105	98	83-129	7	30				
Dibromomethane	111	104	82-128	7	30				
Bromodichloromethane	108	101	80-137	7	30				
Toluene	111	100	83-127	10	30				
1,1,2-Trichloroethane	107	99	77-125	7	30				
Tetrachloroethene	115	108	78-133	6	30				
1,3-Dichloropropane	105	96	82-121	8	30				
Dibromochloromethane	101	95	80-128	6	30				
1,2-Dibromoethane	105	97	78-120	8	30				
Chlorobenzene	109	102	83-120	7	30				
1,1,1,2-Tetrachloroethane	110	103	83-119	6	30				
Ethylbenzene	110	103	82-129	7	30				
m+p-Xylene	109	103	82-130	6	30				
o-Xylene	108	102	82-130	6	30				
Styrene	104	99	69-131	5	30				
Bromoform	93	87	64-119	8	30				
Isopropylbenzene	114	107	81-130	6	30				
1,1,2,2-Tetrachloroethane	97	92	73-121	5	30				
Bromobenzene	103	97	83-121	6	30				
1,2,3-Trichloropropane	104	97	73-125	7	30				
n-Propylbenzene	106	99	74-138	7	30				
2-Chlorotoluene	103	96	78-121	7	30				
1,3,5-Trimethylbenzene	107	101	75-132	6	30				
4-Chlorotoluene	103	96	81-123	7	30				
tert-Butylbenzene	107	103	76-128	3	30				
1,2,4-Trimethylbenzene	105	100	80-125	5	30				
sec-Butylbenzene	106	101	73-137	6	30				
p-Isopropyltoluene	105	100	74-135	5	30				
1,3-Dichlorobenzene	102	96	79-123	7	30				
1,4-Dichlorobenzene	101	97	81-122	4	30				

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

Quality Control Summary

Client Name: Chevron
Reported: 10/16/08 at 02:35 PM

Group Number: 1112142

Sample Matrix Quality Control

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

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
n-Butylbenzene	101	96	70-141	5	30				
1,2-Dichlorobenzene	103	97	82-117	5	30				
1,2-Dibromo-3-chloropropane	100	93	60-131	8	30				
1,2,4-Trichlorobenzene	107	102	60-121	5	30				
Hexachlorobutadiene	106	103	51-135	3	30				
Naphthalene	104	98	57-125	6	30				
1,2,3-Trichlorobenzene	106	100	65-127	6	30				
Acetone	106	103	54-150	4	30				
Carbon Disulfide	107	101	69-146	6	30				
2-Butanone	93	87	57-137	7	30				
trans-1,3-Dichloropropene	101	93	77-123	8	30				
cis-1,3-Dichloropropene	103	97	72-124	7	30				
4-Methyl-2-pentanone	93	87	61-131	7	30				
2-Hexanone	87	80	60-135	8	30				
Batch number: Z082754AA	Sample number(s): 5481472-5481473,5481475 UNSPK: P480565								
Methyl Tertiary Butyl Ether	104	103	69-127	1	30				
Benzene	101	100	83-128	1	30				
Toluene	104	104	83-127	0	30				
Ethylbenzene	103	102	82-129	1	30				
Xylene (Total)	104	103	82-130	1	30				

Surrogate Quality Control

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

Analysis Name: PCBs in Water
Batch number: 082730012A

	Tetrachloro-m-xylene	Decachlorobiphenyl
5481474	99	79
5481477	100	91
Blank	96	76
LCS	100	81
LCSD	101	89
Limits:	55-132	36-153

Analysis Name: PAHs in waters by SIM
Batch number: 08273WAB026

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
5481474	127	78	89
5481477	158*	103	98
Blank	107	105	118
LCS	102	101	109
LCSD	102	99	110
Limits:	64-147	68-132	69-140

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

Quality Control Summary

Client Name: Chevron
Reported: 10/16/08 at 02:35 PM

Group Number: 1112142

Surrogate Quality Control

Analysis Name: TPH by NWTPH-Dx(water) w/SiGel
Batch number: 082750023A

	Orthoterphenyl
5481473	85
Blank	90
LCS	104
LCSD	107
Limits:	50-150

Analysis Name: TPH by NWTPH-Dx(water) w/SiGel
Batch number: 082760002A

	Orthoterphenyl
5481474	116
5481475	91
5481476	88
5481477	108
5481478	109
5481479	89
5481480	84
5481481	76
5481482	84
Blank	107
LCS	116
LCSD	112
Limits:	50-150

Analysis Name: WA EPH in Water
Batch number: 082760012A

	Orthoterphenyl	1-chlorooctadecane
5481474	79	69
5481477	80	83
Blank	90	95
LCS	82	84
LCSD	91	79
Limits:	36-118	32-132

Analysis Name: TPH by NWTPH-Gx waters
Batch number: 08276A20A

	Trifluorotoluene-F
5481472	80
5481473	82
5481474	108
5481475	77
5481476	80
5481477	93
5481478	91
5481479	84
5481480	83
5481481	81
5481482	79

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

Quality Control Summary

Client Name: Chevron
Reported: 10/16/08 at 02:35 PM

Group Number: 1112142

Surrogate Quality Control

Blank	81
LCS	100
LCSD	105
MS	99
Limits:	63-135

Analysis Name: WA - VPH waters
Batch number: 08280A01A

	Trifluorotoluene-P	Trifluorotoluene-F
5481474	107	126
5481477	117	150*
Blank	99	100
LCS	93	96
LCSD	91	95
Limits:	60-140	60-140

Analysis Name: BTEX+MTBE by 8260B
Batch number: D082765AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
5481476	92	104	95	99
5481478	93	104	99	108
5481479	90	100	95	99
5481480	90	102	93	98
5481481	91	102	93	98
5481482	92	103	96	100
Blank	92	106	98	101
LCS	92	105	98	105
MS	93	105	97	105
MSD	94	106	98	106
Limits:	80-116	77-113	80-113	78-113

Analysis Name: EPA SW846/8260 (water)
Batch number: W082811AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
5481474	97	94	94	92
5481477	98	95	95	94
Blank	100	95	92	92
LCS	99	98	95	94
MS	100	98	95	94
MSD	100	101	94	94
Limits:	80-116	77-113	80-113	78-113

Analysis Name: BTEX+MTBE by 8260B
Batch number: Z082754AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
5481472	96	98	95	88
5481473	94	97	95	90
5481475	95	97	92	90
Blank	96	98	94	88
LCS	94	98	95	93

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

Quality Control Summary

Client Name: Chevron
Group Number: 1112142
Reported: 10/16/08 at 02:35 PM

Surrogate Quality Control

MS	95	98	95	95
MSD	95	100	95	93
Limits:	80-116	77-113	80-113	78-113

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

Lancaster Laboratories
Explanation of Symbols and Abbreviations

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

N.D.	none detected	**BMQL**	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	**MPN**	Most Probable Number
IU	International Units	**CP Units**	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	**NTU**	nephelometric turbidity units
C	degrees Celsius	**F**	degrees Fahrenheit
Cal	(diet) calories	**lb.**	pound(s)
meq	milliequivalents	**kg**	kilogram(s)
g	gram(s)	**mg**	milligram(s)
ug	microgram(s)	**l**	liter(s)
ml	milliliter(s)	**ul**	microliter(s)
m3	cubic meter(s)	**fib >5 um/ml**	fibers greater than 5 microns in length per ml

< less than – The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

ppm parts per million – One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas 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.

U.S. EPA 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 quatitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
J	Estimated value
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 amount 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 for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

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.

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January 24, 2013

Mr. Nicholas Acklam
Washington State Department of Ecology
Toxics Cleanup Program
P.O. Box 47600
Olympia, Washington 98504-7600

Subject: **Third Quarter 2012 Groundwater Monitoring Report**
Chevron Service Station No. 9-1122
568 Peace Portal Drive
Blaine, Washington

Dear Mr. Acklam:

SAIC Energy, Environment & Infrastructure, LLC (SAIC), on behalf of Chevron Environmental Management Company (CEMC), prepared this report summarizing the third quarter 2012 groundwater monitoring event at Chevron Service Station No. 9-1122 (the site) in Blaine, Washington (Figure 1).

FIELD ACTIVITIES

Gettler-Ryan, Inc. (Gettler-Ryan) conducted the groundwater monitoring field event on September 13-14, 2012. They collected depth-to-groundwater measurements and checked for the presence of separate-phase hydrocarbons (SPH) in 12 monitoring wells on the site. SPH were not detected in any of the monitoring wells gauged.

Groundwater samples were collected from all 12 monitoring wells using low-flow purging and sampling techniques. Samples were submitted to Eurofins Lancaster Laboratories, Inc. for the following analyses:

- Total petroleum hydrocarbons (TPH) as gasoline-range organics (TPH-GRO) by Washington State Department of Ecology (Ecology) Method NWTPH-Gx;
- TPH as diesel-range organics (TPH-DRO) and TPH as heavy oil-range organics (TPH-HRO) by Ecology Method NWTPH-Dx extended with silica-gel cleanup; and
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX), and methyl tertiary-butyl ether (MTBE) by United States Environmental Protection Agency (EPA) Method 8260B.

A laboratory-supplied trip blank (QA) was submitted to the laboratory and analyzed for TPH-GRO, BTEX, and MTBE to provide quality assurance. Field data sheets from

Gettler-Ryan are provided in the groundwater monitoring and sampling data package (Attachment A).

FINDINGS

During this event, groundwater elevation measurements ranged from 94.15 feet in monitoring well MW-4 to 84.86 feet in monitoring well MW-7, based on an arbitrary benchmark elevation of 100.00 feet. Groundwater elevation data from this event indicate that groundwater flows toward the east-northeast at a gradient of approximately 0.01 to 0.46 feet per foot (Figure 2). Groundwater elevations across the site decreased an average of 0.58 foot since the previous quarterly monitoring event in June 2012.

SPH were not detected in any of the monitoring wells gauged.

The following analytes were detected at concentrations exceeding their respective Model Toxics Control Act (MTCA) Method A cleanup levels:

- TPH-GRO was detected in monitoring wells MW-2 and MW-6;
- TPH-DRO was detected in monitoring wells MW-2;
- Benzene was detected in monitoring wells MW-2, MW-5, MW-6, and MW-7;
- Ethylbenzene was detected in monitoring well MW-2; and
- MTBE was detected in monitoring wells MW-2 and MW-7.

Historical groundwater elevation data and laboratory analytical results are summarized in Table 1. The laboratory analysis report is provided as Attachment B.

DISCUSSION

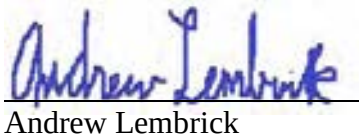
Groundwater monitoring and sampling results from this event are consistent with historical data for this site. Petroleum constituents continue to be detected in monitoring wells MW-2, MW-5, MW-6, and MW-7, at concentrations exceeding MTCA Method A cleanup levels. Long-term data trends suggest that contaminant concentrations in groundwater are generally stable or decreasing over time.

Gettler-Ryan will continue to perform groundwater monitoring at this site on a quarterly basis. The fourth quarter 2012 groundwater monitoring event was performed in December 2012. Results of that monitoring event will be presented in a future report.

If you have any questions or comments regarding this report, please contact the SAIC Project Manager, Russ Shropshire, at (425) 482-3323 or via email at shropshirer@saic.com.

Sincerely,

SAIC Energy, Environment & Infrastructure, LLC



Andrew Lembrick
Project Geologist

Enclosures:

Figure 1 – Vicinity Map

Figure 2 – Potentiometric Map

Table 1 – Groundwater Monitoring Data and Analytical Results

Attachment A – Groundwater Monitoring and Sampling Data Package

Attachment B – Laboratory Analysis Report

cc: Mr. Eric Hetrick – Chevron Environmental Management Company
6101 Bollinger Canyon Road, San Ramon, CA 94583

Mr. Michael Hill – Michael Hill's, Inc.
P.O. Box 489, Blaine, WA 98231

Mr. Paul Grabau – Farrallon Consulting
1201 Cornwall Avenue, Suite 105, Bellingham, WA 98225

Mr. Ken Imus – Jacaranda Land and Development Corporation
1305 11th Street, Office No. 201, Bellingham, WA 98225

Project File

REPORT LIMITATIONS

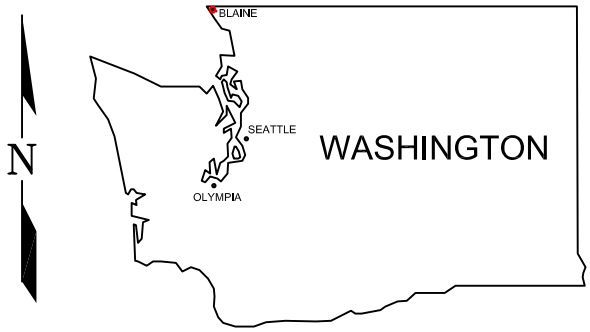
This technical document was prepared on behalf of Chevron and is intended for its sole use and for use by the local, state or federal regulatory agency that the technical document was sent to by SAIC. Any other person or entity obtaining, using, or relying on this technical document hereby acknowledges that they do so at their own risk, and that SAIC 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. SAIC 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 SAIC's site visits or site work and cannot be applied to conditions and features of which SAIC is unaware and has not had the opportunity to evaluate.

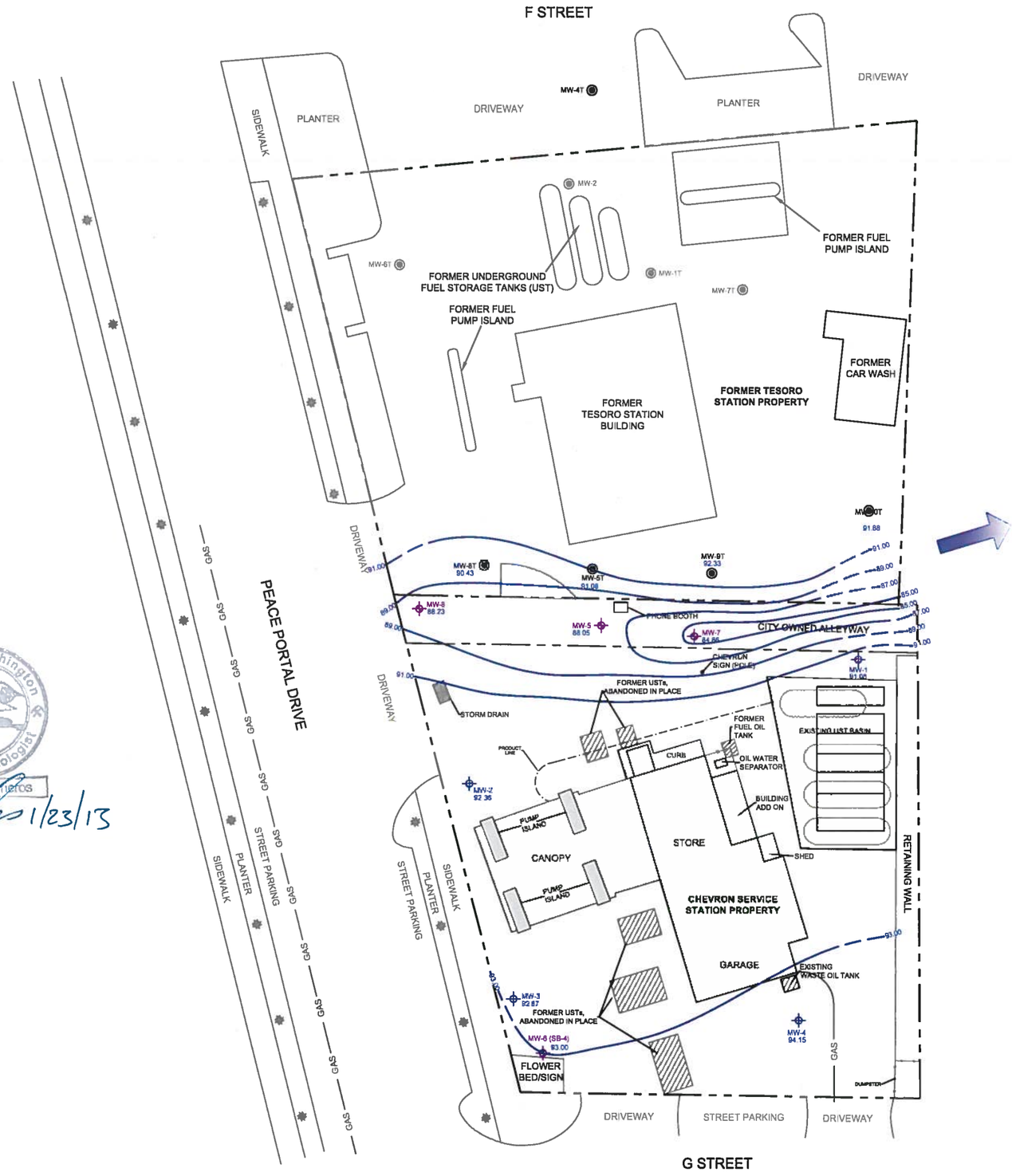
All sources of information on which SAIC has relied in making its conclusions (including direct field observations) are identified by reference in this technical document or in appendices attached to this technical document. Any information not listed by reference or in appendices has not been evaluated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

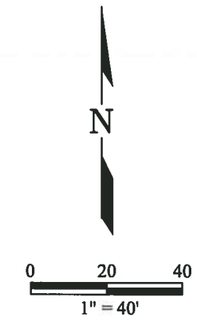


Maps Provided by Seattle.gov

SAIC

Chevron Service Station No. 9-1122 568 Peace Portal Drive Blaine, Washington	FIGURE 1 Vicinity Map
FILE NAME: 91122 Vicinity Map.dwg	DATE: 10/31/2012





LEGEND

MW-1	Groundwater Monitoring Well Installed by Delta Environmental, Inc. (2001)
MW-5	Groundwater Monitoring Well Installed by SAIC (2008)
MW-8T	Groundwater Monitoring Well Located on Former Tesoro Property
MW-2T	Decommissioned Groundwater Monitoring Well Located on Former Tesoro Property
92.56	Groundwater Elevation in Feet
90.00	Groundwater Elevation Contour at a 2.00 Foot Interval (Dashed Where Inferred)
	Approximate Groundwater Flow Direction with a Gradient of 0.01 to 0.46
	Property Line

State of Washington
2357
Licensed Geologist
Gabriel Cisneros
1/23/13

SAIC

Chevron Service Station No. 9-1122
568 Peace Portal Drive
Blaine, Washington

FIGURE 2
Potentiometric Map
September 13-14, 2012

DATE:	FILE NAME:
1/23/2013	91122 Site Map.dwg

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS[1]
CHEVRON SERVICE STATION NO. 9-1122
568 Peace Portal Drive
Blaine, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC[2] (ft.)	DTW (ft.)	GWE (ft.)	TPH-DRO	TPH-HRO	TPH-GRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	D. Lead
CHEVRON SERVICE STATION NO. 9-1122													
MW-1													
5/3/01		100.00	8.34	91.66	--	--	--	--	--	--	--	--	--
6/19/01		100.00	9.42	90.58	<250	<750	192	23.5	6.46	2.49	5.80	<5.00/<5.00[3]	<0.00100[4]
8/19/01		100.00	11.37	88.63	<250	<500	<50.0	1.06	0.624	<0.500	<1.00	<1.00/<5.00[3]	--
11/28/01		100.00	9.24	90.76	<250	<500	190	**46.9**	8.09	0.924	2.94	1.96/<5.00[3]	--
2/18/02		100.00	7.50	92.50	<250	<750	570	**20**	4.2	4.6	3.4	<2.5/<2[3]	--
5/20/02	NP	100.00	9.30	90.70	<250	<750	**1,000**	**23**	6.5	10	4.2	<2.5	--
8/16/02	NP	100.00	11.88	88.12	<250	<250	100	**14**	2.1	1.0	<1.5	<2.5	--
11/17/02	NP	100.00	11.95	88.05	<250	<250	<50	1.0	<0.50	<0.50	<1.5	<2.5	--
2/7/03	NP	100.00	8.49	91.51	<250	<750	95	4.1	<0.50	<0.50	<1.5	<2.5	--
5/21/03	NP	100.00	8.68	91.32	<250	<250	600	**7.7**	1.1	2.1	<1.5	<2.5	--
11/15/03	NP	100.00	9.78	90.22	<250	<250	<50	1.9	<0.5	<0.5	<1.5	<2.5	--
2/7/04	NP	100.00	6.91	93.09	<250	<250	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
5/8/04	NP	100.00	8.72	91.28	<250	<250	430	**16**	1.3	2.4	1.8	3.0/<2[3]	--
8/14/04	NP	100.00	11.18	88.82	<250	<250	<50	**14**	0.8	0.6	<1.5	<2.5	--
11/26/04	NP	100.00	6.68	93.32	<250	<250	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
2/24/05	NP	100.00	6.46	93.54	<250	<250	<50	**17**	0.5	<0.5	2.9	<2.5	--
6/10/05	NP	100.00	9.26	90.74	<250	<250	110	**22**	0.9	0.5	1.7	<2.5	--
8/2/05	NP	100.00	10.53	89.47	<250	<250	<50	1.6	<0.5	<0.5	<1.5	<2.5	--
10/15/05	NP	100.00	11.81	88.19	<80	<100	<48	<0.5	<0.5	<0.5	<1.5	<2.5	--
2/11/06	NP	100.00	6.31	93.69	<82	<100	<48	<0.5	<0.5	<0.5	<1.5	<2.5	--
8/2/07	NP	100.00	8.98	91.02	**520**	<98	<50	4.2	<0.5	<0.5	<1.5	--	--
9/24-25/08	LFP	100.00	8.63	91.37	<80	<100	120	1	<0.5	<0.5	<0.5	<0.5	--
12/4-5/08	LFP	100.00	6.37	93.63	<32	<75	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
3/6/09	LFP	100.00	6.29	93.71	<29	<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
6/18/09	LFP	100.00	8.10	91.90	46	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
9/25/09	LFP	100.00	9.77	90.23	<30	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
11/23-24/09	LFP	100.00	6.18	93.82	<29	<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
3/16/10	LFP	100.00	6.35	93.65	<30	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
6/28-29/10	LFP	100.00	7.21	92.79	48	84	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
09/14/10	LFP	100.00	7.71	92.29	<29	110	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
12/08/10	LFP	100.00	6.82	93.18	32	110	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
03/02/11	LFP	100.00	5.90	94.10	84	250	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS[1]
CHEVRON SERVICE STATION NO. 9-1122
568 Peace Portal Drive
Blaine, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC[2] (ft.)	DTW (ft.)	GWE (ft.)	TPH-DRO	TPH-HRO	TPH-GRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	D. Lead
MW-1 (cont)													
06/14/11	LFP	100.00	6.55	93.45	<29	<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
09/13/11	LFP	100.00	6.10	93.90	<29	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
12/02/11	LFP	100.00	6.80	93.20	<29	<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
03/01-02/12	LFP	100.00	5.75	94.25	<29	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
6/18-19/2012	LFP	100.00	6.50	93.50	<29	<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
09/13-14/2012	LFP	100.00	8.92	91.08	<29	<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
MW-2													
05/03/01		97.01	3.72	93.29	--	--	--	--	--	--	--	--	--
06/19/01		97.01	4.04	92.97	**791**	<750	**40,200**	**2,110**	**1,160**	**777**	**3,200**	**206**/<5.00[3]	<0.00100[4]
08/19/01		97.01	4.15	92.86	<250	<500	**29,300**	**3,490**	**1,010**	**1,460**	**4,790**	**245**/<5.00[3]	--
11/28/01		97.01	4.42	92.59	**513**	<500	**23,800**	**3,490**	334	**1,560**	**3,720**	**192/78.7**[3]	--
11/28/01	R	--	--	--	--	--	--	--	--	--	--	--/**97.9**[3]	--
2/18/02		97.01	3.94	93.07	**1,800**	<750	**25,000**	**2,700**	240	**1,500**	**3,400**	**98/110**[3]	--
5/20/02	NP	97.01	4.28	92.73	**1,600**	<1,000	**25,000**	**1,800**	110	**1,400**	**2,900**	**72/50**[3]	--
8/16/02	NP	97.01	4.19	92.82	**2,400**	<250	**25,000**	**2,000**	89	**1,200**	**2,500**	**140/80**[3]	--
11/17/02	NP	97.01	5.39	91.62	**1,500**	<250	**24,000**	**2,600**	130	**1,300**	**2,700**	<100	--
2/7/03	NP	97.01	5.39	91.62	**1,700**	<750	**27,000**	**2,700**	130	**1,500**	**2,900**	<200	--
5/21/03	NP	97.01	5.65	91.36	**1,300**	<250	**28,000**	**2,300**	93	**1,400**	**2,600**	**150/90**[3]	--
11/15/03	NP	97.01	3.31	93.70	**1,400**	<250	**25,000**	**2,200**	110	**1,300**	**2,700**	**240/82**[3]	--
2/7/04	NP	97.01	3.56	93.45	**1,500**	<250	**24,000**	**2,700**	130	**1,600**	**2,900**	**220/66**[3]	--
5/8/04	NP	97.01	3.96	93.05	**1,800**	260	**22,000**	**1,700**	69	**1,400**	**2,600**	**190/61**[3]	--
8/14/04	NP	97.01	4.30	92.71	**1,700**	330	**21,000**	**2,000**	74	**1,400**	**2,600**	<200	--
11/26/04	NP	97.01	3.98	93.03	**1,100**	<490	**21,000**	**2,400**	82	**1,200**	**2,100**	<2.5	--
2/24/05	NP	97.01	3.63	93.38	**570**	<250	**23,000**	**1,800**	87	**1,500**	**2,600**	<100	--
6/10/05	NP	97.01	3.52	93.49	**1,800**	<250	**21,000**	**1,500**	58	**1,200**	**2,000**	<100	--
8/2/05	NP	97.01	4.14	92.87	**1,600**	310	**23,000**	**1,700**	67	**1,300**	**2,400**	**130**	--
10/15/05	NP	97.01	4.26	92.75	**1,100**	<500	**19,000**	**2,300**	63	**1,400**	**2,000**	<50	--
2/11/06	NP	97.01	3.72	93.29	**1,200**	<100	**22,000**	**2,100**	84	**1,500**	**2,300**	<200	--
8/2/07	NP	97.01	3.69	93.32	**1,500**	<480	**15,000**	**1,400**	52	**1,400**	**1,200**	--	--
9/24-25/08	LFP	97.02	3.92	93.10	**1,200**	<500	**14,000**	**1,700**	57	**1,600**	615	**54**	4.5
12/4-5/08	LFP	97.02	4.11	92.91	**1,000**	<340	**14,000**	**1,500**	52	**1,400**	460	**36**	--
3/6/09	LFP	97.02	3.88	93.14	**1,000**	<140	**13,000**	**1,400**	47	**1,700**	450	**32**	--
6/18/09	LFP	97.02	3.79	93.23	**630**	<140	**13,000**	**1,100**	38	**1,400**	530	**31**	--
9/25/09	LFP	97.02	4.23	92.79	**1,300**	<340	**11,000**	**960**	40	**1,100**	330	**32**	--

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS[1]
CHEVRON SERVICE STATION NO. 9-1122
568 Peace Portal Drive
Blaine, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC[2] (ft.)	DTW (ft.)	GWE (ft.)	TPH-DRO	TPH-HRO	TPH-GRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	D. Lead
MW-2 (cont)													
11/23-24/09	LFP	97.02	2.91	94.11	**710**	<140	**12,000**	**1,300**	40	**1,200**	300	**36**	--
3/16/10	LFP	97.02	3.41	93.61	**760**	140	**9,600**	**870**	34	**1,400**	340	**21**	--
6/28-29/10	LFP	97.02	3.40	93.62	**810**	<140	**10,000**	**760**	27	**1,100**	310	**27**	--
09/14/10	LFP	97.02	3.84	93.18	**800**	440	**10,000**	**740**	34	**1,000**	240	**25**	--
12/08/10	LFP	97.02	4.11	92.91	**840**	<360	**10,000**	**1,300**	44	**1,500**	310	**31**	--
03/02/11	LFP	97.02	3.66	93.36	**960**	<350	**11,000**	**880**	32	**1,000**	230	**22**	--
06/14/11	LFP	97.02	3.70	93.32	**890**	160	**9,400**	**800**	36	**1,000**	220	**20**	--
09/13/11	LFP	97.02	3.95	93.07	240	<68	**11,000**	**980**	36	**1,400**	210	**23**	--
12/02/11	LFP	97.02	3.60	93.42	**580**	<350	**10,000**	**1,200**	47	**1,600**	240	**27**	--
03/1-2/12	LFP	97.02	2.80	94.22	450	<66	**9,100**	**810**	33	**1,100**	200	**22**	--
6/18-19/2012	LFP	97.02	4.46	92.56	**590**	<68	**9,600**	**860**	31	**1,400**	250	18	--
09/13-14/2012	LFP	97.02	4.66	92.36	**660**	<68	**9,600**	**870**	33	**1,300**	140	**20**	--
MW-3													
5/3/01		98.29	4.37	93.92	--	--	--	--	--	--	--	--	--
6/19/01		98.29	4.58	93.71	<250	<750	**2,290**	<0.500	0.550	3.25	6.15	<5.00/<5.00[3]	<0.00100[4]
8/19/01		98.29	5.03	93.26	<250	<500	383	<0.500	<0.500	<0.500	3.58	<1.00/<5.00[3]	--
11/28/01		98.29	4.17	94.12	<250	<500	343	<0.500	<0.500	<0.500	4.31	<1.00/<5.00[3]	--
2/18/02		98.29	4.49	93.80	350	<750	510	<0.50	<0.50	0.69	<1.5	<2.5/<2[3]	--
5/20/02	NP	98.29	4.65	93.64	310	<750	760	<0.50	1.0	2.6	<1.5	<2.5	--
8/16/02	NP	98.29	5.08	93.21	280	<250	220	<0.50	<0.50	<0.50	<1.5	<2.5	--
11/17/02	NP	98.29	4.59	93.70	<250	<250	310	<0.50	<0.50	<0.50	<1.5	<2.5	--
2/7/03	NP	98.29	4.38	93.91	<250	<750	350	<0.50	<0.50	<0.50	<1.5	<2.5	--
5/21/03	NP	98.29	4.31	93.98	<250	<250	400	<0.5	<0.5	<0.5	1.7	<2.5	--
11/15/03	NP	98.29	4.53	93.76	260	<250	240	<0.5	<0.5	<0.5	<1.5	<2.5	--
2/7/04	NP	98.29	4.11	94.18	250	<250	360	<0.5	<0.5	<0.5	<1.5	<2.5	--
5/8/04	NP	98.29	4.75	93.54	280	<250	110	<0.5	<0.5	<0.5	<1.5	<2.5	--
8/14/04	NP	98.29	5.06	93.23	270	<250	100	<0.5	<0.5	<0.5	<1.5	<2.5	--
11/26/04	NP	98.29	3.76	94.53	<250	<250	560	<0.5	<0.5	<1.0	<1.5	<2.5	--
2/24/05	NP	98.29	4.34	93.95	<250	<250	330	<0.5	<0.5	<1.0	<3.0	<2.5	--
6/10/05	NP	98.29	4.31	93.98	<250	<250	250	<0.5	<0.5	<0.5	<1.5	<2.5	--
8/2/05	NP	98.29	4.98	93.31	260	<250	140	<0.5	<0.5	<0.5	<1.5	<2.5	--
10/15/05	NP	98.29	4.06	94.23	200	200	250	<0.5	<0.5	<0.5	<1.5	<2.5	--
2/11/06	NP	98.29	4.22	94.07	110	<100	390	<0.5	<0.5	<0.5	<2.0	<2.5	--
8/2/07	NP	98.29	4.73	93.56	**740**	<97	200	<0.5	<2.0	<0.5	<1.5	--	--

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS[1]
CHEVRON SERVICE STATION NO. 9-1122
568 Peace Portal Drive
Blaine, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC[2] (ft.)	DTW (ft.)	GWE (ft.)	TPH-DRO	TPH-HRO	TPH-GRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	D. Lead
MW-3 (cont)													
9/24-25/08	LFP	98.31	4.89	93.42	99	<99	350	<0.5	<0.5	<0.5	<0.5	<0.5	--
12/4-5/08	LFP	98.31	4.22	94.09	92	<68	460	<0.5	<0.5	<0.5	<0.5	<0.5	--
3/6/09	LFP	98.31	4.33	93.98	120	120	500	<0.5	<0.5	<0.5	<0.5	<0.5	--
6/18/09	LFP	98.31	4.93	93.38	83	<70	300	<0.5	<0.5	<0.5	<0.5	<0.5	--
9/25/09	LFP	98.31	4.97	93.34	100	<69	190	<0.5	<0.5	<0.5	<0.5	<0.5	--
11/23-24/09	LFP	98.31	3.80	94.51	62	<68	350	<0.5	<0.5	<0.5	<0.5	<0.5	--
3/16/10	LFP	98.31	4.01	94.30	100	88	390	<0.5	<0.5	1.0	<0.5	<0.5	--
6/28-29/10	LFP	98.31	4.74	93.57	140	80	310	<0.5	<0.5	<0.5	<0.5	<0.5	--
9/14/10	LFP	98.31	4.10	94.21	80	98	86	<0.5	<0.5	<0.5	<0.5	<0.5	--
12/8/10	LFP	98.31	4.25	94.06	110	90	340	<0.5	<0.5	<0.5	<0.5	<0.5	--
3/2/11	LFP	98.31	4.22	94.09	100	<69	340	<0.5	<0.5	<0.5	<0.5	<0.5	--
6/14/11	LFP	98.31	4.60	93.71	170	<68	500	<0.5	<0.5	<0.5	<0.5	<0.5	--
09/13/11	LFP	98.31	5.10	93.21	33	<68	250	<0.5	<0.5	<0.5	<0.5	<0.5	--
12/02/11	LFP	98.31	4.30	94.01	33	<69	180	<0.5	<0.5	<0.5	<0.5	<0.5	--
03/1-2/2012	LFP	98.31	4.10	94.21	30	<67	310	3	<0.5	5	1	<0.5	--
6/18-19/2012	LFP	98.31	4.30	94.01	34	<70	180	<0.5	<0.5	<0.5	<0.5	<0.5	--
09/13-14/2012	LFP	98.31	5.44	92.87	<29	<69	150	<0.5	<0.5	0.5	<0.5	<0.5	--
MW-4													
5/3/01		99.81	4.65	95.16	--	--	--	--	--	--	--	--	--
6/19/01		99.81	5.14	94.67	<250	<750	<50.0	<0.500	<0.500	<0.500	<1.00	<5.00/<5.00[3]	<0.00100[4]
8/19/01		99.81	6.01	93.80	475	<500	<50.0	<0.500	<0.500	<0.500	<1.00	<1.00/<5.00[3]	--
11/28/01		99.81	4.24	95.57	<250	<500	<50.0	<0.500	<0.500	<0.500	<1.00	<1.00/<5.00[3]	--
2/18/02		99.81	3.98	95.83	<250	<750	<50	<0.50	<0.50	<0.50	<1.5	<2.5/<2[3]	--
5/20/02		99.81	5.05	94.76	--	--	--	--	--	--	--	--	--
8/16/02		99.81	6.01	93.80	--	--	--	--	--	--	--	--	--
11/17/02		99.81	5.22	94.59	--	--	--	--	--	--	--	--	--
2/7/03		99.81	4.86	94.95	--	--	--	--	--	--	--	--	--
5/21/03		99.81	4.78	95.03	--	--	--	--	--	--	--	--	--
11/15/03		99.81	5.02	94.79	--	--	--	--	--	--	--	--	--
2/7/04		99.81	4.62	95.19	--	--	--	--	--	--	--	--	--
5/8/04		99.81	5.19	94.62	--	--	--	--	--	--	--	--	--
8/14/04		99.81	5.91	93.90	--	--	--	--	--	--	--	--	--
11/26/04		99.81	3.84	95.97	--	--	--	--	--	--	--	--	--
2/24/05		99.81	4.85	94.96	--	--	--	--	--	--	--	--	--

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS[1]
CHEVRON SERVICE STATION NO. 9-1122
568 Peace Portal Drive
Blaine, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC[2] (ft.)	DTW (ft.)	GWE (ft.)	TPH-DRO	TPH-HRO	TPH-GRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	D. Lead
MW-4 (cont)													
6/10/05		99.81	4.81	95.00	--	--	--	--	--	--	--	--	--
8/2/05		99.81	5.79	94.02	--	--	--	--	--	--	--	--	--
10/15/05		99.81	4.52	95.29	--	--	--	--	--	--	--	--	--
2/11/06		99.81	4.69	95.12	--	--	--	--	--	--	--	--	--
8/2/07		99.81	5.22	94.59	430	<97	<50	<0.5	<0.5	<0.5	<1.5	--	--
9/24-25/08	LFP	100.15	5.37	94.78	<79	<99	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
12/4-5/08	LFP	100.15	4.04	96.11	<29	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
3/6/09	LFP	100.15	4.36	95.79	<30	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
6/18/09	LFP	100.15	5.31	94.84	46	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
9/25/09	LFP	100.15	5.59	94.56	<30	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
11/23-24/09	LFP	100.15	3.35	96.80	<30	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
3/16/10	LFP	100.15	3.91	96.24	65	320	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
6/28-29/10	LFP	100.15	5.06	95.09	44	<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
9/14/10	LFP	100.15	3.56	96.59	<29	120	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
12/8/10	LFP	100.15	3.95	96.20	270	**810**	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
3/2/11	LFP	100.15	3.85	96.30	<30	<70	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
6/14/11	LFP	100.15	4.80	95.35	98	310	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
09/13/11	LFP	100.15	5.80	94.35	29	250	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
12/02/11	LFP	100.15	4.50	95.65	<30	<71	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
03/1-2/12	LFP	100.15	3.55	96.60	<28	<66	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
6/18-19/2012	LFP	100.15	4.60	95.55	<30	<71	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
9/13-14/2012	LFP	100.15	6.00	94.15	<29	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
MW-5													
09/24-25/08	LFP	97.33	8.94	88.39	**1,100**	<99	**9,600**	**380**	24	320	**940**	13	4.6
12/04-05/08	LFP	97.33	8.43	88.90	**920**	<69	**13,000**	**440**	36	550	**1,400**	10	--
3/6/09	LFP	97.33	8.58	88.75	**730**	<69	**11,000**	**380**	15	490	**900**	9	--
6/18/09	LFP	97.33	8.87	88.46	**750**	<69	**13,000**	**420**	20	560	**1,100**	10	--
9/25/09	LFP	97.33	8.88	88.45	--	--	**5,800**	**240**	6	360	500	6	--
11/23-24/09	LFP	97.33	8.21	89.12	**670**	69	**11,000**	**330**	20	620	**1,400**	7	--
3/16/10	LFP	97.33	8.68	88.65	370	92	**5,900**	**220**	12	370	590	8	--
06/28-29/10	LFP	97.33	8.87	88.46	**630**	<68	**11,000**	**320**	12	620	**740**	8	--
9/14/10	LFP	97.33	8.57	88.76	410	<140	**4,300**	**180**	4	300	40	4	--
12/8/10	LFP	97.33	8.76	88.57	320	<69	**4,200**	**210**	3	370	10	3	--
3/2/11	LFP	97.33	8.74	88.59	280	130	**4,000**	**180**	6	290	16	5	--

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS[1]
CHEVRON SERVICE STATION NO. 9-1122
568 Peace Portal Drive
Blaine, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC[2] (ft.)	DTW (ft.)	GWE (ft.)	TPH-DRO	TPH-HRO	TPH-GRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	D. Lead
MW-5 (cont)													
6/14/11	LFP	97.33	8.70	88.63	420	<68	**5,100**	**320**	9	370	70	8	--
09/13/11	LFP	97.33	9.15	88.18	<29	<68	**2,000**	**180**	2	160	8	6	--
12/02/11	LFP	97.33	8.75	88.58	94	<68	**2,100**	**200**	2	200	3	3	--
03/1-2/2012	LFP	97.33	8.80	88.53	60	<69	680	**56**	0.7	29	1	3	--
6/18-19/2012	LFP	97.33	8.74	88.59	91	<69	**1,900**	**120**	2	170	3	2	--
9/13-14/2012	LFP	97.33	9.28	88.05	81	<67	580	**110**	0.6	78	3	4	--
MW-6													
09/24-25/08	LFP	99.01	5.55	93.46	**700**	120	**6,800**	**13**	2	170	430	0.6	--
12/04-05/08	LFP	99.01	4.85	94.16	**730**	<140	**26,000**	**25**	<3	**830**	**2,500**	<3	--
3/6/09	LFP	99.01	5.00	94.01	**670**	<69	**17,000**	**15**	2	330	**960**	<1	--
6/18/09	LFP	99.01	5.57	93.44	**650**	<69	**5,300**	**6**	1	84	250	<0.5	--
9/25/09	LFP	99.01	5.65	93.36	**680**	400	**4,700**	**10**	1	120	230	<0.5	--
11/23-24/09	LFP	99.01	4.61	94.40	**730**	<140	**31,000**	**31**	3	**800**	**2,600**	0.6	--
3/16/10	LFP	99.01	4.82	94.19	**670**	<330	**14,000**	**19**	2	510	**1,500**	<1	--
06/28-29/10	LFP	99.01	5.35	93.66	**640**	100	**6,700**	**10**	1	170	340	<0.5	--
9/14/10	LFP	99.01	4.79	94.22	**4,100**	<1,700	**23,000**	**28**	2	**730**	**2,300**	<1	--
12/8/10	LFP	99.01	4.92	94.09	**750**	120	**18,000**	**16**	<3	440	**1,300**	<3	--
3/2/11	LFP	99.01	4.90	94.11	**1,200**	260	**13,000**	**14**	1	280	680	<0.5	--
6/14/11	LFP	99.01	5.22	93.79	450	<69	**7,600**	**13**	1	150	320	<0.5	--
09/13/11	LFP	99.01	5.80	93.21	180	<67	**3,400**	**10**	0.7	110	130	<0.5	--
12/02/11	LFP	99.01	4.90	94.11	**1,600**	<340	**13,000**	**15**	<3	410	910	<3	--
03/1-2/2012	LFP	99.01	4.80	94.21	370	<68	**12,000**	**13**	<3	340	800	<3	--
6/18-19/2012	LFP	99.01	4.92	94.09	**2,200**	210	**11,000**	**13**	1	390	680	<1	--
9/13-14/2012	LFP	99.01	6.01	93.00	140	<69	**2,500**	**10**	1	84	110	<0.5	--
MW-7													
09/24-25/08	LFP	98.21	13.34	84.87	<79	<99	120	**160**	3	7	3	**24**	--
12/04-05/08	LFP	98.21	13.32	84.89	42	<68	51	**160**	1	7	<0.5	15	--
3/6/09	LFP	98.21	13.33	84.88	51	<68	170	**220**	3	19	5	19	--
6/18/09	LFP	98.21	13.29	84.92	38	<69	180	**510**	3	23	8	**40**	--
9/25/09	LFP	98.21	13.35	84.86	<29	<68	140	**500**	3	4	3	**45**	--
11/23-24/09	LFP	98.21	13.27	84.94	<29	<68	150	**700**	7	12	12	**55**	--
3/16/10	LFP	98.21	13.28	84.93	48	<66	250	**790**	7	25	22	**48**	--
06/28-29/10	LFP	98.21	13.31	84.90	41	<68	95	**380**	1	6	3	**36**	--

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS[1]
CHEVRON SERVICE STATION NO. 9-1122
568 Peace Portal Drive
Blaine, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC[2] (ft.)	DTW (ft.)	GWE (ft.)	TPH-DRO	TPH-HRO	TPH-GRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	D. Lead
MW-7 (cont)													
9/14/10	LFP	98.22	13.21	85.01	37	69	<50	**190**	1	1	<0.5	**26**	--
12/8/10	LFP	98.22	13.30	84.92	54	170	56	**350**	2	0.9	4	**28**	--
3/2/11	LFP	98.22	13.27	84.95	96	81	**1,000**	**740**	13	100	69	**45**	--
6/14/11	LFP	98.22	13.17	85.05	33	<73	220	**500**	6	23	13	**35**	--
09/13/11	LFP	98.22	13.30	84.92	<30	<69	<50	**170**	1	1	1	**20**	--
12/02/11	LFP	98.22	13.30	84.92	97	<69	160	**310**	3	11	7	19	--
03/1-2/2012	LFP	98.22	13.20	85.02	57	<70	610	**300**	3	39	8	18	--
6/18-19/2012	LFP	98.22	13.20	85.02	33	**1,100**	240	**340**	3	18	9	**21**	--
9/13-14/2012	LFP	98.22	13.36	84.86	<29	<67	57	**170**	1	0.7	2	**21**	--
MW-8													
09/24-25/08	LFP	95.62	5.74	89.88	<79	<99	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
12/04-05/08	LFP	95.62	5.50	90.12	40	<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
3/6/09	LFP	95.62	5.62	90.00	56	<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
6/18/09	LFP	95.62	6.13	89.49	<29	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
9/25/09	LFP	95.62	6.12	89.50	57	<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
11/23-24/09	LFP	95.62	5.48	90.14	<29	<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
3/16/10	LFP	95.62	5.62	90.00	<29	<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
06/28-29/10	LFP	95.62	6.13	89.49	<29	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
9/14/10	LFP	95.63	5.57	90.06	<29	210	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
12/8/10	LFP	95.63	5.48	90.15	<29	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
3/2/11	LFP	95.63	5.61	90.02	<30	180	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
6/14/11	LFP	95.63	6.00	89.63	<29	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
09/13/11	LFP	95.63	6.45	89.18	<29	<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
12/02/11	LFP	95.63	5.75	89.88	<30	<70	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
03/1-2/12	LFP	95.63	5.65	89.98	<29	<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
6/18-19/2012	LFP	95.63	5.85	89.78	<29	<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
9/13-14/2012	LFP	95.63	7.40	88.23	<29	<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
FORMER TESORO SERVICE STATION (IMUS PROPERTY)													
MW-4T													
11/23-24/09		92.18	3.93	88.25	--	--	--	--	--	--	--	--	--

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS[1]
CHEVRON SERVICE STATION NO. 9-1122
568 Peace Portal Drive
Blaine, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC[2] (ft.)	DTW (ft.)	GWE (ft.)	TPH-DRO	TPH-HRO	TPH-GRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	D. Lead
MW-5T													
09/24-25/08	LFP	25.82	3.62	22.20	<83	<100	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
11/23-24/09	LFP	96.16	4.05	92.11	<29	<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
03/16/10	LFP	96.16	4.34	91.82	<30	<70	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
06/28-29/10	LFP	96.16	4.64	91.52	210	170	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
09/14/10	LFP	96.16	4.23	91.93	<30	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
12/08/10	LFP	96.16	4.10	92.06	<29	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
03/02/11	LFP	96.16	4.17	91.99	<30	<70	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
06/14/11	LFP	96.16	4.45	91.71	<29	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
09/13/11	LFP	96.16	4.80	91.36	<29	<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
12/02/11	LFP	96.16	4.30	91.86	<30	<70	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
03/1-2/2012	LFP	96.16	4.30	91.86	<29	<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
6/18-19/2012	LFP	96.16	4.28	91.88	**2,200**	**8,300**	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
9/13-14/2012	LFP	96.16	5.08	91.08	<30	<70	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
MW-8T													
09/24-25/08	PER	--	5.96	--	NOT SAMPLED DUE TO INSUFFICIENT WATER				--	--	--	--	--
11/23-24/09	LFP	95.58	3.41	92.17	<29	<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
03/16/10	LFP	95.58	3.85	91.73	<31	<73	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
06/28-29/10	LFP	95.58	4.71	90.87	<30	<70	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
09/14/10	LFP	95.58	2.78	92.80	<30	<70	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
12/08/10	LFP	95.58	3.68	91.90	<28	<66	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
03/02/11	LFP	95.58	3.83	91.75	35	<70	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
06/14/11	LFP	95.58	4.62	90.96	<30	<70	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
09/13/11	LFP	95.58	5.00	90.58	<29	<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
12/02/11	LFP	95.58	3.90	91.68	<30	<70	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
03/1-2/12	LFP	95.58	3.95	91.63	<29	<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
6/18-19/2012	LFP	95.58	4.20	91.38	<29	<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
9/13-14/2012	LFP	95.58	5.15	90.43	<30	<70	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
MW-9T													
09/24-25/08	PER	--	4.54	--	NOT SAMPLED DUE TO INSUFFICIENT WATER				--	--	--	--	--
11/23-24/09	PER	96.63	2.72	93.91	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
03/16/10	LFP	96.63	3.08	93.55	<29	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
06/28-29/10	LFP	96.63	3.30	93.33	<30	<70	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
09/14/10	LFP	96.63	4.00	92.63	30	<66	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
12/08/10	LFP	96.63	3.21	93.42	51	<70	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
03/02/11	LFP	96.63	2.81	93.82	<30	<71	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS[1]
CHEVRON SERVICE STATION NO. 9-1122
568 Peace Portal Drive
Blaine, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC[2] (ft.)	DTW (ft.)	GWE (ft.)	TPH-DRO	TPH-HRO	TPH-GRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	D. Lead
MW-9T (cont)													
06/14/11	LFP	96.63	3.45	93.18	<31	<73	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
09/13/11	LFP	96.63	3.45	93.18	<29	<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
12/02/11	LFP	96.63	2.95	93.68	<29	<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
03/1-2/12	LFP	96.63	3.45	93.18	<29	<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
6/18-19/2012	LFP	96.63	3.40	93.23	<30	<70	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
9/13-14/2012	LFP	96.63	4.30	92.33	<30	<70	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
MW-10T													
09/24-25/08	PER	--	4.35	--	<83	<100	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
11/23-24/09	LFP	97.24	5.36	91.88	<30	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
03/16/10	LFP	97.24	5.55	91.69	<30	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
06/28-29/10	LFP	97.24	5.74	91.50	41	<70	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
09/14/10	LFP	97.24	5.51	91.73	<30	<70	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
12/08/10	LFP	97.24	5.52	91.72	<30	<71	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
03/02/11	LFP	97.24	5.61	91.63	<30	<71	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
06/14/11	LFP	97.24	5.63	91.61	<29	<68	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
09/13/11	LFP	97.24	6.05	91.19	<30	<70	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
MW-10T (cont)													
12/02/11	LFP	97.24	5.65	91.59	<31	<73	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
03/1-2/12	LFP	97.24	5.70	91.54	<29	<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
6/18-19/2012	LFP	97.24	5.72	91.52	<29	<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
9/13-14/2012	LFP	97.24	5.36	91.88	<30	<69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
TRIP BLANK													
6/19/01		--	--	--	--	--	<50.0	<0.500	<0.500	<0.500	<1.00	<5.00	--
8/19/01		--	--	--	--	--	<50.0	<0.500	<0.500	<0.500	<1.00	<1.00	--
11/28/01		--	--	--	--	--	<50.0	<0.500	<0.500	<0.500	<1.00	<1.00	--
2/18/02		--	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5	--
5/20/02		--	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5	--
QA													
8/16/02		--	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5	--
11/17/02		--	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5	--
2/7/03		--	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5	--
5/21/03		--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
11/15/03		--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
2/7/04		--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--

TABLE 1
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS[1]
CHEVRON SERVICE STATION NO. 9-1122
568 Peace Portal Drive
Blaine, Washington
Concentrations reported in µg/L

Well ID/ Date	Purge Method	TOC[2] (ft.)	DTW (ft.)	GWE (ft.)	TPH-DRO	TPH-HRO	TPH-GRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	D. Lead
QA (cont)													
5/8/04		--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
8/14/04		--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
11/26/04		--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
2/24/05		--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
6/10/05		--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
8/2/05		--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
10/15/05		--	--	--	--	--	<48	<0.5	<0.5	<0.5	<1.5	<2.5	--
2/11/06		--	--	--	--	--	<48	<0.5	<0.5	<0.5	<1.5	<2.5	--
8/2/07		--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	--	--
09/24-25/08		--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
12/04-05/08		--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
3/6/09		--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
6/18/09		--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
9/25/09		--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
11/23-24/09		--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
3/16/10		--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
06/28-29/10		--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
09/14/10		--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
12/08/10		--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
03/02/11		--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
06/14/11		--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
09/13/11		--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
12/02/11		--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
03/1-2/12		--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
6/18-19/2012		--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
9/13-14/2012		--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
Standard Laboratory Reporting Limits:					--	--	50	0.5	0.5	0.5	0.5	0.5	--
MTCA Method A Cleanup Levels:					500	500	800/1,000	5	1,000	700	1,000	20	--
Current Method[5]:					NWTPH-Dx + Extended[6]		NWTPH-Gx and USEPA 8260						USEPA 6020

TABLE 1

GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS[1]

CHEVRON SERVICE STATION NO. 9-1122

568 Peace Portal Drive

Blaine, Washington

Concentrations reported in µg/L

Abbreviations:

D. Lead = Dissolved Lead
DTW = Depth to Water
(ft.) = Feet
GWE = Groundwater Elevation
LFP = Low Flow Purge
MTBE = Methyl Tertiary Butyl Ether
MTCA = Model Toxics Control Act
NP = No purge
PER = Peristaltic pump
QA = Quality Assurance/Trip Blank
R = Re-analysis
SAIC = SAIC Energy, Environment & Infrastructure, LLC
TOC = Top of Casing
TPH = Total Petroleum Hydrocarbons
TPH-DRO = TPH as diesel-range organics
TPH-GRO = TPH as gasoline-range organics
TPH-HRO = TPH as heavy oil-range organics
USEPA = United States Environmental Protection Agency
µg/L = Micrograms per liter
-- = Not Measured/Not Analyzed

Notes:

1 Analytical results in bold font indicate concentrations exceed MTCA Method A cleanup levels.
2 TOC elevations have been surveyed in feet relative to an arbitrary datum.
3 MTBE by USEPA Method 8021 and confirmed by 8260.
4 Laboratory report indicates the sample was laboratory filtered and not in the field as required by the methodology.
5 Laboratory analytical methods for historical data may not be consistent with list of current analytical methods. When necessary, consult original laboratory reports to verify methods used.
6 Analyzed with silica-gel cleanup.

Attachment A:
Groundwater Monitoring and Sampling Data Package

GETTLER-RYAN INC.

TRANSMITTAL

September 19, 2012
G-R #386756

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

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

RE: Chevron Service Station
#9-1122
568 Peace Portal Drive
Blaine, Washington

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DESCRIPTION
VIA PDF	Groundwater Monitoring and Sampling Data Package **Third Quarter Event of September 13 and 14, 2012**

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/9-1122

GETTLER-RYAN INC.

CHEVRON - SITE CHECK LIST

Facility#:	Chevron #9-1122	Date:	9.13/9.14.12
Address:	568 Peace Portal Drive		
City/St.:	Blaine, WA		
Status of Site:	ACTIVE CHEVRON		

DRUMS: Please list below ALL DRUMS @ site: i.e., drum description, condition, labeling, contents, location of drum:

#	Description	Condition	Labeling	Contents/Capacity	Location
	NO DRUMS				

WELLS: Please check the condition of ALL WELLS @ site: i.e., well box condition, gaskets, bolts, well plug, well lock, etc.:

Well ID	Gaskets (M) Missing (R) Replaced	Bolts (M) Missing (R) Replaced	Well Plug Y / N	Well Lock Y / N	Well Box Manufacturer/Size/# of Bolts	Other
MW-1	GOOD				8" MORRIS x3	LOOSE MONUMENT
MW-2	GOOD					
MW-3	GOOD					
MW-4	GOOD	GOOD	R	R		
MW-5	GOOD					
MW-6	GOOD					
MW-7	GOOD					
MW-8	GOOD					
MW-5T	GOOD					
MW-8T	GOOD					
MW-9T	GOOD					
MW-10T	GOOD					

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

Initial Pump Discharge Test Procedures

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

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

Purging and Water Quality Parameter Measurement

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

Sample Collection

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

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

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

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

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #9-1122 | Job Number: 386756
Site Address: 568 Peace Portal Drive | Event Date: 9.13/9.14.12 (inclusive)
City: Blaine, WA | Sampler: J.P

Well ID: MW-1 | Date Monitored: 9.13.12
Well Diameter: 1(2) in.
Total Depth: 15.70 ft.
Depth to Water: 8.92 ft.

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

☐ Check if water column is less then 0.50 ft.

6.78 xVF ___ = ___ x3 case volume = Estimated Purge Volume: ___ gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 10.27

Purge Equipment:

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

Sampling Equipment:

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

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

Start Time (purge): 0900 | Weather Conditions: SUN
Sample Time/Date: 0930 / 9.13.12 | Water Color: CLEAR | Odor: Y / (N)
Approx. Flow Rate: 100 mlpm | Sediment Description: NONE
Did well de-water? NO | If yes, Time: — | Volume: — gal. | DTW @ Sampling: 10.87

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (~~µmhos/cm~~ µS)	Temperature (C) F	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
0918	1.8	6.45	.452	15.9	.06	50.1	10.87
0921	2.1	6.45	.452	15.9	.06	50.1	10.87
0924	2.4	6.45	.452	15.9	.06	50.2	10.87

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-1	6 x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	2 x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc

COMMENTS: Depth Pump Set At: 11.13

Add/Replaced Lock: ___ Add/Replaced Plug: ___ Add/Replaced Bolt: ___

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #9-1122 | Job Number: 386756
Site Address: 568 Peace Portal Drive | Event Date: 9.13/9.14.12 (inclusive)
City: Blaine, WA | Sampler: J.P

Well ID: MW-2 | Date Monitored: 9.13.12
Well Diameter: 1(2) in.
Total Depth: 15.35 ft.
Depth to Water: 4.66 ft. ☐ Check if water column is less then 0.50 ft.

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

10.69 xVF — = — x3 case volume = Estimated Purge Volume: — gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 6.79

Purge Equipment:

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

Sampling Equipment:

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

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

Start Time (purge): 1215 | Weather Conditions: SUN
Sample Time/Date: 1246 / 9.13.12 | Water Color: CLEAR | Odor: (Y) / N MILD
Approx. Flow Rate: 1600 mlpm | Sediment Description: NONE
Did well de-water? NO If yes, Time: — Volume: — gal. DTW @ Sampling: 5.42

Time (2400 hr.)	Volume (Liters)	pH	~~(µmhos/cm µS)~~ mS Conductivity	Temperature (C) / F	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
1253	1.8	6.29	.785	17.0	0	-114.1	5.42
1256	2.1	6.29	.785	17.1	0	-114.2	5.42
1239	2.4	6.29	.785	17.1	0	-114.2	5.42

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-2	6 x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	2 x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc

COMMENTS: Depth Pump Set At: 11'-12'

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

GETTLER - RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #9-1122 Job Number: 386756
Site Address: 568 Peace Portal Drive Event Date: 9.13/9.14.12 (inclusive)
City: Blaine, WA Sampler: J.P

Well ID: MW-3 Date Monitored: 9.13.12
Well Diameter: 1/(2) in.
Total Depth: 15.15 ft.
Depth to Water: 5.44 ft. ☐ Check if water column is less then 0.50 ft.

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

9.71 xVF — = — x3 case volume = Estimated Purge Volume: ______ gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 7.38

Purge Equipment:		Sampling Equipment:	
Disposable Bailer		Disposable Bailer	
Stainless Steel Bailer		Pressure Bailer	
Stack Pump		Metal Filters	
Suction Pump		Peristaltic Pump	x
Grundfos		QED Bladder Pump	
Peristaltic Pump	x	Other:	
QED Bladder Pump			
Other:			

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

Start Time (purge): 1125 Weather Conditions: Sun
Sample Time/Date: 1155 / 9.13.12 Water Color: Clear Odor: Y / (N)
Approx. Flow Rate: 100 mlpm Sediment Description: None
Did well de-water? No If yes, Time: — Volume: — gal. DTW @ Sampling: 5.98

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (~~µmhos/cm - µS~~) mS	Temperature (C) F	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
1143	1.8	6.40	.554	18.3	∅	-128.2	5.98
1146	2.1	6.40	.564	18.3	∅	-128.2	5.98
1149	2.4	6.40	.564	18.3	∅	-128.3	5.98

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-3	6 x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	2 x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc

COMMENTS: Depth Pump Set At: 11'-12'

Add/Replaced Lock: ______ Add/Replaced Plug: ______ Add/Replaced Bolt: ______

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #9-1122 | Job Number: 386756
Site Address: 568 Peace Portal Drive | Event Date: 9.13 | 9.14.12 (inclusive)
City: Blaine, WA | Sampler: J.P

Well ID: MW-4 | Date Monitored: 9.13.12
Well Diameter: 1 (2) in.
Total Depth: 15.35 ft.
Depth to Water: 6.00 ft.
9.35 xVF — = — x3 case volume = Estimated Purge Volume: — gal.

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

☐ Check if water column is less then 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 7.87

Purge Equipment:

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

Sampling Equipment:

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

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

Start Time (purge): 0945 | Weather Conditions: SUN
Sample Time/Date: 1015 / 9.13.12 | Water Color: CLEAR | Odor: Y (N)
Approx. Flow Rate: 100 mlpm | Sediment Description: NONE
Did well de-water? NO | If yes, Time: — | Volume: — gal. | DTW @ Sampling: 6.55

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (mS) (~~umhos/cm~~)	Temperature (C) F	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
1003	1.8	6.02	.337	16.7	0	59.7	6.55
1006	2.1	6.02	.337	16.7	0	59.8	6.55
1009	2.4	6.02	.337	16.8	0	60.0	6.55

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-4	6 x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	2 x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc

COMMENTS: Depth Pump Set At: 11-12

Add/Replaced Lock: — Add/Replaced Plug: — Add/Replaced Bolt: —

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #9-1122 | Job Number: 386756
Site Address: 568 Peace Portal Drive | Event Date: 9.13/9.14.12 (inclusive)
City: Blaine, WA | Sampler: J.P

Well ID: MW-5 | Date Monitored: 9.13.12
Well Diameter: 1 (2) in.
Total Depth: 19.10 ft.
Depth to Water: 9.28 ft. ☐ Check if water column is less then 0.50 ft.

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

9.82 xVF — = — x3 case volume = Estimated Purge Volume: — gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 11.24

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

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

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

Start Time (purge): 1360 | Weather Conditions: Sunny
Sample Time/Date: 1420 / 9.13.12 | Water Color: CLEAR Odor: (Y) / N MILD
Approx. Flow Rate: 100 mlpm | Sediment Description: NONE
Did well de-water? NO If yes, Time: — Volume: — gal. DTW @ Sampling: 10.35

Time (2400 hr.)	Volume (Liters)	pH	Conductivity ~~(umhos/cm uS)~~ mS	Temperature (C) F	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
1402	1.8	6.65	.840	18.5	0	-143.4	10.36
1411	2.1	6.65	.840	18.3	0	-143.5	10.35
1414	2.4	6.65	.840	18.3	0	-143.6	10.35

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-5	6 x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	2 x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc

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

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

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #9-1122 | Job Number: 386756
Site Address: 568 Peace Portal Drive | Event Date: 9.13/9.14.12 (inclusive)
City: Blaine, WA | Sampler: J.P

Well ID: MW-6 | Date Monitored: 9.13.12
Well Diameter: 1/(2) in.
Total Depth: 18.15 ft.
Depth to Water: 6.91 ft. ☐ Check if water column is less then 0.50 ft.

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

12.14 xVF — = — x3 case volume = Estimated Purge Volume: — gal.
Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 8.43

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

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

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

Start Time (purge): 1030 | Weather Conditions: SUN
Sample Time/Date: 1100 / 9.13.12 | Water Color: CLEAR Odor: Y / (N)
Approx. Flow Rate: 100 mlpm | Sediment Description: NONE
Did well de-water? NO If yes, Time: — Volume: — gal. DTW @ Sampling: 6.52

Time (2400 hr.)	Volume (Liters)	pH	Conductivity ~~(µmhos/cm - pS)~~ NS	Temperature (C) / F	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
1048	1.8	6.32	.564	17.2	0	-172.8	6.52
1051	2.1	6.32	.564	17.3	0	-172.8	6.52
1054	2.4	6.52	.554	17.3	0	-172.8	6.52

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-6	6 x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	2 x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc

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

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

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #9-1122 | Job Number: 386756
Site Address: 568 Peace Portal Drive | Event Date: 9-13/9-14-12 (inclusive)
City: Blaine, WA | Sampler: JP

Well ID: MW-7 | Date Monitored: 9-13-12
Well Diameter: 1/2 in.
Total Depth: 18.05 ft.
Depth to Water: 13.36 ft.

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

☐ Check if water column is less then 0.50 ft.

4.69 xVF — = — x3 case volume = Estimated Purge Volume: — gal.

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

Purge Equipment:

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

Sampling Equipment:

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

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

Start Time (purge): 1300 | Weather Conditions: SUN
Sample Time/Date: 1320/9.13.12 | Water Color: CLEAR Odor: Y / (N)
Approx. Flow Rate: 100 mlpm | Sediment Description: NONE
Did well de-water? NO If yes, Time: — Volume: — gal. DTW @ Sampling: 13.60

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µmhos/cm µS)	Temperature (C) F	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
1318	1.8	6.98	.770	17.1	0	-166.0	13.50
1321	2.1	6.98	.770	17.1	0	-166.0	13.50
1324	2.4	6.98	.770	17.1	0	-166.2	13.50

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-7	6 x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	2 x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc

COMMENTS: Depth Pump Set At: 15 - 16

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

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #9-1122 Job Number: 386756
Site Address: 568 Peace Portal Drive Event Date: 9.13/9.14.12 (inclusive)
City: Blaine, WA Sampler: JP

Well ID MW-8
Well Diameter 1/2 in.
Total Depth 18.60 ft.
Depth to Water 7.40 ft.
Date Monitored: 9.15.12

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

☐ Check if water column is less then 0.50 ft.

11.20 xVF — = — x3 case volume = Estimated Purge Volume: — gal.

Depth to Water w/ 80% Recharge ((Height of Water Column x 0.20) + DTW): 9.64

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

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

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

Start Time (purge): 1745 Weather Conditions: Sun
Sample Time/Date: 1815 / 9.13.12 Water Color: CLEAR Odor: Y (N)
Approx. Flow Rate: k/d mlpm Sediment Description: NONE
Did well de-water? NO If yes, Time: — Volume: — gal. DTW @ Sampling: 9.12

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (umhos/cm uS)	Temperature (C) F	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
1803	1.8	6.81	.442	17.11	∅	-182.6	9.12
1806	2.1	6.90	.442	17.12	∅	-182.6	9.12
1809	2.4	6.89	.442	17.18	∅	-182.7	9.12

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-8	6 x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	2 x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc

COMMENTS: Depth Pump Set At: 15-16

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

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: **Chevron #9-1122** Job Number: **386756**

Site Address: **568 Peace Portal Drive** Event Date: 9.13.12 (inclusive)

City: **Blaine, WA** Sampler: J.PAYNE

Well ID MW-5T Date Monitored: 9.13.12

Well Diameter 1(2) in.

Total Depth 8.66 ft.

Depth to Water 5.09 ft.

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

☐ Check if water column is less then 0.50 ft.

5.57 xVF — = — x3 case volume = Estimated Purge Volume: — gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 5.79

Purge Equipment:

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

Sampling Equipment:

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

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

Start Time (purge): 1630 Weather Conditions: SUN

Sample Time/Date: 1700 / 9.13.12 Water Color: CLEAR Odor: Y / (N)

Approx. Flow Rate: 100 mlpm Sediment Description: NONE

Did well de-water? NO If yes, Time: — Volume: — gal. DTW @ Sampling: 5.78

Time (2400 hr.)	Volume (Liters)	pH	Conductivity ~~(umhos/cm µS)~~ mS	Temperature (C) / F	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
1648	1.8	6.76	.512	19.0	0	-9.4	5.78
1651	2.1	6.76	.512	19.1	0	-9.4	5.78
1654	2.4	6.76	.512	19.1	0	-9.4	5.78

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-5T	6 x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	2 x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc

COMMENTS: Depth Pump Set At: 6.5' - 7.5'

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

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #9-1122 | Job Number: 386756
Site Address: 568 Peace Portal Drive | Event Date: 9.13.12 (inclusive)
City: Blaine, WA | Sampler: J.P

Well ID: MW-8T | Date Monitored: 9.13.12
Well Diameter: (2) in.
Total Depth: 11.95 ft.
Depth to Water: 5.15 ft.

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

☐ Check if water column is less then 0.50 ft.

6.80 xVF — = —
x3 case volume = Estimated Purge Volume: — gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 6.51

Purge Equipment:		Sampling Equipment:	
Disposable Bailer		Disposable Bailer	
Stainless Steel Bailer		Pressure Bailer	
Stack Pump		Metal Filters	
Suction Pump		Peristaltic Pump	X
Grundfos		QED Bladder Pump	
Peristaltic Pump	X	Other:	
QED Bladder Pump			
Other:			

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

Start Time (purge): 0730 | Weather Conditions: SUN
Sample Time/Date: 1750 / 9.13.12 | Water Color: CLOUDY | Odor: Y / (N)
Approx. Flow Rate: 100 mlpm | Sediment Description: FINE. GREY
Did well de-water? YES | If yes, Time: 0757 | Volume: 3L ~~gal.~~ | DTW @ Sampling: 6.21

Time (2400 hr.)	Volume (Liters)	pH	Conductivity MS ~~(umhos/cm pS)~~	Temperature (C) F	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
0748	1.0	6.91	.490	13.0	0	-96.8	8.57
0757	3.0	6.91	.491	13.0	0	-98.6	11.90
REMARK							

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-8T	6 x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	2 x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc

COMMENTS: Depth Pump Set At: 10'- 11', 1" NEWATER, CONTINUE EVENT, CHECK REMARK 6.21 COLLECT SAMPLE 1750

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

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #9-1122 Job Number: 386756
Site Address: 568 Peace Portal Drive Event Date: 9.13.12 (inclusive)
City: Blaine, WA Sampler: J. Ryne

Well ID: MW-9T Date Monitored: 9.13.12
Well Diameter: (1)/2 in.
Total Depth: 11.45 ft.
Depth to Water: 4.30 ft. ☐ Check if water column is less then 0.50 ft.
7.15 xVF — = — x3 case volume = Estimated Purge Volume: — gal.

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

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 5.73

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

Purge Equipment:
- Disposable Bailer
- Stainless Steel Bailer
- Stack Pump
- Suction Pump
- Grundfos
- Peristaltic Pump: X
- QED Bladder Pump
- Other:

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

Start Time (purge): 0700 Weather Conditions: Sun
Sample Time/Date: 1720 / 9.13.12 Water Color: Clear Odor: Y / (N)
Approx. Flow Rate: 1000 mlpm Sediment Description: Fine · Brown
Did well de-water? YES If yes, Time: 0712 Volume: 3 L ~~gal.~~ DTW @ Sampling: 5.60

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (mS) ~~(µmhos/cm - µS)~~	Temperature (C) / F	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
0712	3	6.46	.430	13.1	0	-89.7	11.41

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-9T	6 x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	2 x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc

COMMENTS: Depth Pump Set At: 10'-11' Well Dewatered, Call M. Chakerdar Sample Well @ End of Event. Check Recharge; 5.60

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

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #9-1122 Job Number: 386756

Site Address: 568 Peace Portal Drive Event Date: 9.13.12 (inclusive)

City: Blaine, WA Sampler: J.Payne

Well ID: MW-10T Date Monitored: 9.13.12

Well Diameter: (1) 2 in.

Total Depth: 12.00 ft.

Depth to Water: 5.36 ft. ☐ Check if water column is less then 0.50 ft.

6.64 xVF ____ = ____ x3 case volume = Estimated Purge Volume: ____ gal.

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

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 6.68

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

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

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

Start Time (purge): 0810 Weather Conditions: Sun

Sample Time/Date: [redacted] 1515 / 9.13.12 Water Color: clear Odor: Y / (N)

Approx. Flow Rate: 100 mlpm Sediment Description: None

Did well de-water? YES If yes, Time: 0830 Volume: 3.4 ~~gal~~ DTW @ Sampling: 6.50

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (~~µmhos/cm~~ - mS)	Temperature (C) F	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
0820	2	6.90	.400	13.2	0	-122.8	11.80
Recharge							

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-10T	6 x voa vial	YES	HCL	LANCASTER	NWTPH-Gx/BTEX+MTBE(8260)
	2 x 1 liter ambers	YES	HCL	LANCASTER	NWTPH-Dx w/sgc

COMMENTS: Depth Pump Set At: Well dewatered @ 0830 11.80, Recharge
Sample later in event sample collected 1515

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

Chevron Northwest Region Analysis Request/Chain of Custody

Lancaster Laboratories

For Lancaster Laboratories use only

Acct. #: _____ Group #_____ Sample #: _____

SCR #:_____

Facility #: SS#9-1122-0ML G-R#386756 WBS:

Site Address: 568 Peace Portal Drive, BLAINE, WA

Chevron PM: TB Lead Consultant: SAICRS Shropshire

Consultant/Office: G-R, Inc., 6747 Sierra Court, Suite J, Dublin, CA 94568

Consultant Prj. Mgr.: Deanna L. Harding (deanna@grinc.com)

Consultant Phone #: 925-551-7555 Fax #: 925-551-7899

Sampler: J. PAYNE

Analyses Requested / **Preservation Codes**

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

Sample Identification	Date Collected	Time Collected	Grab	Composite	Matrix: Soil	Water (☐ Potable ☐ NPDES)	Oil ☐ Air ☐	Total Number of Containers	BTEX + MTBE 8021 ☐ 8260 ☐ Naphth ☐	8260 full scan	Oxygenates ___	NWTPH GX	NWTPH DX ☐ Silica Gel Cleanup	Lead Total ☐ Diss. ☐ Method ___	☐ WAVPH ☐ WAEPH	NWTPH H HCID ☐ quantification				
QA	9.13.12		X			X		2	X			X								
MW-1		0930	X			X		2	X			X	X							
MW-2		1245	X			X		2	X			X	X							
MW-3		1155	X			X		2	X			X	X							
MW-4		1015	X			X		2	X			X	X							
MW-5		1420	X			X		2	X			X	X							
MW-6		1100	X			X		2	X			X	X							
MW-7		1320	X			X		2	X			X	X							
MW-8		1215	X			X		2	X			X	X							
MW-5T		1700	X			X		2	X			X	X							
MW-8T		1750	X			X		2	X			X	X							
MW-9T		1720	X			X		2	X			X	X							
MW-10T		1515	X			X		2	X			X	X							

Comments /Remarks

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

Turnaround Time Requested (TAT) (please circle)

STD. TAT 72 hour 48 hour
24 hour 4 day 5 day

EDF/EDD

Data Package Options (please circle if required)

QC Summary Type I – Full
Type VI (Raw Data)

	Date	Time		Date	Time
Relinquished by:	9.14.12	1400	Received by:		
Relinquished by:	9.14.12	1400	Received by:		
Relinquished by:			Received by:		
Relinquished by Commercial Carrier: UPS FedEx Other			Received by:		

Temperature Upon Receipt _____ C°

Custody Seals Intact? Yes No

Attachment B:
Laboratory Analysis Report

ANALYTICAL RESULTS

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

Prepared for:

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

September 28, 2012

Project: 91122

Submittal Date: 09/15/2012
Group Number: 1336020
PO Number: 0015103668
Release Number: BAUHS
State of Sample Origin: WA

Client Sample Description	Lancaster Labs (LLI) #
QA Water Sample	6790828
MW-1 Grab Water Sample	6790829
MW-2 Grab Water Sample	6790830
MW-3 Grab Water Sample	6790831
MW-4 Grab Water Sample	6790832
MW-5 Grab Water Sample	6790833
MW-6 Grab Water Sample	6790834
MW-7 Grab Water Sample	6790835
MW-8 Grab Water Sample	6790836
MW-5T Grab Water Sample	6790837
MW-8T Grab Water Sample	6790838
MW-9T Grab Water Sample	6790839
MW-10T Grab Water Sample	6790840

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

ELECTRONIC COPY TO	SAIC c/o Gettler-Ryan	Attn: Rachelle Munoz
ELECTRONIC COPY TO	SAIC	Attn: Jamalyn Green
ELECTRONIC COPY TO	SAIC	Attn: Russ Shropshire

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Respectfully Submitted,

Jill M. Parker
Senior Specialist

(717) 556-7262

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Analysis Report

Sample Description: QA Water Sample
Facility# 91122 Job# 386756
568 Peace Portal Drive - Blaine, WA

LLI Sample # WW 6790828
LLI Group # 1336020
Account # 11260

Project Name: 91122

Collected: 09/13/2012

Submitted: 09/15/2012 09:50
Reported: 09/28/2012 13:58

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

PPBQA

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**ug/l**	**ug/l**	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1

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	P122651AA	09/21/2012 14:32	Kelly E Keller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P122651AA	09/21/2012 14:32	Kelly E Keller	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	12264B20A	09/21/2012 12:02	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	12264B20A	09/21/2012 12:02	Catherine J Schwarz	1

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Analysis Report

Sample Description: MW-1 Grab Water Sample
Facility# 91122 Job# 386756
568 Peace Portal Drive - Blaine, WA

LLI Sample # WW 6790829
LLI Group # 1336020
Account # 11260

Project Name: 91122

Collected: 09/13/2012 09:30 by JP

Submitted: 09/15/2012 09:50
Reported: 09/28/2012 13:58

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

PPB01

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**ug/l**	**ug/l**	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Petroleum Hydrocarbons w/Si	**ECY 97-602 NWTPH-Dx modified**		**ug/l**	**ug/l**	
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	68	1

The reverse surrogate, capric acid, is present at <1%.

General Sample Comments

State of Washington Lab Certification No. 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	P122651AA	09/21/2012 19:10	Kelly E Keller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P122651AA	09/21/2012 19:10	Kelly E Keller	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	12264C20A	09/23/2012 16:02	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	12264C20A	09/23/2012 16:02	Catherine J Schwarz	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	122650013A	09/27/2012 12:51	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	122650013A	09/22/2012 07:00	Roman Kuropatkin	1

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Analysis Report

Sample Description: MW-2 Grab Water Sample
Facility# 91122 Job# 386756
568 Peace Portal Drive - Blaine, WA

LLI Sample # WW 6790830
LLI Group # 1336020
Account # 11260

Project Name: 91122

Collected: 09/13/2012 12:45 by JP

Submitted: 09/15/2012 09:50
Reported: 09/28/2012 13:58

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

PPB02

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	870	5	10
10943	Ethylbenzene	100-41-4	1,300	5	10
10943	Methyl Tertiary Butyl Ether	1634-04-4	20	5	10
10943	Toluene	108-88-3	33	5	10
10943	Xylene (Total)	1330-20-7	140	5	10
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**ug/l**	**ug/l**	
08273	NWTPH-Gx water C7-C12	n.a.	9,600	250	5
GC Petroleum Hydrocarbons w/Si	**ECY 97-602 NWTPH-Dx modified**		**ug/l**	**ug/l**	
12005	DRO C12-C24 w/Si Gel	n.a.	660	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	68	1

The reverse surrogate, capric acid, is present at <1%.

General Sample Comments

State of Washington Lab Certification No. 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	P122651AA	09/21/2012 19:37	Kelly E Keller	10
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P122651AA	09/21/2012 19:37	Kelly E Keller	10
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	12264C20A	09/23/2012 22:37	Catherine J Schwarz	5
01146	GC VOA Water Prep	SW-846 5030B	1	12264C20A	09/23/2012 22:37	Catherine J Schwarz	5
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	122680008A	09/26/2012 22:44	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	122680008A	09/24/2012 22:00	Elaine F Stoltzfus	1

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Analysis Report

Sample Description: MW-3 Grab Water Sample
Facility# 91122 Job# 386756
568 Peace Portal Drive - Blaine, WA

LLI Sample # WW 6790831
LLI Group # 1336020
Account # 11260

Project Name: 91122

Collected: 09/13/2012 11:55 by JP

Submitted: 09/15/2012 09:50
Reported: 09/28/2012 13:58

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

PPB03

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	0.5	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**ug/l**	**ug/l**	
08273	NWTPH-Gx water C7-C12	n.a.	150	50	1
GC Petroleum Hydrocarbons w/Si	**ECY 97-602 NWTPH-Dx modified**		**ug/l**	**ug/l**	
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	69	1

The reverse surrogate, capric acid, is present at <1%.

General Sample Comments

State of Washington Lab Certification No. C259

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	P122651AA	09/21/2012 20:05	Kelly E Keller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P122651AA	09/21/2012 20:05	Kelly E Keller	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	12264C20A	09/23/2012 16:24	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	12264C20A	09/23/2012 16:24	Catherine J Schwarz	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	122680008A	09/26/2012 23:07	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	122680008A	09/24/2012 22:00	Elaine F Stoltzfus	1

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Analysis Report

Sample Description: MW-4 Grab Water Sample
Facility# 91122 Job# 386756
568 Peace Portal Drive - Blaine, WA

LLI Sample # WW 6790832
LLI Group # 1336020
Account # 11260

Project Name: 91122

Collected: 09/13/2012 10:15 by JP

Submitted: 09/15/2012 09:50
Reported: 09/28/2012 13:58

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

PPB04

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**ug/l**	**ug/l**	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Petroleum Hydrocarbons w/Si	**ECY 97-602 NWTPH-Dx modified**		**ug/l**	**ug/l**	
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	69	1

The reverse surrogate, capric acid, is present at <1%.

General Sample Comments

State of Washington Lab Certification No. C259

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	P122651AA	09/21/2012 20:32	Kelly E Keller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P122651AA	09/21/2012 20:32	Kelly E Keller	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	12264C20A	09/23/2012 16:46	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	12264C20A	09/23/2012 16:46	Catherine J Schwarz	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	122680008A	09/26/2012 23:29	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	122680008A	09/24/2012 22:00	Elaine F Stoltzfus	1

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Analysis Report

Sample Description: MW-5 Grab Water Sample
Facility# 91122 Job# 386756
568 Peace Portal Drive - Blaine, WA

LLI Sample # WW 6790833
LLI Group # 1336020
Account # 11260

Project Name: 91122

Collected: 09/13/2012 14:20 by JP

Submitted: 09/15/2012 09:50
Reported: 09/28/2012 13:58

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

PPB05

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	110	0.5	1
10943	Ethylbenzene	100-41-4	78	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	4	0.5	1
10943	Toluene	108-88-3	0.6	0.5	1
10943	Xylene (Total)	1330-20-7	3	0.5	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**ug/l**	**ug/l**	
08273	NWTPH-Gx water C7-C12	n.a.	580	50	1
GC Petroleum Hydrocarbons w/Si	**ECY 97-602 NWTPH-Dx modified**		**ug/l**	**ug/l**	
12005	DRO C12-C24 w/Si Gel	n.a.	81	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1

The reverse surrogate, capric acid, is present at <1%.

General Sample Comments

State of Washington Lab Certification No. C259

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	P122651AA	09/21/2012 21:00	Kelly E Keller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P122651AA	09/21/2012 21:00	Kelly E Keller	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	12264C20A	09/23/2012 17:08	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	12264C20A	09/23/2012 17:08	Catherine J Schwarz	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	122680008A	09/26/2012 23:52	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	122680008A	09/24/2012 22:00	Elaine F Stoltzfus	1

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Analysis Report

Sample Description: MW-6 Grab Water Sample
Facility# 91122 Job# 386756
568 Peace Portal Drive - Blaine, WA

LLI Sample # WW 6790834
LLI Group # 1336020
Account # 11260

Project Name: 91122

Collected: 09/13/2012 11:00 by JP

Submitted: 09/15/2012 09:50
Reported: 09/28/2012 13:58

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

PPB06

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	10	0.5	1
10943	Ethylbenzene	100-41-4	84	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	1	0.5	1
10943	Xylene (Total)	1330-20-7	110	0.5	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**ug/l**	**ug/l**	
08273	NWTPH-Gx water C7-C12	n.a.	2,500	50	1
GC Petroleum Hydrocarbons w/Si	**ECY 97-602 NWTPH-Dx modified**		**ug/l**	**ug/l**	
12005	DRO C12-C24 w/Si Gel	n.a.	140	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	69	1

The reverse surrogate, capric acid, is present at <1%.

General Sample Comments

State of Washington Lab Certification No. 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	P122651AA	09/21/2012 21:28	Kelly E Keller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P122651AA	09/21/2012 21:28	Kelly E Keller	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	12264C20A	09/23/2012 17:30	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	12264C20A	09/23/2012 17:30	Catherine J Schwarz	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	122680008A	09/27/2012 00:14	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	122680008A	09/24/2012 22:00	Elaine F Stoltzfus	1

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Analysis Report

Sample Description: MW-7 Grab Water Sample
Facility# 91122 Job# 386756
568 Peace Portal Drive - Blaine, WA

LLI Sample # WW 6790835
LLI Group # 1336020
Account # 11260

Project Name: 91122

Collected: 09/13/2012 13:30 by JP

Submitted: 09/15/2012 09:50
Reported: 09/28/2012 13:58

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

PPB07

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	170	5	10
10943	Ethylbenzene	100-41-4	0.7	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	21	0.5	1
10943	Toluene	108-88-3	1	0.5	1
10943	Xylene (Total)	1330-20-7	2	0.5	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**ug/l**	**ug/l**	
08273	NWTPH-Gx water C7-C12	n.a.	57	50	1
GC Petroleum Hydrocarbons w/Si	**ECY 97-602 NWTPH-Dx modified**		**ug/l**	**ug/l**	
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1

The reverse surrogate, capric acid, is present at <1%.

General Sample Comments

State of Washington Lab Certification No. C259

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	P122651AA	09/21/2012 21:56	Kelly E Keller	1
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	F122691AA	09/25/2012 11:22	Anita M Dale	10
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P122651AA	09/21/2012 21:56	Kelly E Keller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	2	F122691AA	09/25/2012 11:22	Anita M Dale	10
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	12264C20A	09/24/2012 11:33	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	12264C20A	09/24/2012 11:33	Catherine J Schwarz	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	122680008A	09/27/2012 00:37	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	122680008A	09/24/2012 22:00	Elaine F Stoltzfus	1

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Analysis Report

Sample Description: MW-8 Grab Water Sample
Facility# 91122 Job# 386756
568 Peace Portal Drive - Blaine, WA

LLI Sample # WW 6790836
LLI Group # 1336020
Account # 11260

Project Name: 91122

Collected: 09/13/2012 18:15 by JP

Submitted: 09/15/2012 09:50
Reported: 09/28/2012 13:58

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

PPB08

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**ug/l**	**ug/l**	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Petroleum Hydrocarbons w/Si	**ECY 97-602 NWTPH-Dx modified**		**ug/l**	**ug/l**	
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1

The reverse surrogate, capric acid, is present at <1%.

General Sample Comments

State of Washington Lab Certification No. C259

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	P122651AA	09/21/2012 22:23	Kelly E Keller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P122651AA	09/21/2012 22:23	Kelly E Keller	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	12264C20A	09/23/2012 18:14	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	12264C20A	09/23/2012 18:14	Catherine J Schwarz	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	122680008A	09/27/2012 00:59	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	122680008A	09/24/2012 22:00	Elaine F Stoltzfus	1

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Analysis Report

Sample Description: MW-5T Grab Water Sample
Facility# 91122 Job# 386756
568 Peace Portal Drive - Blaine, WA

LLI Sample # WW 6790837
LLI Group # 1336020
Account # 11260

Project Name: 91122

Collected: 09/13/2012 17:00 by JP

Submitted: 09/15/2012 09:50
Reported: 09/28/2012 13:58

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

PPB5T

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**ug/l**	**ug/l**	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Petroleum Hydrocarbons w/Si	**ECY 97-602 NWTPH-Dx modified**		**ug/l**	**ug/l**	
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	30	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	70	1

The reverse surrogate, capric acid, is present at <1%.

General Sample Comments

State of Washington Lab Certification No. 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	P122651AA	09/21/2012 22:51	Kelly E Keller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P122651AA	09/21/2012 22:51	Kelly E Keller	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	12264C20A	09/23/2012 18:36	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	12264C20A	09/23/2012 18:36	Catherine J Schwarz	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	122680008A	09/27/2012 01:21	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	122680008A	09/24/2012 22:00	Elaine F Stoltzfus	1

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Analysis Report

Sample Description: MW-8T Grab Water Sample
Facility# 91122 Job# 386756
568 Peace Portal Drive - Blaine, WA

LLI Sample # WW 6790838
LLI Group # 1336020
Account # 11260

Project Name: 91122

Collected: 09/13/2012 17:50 by JP

Submitted: 09/15/2012 09:50
Reported: 09/28/2012 13:58

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

PPB8T

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**ug/l**	**ug/l**	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Petroleum Hydrocarbons w/Si	**ECY 97-602 NWTPH-Dx modified**		**ug/l**	**ug/l**	
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	30	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	70	1

The reverse surrogate, capric acid, is present at <1%.

General Sample Comments

State of Washington Lab Certification No. 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	P122651AA	09/21/2012 23:19	Kelly E Keller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P122651AA	09/21/2012 23:19	Kelly E Keller	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	12264C20A	09/23/2012 18:58	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	12264C20A	09/23/2012 18:58	Catherine J Schwarz	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	122680008A	09/27/2012 01:44	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	122680008A	09/24/2012 22:00	Elaine F Stoltzfus	1

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Analysis Report

Sample Description: MW-9T Grab Water Sample
Facility# 91122 Job# 386756
568 Peace Portal Drive - Blaine, WA

LLI Sample # WW 6790839
LLI Group # 1336020
Account # 11260

Project Name: 91122

Collected: 09/13/2012 17:20 by JP

Submitted: 09/15/2012 09:50
Reported: 09/28/2012 13:58

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

PPB9T

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**ug/l**	**ug/l**	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Petroleum Hydrocarbons w/Si	**ECY 97-602 NWTPH-Dx modified**		**ug/l**	**ug/l**	
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	30	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	70	1

The reverse surrogate, capric acid, is present at <1%.

General Sample Comments

State of Washington Lab Certification No. C259

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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	P122651AA	09/21/2012 23:46	Kelly E Keller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P122651AA	09/21/2012 23:46	Kelly E Keller	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	12264C20A	09/23/2012 19:42	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	12264C20A	09/23/2012 19:42	Catherine J Schwarz	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	122680008A	09/27/2012 02:06	Christine E Dolman	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	122680008A	09/24/2012 22:00	Elaine F Stoltzfus	1

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Analysis Report

Sample Description: MW-10T Grab Water Sample
Facility# 91122 Job# 386756
568 Peace Portal Drive - Blaine, WA

LLI Sample # WW 6790840
LLI Group # 1336020
Account # 11260

Project Name: 91122

Collected: 09/13/2012 15:15 by JP

Submitted: 09/15/2012 09:50
Reported: 09/28/2012 13:58

Chevron
6001 Bollinger Canyon Road
L4310
San Ramon CA 94583

PPB10

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**ug/l**	**ug/l**	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Petroleum Hydrocarbons w/Si	**ECY 97-602 NWTPH-Dx modified**		**ug/l**	**ug/l**	
12005	DRO C12-C24 w/Si Gel	n.a.	N.D.	30	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	69	1

The reverse surrogate, capric acid, is present at <1%.

General Sample Comments

State of Washington Lab Certification No. 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	P122651AA	09/22/2012 00:14	Kelly E Keller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P122651AA	09/22/2012 00:14	Kelly E Keller	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	12264C20A	09/23/2012 20:04	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	12264C20A	09/23/2012 20:04	Catherine J Schwarz	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	122680009A	09/27/2012 15:26	Heather E Williams	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	122680009A	09/24/2012 22:00	Elaine F Stoltzfus	1

Quality Control Summary

Client Name: Chevron Group Number: 1336020
Reported: 09/28/12 at 01:58 PM

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

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

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: F122691AA	Sample number(s): 6790835							
Benzene	N.D.	0.5	ug/l	92	92	77-121	0	30
Batch number: P122651AA	Sample number(s): 6790828-6790840							
Benzene	N.D.	0.5	ug/l	102		77-121		
Ethylbenzene	N.D.	0.5	ug/l	94		79-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	100		68-121		
Toluene	N.D.	0.5	ug/l	104		79-120		
Xylene (Total)	N.D.	0.5	ug/l	96		77-120		
Batch number: 12264B20A	Sample number(s): 6790828							
NWTPH-Gx water C7-C12	N.D.	50.	ug/l	101		75-135		
Batch number: 12264C20A	Sample number(s): 6790829-6790840							
NWTPH-Gx water C7-C12	N.D.	50.	ug/l	100	94	75-135	6	30
Batch number: 122650013A	Sample number(s): 6790829							
DRO C12-C24 w/Si Gel	N.D.	30.	ug/l	84	85	50-120	2	20
HRO C24-C40 w/Si Gel	N.D.	70.	ug/l					
Batch number: 122680008A	Sample number(s): 6790830-6790839							
DRO C12-C24 w/Si Gel	N.D.	30.	ug/l	78	77	50-120	1	20
HRO C24-C40 w/Si Gel	N.D.	70.	ug/l					
Batch number: 122680009A	Sample number(s): 6790840							
DRO C12-C24 w/Si Gel	N.D.	30.	ug/l	64	72	50-120	12	20
HRO C24-C40 w/Si Gel	N.D.	70.	ug/l					

Sample Matrix Quality Control

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

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: P122651AA	Sample number(s): 6790828-6790840 UNSPK: P790799								
Benzene	104	105	72-134	1	30				
Ethylbenzene	99	99	71-134	0	30				
Methyl Tertiary Butyl Ether	99	100	72-126	1	30				
Toluene	109	111	80-125	2	30				
Xylene (Total)	101	101	79-125	0	30				

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

Quality Control Summary

Client Name: Chevron Group Number: 1336020
Reported: 09/28/12 at 01:58 PM

Sample Matrix Quality Control

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

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 12264B20A	Sample number(s): 6790828			UNSPK: P790503					
NWTPH-Gx water C7-C12	86	90	75-135	5	30				

Surrogate Quality Control

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

Analysis Name: UST VOCs by 8260B - Water
Batch number: F122691AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
Blank	99	96	98	99
LCS	101	100	99	101
LCSD	99	99	100	100
Limits:	80-116	77-113	80-113	78-113

Analysis Name: UST VOCs by 8260B - Water
Batch number: P122651AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
6790828	94	99	103	92
6790829	96	102	102	92
6790830	93	99	102	94
6790831	95	100	102	95
6790832	95	99	101	92
6790833	93	98	103	95
6790834	94	99	101	98
6790835	93	99	102	94
6790836	97	98	102	92
6790837	95	98	103	93
6790838	96	99	102	92
6790839	97	98	102	93
6790840	95	100	102	93
Blank	95	102	102	93
LCS	94	96	101	95
MS	93	99	101	96
MSD	94	101	102	95
Limits:	80-116	77-113	80-113	78-113

Analysis Name: NWTPH-Gx water C7-C12
Batch number: 12264B20A

	Trifluorotoluene-F
6790828	69
Blank	76
LCS	91
MS	77

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

Quality Control Summary

Client Name: Chevron Group Number: 1336020
Reported: 09/28/12 at 01:58 PM

Surrogate Quality Control

MSD 85

Limits: 63-135

Analysis Name: NWTPH-Gx water C7-C12
Batch number: 12264C20A

	Trifluorotoluene-F
6790829	79
6790830	99
6790831	78
6790832	80
6790833	94
6790834	116
6790835	86
6790836	79
6790837	81
6790838	79
6790839	79
6790840	81
Blank	78
LCS	104
LCSD	103

Limits: 63-135

Analysis Name: NWTPH-Dx water w/ 10g Si Gel
Batch number: 122650013A

	Orthoterphenyl
6790829	83
Blank	92
LCS	101
LCSD	97

Limits: 50-150

Analysis Name: NWTPH-Dx water w/ 10g Si Gel
Batch number: 122680008A

	Orthoterphenyl
6790830	80
6790831	81
6790832	78
6790833	78
6790834	80
6790835	82
6790836	80
6790837	82
6790838	79
6790839	79
Blank	82
LCS	91
LCSD	90

Limits: 50-150

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

Quality Control Summary

Client Name: Chevron Group Number: 1336020
Reported: 09/28/12 at 01:58 PM

Surrogate Quality Control

Analysis Name: NWTPH-Dx water w/ 10g Si Gel
Batch number: 122680009A

	Orthoterphenyl
6790840	79
Blank	78
LCS	85
LCSD	86
Limits:	50-150

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

Chevron Northwest Region Analysis Request/Chain of Custody

Lancaster Laboratories

For Lancaster Laboratories use only
Acct. #: 11260 Group #: 1336020 Sample #: 6790828-40

SCR #:

Facility #: SS#9-1122-OML G-R#386756 WBS:
Site Address: 568 Peace Portal Drive, BLAINE, WA
Chevron PM: TB Lead Consultant: SAICRS Shropshire
Consultant/Office: G-R, Inc., 6747 Sierra Court, Suite J, Dublin, CA 94568
Consultant Prj. Mgr.: Deanna L. Harding (deanna@grinc.com)
Consultant Phone #: 925-551-7555 Fax #: 925-551-7899
Sampler: J. PAYNE

Matrix: ☐ Potable ☐ NPDES; Soil; Water; Oil ☐ Air ☐

Analyses Requested / Preservation Codes

Sample Identification	Date Collected	Time Collected	Grab	Composite	Soil	Water	Oil ☐ Air ☐	Total Number of Containers	BTEX + MTBE 8021 ☐ 8260 ☐ Naphth ☐	8260 full scan	Oxygenates ____	NWTPH GX	NWTPH DX ☐ Silica Gel Cleanup	Lead Total ☐ Diss. ☐ Method ____	☐ WAVPH ☐ WAEPH	NWTPH H HCID ☐ quantification
QA	9.13.12		X			X		2	X			X				
MW-1		0930	X			X		2	X			X	X			
MW-2		1246	X			X		2	X			X	X			
MW-3		1155	X			X		2	X			X	X			
MW-4		1015	X			X		2	X			X	X			
MW-5		1420	X			X		2	X			X	X			
MW-6		1100	X			X		2	X			X	X			
MW-7		1330	X			X		2	X			X	X			
MW-8		1015	X			X		2	X			X	X			
MW-5T		1700	X			X		2	X			X	X			
MW-8T		1750	X			X		2	X			X	X			
MW-9T		1720	X			X		2	X			X	X			
MW-10T		1615	X			X		2	X			X	X			

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

Comments /Remarks

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

Turnaround Time Requested (TAT) (please circle)
STD. TAT | 72 hour | 48 hour | 24 hour | 4 day | 5 day
EDF/EDD

Data Package Options (please circle if required)
QC Summary | Type I – Full | Type VI (Raw Data)

	Date	Time
Relinquished by:	9.14.12	1400
Relinquished by:	9.14.12	1400
Relinquished by:		
Relinquished by Commercial Carrier: UPS FedEx Other		
Temperature Upon Receipt 1.0-3.7 C°		

	Date	Time
Received by:		
Received by:		
Received by:		
Received by:	9/15/12	0950
Custody Seals Intact? Yes No		

Lancaster Laboratories, Inc., 2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 (717) 656-2300
Copies: White and yellow should accompany samples to Lancaster Laboratories. The pink copy should be retained by the client.

eurofins | Lancaster Laboratories

Explanation of Symbols and Abbreviations

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

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
µg	microgram(s)	**mg**	milligram(s)
mL	milliliter(s)	**L**	liter(s)
m3	cubic meter(s)	**µL**	microliter(s)
		pg/L	picogram/liter

< less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Data Qualifiers:

C – result confirmed by reanalysis.

J - estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers		**Inorganic Qualifiers**	
A	TIC is a possible aldol-condensation product	**B**	Value is <CRDL, but ≥IDL
B	Analyte was also detected in the blank	**E**	Estimated due to interference
C	Pesticide result confirmed by GC/MS	**M**	Duplicate injection precision not met
D	Compound quantitated on a diluted sample	**N**	Spike sample not within control limits
E	Concentration exceeds the calibration range of the instrument	**S**	Method of standard additions (MSA) used for calculation
N	Presumptive evidence of a compound (TICs only)	**U**	Compound was not detected
P	Concentration difference between primary and confirmation columns >25%	**W**	Post digestion spike out of control limits
U	Compound was not detected	*****	Duplicate analysis not within control limits
X,Y,Z	Defined in case narrative	**+**	Correlation coefficient for MSA <0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

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

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

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

Facility/Site: H St Waste Gasoline 78546495

Also known as:

Address

314 H ST

BLAINE WA 98230

Decimal Coordinates

Latitude: 48.99383

Longitude: -122.75101

Geographic Information

Ecology Region: NWRO | Legislative District: 42 | WRIA: 1

County: Whatcom | Congressional District: 1 | Tribal Land: No

Ecology Interactions

Interaction Description	Ecology Program	Ecology Program Phone	Program ID	Start Date	End Date
Hazardous Waste Generator	HAZWASTE	(360) 407-6023	WAD988507588	6/22/1992	12/31/1992

Industrial Codes (External Links Below)

No NAICS information is available for this facility site.

SIC Code	SIC Description
9999	NONCLASSIFIABLE ESTABLISHMENTS

Facility/Site: ONeil Property 21797146

Also known as: ONeil Property

Address

625 PEACE PORTAL DR

BLAINE WA 98230-4012

Decimal Coordinates

Latitude: 48.99495

Longitude: -122.75223

Geographic Information

Ecology Region: NWRO | Legislative District: 42 | WRIA: 1

County: Whatcom | Congressional District: 1 | Tribal Land: No

Ecology Interactions

Interaction Description	Ecology Program	Ecology Program Phone	Program ID	Start Date	End Date
State Cleanup Site	TOXICS	(360) 407-7224		6/8/2001	

Industrial Codes (External Links Below)

No NAICS information is available for this facility site.

No SIC information is available for this facility site.

WHATCOM COUNTY

SITE I

ONeil Property

CleanupSite ID: **4044** FS ID: **21797146**

Alternate Name(s): ONeil Property

LOCATION:

View Vicinity Map

Address: **625 PEACE PORTAL DR**
BLAINE **98230-4012**

Lat/Long: **48.99495** **-122.75223**
Township/Range/Section: **41N** **1W** **36**

Legislative District: **42**
Congressional District: **1**

STATUS:

View Site Web Page

Ecology Status: **Awaiting Cleanup**
WARM BIN#: **3**

Responsible Unit: **Northwest**
Site Manager: **Musa, Donna**
Statute: **MTCA**

Is Brownfield?
Environmental Covenant?
Is PSI Site? **Yes**

UST Site ID:
WRIA ID: **1**

NFA Received? NFA Date: NFA Reason:

ASSOCIATED CLEANUP UNIT(s)

cuID	Cleanup Unit Name	Unit Type	Process Type	Unit Status	Size (Acres)	ERTS ID
3488	ONeil Property	Upland	No Process	Awaiting Cleanup		518666

SITE ACTIVITIES:

Applies to:	Related ID (Unit-LUST-VCP)	Activity Display Name	Status	Start Date	End Date	Legal Mechanism	Performed By	Project Manager
CleanupSite		Initial Investigation / Federal Preliminary Assessment	Completed	6/14/2001	6/14/2001		Ecology	Bremer, Steve
CleanupSite		Early Notice Letter(s)			7/17/2001			Bremer, Steve
CleanupSite		Site Hazard Assessment/Federal Site Inspection	Completed	10/1/2002	10/1/2002		Local Government	County Health-NW
CleanupSite		Hazardous Sites Listing/NPL			8/17/2006			Northwest Region

AFFECTED MEDIA & CONTAMINANTS:

	Media:					
Contaminant:	Ground Water	Surface Water	Soil	Sediment	Air	Bedrock
Metals Priority Pollutants	S		S			

Petroleum Products-Unspecified	C		C				

Key:

B - Below Cleanup Level
C - Confirmed Above Cleanup Level
S - Suspected
R - Remediated
RA - Remediated-Above
RB - Remediated-Below

9.4 HISTORICAL RESEARCH DOCUMENTATION

Blaine, WA
277 G Street
Blaine, WA 98230

Inquiry Number: 4127362.9
November 06, 2014

The EDR Aerial Photo Decade Package

6 Armstrong Road, 4th Floor
Shelton, Connecticut 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Aerial Photo Decade Package

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

When delivered electronically by EDR, the aerial photo images included with this report are for ONE TIME USE ONLY. Further reproduction of these aerial photo images is prohibited without permission from EDR. For more information contact your EDR Account Executive.

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

Date EDR Searched Historical Sources:

Aerial Photography November 06, 2014

Target Property:

277 G Street

Blaine, WA 98230

Year	***Scale***	***Details***	***Source***
1980	Aerial Photograph. Scale: 1"=500'	Flight Date: January 01, 1980	USGS
1989	Aerial Photograph. Scale: 1"=500'	Flight Date: April 29, 1989	EDR
1990	Aerial Photograph. Scale: 1"=500'	Flight Date: January 01, 1990	USGS
1998	Aerial Photograph. Scale: 1"=500'	DOQQ - acquisition dates: July 21, 1998	USGS/DOQQ
2005	Aerial Photograph. Scale: 1"=500'	Flight Year: 2005	USDA/NAIP
2006	Aerial Photograph. Scale: 1"=500'	Flight Year: 2006	USDA/NAIP
2009	Aerial Photograph. Scale: 1"=500'	Flight Year: 2009	USDA/NAIP
2011	Aerial Photograph. Scale: 1"=500'	Flight Year: 2011	USDA/NAIP


Site
INQUIRY #: 4127362.9
YEAR: 1980
= 500'
N
EDR


Site
INQUIRY #: 4127362.9
YEAR: 1989
= 500'
N
EDR