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Stantec

April 27, 2012

Libby Goldstein
Department of Ecology
Toxic Cleanup Program, NWRO
3190 160th Avenue, SE
Bellevue, Washington 98008

Re: First Quarter 2012 Monitoring and Sampling Report
Former Tidewater Service Station
ConocoPhillips Site 5173
Chevron Site 301233
2800 Martin Luther King Way, Seattle, WA
Stantec Project No.: 211602382

Dear Ms. Goldstein:

Stantec is pleased to submit the enclosed *First Quarter 2012 Monitoring and Sampling Report* for the above referenced site on behalf Chevron Environmental Management Company and ConocoPhillips.

If there are any questions or comments regarding the contents of this document, please contact Dan Schreiner at (916) 861-0400 extension 227.

Sincerely,
Stantec Consulting Services Inc.

Dan Schreiner
Senior Project Manager

cc: Mr. Eric Hetrick, ConocoPhillips – EDMS Upload
Mr. Rick Rittenberg, Chevron Environmental Management Company – Strata Upload
Mr. Howard F. Jensen and Ms. Alison Robinson, Veris Low Group, 1809 7th Ave., Suite 1400, Seattle, WA 98101 – Hard Copy
Mr. Greg McMormick, 295 NE Gilman Blvd., Suite 201, Issaquah, WA 98027 – Hard Copy

Stantec

First Quarter 2012 Monitoring and Sampling Report

Prepared for

Chevron Environmental Management Company and ConocoPhillips Company

Former Tidewater Site
Chevron Site 301233
ConocoPhillips Site 5173
2800 Martin Luther King Way South
Seattle, WA

April 27, 2012

Prepared By

for
Tony Giglini
Associate Scientist

Reviewed By

Dan Schreiner
Senior Project Manager

Marc Sauze, P.E.
Senior Engineer

INTRODUCTION

Stantec Consulting Services Inc. (Stantec) is pleased to present this quarterly groundwater monitoring report to the Washington State Department of Ecology (DOE) Voluntary Cleanup Program on behalf of the Chevron Environmental Management Company (CEMC) and ConocoPhillips Company (COP). This report describes the results of groundwater monitoring activities performed by Stantec during the first quarter of 2012 (the reporting period) at CEMC Facility No. 301233 / COP Facility No. 5173 (Facility Site ID # 42746846, Cleanup Site ID # 6056; the "Site"). The source property for the Site is located at 2800 Martin Luther King Jr. Way South, Seattle, Washington (the "Property").

As of April 1, 2012, Conestoga-Rovers & Associates (CRA) will be the lead consultant for environmental activities at this Site on behalf of CEMC and COP. Please direct any inquiries regarding this Site to Ed Turner of CRA at (425) 563-6500.

SITE DESCRIPTION

The Property is an approximately 0.25-acre lot currently occupied by Auto Care Detail, which uses the Property as an auto detailing business. The Property was formerly used as a gasoline station between approximately 1955 and 1989. According to historical documents, the Property was undeveloped until 1955 and has since been owned and operated by the following companies:

- ~1955 to ~1965: Associated Oil Company-Associates Gas Station (in 1938, Associated Oil and Tidewater Oil merged to become Tidewater Associated Oil Company)
- ~1965 to 1967: Phillips Gas Station
- ~1967 to ~1973: Rainier Bonanza Self Serve Gas
- ~1974 to ~1986: Vacant
- ~1986 to ~ 1990: Empire Mobile
- ~1994 to ~2004: R&R Auto Repair
- ~2004 ~2010: Vacant auto repair garage
- ~2010 to Present: Auto Care Detail

Three underground storage tanks (USTs) consisting of two gasoline USTs (4,000 and 5,000 gallon tanks) and one waste oil UST (approximately 300-gallon tank) were removed from the northwest corner of the Property in 1989. UST removal activities were summarized in G-Logics *Phase I Environmental Site Assessment* report dated January 11, 2005. Additional service station equipment, including two vehicle hoists, a heating oil UST, an oil/water separator, and drain sump were removed in February 2005.

The Site is located in a mixed commercial and residential area. To the north of the Property is South McClellan Street and to the north-northwest, across South McClellan Street, is a home

improvement store (Lowes). To the north-northeast, across South McClellan Street, is Mt. Baker Cleaners. The Property is bounded to the east by a dental clinic and a residential area is located to the southeast. Directly south of the Property is a strip mall with a nail salon and a few other small businesses. The Property is bounded to the west by Martin Luther King Jr. Way South. Across Martin Luther King Jr. Way South to the southwest and west are commercial buildings.

There is an active gas station northwest of the Site across Martin Luther King Jr. Way South. The potential for impacts migrating from the gas station to the Site have not been investigated; however, the gas station is located hydraulically cross gradient of the Site and the potential for impacts to the Site from the gas station appear limited.

PREVIOUS INVESTIGATIONS

Soil and groundwater investigations at the Site began with the UST removals in 1989. All soil samples collected from the UST excavation, in the northwest corner of the Property, were documented below the MTCA Method A Cleanup Levels for constituents of concern (COC).

Additional soil and groundwater investigations were conducted by G-Logics in February 2005. A groundwater sample collected from boring GL-4, contained total petroleum hydrocarbons in the gasoline range (TPH-GRO) at 5,900 micrograms per liter (µg/L), exceeding the MTCA Method A Cleanup Level (1,000 µg/L). The sample area was located between the former western and eastern pump islands. G-Logics also conducted an investigation beneath the former heating oil UST. Impacted soil was found in this location but it did not exceed MTCA Method A Cleanup Levels.

Further soil and groundwater investigation of the western and eastern pump island area was conducted by G-Logics in June 2005 (soil borings P1 through P11). Laboratory results confirmed that the highest concentrations of petroleum-impacted soil, mostly in the gasoline range, were from soil borings P-7, P-8, and P-9 in the vicinity of the western pump island, which all exceeded MTCA Method A Cleanup Levels. The impact was primarily observed between 15 and 20 feet below ground surface (bgs).

In August 2005 G-Logics began the installation and operation of an ozone treatment system. Five ozone injection points (IP-1 through IP-5) and monitoring wells MW-1, MW-2, and MW-3 were installed. The ozone system began operation on August 26, 2005.

Elevated concentrations of TPH-GRO were regularly detected at MW-3, located west of the western pump island. As a result, G-Logics continued soil investigations in the vicinity of MW-3 in June 2006 due to elevated concentrations of TPH-GRO detected in the groundwater well during quarterly sampling activities. Petroleum related compounds were either non-detect or were below the MTCA Method A Cleanup Levels in the borings, supporting that the source area was concentrated in the area of the west pump island.

In July 2006, ozone flow to injection points IP-1, IP-2, and IP-3 was stopped and directed towards injection points IP-4 and IP-5, in the area near MW-3. Petroleum related compounds were either non-detect or were below the MTCA Method A Cleanup Levels in monitoring wells MW-1 and MW-2, supporting that the source area impacting MW-3 was concentrated in the area of the west pump island.

In August 2006, a second compressor was added to augment the ozone injection system. The second compressor was dedicated to providing a primary source of air flow to the wells; the original compressor was dedicated to providing air flow to the ozone generator.

To supplement the ozone treatment system, in December 2006, G-Logics oversaw the installation of a horizontal pipe for In-Situ Chemical Oxidation (ISCO) in an area up-gradient of the western pump island. The pipe was installed at approximately six to seven feet; installation at a greater depth was unfeasible due to soil caving. Between January and March 2007, ISCO using Fenton's Reagent was performed to supplement ozone injection remediation efforts. On January 4, 2007, a buffered, iron-catalyst was introduced with the Fenton's application. In March 2007, a Fenton's application treatment well (TW-1) was installed directly west of the west pump island source area. The ozone system was shut down in June 2007.

In April and July 2011, Stantec oversaw Cascade Drilling, L.P. advance seven soil borings (B-1 through B-7) and install five two-inch diameter groundwater monitoring wells (MW-6 through MW-10). Analytical results from the smear zone and water bearing zone from soil collected between 10 and 17 feet bgs contained relatively low to non-detectable concentrations for TPH-G, total petroleum hydrocarbons in the diesel range (TPH-D), total petroleum hydrocarbons in the heavy oil-range organics (TPH-O), and benzene, toluene, ethylbenzene, and total xylenes (collectively BTEX) except for the samples collected from the former Heating Oil UST area (B-3 and MW-9) at 10 and 15 feet bgs. Soil samples screened in the vadose zone, in general, contained low to non-detectable concentrations of TPH-G, TPH-D, TPH-O, and BTEX. Groundwater samples collected in borings B-1 through B-7 showed slightly elevated concentrations of TPH-G and total xylenes near the former pump island (borings B-2 and B-6). Down-gradient of the Site, in borings B-4 and B-5, concentrations of TPH-G and BTEX were below the laboratory method detection limit (MDL).

GROUNDWATER MONITORING ACTIVITIES

Groundwater monitoring activities during the reporting period were performed on February 6, 2012. Groundwater monitoring activities were performed in accordance with Stantec's protocols for groundwater monitoring and sampling events (Appendix A).

During the first quarter 2012, ten groundwater monitoring wells were gauged and sampled (MW-1 through MW-10). Monitoring activities for the first quarter 2012 are described below.

Monitoring Well Gauging

On February 6, 2012, ten groundwater monitoring wells were gauged (MW-1 through MW-10). Monitoring wells were gauged for the presence of liquid phase hydrocarbons (LPH) and depth-to-groundwater prior to purging and sampling. LPH was not measured in any of the groundwater monitoring wells during the reporting quarter. The depth to groundwater ranged from 9.84 feet (MW-1) to 12.04 feet (MW-9) below the top of casing. Depth-to-groundwater data was used to calculate the groundwater elevation in each well and evaluate the groundwater flow direction and gradient. First quarter 2012 gauging data and historical groundwater gauging data are summarized in Table 1. Well locations and groundwater flow direction are shown on Figure 1. Based on these data, the inferred groundwater flow direction was to the southwest at an approximate gradient of 0.030 foot per foot (ft/ft) and to the west-southwest at an approximate gradient of 0.035 ft/ft.

Monitoring Well Purging

On February 6, 2012, the wells intended to be sampled were purged after gauging. Groundwater was purged from the wells using low-flow methods, which included using a peristaltic pump and dedicated polyethylene tubing. Water quality parameters were measured during purging and recorded on field data sheets (Appendix B). Using low flow methodology, wells were considered ready for sampling after water quality parameters have shown to be stable. Purged groundwater and rinsate/decontamination water were stored on the Site in Department of Transportation (DOT)-approved steel drums pending laboratory characterization. The drums and their contents were transported off the Site to an appropriate licensed disposal facility.

Monitoring Well Sampling

Following purging operations, groundwater samples were collected and placed directly into pre-cleaned sample containers provided by an independent laboratory.

Once the sample containers were filled and sealed, they were labeled with the pertinent sampling information, and immediately placed on ice in an insulated cooler for delivery under chain-of-custody documentation to an independent laboratory.

Chemical Analyses

Groundwater samples collected during the reporting period were submitted to Lancaster Laboratories (Lancaster) in Lancaster, PA for the following chemical analyses:

- BTEX and Risk Based Corrective Action (RBCA) Volatile Organic Compounds using Environmental Protection Agency Method 8260B.

- TPH-G using Ecology Northwest Method NWTPH-Gx.
- TPH-D and TPH-O using Ecology Northwest Method NWTPH-Dx.

First quarter 2012 chemical analyses results are described below. A copy of the certified laboratory analytical report and chain-of-custody documentation from Lancaster are included in Appendix C.

Laboratory Quality Assurance/Quality Control (QA/QC)

A copy of the analytical report for the samples collected during the reporting period is included in Appendix C. Please refer to the analytical report for a description of QA/QC methods and potential concerns (if any) that were identified during chemical analysis. Potential QA/QC concerns are summarized on pages 14-16 of the analytical report. Based on Stantec's review of the analytical report, all data is considered valid.

Results

First quarter 2012 chemical analyses results and historic results are summarized in Table 1. First quarter 2012 analytical results for TPH-G, TPH-D, TPH-O, BTEX, and methyl tertiary butyl ether (MTBE) are illustrated on Figure 2.

A summary of the first quarter 2012 analytical results exceeding MTCA Method A cleanup levels is provided below. Analytical results not exceeding MTCA Method A cleanup levels are not included.

- TPH-G concentrations were detected in groundwater samples collected from wells MW-3, MW-5, and MW-8 at concentrations of 6,300, 1,200, and 13,000 micrograms per liter (µg/L), respectively; which exceeds the MTCA Method A cleanup level of 1,000 µg/L. The detected concentrations from wells MW-3 and MW-5 were consistent with historical sampling events. TPH-G concentrations in well MW-8 have been increasing since well installation prior to third quarter 2011. Additional TPH-G sampling should be performed for well MW-8 before any trend can be established.
- TPH-D concentrations were detected in groundwater samples collected from well MW-3 at a concentration of 1,200 µg/L; which exceeds the MTCA Method A cleanup level of 500 µg/L. Additional TPH-D sampling should be performed before any trend can be established.
- TPH-O concentrations were detected in groundwater samples collected from well MW-1 at a concentration of 620 µg/L; which exceeds the MTCA Method A cleanup level of 500 µg/L. TPH-O concentrations in well MW-9 were not detected at or above the laboratory's MDL; however, it should be noted that the MTCA Method A cleanup level (500 µg/L) is lower than the laboratory MDL (700 µg/L). The reporting limits for sample

MW-9 were raised due to interference from the sample matrix. The surrogate data was outside the quality control limits due to unresolvable matrix problems evident in the sample chromatogram. Additional TPH-O sampling should be performed before any trend can be established.

- Total xylenes concentrations were detected in groundwater samples collected from well MW-8 at a concentration of 1,280 µg/L; which exceeds the MTCA Method A cleanup level of 1,000 µg/L. The detected concentration is consistent with historical sampling events.
- 1,2-Dibromoethane concentrations were not detected at or above the laboratory's MDL; however, it should be noted that the MTCA Method A cleanup level (0.1 µg/L) is lower than the laboratory MDL of 1 µg/L in wells MW-1, MW-2, MW-4 through MW-7, MW-9, and MW-10, and 2 µg/L in wells MW-3 and MW-8.

WASTE DISPOSAL

Purge and rinsate water generated during the monitoring and sampling event were temporarily stored on the Site in labeled, DOT-approved, 55-gallon steel drums pending characterization and disposal. Purged water from the 1Q12 groundwater sampling event was removed on March 13, 2012 by Cowlitz Clean Sweep (CCS) and transported to Oil Re-Refining Company facility for disposal.

CONCLUSIONS

Contaminant concentrations exceed MTCA Method A cleanup levels in groundwater samples collected from wells MW-1, MW-3, MW-5, MW-8. The reported concentrations are relatively consistent with previous sampling events at the Site with the exception of TPH-D detected in groundwater collected from MW-3. The laboratory MDL for 1,2-Dibromoethane exceeded the MTCA Method A cleanup level of 1 µg/L in wells MW-1, MW-2, MW-4 through MW-7, MW-9, and MW-10, and 2 µg/L in wells MW-3 and MW-8. The laboratory MDL for TPH-O exceeded the MTCA Method A cleanup level in the groundwater sample collected from MW-9.

LIMITATIONS AND CERTIFICATIONS

This report was prepared in accordance with the scope of work outlined in Stantec's contract and with generally accepted professional engineering and environmental consulting practices existing at the time this report was prepared and applicable to the location of the Site. It was prepared for the exclusive use of Chevron Environmental Management Company and ConocoPhillips Company for the express purpose stated above. Any re-use of this report for a different purpose or by others not identified above shall be at the user's sole risk without liability to Stantec. To the extent that this report is based on information provided to Stantec by third parties, Stantec may have made efforts to verify this third party information, but Stantec cannot guarantee the completeness or accuracy of this information. The opinions expressed and data collected are based on the conditions of the Site existing at the time of the field investigations. No other warranties, expressed or implied are made by Stantec.

Marc Sauze, P.E.
Senior Engineer

ATTACHMENTS

Figure 1	Site Plan with Groundwater Elevation Contour Map First Quarter 2012
Figure 2	Site Plan with Analytical Results First Quarter 2012
Table 1	Cumulative Summary of Groundwater Elevations and Sample Analytical Results
Appendix A	Field and Laboratory Procedures
Appendix B	Field Data Sheets
Appendix C	Certified Laboratory Analytical Report and Chain-of-Custody Documentation

FIGURES

SOUTH McCLELLAN STREET

MARTIN LUTHER KING WAY

76 UNION
SERVICE STATION

GL-1

FORMER UST
EXCAVATION

MW-4
52.25

MW-3
51.48

MW-5
51.12

MW-8
51.71

MW-1
52.51

MW-2
50.46

MW-9
50.45

MW-6
46.23

MW-7
46.21

MW-10
48.52

52.0

51.0

50.0

49.0

48.0

47.0

GRADIENT = 0.030

GRADIENT = 0.035

FORMER
PUMP ISLAND

FORMER
STATION BUILDING

FORMER
HEATING OIL UST
(REMOVED 02-02-05)

DENTIST
OFFICE

RESIDENTIAL YARDS

COMMERCIAL SHOPS

LEGEND:

MW-1	GROUNDWATER MONITORING WELL
	SITE BOUNDARY
	FENCE LINE
GRADIENT	INFERRED GROUNDWATER DIRECTION AND GRADIENT (ft/ft)
47.0	GROUNDWATER ELEVATION CONTOUR (FEET ABOVE MEAN SEA LEVEL)
46.21	GROUNDWATER ELEVATION (FEET ABOVE MEAN SEA LEVEL)
NM	NOT MEASURED (WELL NOT FOUND)
ft/ft	FOOT PER FOOT

N

0 25 50

APPROXIMATE SCALE IN FEET

Stantec

FOR:
FORMER TIDERWATER
SERVICE STATION
2800 MARTIN LUTHER KING WAY
SEATTLE, WASHINGTON

SITE PLAN WITH GROUNDWATER ELEVATION CONTOUR MAP (FIRST QUARTER 2012)

FIGURE: **1**

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
211602382	JCR	AS	DS	MARCH 2012

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SOUTH McCLELLAN STREET

76 UNION SERVICE STATION

MARTIN LUTHER KING WAY

FORMER UST EXCAVATION

FORMER STATION BUILDING

DENTIST OFFICE

FORMER PUMP ISLAND

FORMER HEATING OIL UST (REMOVED 02-02-05)

RESIDENTIAL YARD

COMMERCIAL SHOPS

MW-4	
TPH-GRO	<50
TPH-DRO	55
TPH-MRO	<67
B	<0.5
T	<0.7
E	<0.8
X	<1.6
MTBE	<0.5

MW-8	
TPH-GRO	**13,000**
TPH-DRO	290
TPH-MRO	<69
B	<1.0
T	<1.0
E	110
X	**1,280**
MTBE	<1.0

MW-1	
TPH-GRO	260
TPH-DRO	430
TPH-MRO	**620**
B	<0.5
T	41
E	3
X	18
MTBE	<0.5

MW-3	
TPH-GRO	**6,300**
TPH-DRO	**1,200**
TPH-MRO	<68
B	<1.0
T	<1.0
E	130
X	523
MTBE	<1.0

MW-5	
TPH-GRO	**1,200**
TPH-DRO	34
TPH-MRO	<68
B	0.8
T	<0.7
E	12
X	43
MTBE	<0.5

MW-2	
TPH-GRO	780
TPH-DRO	390
TPH-MRO	<68
B	1.0
T	2.0
E	<0.8
X	<1.6
MTBE	<0.5

MW-6	
TPH-GRO	<50
TPH-DRO	<29
TPH-MRO	<68
B	<0.5
T	<0.7
E	<0.8
X	<1.6
MTBE	<0.5

MW-9	
TPH-GRO	66
TPH-DRO	<300
TPH-MRO	**<700**
B	<0.5
T	<0.7
E	<0.8
X	<1.6
MTBE	<0.5

MW-7	
TPH-GRO	<50
TPH-DRO	<29
TPH-MRO	<68
B	<0.5
T	2.0
E	<0.8
X	<1.6
MTBE	<0.5

MW-10	
TPH-GRO	<50
TPH-DRO	<29
TPH-MRO	<68
B	1.0
T	<0.7
E	<0.8
X	<1.6
MTBE	<0.5

MW-1 MW-2 MW-3 MW-4 MW-5 MW-6 MW-7 MW-8 MW-9 MW-10

LEGEND:

MW-1 GROUNDWATER MONITORING WELL

SITE BOUNDARY

FENCE LINE

ANALYTES:

TPH-GRO	TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
TPH-DRO	TOTAL PETROLEUM HYDROCARBONS AS DIESEL
TPH-MRO	TOTAL PETROLEUM HYDROCARBONS AS MOTOR OIL
B	BENZENE
T	TOULENE
E	ETHYLBENZENE
X	TOTAL XYLENES
MTBE	METHYL TERTIARY BUTYL ETHER
µg/L	MICROGRAMS PER LITER
BOLD	EXCEEDS MTCA METHOD A CLEANUP LEVEL.

CHEMICAL ANALYTICAL RESULTS:

SAMLPE LOCATION

MW-2	
TPH-GRO	<50
TPH-DRO	<29
TPH-MRO	<67
B	<0.5
T	<0.7
E	<0.8
X	<0.8
MTBE	<0.5

ANALYTE

CONCENTRATION (µg/L) VIA NORTHWEST METHOD NWTPH-Gx

CONCENTRATION (µg/L) VIA EPA METHOD 8260B

N

0 25 50

APPROXIMATE SCALE IN FEET

Stantec

FOR: FORMER TIDERWATER SERVICE STATION 2800 MARTIN LUTHER KING WAY SEATTLE, WASHINGTON

SITE PLAN WITH ANALYTICAL RESULTS (FIRST QUARTER 2012)

FIGURE: **2**

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TABLE

Table 1
Cumulative Summary of Groundwater Elevations and Sample Analytical Results

Former Tidewater Site
2800 Martin Luther King Way
Seattle, WA

Sample ID / Well Elevation (feet, amsl)	Date Sampled	Depth to Water (feet, TOC)	Groundwater Elevation (feet, amsl)	NWTPH-Dx		NWTPH-Gx	EPA Method 8260B											
				TPH-DRO (ug/L)	TPH-MRO (ug/L)	TPH-GRO (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethyl-benzene (ug/L)	Total Xylenes (ug/L)	Naphthalene (ug/L)	MTBE (ug/L)	1,2-Di-bromoethane (ug/L)	1,2-Di-chloroethane (ug/L)	1,2,4-Tri-methylbenzene (ug/L)	1,3,5-Tri-methylbenzene (ug/L)	n-Propylbenzene (ug/L)	Iso-Propylbenzene (ug/L)
MW-1	08/19/05	13.01	84.91	--	--	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--
97.92	10/27/05	12.62	85.30	--	--	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--
	12/27/05	--	--	--	--	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--
	01/12/08	9.03	88.89	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	03/02/06	10.56	87.36	--	--	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--
	06/28/06	12.42	85.50	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/01/06	9.33	88.59	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/06/06	9.72	88.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	02/28/07	11.04	86.88	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	03/07/07	11.14	86.78	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/11/07	11.06	86.86	--	--	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--
	11/12/09	11.08	86.84	--	--	<50	<1.0	<1.0	<1.0	<3.0	--	--	--	--	--	--	--	--
	08/30/11	--	--	Well not sampled - well not found														
	12/15/11	--	--	Well not sampled - well not found														
62.35	02/06/12	9.84	52.51	430	**620**	260	<0.5	41	3	18	<1	<0.5	**<1**	<1	<1	<1	<1	<1
MW-2	08/19/05	13.02	83.23	--	--	**2,000**	ND	10	81	91	--	--	--	--	--	--	--	--
96.25	10/27/05	13.62	82.63	--	--	**2,300**	ND	ND	89	93	--	--	--	--	--	--	--	--
	12/27/05	--	--	--	--	**820**	ND	ND	21	66	--	--	--	--	--	--	--	--
	01/12/06	5.77	90.48	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	03/02/06	11.82	84.43	--	--	**1,300**	ND	3.9	23	50	--	--	--	--	--	--	--	--
	04/13/06	13.06	83.19	--	--	470	ND	1.4	6.9	15	--	--	--	--	--	--	--	--
	06/28/06	12.40	83.85	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	09/11/06	13.64	82.61	--	--	580	ND	1.6	2.9	6.2	--	--	--	--	--	--	--	--
	12/01/06	10.65	85.60	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/06/06	10.20	86.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	01/12/07	11.06	85.19	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	02/12/07	--	--	--	--	**1,400**	1.4	3.5	16	13	--	--	--	--	--	--	--	--
	02/28/07	11.65	84.60	--	--	**1,200**	1.8	3.7	18	60	--	--	--	--	--	--	--	--
	03/07/07	11.43	84.82	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/11/07	11.07	85.18	--	--	**1,200**	ND	2.8	11	63	--	--	--	--	--	--	--	--
	11/12/09	12.35	83.90	--	--	455	<1.0	<1.0	<1.0	<3.0	--	--	--	--	--	--	--	--
60.72	08/31/11	11.96	48.76	**590**	<66	**960**	1	<0.7	1	6	<1	<0.5	**<1**	<1	<1	2	59	24
	12/15/11	11.53	49.19	30	<67	750	1	<0.7	1	<1.6	<1	<0.5	**<1**	<1	<1	<1	60	25
	02/06/12	10.26	50.46	390	<68	780	1	2	<0.8	<1.6	<1	<0.5	**<1**	<1	<1	<1	55	22

Table 1
Cumulative Summary of Groundwater Elevations and Sample Analytical Results

Former Tidewater Site
2800 Martin Luther King Way
Seattle, WA

Sample ID / Well Elevation (feet, amsl)	Date Sampled	Depth to Water (feet, TOC)	Groundwater Elevation (feet, amsl)	NWTPH-Dx		NWTPH-Gx	EPA Method 8260B											
				TPH-DRO (ug/L)	TPH-MRO (ug/L)	TPH-GRO (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethyl-benzene (ug/L)	Total Xylenes (ug/L)	Naphthalene (ug/L)	MTBE (ug/L)	1,2-Di-bromoethane (ug/L)	1,2-Di-chloroethane (ug/L)	1,2,4-Tri-methylbenzene (ug/L)	1,3,5-Tri-methylbenzene (ug/L)	n-Propylbenzene (ug/L)	Iso-Propylbenzene (ug/L)
MW-3	08/19/05	12.72	84.71	--	--	**44,000**	4.1	18	**780**	**3,600**	--	--	--	--	--	--	--	--
97.43	10/27/05	13.42	84.01	--	--	**17,000**	ND	38	580	**3,000**	--	--	--	--	--	--	--	--
	12/27/05	--	--	--	--	**6,600**	**5.0**	22	200	**1,100**	--	--	--	--	--	--	--	--
	01/12/06	8.84	88.59	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	03/02/06	10.90	86.53	--	--	**22,000**	ND	26	450	**4,200**	--	--	--	--	--	--	--	--
	04/13/06	11.92	85.51	--	--	**33,000**	ND	3.4	**700**	**3,100**	--	--	--	--	--	--	--	--
	06/28/06	12.17	85.26	--	--	**53,000**	ND	17	530	**2,600**	--	--	--	--	--	--	--	--
	08/13/06	13.91	83.52	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	09/11/06	13.77	83.66	--	--	**14,000**	ND	5.6	180	**1,100**	--	--	--	--	--	--	--	--
	10/13/06	--	--	--	--	**1,400**	ND	1.0	26	98	--	--	--	--	--	--	--	--
	11/17/06	10.56	86.87	--	--	**48,000**	ND	34	490	**4,100**	--	--	--	--	--	--	--	--
	12/01/06	9.78	87.65	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/06/06	10.01	87.42	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	01/12/07	10.90	86.53	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	02/12/07	--	--	--	--	**36,000**	ND	10	280	**1,800**	--	--	--	--	--	--	--	--
	02/28/07	11.12	86.31	--	--	**22,000**	ND	5.8	200	**1,400**	--	--	--	--	--	--	--	--
	03/07/07	11.17	86.26	--	--	**21,000**	ND	18	170	**1,000**	--	--	--	--	--	--	--	--
	04/11/07	11.04	86.39	--	--	**19,000**	ND	5.5	110	**1,100**	--	--	--	--	--	--	--	--
	11/12/09	11.98	85.45	--	--	71.7	<1.0	<1.0	<1.0	<3.0	--	--	--	--	--	--	--	--
61.81	08/31/11	12.10	49.71	370	<68	**7,400**	<1	<1	190	554	67	<1	**<2**	<2	1,300	330	140	47
	12/15/11	11.38	50.43	<29	<67	**5,400**	<0.5	<0.7	120	400	50	<0.5	**<1**	<1	950	210	110	37
	02/06/12	10.33	51.48	**1,200**	<68	**6,300**	<1	<1	130	523	49	<1	**<2**	<2	870	190	74	27
MW-4	06/28/06	12.40	85.96	--	--	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--
98.36	12/01/06	9.90	88.46	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/06/06	10.21	88.15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	02/28/07	11.43	86.93	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	03/07/07	11.49	86.87	--	--	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--
	04/11/07	11.27	87.09	--	--	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--
	11/12/09	11.82	86.54	--	--	<50	<1.0	<1.0	<1.0	<3.0	--	--	--	--	--	--	--	--
62.75	08/31/11	12.42	50.33	<29	<68	<50	<0.5	<0.7	<0.8	<0.8	<1	<0.5	**<1**	<1	<1	<1	<1	<1
	12/15/11	11.69	51.06	<29	<67	<50	<0.5	<0.7	<0.8	<1.6	<1	<0.5	**<1**	<1	<1	<1	<1	<1
	02/06/12	10.50	52.25	55	<67	<50	<0.5	<0.7	<0.8	<1.6	<1	<0.5	**<1**	<1	<1	<1	<1	<1
MW-5	06/28/06	12.09	85.11	--	--	**21,000**	ND	14	290	920	--	--	--	--	--	--	--	--
97.2	09/11/06	13.63	83.57	--	--	**2,500**	ND	ND	34	60	--	--	--	--	--	--	--	--
	11/17/06	10.57	86.63	--	--	**23,000**	ND	52	450	**1,700**	--	--	--	--	--	--	--	--
	12/01/06	9.75	87.45	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	01/12/07	10.85	86.35	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	02/12/07	--	--	--	--	**37,000**	ND	33	**1,600**	**2,800**	--	--	--	--	--	--	--	--
	02/28/07	11.05	86.15	--	--	**29,000**	ND	24	550	**1,800**	--	--	--	--	--	--	--	--
	03/07/07	11.11	86.09	--	--	**42,000**	**11.0**	24	**740**	**2,500**	--	--	--	--	--	--	--	--
	04/11/07	10.96	86.24	--	--	**65,000**	ND	79	**850**	**4000**	--	--	--	--	--	--	--	--
	11/12/09	12.10	85.10	--	--	**2,340**	1.3	36.3	<1.0	125	--	--	--	--	--	--	--	--
61.66	08/31/11	12.80	48.86	770	<67	**3,100**	2	1	72	124	120	<0.5	**<1**	<1	130	18	210	78
	12/15/11	11.41	50.25	66	<67	**1,900**	1	0.9	24	33	81	<0.5	**<1**	<1	43	3	120	43
	02/06/12	10.54	51.12	34	<68	**1,200**	0.8	<0.7	12	43	37	<0.5	**<1**	<1	31	6	55	21

Table 1
Cumulative Summary of Groundwater Elevations and Sample Analytical Results

Former Tidewater Site
2800 Martin Luther King Way
Seattle, WA

Sample ID / Well Elevation (feet, amsl)	Date Sampled	Depth to Water (feet, TOC)	Groundwater Elevation (feet, amsl)	NWTPH-Dx		NWTPH-Gx	EPA Method 8260B											
				TPH-DRO (ug/L)	TPH-MRO (ug/L)	TPH-GRO (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethyl-benzene (ug/L)	Total Xylenes (ug/L)	Naphthalene (ug/L)	MTBE (ug/L)	1,2-Di-bromoethane (ug/L)	1,2-Di-chloroethane (ug/L)	1,2,4-Tri-methylbenzene (ug/L)	1,3,5-Tri-methylbenzene (ug/L)	n-Propylbenzene (ug/L)	Iso-Propylbenzene (ug/L)
MW-6	08/31/11	12.33	45.70	44	<67	<50	<0.5	<0.7	<0.8	<0.8	1	<0.5	**<1**	<1	<1	<1	<1	<1
58.03	12/15/11	12.09	45.94	<29	<67	<50	<0.5	<0.7	<0.8	<1.6	<1	<0.5	**<1**	<1	<1	<1	<1	<1
	02/06/12	11.80	46.23	<29	<68	<50	<0.5	<0.7	<0.8	<1.6	<1	<0.5	**<1**	<1	<1	<1	<1	<1
MW-7	08/31/11	11.15	45.81	<29	<67	<50	<0.5	<0.7	<0.8	<0.8	<1	<0.5	**<1**	<1	<1	<1	<1	<1
56.96	12/15/11	10.93	46.03	45	89	<50	<0.5	<0.7	<0.8	<1.6	<1	<0.5	**<1**	<1	<1	<1	<1	<1
	02/06/12	10.75	46.21	<29	<68	<50	<0.5	2.0	<0.8	<1.6	<1	<0.5	**<1**	<1	<1	<1	<1	<1
MW-8	08/31/11	12.01	49.70	240	<67	**4,400**	<0.5	<0.7	41	442	33	<0.5	**<1**	<1	500	130	26	11
61.71	12/15/11	11.25	50.46	98	<67	**8,100**	<0.5	<0.7	79	880	72	<0.5	**<1**	<1	900	230	46	20
	02/06/12	10.00	51.71	290	<69	**13,000**	<1	<1	110	**1,280**	89	<1	**<2**	<2	1,400	450	36	18
MW-9	08/31/11	14.29	48.29	78	<68	<50	<0.5	<0.7	<0.8	<0.8	<1	<0.5	**<1**	<1	<1	<1	<1	<1
62.58	12/15/11	13.01	49.57	<29	<67	<50	<0.5	<0.7	<0.8	<1.6	<1	<0.5	**<1**	<1	<1	<1	<1	<1
	02/06/12	12.04	50.54	<300	**<700**[1]	66	<0.5	<0.7	<0.8	<1.6	<1	<0.5	**<1**	<1	<1	<1	<1	<1
MW-10	08/31/11	11.94	47.02	260	100	<50	2	<0.7	<0.8	<0.8	<1	<0.5	**<1**	<1	<1	<1	<1	<1
58.96	12/15/11	11.13	47.83	<28	<66	51	3	<0.7	<0.8	0.8	<1	<0.5	**<1**	<1	<1	<1	2	<1
	02/06/12	10.44	48.52	<29	<68	<50[2]	1	<0.7	<0.8	<1.6	<1	<0.5	**<1**	<1	<1	<1	3	1
TB	11/12/2009	---	---	--	--	<50	<1.0	<1.0	<1.0	<3.0	--	--	--	--	--	--	--	--
	8/31/2011	---	---	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--
	12/15/11	---	---	--	--	<50	<0.5	<0.7	<0.8	<1.6	<1	<0.5	**<1**	<1	<1	<1	<1	<1
QA-T	02/07/12	---	---	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	<0.5	**--**	**--**	**--**	**--**	**--**	--
MTCA METHOD A CLEANUP LEVEL				**500**	**500**	**800/1,000***	**5**	**1,000**	**700**	**1,000**	**160**	**20**	**0.1**	**5**	**--**	**--**	**--**	**--**

Explanation:

amsl = above mean sea level
bgs = below ground surface
EPA = Environmental Protection Agency
ND = Not detected at or above laboratory method reporting limits ug/L= micrograms per liter
SPH = separate phase hydrocarbons
TB = Trip blank
TOC = top of casing
MTCA= Model Toxics Control Act
TPH-DRO = Total Petroleum Hydrocarbons as Diesel Range Organics
TPH-GRO = Total Petroleum Hydrocarbons as Gasoline Range Organics
TPH-MRO = Total Petroleum Hydrocarbons as Motor Oil Range Organics
< = Not detected at or above laboratory method reporting limits.
-- = Not applicable or not analyzed
Bold = Exceeds MTCA Method A Cleanup Levels
MTBE= Methyl Tertiary Butyl Ether
*=Concentration of TPH-GRO containing benzene have a MTCA Method A cleanup level of 800 ug/L; no detectable benzene have a cleanup level of 1,000 ug/L.

[1] = Reporting limits were raised due to interference from the sample matrix. The surrogate data is outside the QC limits due to unresolvable matrix problems evident in the sample chromatogram.
[2] = A preserved vial was submitted for analysis. However, the pH at the time of analysis was 4.

APPENDIX A
FIELD AND LABORATORY PROCEDURES

STANTEC MONITORING WELL GAUGING, PURGING AND SAMPLING PROCEDURES

Monitoring well purging and sampling was conducted based on USEPA approved (Puls and Barcelona, 1996) low-flow sampling techniques whenever possible.

Purging Procedures

A. Using a decontaminated instrument (i.e., tape measure, continuity meter, or interface probe) measure the depth to groundwater in reference to the measuring point at the top of the casing. Measure the total depth of the well and diameter of the well casing to calculate the volume of water in the well casing.

B. Based on previously obtained data, if a monitoring well is suspected of containing LPH concentrations, lower a transparent bailer into the well to evaluate the presence of a hydrocarbon sheen on the water table.

C. Decontaminate the purge pump and/or PVC bailers by scrubbing in Alconox detergent solution, followed by a tap water rinse and then a de-ionized water rinse.

D. Purge by low-flow pumping (less than 0.5 liters per minute) for approximately five minutes. Monitor the static water level in the well using a decontaminated instrument and adjust the pumping rate to maintain a minimal drawdown. If low-flow purging is not possible and bailing is used to purge the well, then a minimum of three well volumes will be removed. When purging 3 well volumes, parameters should be measured after each casing volume is removed. If the well goes dry, the procedure listed in step E2 (below) should be followed.

E. Conduct field measurements (i.e., pH, specific conductivity, temperature, and oxidation-reduction potential) note clarity, color, turbidity, and odor of purge water, and measure depth to groundwater.

    1. If the well has not been purged dry and drawdown is minimal, continue to pump and conduct field measurements (including depth to water) again every three to five minutes during purging.

        a) If the first through third series of measurements vary by less than 10 percent, the well has been adequately purged. If bailers are used to purge the well, then the water level is allowed to recover to 80 percent of its static condition, or for two hours, whichever comes first prior to beginning the sampling procedure.

        b) If the measurements vary by 10 percent or greater, repeat Step E1 above.

        c) If a minimum of three parameters cannot be measured during purging and or drawdown cannot be controlled to minimal, remove three well volumes with a bailer prior to sampling.

    2. If the well has been purged dry, measure the water level and allow the well to recharge to 80 percent, or for two hours, whichever occurs first. Calculate the percent recovery, and begin the sampling procedure.

Sampling Procedures

- Use the pump and a clean, dedicated section of tubing to collect the groundwater sample from the screened interval of the water column. If the pump cannot be used, collect the water sample with a clean, dedicated polyethylene disposable bailer.

- Transfer the groundwater sample into the appropriate container(s). Where applicable, some containers are completely filled to achieve zero headspace. Label the samples according to location and date of collection.

- Enter the samples into Chain-of-Custody and preserve on ice until delivery to the analytical laboratory. Complete the Well Development or Purging/Sampling Log to be stored in the project file.

Reference:

Puls, R.W., and Barcelona M.J., 1996. EPA Ground Water Issue Low-Flow (Minimal Drawdown) Ground-Water Sampling Procedures, EPA/540/S-95/504.

APPENDIX B
FIELD DATA SHEETS

JOB NAME:	Tidewater Seattle	JOB NUMBER:	211602274.400.151
ADDRESS:	2800 Martin Luther King Way	START DATE:	02/06/12
ADDRESS:	Seattle, WA	DATE PREPARED:	01/17/12
PREPARED FOR:	Deitrie Hanson and David Reitz	PREPARED BY:	Alejandra Hernandez

STANTEC - SITE VISITATION REPORT

Did you call in? (Yes) No 0707, 0711 — Arrival Time: 0704

Who did you call? Chris Gdak (425) 698-7398 cell — Departure Time: 1614

Weather Notations (SUN) RAIN CLOUDY SNOW — Temperature: 55°F — OnSite Time: 9.25 hrs

PURPOSE OF VISIT: Conduct M&S Event

DESCRIPTION OF ACTIVITIES ON SITE AND NOTES

DRUM INVENTOR — Type: Number: (2) 16-gallon — Contents: Purge water

(0510 UP)

0600-0616 Loaded up HORIBA, YSI, 2 yellow peristaltics into F250. Walkaround. Mileage.
0616-0622 Drove from home to QFC. Purchased 3 (7lb) bags of wet ice.
0622-0640 Packed 3 large coolers with wet ice to keep bottles on ice. Thursday
0640-0642 Returned cart. Secured truck bed. Ready to drive to Seattle.
0642-0704 Drove from QFC 140th to site. No traffic problems I-90 to S McClellan St.
0704 Arrived at the site. Parked at City Cafe. Site is locked up.
0707 Called Chris Gdak that I am on-site. Nobody else is here. Left voicemail.
0711 Called Paul Fairbairn (my boss) that I am on-site, Left voicemail.
0711-0738 Donned PPE. Set-up 6 orange delineators. 3 stage decon with alconox 1/2oz. packet
0738-0745 David Reitz arrived on-site. Gate to property is open. Carry over
ERIC EPI arrived.
0745-0830 Conducted big H&S meeting w/ David, me, Eric Caddey ERI
0830-0845 Moved all cars into car wash site. Set-up for gauging.
0845-0850 Begin gauging. MW-6 across street. Eric carried delineators. Recorded
0850-0938 Gauged MW-9, 4, 7, 10, 2, 5, 3, 8, 10 (per gauging order).
ERIC copied all gauging data. Finished
0938-0950 Carry gear, delineators over to MW-6. Set-up exclusion zone.
1000-1010 Low-flow purged MW-6 using HORIBA-22.
*1010 Sampled MW-6. 6 voas (3 voas for NWTPH-Gx, 3 voas for BTEX etc.) and 2 ambers
Decon'd DTW meter. Put away containers. Put
*1050 sampled MW-7.
1052-1055 Greg McCormick of EPI on-site. David
1055-1115 Conduct 2nd H&S with Greg McCormick. David needed a voa cap - broke one.
David Reitz crossing the street. Talked to David Reitz crossing the street.
1118 ERIC Caddey of EPI said good-byes and departed the site.
1120-1145 David Reitz samples MW-10. I set-up on MW-4. YSI meter used.
*1135 Sampled MW-10 (David Reitz). David moved up to MW-2 in driveway
*1220 sampled MW-2 (David Reitz).
*1225 sampled MW-4 (Deitrie H.)
David used wrong pre-made labels on voas. I brought extras from
previous GWM events to correct his labeling. He used 6 VOCs for 8260B
*1300 when only supposed to use 3. sampled MW-5 (David Reitz).
1308 Back to my well MW-4. David onto MW-3.
*1310 Closed MW-4. Moved to MW-9. Greg McCormick go to lunch $5.00
Mary asked me if I needed anything. She was going to QFC.
Sampled MW-3 (David Reitz)
*1330 sampled MW-8 (David Reitz).

JOB NAME:	**Tidewater Seattle**	JOB NUMBER:	211602274.400.151
ADDRESS:	2800 Martin Luther King Way	START DATE:	02/06/12
ADDRESS:	Seattle, WA	DATE PREPARED:	01/17/12
PREPARED FOR:	Deitrie Hanson and David Reitz	PREPARED BY:	Alejandra Hernandez

STANTEC - SITE VISITATION REPORT (continued)

Health and Safety Notes:

Conducted H&S meeting w/ ERIC Caddey L.G. * J-walking across the street
1. Daily Production H/S meeting * Broken vob. caps
2. General PTW form
3. H&S QUIZ
4. COP RM&R Personal H/S Committment
5. Signed HASP acknowledgement
Conducted 2nd H&S meeting with Greg McCormick at 11:00 Am.
1. Daily Production H/S meeting
2. General PTW form
3. H&S Quiz
4. COP RM&R Personal H/S Committment
5. signed HASP acknowledgement

1310-1405 Finished MW-4. Fixed labels. David Reitz finished MW-3
Greg McCormick brought McDonalds lunch. David broke 4th black voa cap.
Run out of voas. I found one, and now have a full set.
Can't break anymore caps !!!!. David took off for lunch. I ate my lunch 10 minutes
1405 Began to purge MW-9.
*1415 sampled MW-8 (David Reitz) David broke 5th voa lid today.
Had to use sample traps white lid to cap voa. Took extra voa sample
Sample Traps.
*1425 sampled MW-9 (Deitrie Hanson).
David moved to MW-1. I cleaned up sampling gear
1500 Greg McCormick says his good-bye's. David purged MW-1.
1503 Greg departed the site to get lab samples. CHEX-6 to Bothell lab
* 1505 Sampled MW-1. I screwed on the black voa caps so David's
Strong hands not break anymore caps!
1506-1530 Closed MW-1. Washed, wiped, decon rinsed HORIBA 22, YSI meter,
cups, buckets. Made out waste label
1530-1550 Purge drum labeled. Breakdown delineators. Packed truck. SAFE debrief.
1550 David Reitz departed the site.
1605 Asked Maria to use bathroom. Not in a good state. Go across the street
to 76 ConocoPhillips gas station.
1607-1614 Secured truck! Walk around truck. Called Chris Odak.
1614-1645 Drove from site back to Redmond office
1645-1745 Audited 3 coolers, sample labels. MW-8 label was wrong - 1430 not 1330.
Unloaded all 30 samples into refrig to chill overnight.
Demobilize. FORD F250 truck of all gear.
1745-1900 Finished demobilization and filling field paperwork

JOB NAME:	Tidewater Seattle	JOB NUMBER:	211602274.400.151
ADDRESS:	2800 Martin Luther King Way	START DATE:	02/06/12
ADDRESS:	Seattle, WA	DATE PREPARED:	01/17/12
PREPARED FOR:	Deilrie Hanson and David Reitz	PREPARED BY:	Alejandra Hernandez

STANTEC - GROUND WATER GAUGING FORM

MEASURED TO TOC: Top of Casing

	WELL I.D.	Gauge Order	Well Diameter	1Q12 DTB (ft)	1Q12 DTP (ft below TOC)	1Q12 DTW (ft below TOC)	1Q12 LPH (feet)	4Q11 DTW (ft below TOC)	NOTES OR COMMENTS Was there sheen?
0938	MW-1	10	2	22.60	—	9.84	—	---	Unable to locate during 4Q11.* APM 433
0910	MW-2	6	2	21.10	—	10.26	—	11.53	Well tag # APM 434
0928	MW-3	8	2	20.20	—	10.33	—	11.38	Well tag # APM 435. Water in box
0858	MW-4	3	2	19.10	—	10.50	—	11.69	No well tag. 3 bolts. Gasket.
0915	MW-5	7	2	19.29	—	10.54	—	11.41	Well tag # APK 217 19.30 Water in well box.
0850	MW-6	1	2	19.90	—	11.80	—	12.09	Well tag # BHA 125. 3 bolts
0902	MW-7	4	2	19.90	—	10.75	—	10.93	Well tag # BHA 127. 3 bolts
0933	MW-8	9	2	19.80	—	10.00	—	11.25	Well tag # BHA 124. Gasket
0855	MW-9	2	2	23.60	—	12.04	—	13.01	Well tag # BHA 123. 3 bolts. Gasket
0907	MW-10	5	2	19.80	—	10.44	—	11.13	Well tag # BHA 126. 3 bolts. Gasket.

Stantec Consulting

WATER SAMPLE FIELD DATA SHEET

PROJECT #: 211602274.400.151 PURGED BY: D. Reitz WELL I.D.: MW- 1

CLIENT NAME: Tidewater Seattle SAMPLED BY: D. Reitz SAMPLE I.D.: MW - 1

LOCATION: 2800 Martin Luther King Way, Seattle, WA QA SAMPLES: ____

DATE PURGED 02 / 07 / 12 START (2400hr) 1450 END (2400hr) 1510

DATE SAMPLED 02 / 07 / 12 SAMPLE TIME (2400hr) 1505

SAMPLE TYPE: Groundwater X Surface Water ____ Treatment Effluent ____ Other ____

CASING DIAMETER: 2" X (0.17) 3" ____ (0.38) 4" ____ (0.67) 5" ____ (1.02) 6" ____ (1.50) 8" ____ (2.60) Other ____ ( )

Casing Volume: (gallons per foot)

DEPTH TO BOTTOM (feet) = 22.60 CASING VOLUME (gal) = 2.17 gal

DEPTH TO WATER (feet) = 9.84 CALCULATED PURGE (gal) = —

WATER COLUMN HEIGHT (feet) = 12.76 ACTUAL PURGE (gal) = 1.00 gal

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME ~~(gal)~~	TEMP. (degrees C)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
2/7/2012	1455	0.25 gal	13.00	31.7	6.4	Clr	—
2/7/2012	1458	0.25 gal	12.66	29.5	6.4	Clr	—
2/7/2012	1501	0.25 gal	12.58	28.0	6.5	Clr	—
2/7/2012	1504	0.25 gal	12.52	27.5	6.5	Clr	—

Post Purge Measurements

Dissolved Oxygen 0.0 ORP -10

SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: 11.61 SAMPLE TURBIDITY: —

80% RECHARGE: ___ YES ___ NO ANALYSES: See Work Order

ODOR: Nog. SAMPLE VESSEL / PRESERVATIVE: See Work Order

PURGING EQUIPMENT		SAMPLING EQUIPMENT	
___ Bladder Pump	___ Bailer (Teflon)	___ Bladder Pump	___ Bailer (Teflon)
___ Centrifugal Pump	___ Bailer (PVC)	___ Centrifugal Pump	___ Bailer (___ PVC or ___ disposable)
___ Submersible Pump	___ Bailer (Stainless Steel)	___ Submersible Pump	___ Bailer (Stainless Steel)
X Peristalic Pump	___ Dedicated ____	X Peristalic Pump	___ Dedicated ____
Other: ____		Other: ____	
Pump Depth: ____			

WELL INTEGRITY: Fair LOCK#: Yes

REMARKS: ____

SIGNATURE: ____

Stantec Consulting

WATER SAMPLE FIELD DATA SHEET

PROJECT #: 211602274.400.151 PURGED BY: D. Reitz WELL I.D.: MW-2

CLIENT NAME: Tidewater Seattle SAMPLED BY: D. Reitz SAMPLE I.D.: MW-2

LOCATION: 2800 Martin Luther King Way, Seattle, WA QA SAMPLES: ____

DATE PURGED 02/07/12 START (2400hr) 1205 END (2400hr) 1225

DATE SAMPLED 02/07/12 SAMPLE TIME (2400hr) 1220

SAMPLE TYPE: Groundwater X Surface Water ____ Treatment Effluent ____ Other ____

CASING DIAMETER: 2" X 3" ____ 4" ____ 5" ____ 6" ____ 8" ____ Other ____ ( )

Casing Volume: (gallons per foot) (0.17) (0.38) (0.67) (1.02) (1.50) (2.60)

DEPTH TO BOTTOM (feet) = 21.10 CASING VOLUME (gal) = 1.84 gal

DEPTH TO WATER (feet) = 10.26 CALCULATED PURGE (gal) = —

WATER COLUMN HEIGHT (feet) = 10.84 ACTUAL PURGE (gal) = 1.50 gal

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME ~~(gal)~~ OK	TEMP. (degrees C)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
02/07/12	1200	0.25 gal	13.41	52.7	6.6	Clr	—
	1203	0.250 gal	13.07	52.3	6.5	Clr	—
	1206	0.250 gal	13.14	51.9	6.4	Clr	—
	1209	0.250 gal	13.13	51.5	6.3	Clr	—
	1212	0.250 gal	13.11	51.2	6.2	Clr	—
	1215	0.250 gal	13.20	51.0	6.2	Clr	—

Post Purge Measurements

Dissolved Oxygen 0.0 ORP -26

SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: 10.89 SAMPLE TURBIDITY: —

80% RECHARGE: ___ YES ___ NO ANALYSES: See Work Order

ODOR: None SAMPLE VESSEL / PRESERVATIVE: 11

PURGING EQUIPMENT

___ Bladder Pump
___ Centrifugal Pump
___ Submersible Pump
X Peristaltic Pump
___ Bailer (Teflon)
___ Bailer (PVC)
___ Bailer (Stainless Steel)
___ Dedicated ____
Other: ____
Pump Depth: ____

SAMPLING EQUIPMENT

___ Bladder Pump
___ Centrifugal Pump
___ Submersible Pump
X Peristaltic Pump
___ Bailer (Teflon)
___ Bailer (___ PVC or ___ disposable)
___ Bailer (Stainless Steel)
___ Dedicated ____
Other: ____

WELL INTEGRITY: Fair LOCK#: Y83

REMARKS: ____

SIGNATURE: [signature]

Stantec Consulting

WATER SAMPLE FIELD DATA SHEET

PROJECT #: 211602274.400.151 PURGED BY: D. Reitz WELL I.D.: MW-3

CLIENT NAME: Tidewater Seattle SAMPLED BY: D. Reitz SAMPLE I.D.: MW-3

LOCATION: 2800 Martin Luther King Way, Seattle, WA QA SAMPLES:

DATE PURGED 02/07/12 START (2400hr) 1315 END (2400hr) 1335

DATE SAMPLED 02/07/12 SAMPLE TIME (2400hr) 1330

SAMPLE TYPE: Groundwater X Surface Water ____ Treatment Effluent ____ Other ____

CASING DIAMETER: 2" X (0.17) 3" ____ (0.38) 4" ____ (0.67) 5" ____ (1.02) 6" ____ (1.50) 8" ____ (2.60) Other ____ ( )

Casing Volume: (gallons per foot)

DEPTH TO BOTTOM (feet) = 20.20 CASING VOLUME (gal) = 1.68 gal.

DEPTH TO WATER (feet) = 10.33 CALCULATED PURGE (gal) = —

WATER COLUMN HEIGHT (feet) = 9.87 ACTUAL PURGE (gal) = 1.00 gal

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees F)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
2/7/2012	1320	0.25gal	13.23	49.3	6.1	Clr	—
2/7/2012	1323	0.25gal	13.33	49.3	6.1	Clr	—
2/7/2012	1326	0.25gal	12.99	49.7	6.1	Clr	—
2/7/2012	1329	0.25gal	12.99	49.7	6.1	Clr	—

Post Purge Measurements

Dissolved Oxygen 0.0 ORP -29

SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: 10.67 SAMPLE TURBIDITY: —

80% RECHARGE: ___ YES ___ NO ANALYSES: See Work Order

ODOR: Neg. SAMPLE VESSEL / PRESERVATIVE: See Work order

PURGING EQUIPMENT		SAMPLING EQUIPMENT	
___ Bladder Pump	___ Bailer (Teflon)	___ Bladder Pump	___ Bailer (Teflon)
___ Centrifugal Pump	___ Bailer (PVC)	___ Centrifugal Pump	___ Bailer (___ PVC or ___ disposable)
___ Submersible Pump	___ Bailer (Stainless Steel)	___ Submersible Pump	___ Bailer (Stainless Steel)
X Peristalic Pump	___ Dedicated ____	X Peristalic Pump	___ Dedicated ____
Other: ____		Other: ____	
Pump Depth: ____			

WELL INTEGRITY: Fair LOCK#: Y85

REMARKS: ____

SIGNATURE: ____

Stantec Consulting

WATER SAMPLE FIELD DATA SHEET

PROJECT #: 211602274.400.151 PURGED BY: Deitrie Hanson WELL I.D.: MW- 4

CLIENT NAME: Tidewater Seattle SAMPLED BY: Deitrie Hanson SAMPLE I.D.: MW-4

LOCATION: 2800 Martin Luther King Way, Seattle, WA QA SAMPLES: -0-

DATE PURGED 2/7/2012 START (2400hr) 1205 END (2400hr) 1245

DATE SAMPLED _____ SAMPLE TIME (2400hr) 1225

SAMPLE TYPE: Groundwater X Surface Water ____ Treatment Effluent ____ Other ____

CASING DIAMETER: 2" X 3" ____ 4" ____ 5" ____ 6" ____ 8" ____ Other ____

Casing Volume: (gallons per foot) (0.17) (0.38) (0.67) (1.02) (1.50) (2.60) ( )

DEPTH TO BOTTOM (feet) = 19.10 CASING VOLUME (gal) = 1.632gal

DEPTH TO WATER (feet) = 10.50 CALCULATED PURGE (gal) = —

WATER COLUMN HEIGHT (feet) = 9.60 ACTUAL PURGE (gal) = 3 Liters ~ 1.50gal

DH 2-7-12

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME ~~(gal) Liters~~ gal	TEMP. ~~(degrees F)~~ °C	CONDUCTIVITY ~~(umhos/cm)~~ mS/cm	pH (units)	COLOR (visual)	TURBIDITY (NTU)
2/7/2012	1208	0.250 gal	11.76	0.290	6.61	Opaque	—
2/7/2012	1211	0.250 gal	11.80	0.279	6.60	Opaque	—
2/7/2012	1214	0.250 gal	11.81	0.278	6.60	Opaque	—
2/7/2012	1217	0.250 gal	11.87	0.282	6.55	Opaque	—
2/7/2012	1220	0.250 gal	11.86	0.279	6.60	Opaque	—
2/7/2012	1223	0.250 gal	11.85	0.283	6.60	Opaque	—

Post Purge Measurements

Dissolved Oxygen 106.3 DO% ORP -46.9

SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: 10.71 SAMPLE TURBIDITY: —

80% RECHARGE: X YES ___ NO ANALYSES: See Work Order

ODOR: None - Slight SAMPLE VESSEL / PRESERVATIVE: See work order

PURGING EQUIPMENT		SAMPLING EQUIPMENT	
___ Bladder Pump	___ Bailer (Teflon)	___ Bladder Pump	___ Bailer (Teflon)
___ Centrifugal Pump	___ Bailer (PVC)	___ Centrifugal Pump	___ Bailer (___ PVC or ___ disposable)
___ Submersible Pump	___ Bailer (Stainless Steel)	___ Submersible Pump	___ Bailer (Stainless Steel)
X Peristalic Pump	___ Dedicated ____	X Peristalic Pump	___ Dedicated ____
Other: ____		Other: ____	
Pump Depth: 18 feet			

WELL INTEGRITY: GOOD LOCK#: NO

REMARKS: _____

SIGNATURE: Deitrie Hanson

Stantec Consulting

WATER SAMPLE FIELD DATA SHEET

PROJECT #: 211602274.400.151 PURGED BY: D. Reitz WELL I.D.: MW-5

CLIENT NAME: Tidewater Seattle SAMPLED BY: D. Reitz SAMPLE I.D.: MW-5

LOCATION: 2800 Martin Luther King Way, Seattle, WA QA SAMPLES: _____

DATE PURGED 02/07/12 START (2400hr) 1245 END (2400hr) 1305

DATE SAMPLED 02/07/12 SAMPLE TIME (2400hr) 1300

SAMPLE TYPE: Groundwater X Surface Water ____ Treatment Effluent ____ Other ____

CASING DIAMETER: 2" ____ 3" ____ 4" ____ 5" ____ 6" ____ 8" ____ Other 1" X

Casing Volume: (gallons per foot) (0.17) (0.38) (0.67) (1.02) (1.50) (2.60) ( )

DEPTH TO BOTTOM (feet) = 19.29 CASING VOLUME (gal) = —

DEPTH TO WATER (feet) = 10.54 CALCULATED PURGE (gal) = —

WATER COLUMN HEIGHT (feet) = 8.75 ACTUAL PURGE (gal) = 1.00 gal

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees F)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
2/7/12	1250	0.25gal	12.17	46.1	6.1	cldy	—
2/7/12	1253	0.25gal	12.12	45.6	6.1	cldy	—
2/7/12	1256	0.25gal	12.26	44.9	6.1	cldy	—
2/7/12	1259	0.25gal	12.24	45.1	6.1	cldy	—

Post Purge Measurements

Dissolved Oxygen 0.0 ORP -11

SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: 11.03 SAMPLE TURBIDITY: —

80% RECHARGE: ___ YES ___ NO ANALYSES: See Work Order

ODOR: Neg SAMPLE VESSEL / PRESERVATIVE: See Work Order

PURGING EQUIPMENT

___ Bladder Pump ___ Bailer (Teflon)
___ Centrifugal Pump ___ Bailer (PVC)
___ Submersible Pump ___ Bailer (Stainless Steel)
X Peristalic Pump ___ Dedicated ____
Other: ____
Pump Depth: ____

SAMPLING EQUIPMENT

___ Bladder Pump ___ Bailer (Teflon)
___ Centrifugal Pump ___ Bailer (___ PVC or ___ disposable)
___ Submersible Pump ___ Bailer (Stainless Steel)
X Peristalic Pump ___ Dedicated ____
Other: ____

WELL INTEGRITY: Fair LOCK#: Yes

REMARKS: ____

SIGNATURE: ____

Stantec Consulting

WATER SAMPLE FIELD DATA SHEET

PROJECT #: 211602274.400.151 PURGED BY: D. Reitz WELL I.D.: MW- 6

CLIENT NAME: Tidewater Seattle SAMPLED BY: D. Reitz SAMPLE I.D.: MW-6

LOCATION: 2800 Martin Luther King Way, Seattle, WA QA SAMPLES: ____

DATE PURGED 02/07/12 START (2400hr) 0955 END (2400hr) 1015

DATE SAMPLED 02/07/12 SAMPLE TIME (2400hr) 1010

SAMPLE TYPE: Groundwater X Surface Water ____ Treatment Effluent ____ Other ____

CASING DIAMETER: 2" X (0.17) 3" ____ (0.38) 4" ____ (0.67) 5" ____ (1.02) 6" ____ (1.50) 8" ____ (2.60) Other ____ ( )

Casing Volume: (gallons per foot)

DEPTH TO BOTTOM (feet) = 19.90 CASING VOLUME (gal) = 1.377gal

DEPTH TO WATER (feet) = 11.80 CALCULATED PURGE (gal) = —

WATER COLUMN HEIGHT (feet) = 8.10 ACTUAL PURGE (gal) = 1.00gal

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees F)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
02/07/12	1000	0.25gal	13.81	86.4	6.5	Clr	—
02/07/12	1003	0.25gal	13.53	88.5	6.3	Clr	—
02/07/12	1006	0.25gal	13.56	89.0	6.3	Clr	—
02/07/12	1009	0.25gal	13.65	89.4	6.3	Clr	—

Post Purge Measurements

Dissolved Oxygen 0.0 ORP 162

SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: 11.90 SAMPLE TURBIDITY: —

80% RECHARGE: ___ YES ___ NO ANALYSES: See Work Order

ODOR: Neg. SAMPLE VESSEL / PRESERVATIVE: See Work Order

PURGING EQUIPMENT

___ Bladder Pump ___ Bailer (Teflon)
___ Centrifugal Pump ___ Bailer (PVC)
___ Submersible Pump ___ Bailer (Stainless Steel)
X Peristalic Pump ___ Dedicated ____
Other: ____
Pump Depth: ____

SAMPLING EQUIPMENT

___ Bladder Pump ___ Bailer (Teflon)
___ Centrifugal Pump ___ Bailer (___ PVC or ___ disposable)
___ Submersible Pump ___ Bailer (Stainless Steel)
X Peristalic Pump ___ Dedicated ____
Other: ____

WELL INTEGRITY: Fair LOCK#: YES

REMARKS: ____

SIGNATURE: [signature]

Stantec Consulting

WATER SAMPLE FIELD DATA SHEET

PROJECT #: 211602274.400.151 | PURGED BY: D. Reitz | WELL I.D.: MW-7

CLIENT NAME: Tidewater Seattle | SAMPLED BY: D. Reitz | SAMPLE I.D.: MW-7

LOCATION: 2800 Martin Luther King Way, Seattle, WA | QA SAMPLES: ____

DATE PURGED 02/07/12 | START (2400hr) 1035 | END (2400hr) 1055

DATE SAMPLED 02/07/12 | SAMPLE TIME (2400hr) 1050

SAMPLE TYPE: Groundwater X | Surface Water ____ | Treatment Effluent ____ | Other ____

CASING DIAMETER: 2" X | 3" ____ | 4" ____ | 5" ____ | 6" ____ | 8" ____ | Other ____ ( )

Casing Volume: (gallons per foot) (0.17) | (0.38) | (0.67) | (1.02) | (1.50) | (2.60) | ( )

DEPTH TO BOTTOM (feet) = 19.90 | CASING VOLUME (gal) = 1.56 gal

DEPTH TO WATER (feet) = 10.75 | CALCULATED PURGE (gal) = —

WATER COLUMN HEIGHT (feet) = 9.15 | ACTUAL PURGE (gal) = ____

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees F)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
02/07/12	1040	0.25 gal	13.30	89.0	6.3	Clr.	—
02/07/12	1043	0.25 gal	12.99	91.3	6.3	Clr.	—
02/07/12	1046	0.25 gal	13.07	91.3	6.3	Clr.	—
02/07/12	1049	0.25 gal	13.14	91.4	6.2	Clr.	—

Post Purge Measurements

Dissolved Oxygen 0.0 | ORP 24

SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: 10.77 | SAMPLE TURBIDITY: —

80% RECHARGE: ___ YES ___ NO | ANALYSES: See Work Order

ODOR: Neg. | SAMPLE VESSEL / PRESERVATIVE: See Work Order

PURGING EQUIPMENT

___ Bladder Pump
___ Centrifugal Pump
___ Submersible Pump
X Peristalic Pump
___ Bailer (Teflon)
___ Bailer (PVC)
___ Bailer (Stainless Steel)
___ Dedicated ____
Other: ____
Pump Depth: ____

SAMPLING EQUIPMENT

___ Bladder Pump
___ Centrifugal Pump
___ Submersible Pump
X Peristalic Pump
___ Bailer (Teflon)
___ Bailer (___ PVC or ___ disposable)
___ Bailer (Stainless Steel)
___ Dedicated ____
Other: ____

WELL INTEGRITY: Fair | LOCK#: 483

REMARKS: ____

SIGNATURE: [signature]

Stantec Consulting

WATER SAMPLE FIELD DATA SHEET

PROJECT #: 211602274.400.151 PURGED BY: D. Reitz WELL I.D.: MW-8

CLIENT NAME: Tidewater Seattle SAMPLED BY: D. Reitz SAMPLE I.D.: MW-8

LOCATION: 2800 Martin Luther King Way, Seattle, WA QA SAMPLES:

DATE PURGED 02/07/12 START (2400hr) 1415 END (2400hr) 1435

DATE SAMPLED 02/07/12 SAMPLE TIME (2400hr) 1430

SAMPLE TYPE: Groundwater X Surface Water ____ Treatment Effluent ____ Other ____

CASING DIAMETER: 2" X 3" ____ 4" ____ 5" ____ 6" ____ 8" ____ Other ____

Casing Volume: (gallons per foot) (0.17) (0.38) (0.67) (1.02) (1.50) (2.60) ( )

DEPTH TO BOTTOM (feet) = 19.80 CASING VOLUME (gal) = 1.67 gal

DEPTH TO WATER (feet) = 10.00 CALCULATED PURGE (gal) = —

WATER COLUMN HEIGHT (feet) = 9.80 ACTUAL PURGE (gal) = 1.00 gal

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees C)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
2/7/2012	1420	0.25 gal	12.76	55.5	6.2	Clr.	—
2/7/2012	1423	0.25 gal	12.40	57.0	6.1	Clr.	—
2/7/2012	1426	0.25 gal	12.36	57.1	6.1	Clr.	—
2/7/2012	1429	0.25 gal	12.35	57.2	6.1	Clr.	—

Post Purge Measurements

Dissolved Oxygen 0.0 ORP 3

SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: 10.18 SAMPLE TURBIDITY: —

80% RECHARGE: ___ YES ___ NO ANALYSES: See Work Order

ODOR: Neg. SAMPLE VESSEL / PRESERVATIVE: See Work Order

PURGING EQUIPMENT

___ Bladder Pump ___ Bailer (Teflon)
___ Centrifugal Pump ___ Bailer (PVC)
___ Submersible Pump ___ Bailer (Stainless Steel)
X Peristalic Pump ___ Dedicated ____
Other: ____
Pump Depth: ____

SAMPLING EQUIPMENT

___ Bladder Pump ___ Bailer (Teflon)
___ Centrifugal Pump ___ Bailer (___ PVC or ___ disposable)
___ Submersible Pump ___ Bailer (Stainless Steel)
X Peristalic Pump ___ Dedicated ____
Other: ____

WELL INTEGRITY: Fair LOCK#: YES

REMARKS: ____

SIGNATURE: [signature]

Stantec Consulting

WATER SAMPLE FIELD DATA SHEET

PROJECT #: 211602274.400.151 PURGED BY: Deitrie Hanson WELL I.D.: MW- 9

CLIENT NAME: Tidewater Seattle SAMPLED BY: Deitrie Hanson SAMPLE I.D.: MW-9

LOCATION: 2800 Martin Luther King Way, Seattle, WA QA SAMPLES: &

DATE PURGED 2/7/2012 START (2400hr) 1405 END (2400hr) 1455

DATE SAMPLED 2/7/2012 SAMPLE TIME (2400hr) 1425

SAMPLE TYPE: Groundwater X Surface Water ____ Treatment Effluent ____ Other ____

CASING DIAMETER: 2" X (0.17) 3" ____ (0.38) 4" ____ (0.67) 5" ____ (1.02) 6" ____ (1.50) 8" ____ (2.60) Other ____ ( )

Casing Volume: (gallons per foot)

DEPTH TO BOTTOM (feet) = 23.60 CASING VOLUME (gal) = 1.965 gal

DEPTH TO WATER (feet) = 12.04 CALCULATED PURGE (gal) = —

WATER COLUMN HEIGHT (feet) = 11.56 ACTUAL PURGE (gal) = 1.50 gal

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME ~~(gal)~~ OK	TEMP. °C (degrees ~~F~~)	CONDUCTIVITY ~~(umhos/cm)~~ mS/cm	pH (units)	COLOR (visual)	TURBIDITY (NTU)
2/7/2011	1408	0.750 gal	11.51	0.406	7.29	opaque gray	—
2/7/2011	1411	0.250 gal	11.51	0.464	7.29	Opaque gray	—
2/7/2011	1414	0.250 gal	11.52	0.466	7.26	Opaque gray	—
2/7/2011	1417	0.250 gal	11.54	0.467	7.21	Opaque gray	—
2/7/2011	1420	0.250 gal	11.54	0.460	7.22	Opaque gray	—
2/7/201	1423	0.250 gal	11.57	0.465	7.20	Opaque	—

Post Purge Measurements

Dissolved Oxygen 30.10 ORP -53.4

SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: 12.29 SAMPLE TURBIDITY: —

80% RECHARGE: X YES ___ NO ANALYSES: See Work Order

ODOR: None SAMPLE VESSEL / PRESERVATIVE: See Work Order

PURGING EQUIPMENT		SAMPLING EQUIPMENT	
___ Bladder Pump	___ Bailer (Teflon)	___ Bladder Pump	___ Bailer (Teflon)
___ Centrifugal Pump	___ Bailer (PVC)	___ Centrifugal Pump	___ Bailer (___ PVC or ___ disposable)
X Submersible Pump	___ Bailer (Stainless Steel)	___ Submersible Pump	___ Bailer (Stainless Steel)
___ Peristalic Pump	___ Dedicated ____	X Peristalic Pump	___ Dedicated ____
Other: ____		Other: ____	
Pump Depth: 11.00			

WELL INTEGRITY: GOOD LOCK#: No

REMARKS: ____

SIGNATURE: Deitrie Hanson

Stantec Consulting

WATER SAMPLE FIELD DATA SHEET

PROJECT #: 211602274.400.151 PURGED BY: D. Reitz WELL I.D.: MW-10

CLIENT NAME: Tidewater Seattle SAMPLED BY: D. Reitz SAMPLE I.D.: MW-10

LOCATION: 2800 Martin Luther King Way, Seattle, WA QA SAMPLES: _____

DATE PURGED 02/07/12 START (2400hr) 1120 END (2400hr) 1140

DATE SAMPLED 02/07/12 SAMPLE TIME (2400hr) 1135

SAMPLE TYPE: Groundwater X Surface Water ____ Treatment Effluent ____ Other ____

CASING DIAMETER: 2" X 3" ____ 4" ____ 5" ____ 6" ____ 8" ____ Other ____

Casing Volume: (gallons per foot) (0.17) (0.38) (0.67) (1.02) (1.50) (2.60) ( )

DEPTH TO BOTTOM (feet) = 19.80 CASING VOLUME (gal) = 1.59 gal

DEPTH TO WATER (feet) = 10.44 CALCULATED PURGE (gal) = —

WATER COLUMN HEIGHT (feet) = 9.36 ACTUAL PURGE (gal) = 1.00 gal

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees C)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
2/7/2012	1125	0.25 gal	13.93	0.247	6.3	Clr	—
2/7/2012	1128	0.25 gal	14.11	0.250	6.4	Clr	—
2/7/2012	1131	0.25 gal	14.22	0.254	6.4	Clr	—
2/7/2012	1134	0.25 gal	14.10	0.251	6.5	Clr	—

Post Purge Measurements

Dissolved Oxygen 0.0 ORP -3

SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: 10.72 SAMPLE TURBIDITY: —

80% RECHARGE: ___ YES ___ NO ANALYSES: See Work Order

ODOR: Neg SAMPLE VESSEL / PRESERVATIVE: See Work Order

PURGING EQUIPMENT

___ Bladder Pump ___ Bailer (Teflon)
___ Centrifugal Pump ___ Bailer (PVC)
___ Submersible Pump ___ Bailer (Stainless Steel)
X Peristalic Pump ___ Dedicated ____
Other: ____
Pump Depth: ____

SAMPLING EQUIPMENT

___ Bladder Pump ___ Bailer (Teflon)
___ Centrifugal Pump ___ Bailer (___ PVC or ___ disposable)
___ Submersible Pump ___ Bailer (Stainless Steel)
X Peristalic Pump ___ Dedicated ____
Other: ____

WELL INTEGRITY: Fair LOCK#: yes

REMARKS: ____

SIGNATURE: _____

APPENDIX C
CERTIFIED LABORATORY ANALYTICAL REPORT AND CHAIN-OF-CUSTODY DOCUMENTATION

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Analysis Report

ANALYTICAL RESULTS

Prepared by:

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

Prepared for:

STANTEC-TIDEWATER
3017 Kilgore Rd, Ste 100
Rancho Cordova CA 95670

March 06, 2012

Project: 301233/5173

Submittal Date: 02/09/2012
Group Number: 1288994
PO Number: 211602382.500.0802
Release Number: RITTENBERG
State of Sample Origin: WA

Client Sample Description	Lancaster Labs (LLI) #
MW-1 Grab Water Sample	6544124
MW-2 Grab Water Sample	6544125
MW-3 Grab Water Sample	6544126
MW-4 Grab Water Sample	6544127
MW-5 Grab Water Sample	6544128
MW-6 Grab Water Sample	6544129
MW-7 Grab Water Sample	6544130
MW-8 Grab Water Sample	6544131
MW-9 Grab Water Sample	6544132
MW-10 Grab Water Sample	6544133
QA-T Water Sample	6544134

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

ELECTRONIC COPY TO	Stantec - Tidewater	Attn: Laura Viesselman
ELECTRONIC COPY TO	STANTEC	Attn: Tony Giglini
ELECTRONIC COPY TO	STANTEC-TIDEWATER	Attn: Dan Schreiner
ELECTRONIC COPY TO	Stantec	Attn: Alejandra Hernandez
ELECTRONIC COPY TO	Stantec	Attn: Jennifer Tanner

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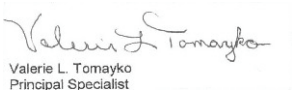
ELECTRONIC COPY TO	STANTEC-TIDEWATER	Attn: Brian Goss
ELECTRONIC COPY TO	Stantec	Attn: Justin Dauphinais

Questions? Contact your Client Services Representative
Jill M Parker at (717) 556-7262

Respectfully Submitted,



Valerie L. Tomayko
Principal Specialist

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Analysis Report

Sample Description: MW-1 Grab Water Sample
301233/5173
2800 Martin Luther King Jr Way S - Seattle, WA

LLI Sample # WW 6544124
LLI Group # 1288994
Account # 11811

Project Name: 301233/5173

Collected: 02/07/2012 15:05 by DH

Submitted: 02/09/2012 09:45
Reported: 03/06/2012 21:33

STANTEC-TIDEWATER
3017 Kilgore Rd, Ste 100
Rancho Cordova CA 95670

MLK-1

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**	
10903	Benzene	71-43-2	N.D.	0.5	1
10903	1,2-Dibromoethane	106-93-4	N.D.	1	1
10903	1,2-Dichloroethane	107-06-2	N.D.	1	1
10903	Ethylbenzene	100-41-4	3	0.8	1
10903	Isopropylbenzene	98-82-8	N.D.	1	1
10903	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10903	Naphthalene	91-20-3	N.D.	1	1
10903	n-Propylbenzene	103-65-1	N.D.	1	1
10903	Toluene	108-88-3	41	0.7	1
10903	1,2,4-Trimethylbenzene	95-63-6	N.D.	1	1
10903	1,3,5-Trimethylbenzene	108-67-8	N.D.	1	1
10903	m+p-Xylene	179601-23-1	13	0.8	1
10903	o-Xylene	95-47-6	5	0.8	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**ug/l**	**ug/l**	
08273	NWTPH-Gx water C7-C12	n.a.	260	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.	430	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	620	69	1

The reverse surrogate, capric acid, was 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
10903	VOCs by 8260B - Water	SW-846 8260B	1	N120471AA	02/16/2012 07:26	Michael D Cawley	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	N120471AA	02/16/2012 07:26	Michael D Cawley	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	12046A07A	02/15/2012 12:57	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	12046A07A	02/15/2012 12:57	Marie D John	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	120460009A	02/23/2012 01:15	Michele D Hamilton	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	120460009A	02/15/2012 22:00	Elaine F Stoltzfus	1

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Analysis Report

Sample Description: MW-2 Grab Water Sample
301233/5173
2800 Martin Luther King Jr Way S - Seattle, WA

LLI Sample # WW 6544125
LLI Group # 1288994
Account # 11811

Project Name: 301233/5173

Collected: 02/07/2012 12:20 by DH

Submitted: 02/09/2012 09:45
Reported: 03/06/2012 21:33

STANTEC-TIDEWATER
3017 Kilgore Rd, Ste 100
Rancho Cordova CA 95670

MLK02

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	
10903	Benzene	71-43-2	1	0.5	1
10903	1,2-Dibromoethane	106-93-4	N.D.	1	1
10903	1,2-Dichloroethane	107-06-2	N.D.	1	1
10903	Ethylbenzene	100-41-4	N.D.	0.8	1
10903	Isopropylbenzene	98-82-8	22	1	1
10903	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10903	Naphthalene	91-20-3	N.D.	1	1
10903	n-Propylbenzene	103-65-1	55	1	1
10903	Toluene	108-88-3	2	0.7	1
10903	1,2,4-Trimethylbenzene	95-63-6	N.D.	1	1
10903	1,3,5-Trimethylbenzene	108-67-8	N.D.	1	1
10903	m+p-Xylene	179601-23-1	N.D.	0.8	1
10903	o-Xylene	95-47-6	N.D.	0.8	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	780	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.	390	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	68	1

The reverse surrogate, capric acid, was 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
10903	VOCs by 8260B - Water	SW-846 8260B	1	N120471AA	02/16/2012 07:48	Michael D Cawley	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	N120471AA	02/16/2012 07:48	Michael D Cawley	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	12046A07A	02/15/2012 13:22	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	12046A07A	02/15/2012 13:22	Marie D John	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	120460009A	02/23/2012 00:06	Michele D Hamilton	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	120460009A	02/15/2012 22:00	Elaine F Stoltzfus	1

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Analysis Report

Sample Description: MW-3 Grab Water Sample
301233/5173
2800 Martin Luther King Jr Way S - Seattle, WA

LLI Sample # WW 6544126
LLI Group # 1288994
Account # 11811

Project Name: 301233/5173

Collected: 02/07/2012 13:30 by DH

Submitted: 02/09/2012 09:45
Reported: 03/06/2012 21:33

STANTEC-TIDEWATER
3017 Kilgore Rd, Ste 100
Rancho Cordova CA 95670

MLK-3

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**	
10903	Benzene	71-43-2	N.D.	1	2
10903	1,2-Dibromoethane	106-93-4	N.D.	2	2
10903	1,2-Dichloroethane	107-06-2	N.D.	2	2
10903	Ethylbenzene	100-41-4	130	2	2
10903	Isopropylbenzene	98-82-8	27	2	2
10903	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	2
10903	Naphthalene	91-20-3	49	2	2
10903	n-Propylbenzene	103-65-1	74	2	2
10903	Toluene	108-88-3	N.D.	1	2
10903	1,2,4-Trimethylbenzene	95-63-6	870	20	20
10903	1,3,5-Trimethylbenzene	108-67-8	190	2	2
10903	m+p-Xylene	179601-23-1	480	2	2
10903	o-Xylene	95-47-6	43	2	2
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**ug/l**	**ug/l**	
08273	NWTPH-Gx water C7-C12	n.a.	6,300	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.	1,200	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	68	1

The reverse surrogate, capric acid, was 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
10903	VOCs by 8260B - Water	SW-846 8260B	1	N120471AA	02/16/2012 10:31	Michael D Cawley	2
10903	VOCs by 8260B - Water	SW-846 8260B	1	N120471AA	02/16/2012 10:54	Michael D Cawley	20
01163	GC/MS VOA Water Prep	SW-846 5030B	1	N120471AA	02/16/2012 10:31	Michael D Cawley	2
01163	GC/MS VOA Water Prep	SW-846 5030B	2	N120471AA	02/16/2012 10:54	Michael D Cawley	20
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	12046A07A	02/15/2012 18:50	Marie D John	5
01146	GC VOA Water Prep	SW-846 5030B	1	12046A07A	02/15/2012 18:50	Marie D John	5
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	120460009A	02/23/2012 00:29	Michele D Hamilton	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	120460009A	02/15/2012 22:00	Elaine F Stoltzfus	1

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Analysis Report

Sample Description: MW-4 Grab Water Sample
301233/5173
2800 Martin Luther King Jr Way S - Seattle, WA

LLI Sample # WW 6544127
LLI Group # 1288994
Account # 11811

Project Name: 301233/5173

Collected: 02/07/2012 12:25 by DH

Submitted: 02/09/2012 09:45
Reported: 03/06/2012 21:33

STANTEC-TIDEWATER
3017 Kilgore Rd, Ste 100
Rancho Cordova CA 95670

MLK04

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**	
10903	Benzene	71-43-2	N.D.	0.5	1
10903	1,2-Dibromoethane	106-93-4	N.D.	1	1
10903	1,2-Dichloroethane	107-06-2	N.D.	1	1
10903	Ethylbenzene	100-41-4	N.D.	0.8	1
10903	Isopropylbenzene	98-82-8	N.D.	1	1
10903	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10903	Naphthalene	91-20-3	N.D.	1	1
10903	n-Propylbenzene	103-65-1	N.D.	1	1
10903	Toluene	108-88-3	N.D.	0.7	1
10903	1,2,4-Trimethylbenzene	95-63-6	N.D.	1	1
10903	1,3,5-Trimethylbenzene	108-67-8	N.D.	1	1
10903	m+p-Xylene	179601-23-1	N.D.	0.8	1
10903	o-Xylene	95-47-6	N.D.	0.8	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.	55	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1

The reverse surrogate, capric acid, was 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
10903	VOCs by 8260B - Water	SW-846 8260B	1	N120471AA	02/16/2012 08:12	Michael D Cawley	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	N120471AA	02/16/2012 08:12	Michael D Cawley	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	12046A07A	02/15/2012 13:48	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	12046A07A	02/15/2012 13:48	Marie D John	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	120460009A	02/23/2012 00:52	Michele D Hamilton	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	120460009A	02/15/2012 22:00	Elaine F Stoltzfus	1

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Analysis Report

Sample Description: MW-5 Grab Water Sample
301233/5173
2800 Martin Luther King Jr Way S - Seattle, WA

LLI Sample # WW 6544128
LLI Group # 1288994
Account # 11811

Project Name: 301233/5173

Collected: 02/07/2012 13:00 by DH

Submitted: 02/09/2012 09:45
Reported: 03/06/2012 21:33

STANTEC-TIDEWATER
3017 Kilgore Rd, Ste 100
Rancho Cordova CA 95670

MLK05

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**	
10903	Benzene	71-43-2	0.8	0.5	1
10903	1,2-Dibromoethane	106-93-4	N.D.	1	1
10903	1,2-Dichloroethane	107-06-2	N.D.	1	1
10903	Ethylbenzene	100-41-4	12	0.8	1
10903	Isopropylbenzene	98-82-8	21	1	1
10903	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10903	Naphthalene	91-20-3	37	1	1
10903	n-Propylbenzene	103-65-1	55	1	1
10903	Toluene	108-88-3	N.D.	0.7	1
10903	1,2,4-Trimethylbenzene	95-63-6	31	1	1
10903	1,3,5-Trimethylbenzene	108-67-8	6	1	1
10903	m+p-Xylene	179601-23-1	37	0.8	1
10903	o-Xylene	95-47-6	6	0.8	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**ug/l**	**ug/l**	
08273	NWTPH-Gx water C7-C12	n.a.	1,200	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.	34	29	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	68	1

The reverse surrogate, capric acid, was 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
10903	VOCs by 8260B - Water	SW-846 8260B	1	N120471AA	02/16/2012 08:35	Michael D Cawley	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	N120471AA	02/16/2012 08:35	Michael D Cawley	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	12046A07A	02/15/2012 14:13	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	12046A07A	02/15/2012 14:13	Marie D John	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	120460022A	02/23/2012 21:53	Michele D Hamilton	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	120460022A	02/16/2012 09:20	Kerrie A Freeburn	1

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Analysis Report

Sample Description: MW-6 Grab Water Sample
301233/5173
2800 Martin Luther King Jr Way S - Seattle, WA

LLI Sample # WW 6544129
LLI Group # 1288994
Account # 11811

Project Name: 301233/5173

Collected: 02/07/2012 10:10 by DH

Submitted: 02/09/2012 09:45
Reported: 03/06/2012 21:33

STANTEC-TIDEWATER
3017 Kilgore Rd, Ste 100
Rancho Cordova CA 95670

MLK06

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**	
10903	Benzene	71-43-2	N.D.	0.5	1
10903	1,2-Dibromoethane	106-93-4	N.D.	1	1
10903	1,2-Dichloroethane	107-06-2	N.D.	1	1
10903	Ethylbenzene	100-41-4	N.D.	0.8	1
10903	Isopropylbenzene	98-82-8	N.D.	1	1
10903	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10903	Naphthalene	91-20-3	N.D.	1	1
10903	n-Propylbenzene	103-65-1	N.D.	1	1
10903	Toluene	108-88-3	N.D.	0.7	1
10903	1,2,4-Trimethylbenzene	95-63-6	N.D.	1	1
10903	1,3,5-Trimethylbenzene	108-67-8	N.D.	1	1
10903	m+p-Xylene	179601-23-1	N.D.	0.8	1
10903	o-Xylene	95-47-6	N.D.	0.8	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, was 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
10903	VOCs by 8260B - Water	SW-846 8260B	1	N120471AA	02/16/2012 08:58	Michael D Cawley	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	N120471AA	02/16/2012 08:58	Michael D Cawley	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	12046A07A	02/15/2012 14:38	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	12046A07A	02/15/2012 14:38	Marie D John	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	120460022A	02/23/2012 22:16	Michele D Hamilton	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	120460022A	02/16/2012 09:20	Kerrie A Freeburn	1

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Analysis Report

Sample Description: MW-7 Grab Water Sample
301233/5173
2800 Martin Luther King Jr Way S - Seattle, WA

LLI Sample # WW 6544130
LLI Group # 1288994
Account # 11811

Project Name: 301233/5173

Collected: 02/07/2012 10:50 by DH

Submitted: 02/09/2012 09:45
Reported: 03/06/2012 21:33

STANTEC-TIDEWATER
3017 Kilgore Rd, Ste 100
Rancho Cordova CA 95670

MLK07

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**	
10903	Benzene	71-43-2	N.D.	0.5	1
10903	1,2-Dibromoethane	106-93-4	N.D.	1	1
10903	1,2-Dichloroethane	107-06-2	N.D.	1	1
10903	Ethylbenzene	100-41-4	N.D.	0.8	1
10903	Isopropylbenzene	98-82-8	N.D.	1	1
10903	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10903	Naphthalene	91-20-3	N.D.	1	1
10903	n-Propylbenzene	103-65-1	N.D.	1	1
10903	Toluene	108-88-3	2	0.7	1
10903	1,2,4-Trimethylbenzene	95-63-6	N.D.	1	1
10903	1,3,5-Trimethylbenzene	108-67-8	N.D.	1	1
10903	m+p-Xylene	179601-23-1	N.D.	0.8	1
10903	o-Xylene	95-47-6	N.D.	0.8	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, was 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
10903	VOCs by 8260B - Water	SW-846 8260B	1	N120471AA	02/16/2012 09:21	Michael D Cawley	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	N120471AA	02/16/2012 09:21	Michael D Cawley	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	12046A07A	02/15/2012 15:03	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	12046A07A	02/15/2012 15:03	Marie D John	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	120460022A	02/23/2012 22:39	Michele D Hamilton	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	120460022A	02/16/2012 09:20	Kerrie A Freeburn	1

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Analysis Report

Sample Description: MW-8 Grab Water Sample
301233/5173
2800 Martin Luther King Jr Way S - Seattle, WA

LLI Sample # WW 6544131
LLI Group # 1288994
Account # 11811

Project Name: 301233/5173

Collected: 02/07/2012 14:30 by DH

Submitted: 02/09/2012 09:45
Reported: 03/06/2012 21:33

STANTEC-TIDEWATER
3017 Kilgore Rd, Ste 100
Rancho Cordova CA 95670

MLK8-

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**	
10903	Benzene	71-43-2	N.D.	1	2
10903	1,2-Dibromoethane	106-93-4	N.D.	2	2
10903	1,2-Dichloroethane	107-06-2	N.D.	2	2
10903	Ethylbenzene	100-41-4	110	2	2
10903	Isopropylbenzene	98-82-8	18	2	2
10903	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	2
10903	Naphthalene	91-20-3	89	2	2
10903	n-Propylbenzene	103-65-1	36	2	2
10903	Toluene	108-88-3	N.D.	1	2
10903	1,2,4-Trimethylbenzene	95-63-6	1,400	20	20
10903	1,3,5-Trimethylbenzene	108-67-8	450	2	2
10903	m+p-Xylene	179601-23-1	970	2	2
10903	o-Xylene	95-47-6	310	2	2
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**ug/l**	**ug/l**	
08273	NWTPH-Gx water C7-C12	n.a.	13,000	500	10
GC Petroleum Hydrocarbons w/Si	**ECY 97-602 NWTPH-Dx modified**		**ug/l**	**ug/l**	
12005	DRO C12-C24 w/Si Gel	n.a.	290	30	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	69	1

The reverse surrogate, capric acid, was present at 6.3%.

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
10903	VOCs by 8260B - Water	SW-846 8260B	1	N120471AA	02/16/2012 11:17	Michael D Cawley	2
10903	VOCs by 8260B - Water	SW-846 8260B	1	N120471AA	02/16/2012 11:40	Michael D Cawley	20
01163	GC/MS VOA Water Prep	SW-846 5030B	1	N120471AA	02/16/2012 11:17	Michael D Cawley	2
01163	GC/MS VOA Water Prep	SW-846 5030B	2	N120471AA	02/16/2012 11:40	Michael D Cawley	20
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	12046A07A	02/15/2012 19:15	Marie D John	10
01146	GC VOA Water Prep	SW-846 5030B	1	12046A07A	02/15/2012 19:15	Marie D John	10
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	120460022A	02/23/2012 23:02	Michele D Hamilton	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	120460022A	02/16/2012 09:20	Kerrie A Freeburn	1

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Analysis Report

Sample Description: MW-9 Grab Water Sample
301233/5173
2800 Martin Luther King Jr Way S - Seattle, WA

LLI Sample # WW 6544132
LLI Group # 1288994
Account # 11811

Project Name: 301233/5173

Collected: 02/07/2012 14:25 by DH

Submitted: 02/09/2012 09:45
Reported: 03/06/2012 21:33

STANTEC-TIDEWATER
3017 Kilgore Rd, Ste 100
Rancho Cordova CA 95670

MLK-9

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**	
10903	Benzene	71-43-2	N.D.	0.5	1
10903	1,2-Dibromoethane	106-93-4	N.D.	1	1
10903	1,2-Dichloroethane	107-06-2	N.D.	1	1
10903	Ethylbenzene	100-41-4	N.D.	0.8	1
10903	Isopropylbenzene	98-82-8	N.D.	1	1
10903	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10903	Naphthalene	91-20-3	N.D.	1	1
10903	n-Propylbenzene	103-65-1	N.D.	1	1
10903	Toluene	108-88-3	N.D.	0.7	1
10903	1,2,4-Trimethylbenzene	95-63-6	N.D.	1	1
10903	1,3,5-Trimethylbenzene	108-67-8	N.D.	1	1
10903	m+p-Xylene	179601-23-1	N.D.	0.8	1
10903	o-Xylene	95-47-6	N.D.	0.8	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**ug/l**	**ug/l**	
08273	NWTPH-Gx water C7-C12	n.a.	66	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.	300	1
12005	HRO C24-C40 w/Si Gel	n.a.	N.D.	700	1

The reverse surrogate, capric acid, was present at <1%.
Reporting limits were raised due to interference from the sample matrix.
The surrogate data is outside the QC limits due to unresolvable matrix problems evident in the sample chromatogram.

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
10903	VOCs by 8260B - Water	SW-846 8260B	1	N120471AA	02/16/2012 09:44	Michael D Cawley	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	N120471AA	02/16/2012 09:44	Michael D Cawley	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	12046A07A	02/15/2012 15:29	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	12046A07A	02/15/2012 15:29	Marie D John	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	120460022A	02/23/2012 23:25	Michele D Hamilton	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	120460022A	02/16/2012 09:20	Kerrie A Freeburn	1

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Analysis Report

Sample Description: MW-10 Grab Water Sample
301233/5173
2800 Martin Luther King Jr Way S - Seattle, WA

LLI Sample # WW 6544133
LLI Group # 1288994
Account # 11811

Project Name: 301233/5173

Collected: 02/07/2012 11:35 by DH

Submitted: 02/09/2012 09:45
Reported: 03/06/2012 21:33

STANTEC-TIDEWATER
3017 Kilgore Rd, Ste 100
Rancho Cordova CA 95670

MLK10

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**	
10903	Benzene	71-43-2	1	0.5	1
10903	1,2-Dibromoethane	106-93-4	N.D.	1	1
10903	1,2-Dichloroethane	107-06-2	N.D.	1	1
10903	Ethylbenzene	100-41-4	N.D.	0.8	1
10903	Isopropylbenzene	98-82-8	1	1	1
10903	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10903	Naphthalene	91-20-3	N.D.	1	1
10903	n-Propylbenzene	103-65-1	3	1	1
10903	Toluene	108-88-3	N.D.	0.7	1
10903	1,2,4-Trimethylbenzene	95-63-6	N.D.	1	1
10903	1,3,5-Trimethylbenzene	108-67-8	N.D.	1	1
10903	m+p-Xylene	179601-23-1	N.D.	0.8	1
10903	o-Xylene	95-47-6	N.D.	0.8	1
	A preserved vial was submitted for analysis. However, the pH at the time of analysis was 5.				
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**ug/l**	**ug/l**	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
	A preserved vial was submitted for analysis. However, the pH at the time of analysis was 4.				
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, was 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
10903	VOCs by 8260B - Water	SW-846 8260B	1	N120471AA	02/16/2012 10:08	Michael D Cawley	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	N120471AA	02/16/2012 10:08	Michael D Cawley	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	12046A07A	02/15/2012 15:54	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	12046A07A	02/15/2012 15:54	Marie D John	1
12005	NWTPH-Dx water w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	120470015A	03/01/2012 03:22	Michele D Hamilton	1
12007	NW Dx water w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	120470015A	02/17/2012 07:30	Catherine R Wiker	1

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Analysis Report

Sample Description: QA-T Water Sample
301233/5173
2800 Martin Luther King Jr Way S - Seattle, WA

LLI Sample # WW 6544134
LLI Group # 1288994
Account # 11811

Project Name: 301233/5173

Collected: 02/07/2012

Submitted: 02/09/2012 09:45
Reported: 03/06/2012 21:33

STANTEC-TIDEWATER
3017 Kilgore Rd, Ste 100
Rancho Cordova CA 95670

MLKTB

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	D120462AA	02/15/2012 11:35	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D120462AA	02/15/2012 11:35	Daniel H Heller	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	12046A07A	02/15/2012 12:07	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	12046A07A	02/15/2012 12:07	Marie D John	1

Quality Control Summary

Client Name: STANTEC-TIDEWATER Group Number: 1288994
Reported: 03/06/12 at 09:33 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: D120462AA	Sample number(s): 6544134							
Benzene	N.D.	0.5	ug/l	99		79-120		
Ethylbenzene	N.D.	0.5	ug/l	99		79-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	95		76-120		
Toluene	N.D.	0.5	ug/l	102		79-120		
Xylene (Total)	N.D.	0.5	ug/l	100		80-120		
Batch number: N120471AA	Sample number(s): 6544124-6544133							
Benzene	N.D.	0.5	ug/l	99	97	79-120	2	30
1,2-Dibromoethane	N.D.	1.	ug/l	100	99	80-120	1	30
1,2-Dichloroethane	N.D.	1.	ug/l	100	98	70-130	2	30
Ethylbenzene	N.D.	0.8	ug/l	97	96	79-120	2	30
Isopropylbenzene	N.D.	1.	ug/l	94	92	77-120	2	30
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	94	94	76-120	0	30
Naphthalene	N.D.	1.	ug/l	89	89	62-120	0	30
n-Propylbenzene	N.D.	1.	ug/l	92	92	80-120	0	30
Toluene	N.D.	0.7	ug/l	100	99	79-120	1	30
1,2,4-Trimethylbenzene	N.D.	1.	ug/l	93	91	74-120	2	30
1,3,5-Trimethylbenzene	N.D.	1.	ug/l	90	90	75-120	1	30
m+p-Xylene	N.D.	0.8	ug/l	98	97	80-120	2	30
o-Xylene	N.D.	0.8	ug/l	97	95	80-120	2	30
Batch number: 12046A07A	Sample number(s): 6544124-6544134							
NWTPH-Gx water C7-C12	N.D.	50.	ug/l	100	91	75-135	10	30
Batch number: 120460009A	Sample number(s): 6544124-6544127							
DRO C12-C24 w/Si Gel	N.D.	30.	ug/l	88	88	50-120	0	20
HRO C24-C40 w/Si Gel	N.D.	70.	ug/l					
Batch number: 120460022A	Sample number(s): 6544128-6544132							
DRO C12-C24 w/Si Gel	N.D.	30.	ug/l	69	69	50-120	0	20
HRO C24-C40 w/Si Gel	N.D.	70.	ug/l					
Batch number: 120470015A	Sample number(s): 6544133							
DRO C12-C24 w/Si Gel	N.D.	30.	ug/l	69	69	50-120	0	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

	MS	MSD	MS/MSD	RPD	BKG	DUP	DUP	Dup RPD

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

Quality Control Summary

Client Name: STANTEC-TIDEWATER Group Number: 1288994
Reported: 03/06/12 at 09:33 PM

Analysis Name	%REC	%REC	Limits	RPD	MAX	Conc	Conc	RPD	Max
Batch number: D120462AA	Sample number(s): 6544134 UNSPK: P543971								
Benzene	107	95	80-126	12	30				
Ethylbenzene	105	95	71-134	10	30				
Methyl Tertiary Butyl Ether	98	86	72-126	13	30				
Toluene	110	97	80-125	12	30				
Xylene (Total)	105	95	79-125	11	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: D120462AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
6544134	94	96	100	96
Blank	96	96	100	96
LCS	95	97	100	99
MS	95	99	99	99
MSD	95	101	99	99
Limits:	80-116	77-113	80-113	78-113

Analysis Name: VOCs by 8260B - Water
Batch number: N120471AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
6544124	103	101	97	96
6544125	100	100	98	97
6544126	102	102	99	100
6544127	104	102	97	92
6544128	101	101	98	96
6544129	102	101	96	93
6544130	104	103	96	93
6544131	103	101	99	98
6544132	103	102	97	93
6544133	103	103	99	93
Blank	100	100	98	92
LCS	101	104	107	99
LCSD	100	104	105	99
Limits:	80-116	77-113	80-113	78-113

Analysis Name: NWTPH-Gx water C7-C12
Batch number: 12046A07A

	Trifluorotoluene-F
6544124	108
6544125	116
6544126	113
6544127	104
6544128	127
6544129	104
6544130	109

*- 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: STANTEC-TIDEWATER Group Number: 1288994
Reported: 03/06/12 at 09:33 PM

Surrogate Quality Control

6544131	107
6544132	109
6544133	108
6544134	111
Blank	107
LCS	117
LCSD	113

Limits: 63-135

Analysis Name: NWTPH-Dx water w/ 10g Si Gel
Batch number: 120460009A

	Orthoterphenyl
6544124	90
6544125	98
6544126	100
6544127	102
Blank	105
LCS	94
LCSD	93

Limits: 50-150

Analysis Name: NWTPH-Dx water w/ 10g Si Gel
Batch number: 120460022A

	Orthoterphenyl
6544128	87
6544129	76
6544130	87
6544131	91
6544132	20*
Blank	66
LCS	143
LCSD	142

Limits: 50-150

Analysis Name: NWTPH-Dx water w/ 10g Si Gel
Batch number: 120470015A

	Orthoterphenyl
6544133	80
Blank	92
LCS	91
LCSD	92

Limits: 50-150

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

Chevron Northwest Region Analysis Request/Chain of Custody

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Acct. #: 11811 — For Lancaster Laboratories use only — Sample #: 6544124-34 — SCR#: 223631

C# 1288994

Facility #: CEMC 301233 / COP 5173
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Sampler: Deitrie Hanson / David Reitz
Service Order #: _____ — ☐ Non SAR: _____

Sample Identification	Date Collected	Time Collected	Grab	Composite	Matrix: Soil	Matrix: Water	Matrix: Oil	Matrix: Air	Total Number of Containers	BTEX + MTBE 8021 ☐ 8260 ☒ Naphth ☐	8260 full scan	Oxygenates ___	TPH G NWTPH-G 8260	TPH D ☐ Extended Rng. NWTPH-D ☒ Silica Gel Cleanup	Lead Total ☐ Diss. ☐ Method ___	VPH/EPH	NWTPH HCID ☐ quantification	RBCA VOCs 8260			
MW-1*	2/7/12	1505	X			X				X			X	X				X			
MW-2	2/7/12	1220	X			X				X			X	X				X			
MW-3	2/7/12	1330	X			X				X			X	X				X			
MW-4	2/7/12	1225	X			X				X			X	X				X			
MW-5	2/7/12	1300	X			X				X			X	X				X			
MW-6	2/7/12	1010	X			X				X			X	X				X			
MW-7	2/7/12	1050	X			X				X			X	X				X			
MW-8*	2/7/12	1430	X			X				X			X	X				X			
MW-9	2/7/12	1425	X			X				X			X	X				X			
MW-10	2/7/12	1135	X			X				X			X	X				X			
QA-T						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
Please send report to: Anthony.Giglini@stantec.com & Alejandra.Hernandez@stantec.com
* 1 voa for MW-1 VOCs by 8260 froze and broke in Stantec refrig
* 1 vial for MW-8 for NWTPH-G C7-C14 froze & broke

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)
QC Summary — Type I - Full
Type VI (Raw Data) — Disk / EDD
WIP (RWQCB) — Standard Format
Disk — _____ Other.

		Date	Time		Date	Time
Relinquished by:	Deitrie Hanson	2/8/12	1410	Received by:		
Relinquished by:				Received by:		
Relinquished by:				Received by:		
Relinquished by Commercial Carrier: UPS (FedEx) Other ____				Received by:	2-9-12	945
Temperature Upon Receipt 0.5-1.0 C°				Custody Seals Intact? (Yes) No		

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Explanation of Symbols and Abbreviations

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

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
µg	microgram(s)	**mg**	milligram(s)
mL	milliliter(s)	**L**	liter(s)
m3	cubic meter(s)	**µL**	microliter(s)
		pg/L	picogram/liter

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

> greater than

J estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

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.

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quantitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
N	Presumptive evidence of a compound (TICs only)
P	Concentration difference between primary and confirmation columns >25%
U	Compound was not detected
X,Y,Z	Defined in case narrative

Inorganic Qualifiers

B	Value is <CRDL, but ≥IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike sample not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*****	Duplicate analysis not within control limits
+	Correlation coefficient for MSA <0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

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

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

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