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**CONESTOGA-ROVERS
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RECEIVED

July 23, 2013

Reference No. 061992

JUL 23 2013

DEPT OF ECOLOGY
TCP - NWRO



Mr. John Bails
Department of Ecology
Northwest Regional Office
3190 160th Avenue Southeast
Bellevue, Washington 98008

Re: First Quarter 2013 Groundwater Monitoring and Sampling Report
Former Tidewater Site
Phillips 66 Site 5173
Chevron Site 301233
2800 Martin Luther King Junior Way South
Seattle, Washington
DOE Case 42746846

Dear Mr. Bails,

Conestoga-Rovers & Associates (CRA) is submitting this *First Quarter 2013 Groundwater Monitoring and Sampling Report* for the site referenced above (Figure 1) on behalf of Phillips 66 Company and Chevron Environmental Management Company. Groundwater monitoring and sampling was performed by CRA. CRA's field forms are presented as Attachment A. Eurofins Lancaster Laboratories' *Analytical Results* report is included as Attachment B. Graphs depicting total petroleum hydrocarbons as diesel (TPHd), TPH as gasoline (TPHg), and benzene concentrations over time for select wells are included as Attachment C. A summary of previous site investigations is included as Attachment D. A site map is presented on Figure 2.

RESULTS OF FIRST QUARTER 2013 EVENT

On February 26 and 27, 2013, CRA monitored and sampled the site wells per the established schedule. Results of the current monitoring event indicate the following.

- Groundwater Flow Direction Southwest (Figure 3)
- Hydraulic Gradient 0.03 foot/foot
- Approximate Depth to Water 10.5 to 12 feet below grade
- Approximate Groundwater Elevation 46 to 52 feet above mean sea level

Equal
Employment Opportunity
Employer



July 23, 2013

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Current and historical groundwater monitoring and sampling data are presented in Table 1, and current concentration data presented below in Table A and on Figure 4.

TABLE A: GROUNDWATER ANALYTICAL DATA							
Well ID	TPHg (µg/L)	TPHd (µg/L)	TPHo (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
MTCA Method A Cleanup Levels	800/1000*	500	500	5	1000	700	1000
MW-1	<50	<30	<71	<0.5	<0.5	<0.5	<0.5
MW-2	770	150	<68	0.7	<0.5	<0.5	<0.5
MW-3	9,500	510	<66	<0.5	<0.5	190	620
MW-4	<50	<28	<66	<0.5	<0.5	<0.5	<0.5
MW-5	790	170	<69	<0.5	0.6	7	12
MW-6	<50	<30	<70	<0.5	<0.5	<0.5	<0.5
MW-7	<50	<29	<68	<0.5	<0.5	<0.5	<0.5
MW-8	12,000	780	<70	<0.5	0.6	100	800
MW-8 DUP	11,000	540	<69	<0.5	0.6	100	770
MW-9	Inaccessible						
MW-10	<50	71	<69	0.8	<0.5	<0.5	<0.5
Bold	Indicates concentration exceed MTCA Method A cleanup level						
*	TPHg Cleanup Level for wells containing benzene is 800 µg/L; otherwise cleanup level is 1,000 µg/L.						

CONCLUSIONS AND RECOMMENDATIONS

The results of ongoing groundwater monitoring and sampling at the site indicate:

- TPHg concentrations exceeded the Washington State Ecology (Ecology) Model Toxics Control Act (MTCA) Method A cleanup level in groundwater wells MW-3 and MW-8, with the highest concentration detected at MW-8 (Figure 5).
- TPHd concentrations exceeded the MTCA Method A cleanup level in groundwater in wells MW-3 and MW-8 (Figure 6).
- TPHo concentrations were below MTCA Method A cleanup levels in all wells.
- Benzene, toluene, ethylbenzene, and total xylenes concentrations were all below the MTCA Method A cleanup levels in groundwater.



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- With the exception of source area well MW-8, hydrocarbon concentrations exhibit decreasing concentration trends over time. Hydrocarbon concentrations in MW-8 have been stable.

CRA recommends continuing quarterly monitoring and sampling to further evaluate concentration trends over time.

ANTICIPATED FUTURE ACTIVITIES

Groundwater Monitoring

CRA will monitor and sample site wells per the established schedule. The second quarter 2013 event is scheduled for May 2013. CRA will submit a groundwater monitoring and sampling report approximately 90 days following receipt of laboratory analytical results.

Remedial Investigation/Feasibility Study (RI/FS) Work Plan

CRA is currently preparing a RI/FS Work Plan to submit to the Department of Ecology during the second quarter of 2013.

Please contact Edwin Turner at (425) 563-6500 if you have any questions or require additional information.

Sincerely,

CONESTOGA-ROVERS & ASSOCIATES

Edwin Turner

ET/aa/5
Encl.



**CONESTOGA-ROVERS
& ASSOCIATES**

July 23, 2013

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Figure 1	Vicinity Map
Figure 2	Site Plan
Figure 3	Groundwater Elevations and Contour Map
Figure 4	Groundwater Concentration Map
Figure 5	TPHg Isoconcentration Contour Map
Figure 6	TPHd Isoconcentration Contour Map
Table 1	Groundwater Monitoring and Sampling Data
Attachment A	Monitoring Data Package
Attachment B	Laboratory Analytical Report
Attachment C	Concentration Trend Graphs
Attachment D	Summary of Previous Investigations

cc: Mr. Rick Rittenberg, Chevron (*electronic copy*)
Mr. Ed Ralston, Phillips 66 (*electronic copy*)
Greg McCormick, EP Inc. (*electronic copy*)

FIGURES

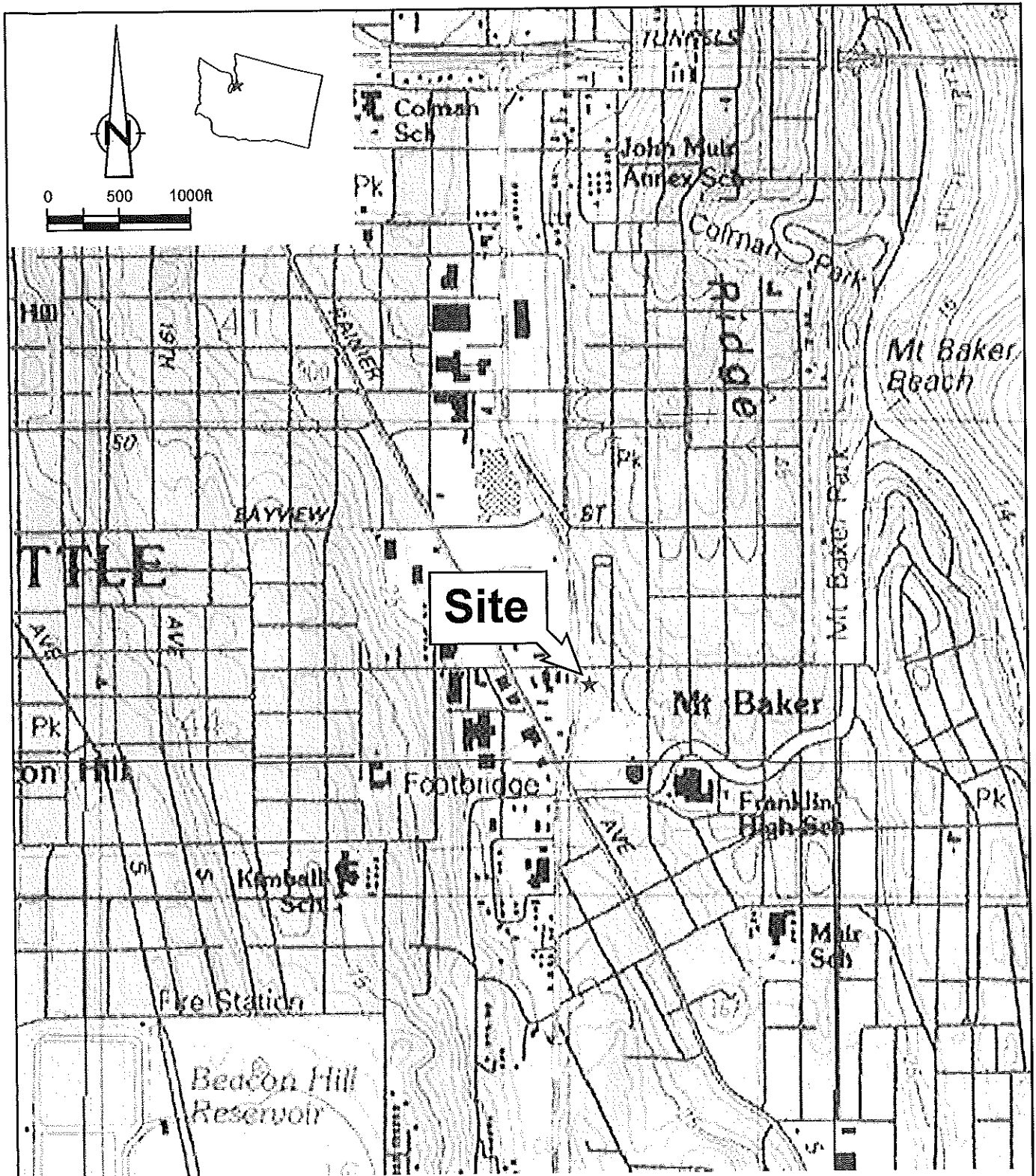


Figure 1

VICINITY MAP
 FORMER TIDEWATER SERVICE STATION
 PHILLIPS 66 SITE 5173
 CHEVRON SITE 301233
 2800 MARTIN LUTHER KING WAY SOUTH
 Seattle, Washington

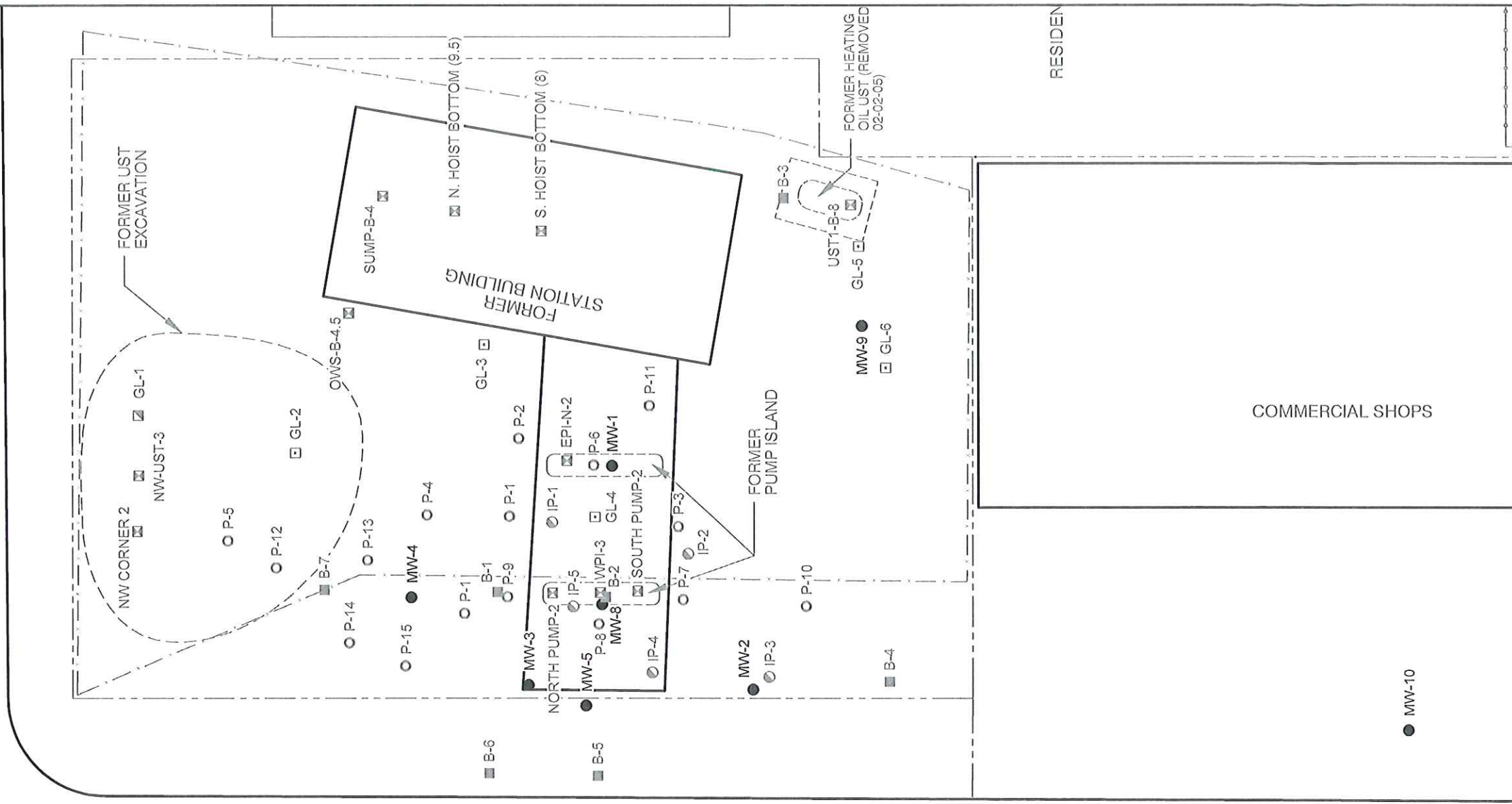




LEGEND

- MW-1 GROUNDWATER MONITORING WELL
- P-1 PREVIOUS GEOPROBE BORING
- B-4 SOIL BORING
- GL-2 AUGER BORING LOCATION WITH GROUNDWATER SAMPLE
- ▣ GL-1 AUGER BORING LOCATION
- ⊙ IP-1 FORMER INJECTION WELL LOCATION
- B-4 SOIL SAMPLE LOCATION

SOUTH McCLELLAN STREET



MARTIN LUTHER KING WAY

RESIDEN

COMMERCIAL SHOPS

Figure 2

SITE PLAN
 FORMER TIDEWATER SERVICE STATION
 PHILLIPS 66 SITE 5173
 CHEVRON SITE 301233
 2800 MARTIN LUTHER KING WAY SOUTH
Seattle, Washington





LEGEND

- MW-1 GROUNDWATER MONITORING WELL
- | |
|------|
| WELL |
| ELEV |

 GROUNDWATER ELEVATION (MSL)
- 50.0 GROUNDWATER ELEVATION CONTOUR, IN FEET ABOVE MEAN SEA LEVEL (MSL); DASHED WHERE INFERRED
- GROUNDWATER FLOW DIRECTION AND GRADIENT
- NM NOT MEASURED; INACCESSIBLE

SOUTH McCLELLAN STREET

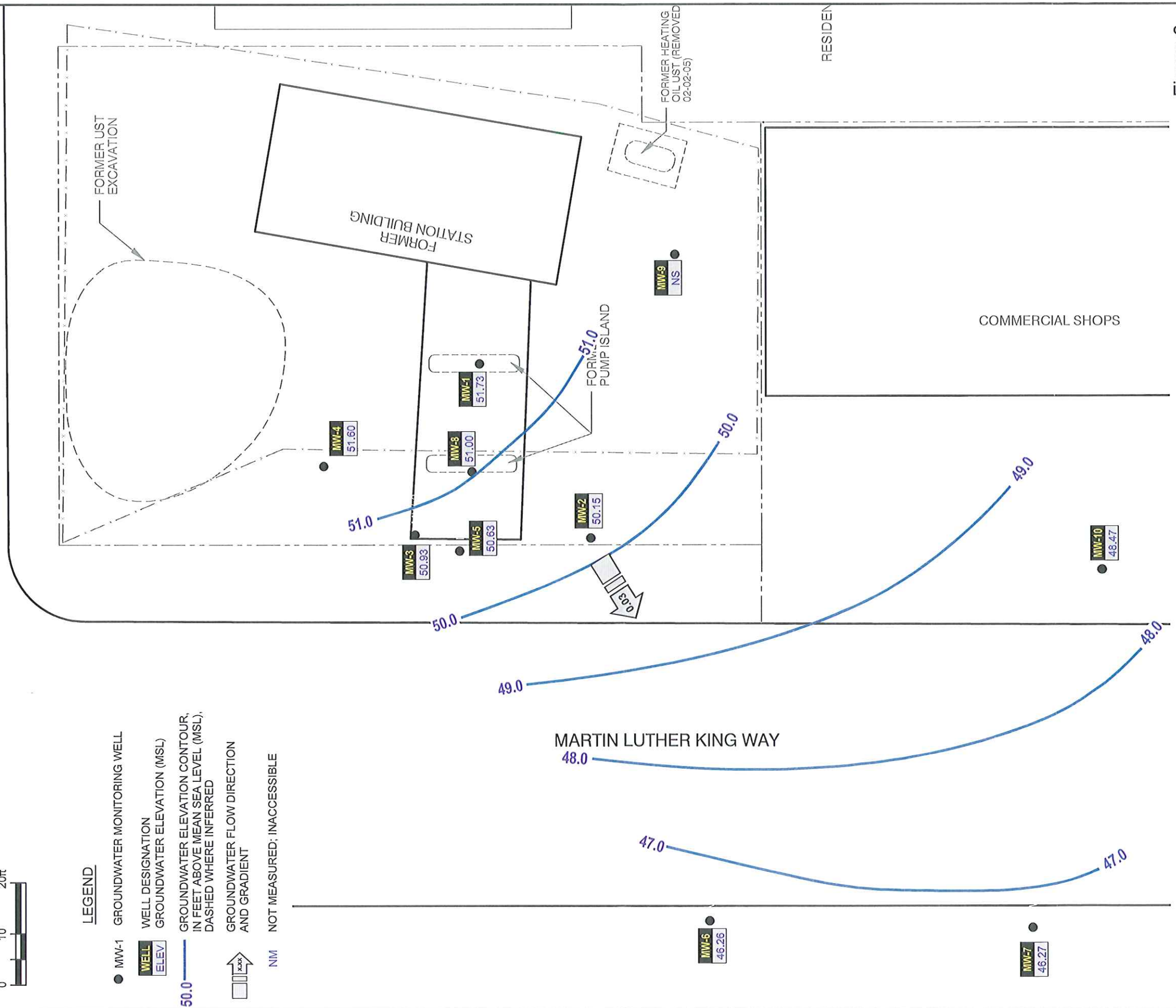
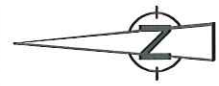


Figure 3
 GROUNDWATER ELEVATION CONTOUR MAP
 FORMER TIDEWATER SERVICE STATION
 PHILLIPS 66 SITE 5173
 CHEVRON SITE 301233
 2800 MARTIN LUTHER KING WAY SOUTH
 Seattle, Washington
 February 26, 2013





LEGEND

● MW-1 GROUNDWATER MONITORING WELL

WELL	TPHg	TPHd	BENZ	TOUL	ETH	TOTAL
------	------	------	------	------	-----	-------

WELL DESIGNATION
 TPHg CONCENTRATION (µg/L)
 TPHd CONCENTRATION (µg/L)
 BENZENE CONCENTRATION (µg/L)
 TOULENE CONCENTRATION (µg/L)
 ETHYLBENZENE CONCENTRATION (µg/L)
 TOTAL XYLENES CONCENTRATION (µg/L)

* SAMPLED ON 2/27/13

D DUPLICATE

NS NOT SAMPLED; INACCESSIBLE

SOUTH McCLELLAN STREET

FORMER UST
EXCAVATION

FORMER
STATION BUILDING

FORMER
PUMP ISLAND

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

RESIDEN

COMMERCIAL SHOPS

MARTIN LUTHER KING WAY

MW-3*
9,500
510
<0.5
190
620

MW-4
<50
<28
<0.5
<0.5
<0.5

MW-5*
790
170
<0.5
0.6
7
12

MW-8
12,000/1,000 D
780/540 D
<0.5/<0.5 D
0.6/0.6 D
100/100 D
800/770 D

MW-1
<50
<30
<0.5
<0.3
<0.3

MW-2
770
150
0.7
<0.5
<0.3

MW-9
NS

MW-6*
<50
<30
<0.5
<0.5
<0.5

MW-7*
<50
<30
<0.5
<0.3
<0.3

MW-10*
<50
71
0.8
<0.5
<0.5

Figure 4
 GROUNDWATER CONCENTRATION MAP
 FORMER TIDEWATER SERVICE STATION
 PHILLIPS 66 SITE 5173
 CHEVRON SITE 301233
 2800 MARTIN LUTHER KING WAY SOUTH
 Seattle, Washington
 February 26, 2013

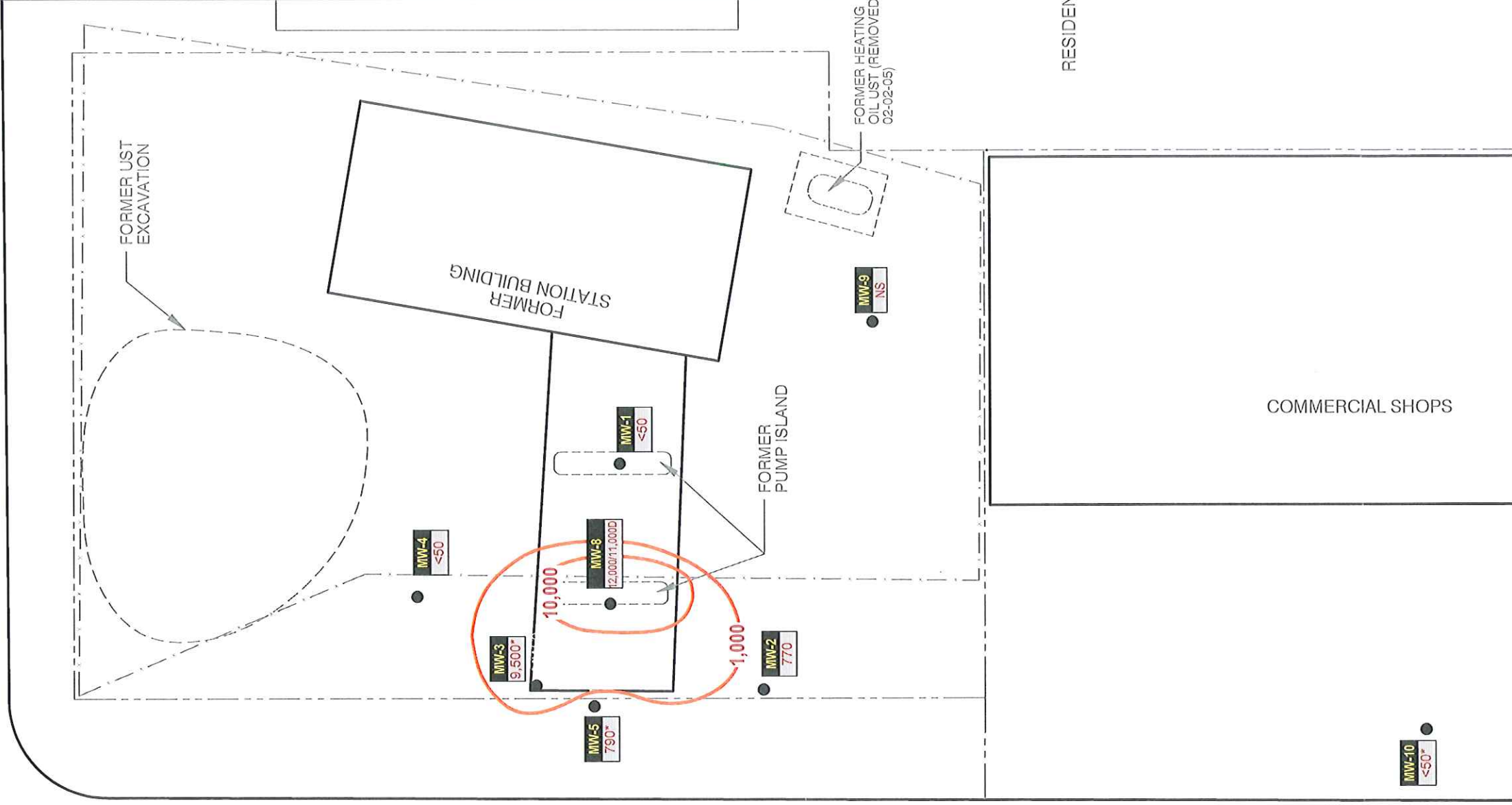




LEGEND

- MW-1 GROUNDWATER MONITORING WELL
- 1,000 ——— TPHg CONCENTRATION CONTOUR IN MICROGRAMS PER LITER (µg/L), DASHED WHERE INFERRED
- WELL DESIGNATION
TPHg CONCENTRATION (µg/L)
- * SAMPLED ON 2/27/13
- D DUPLICATE
- NS NOT SAMPLED; INACCESSIBLE

SOUTH McCLELLAN STREET



MARTIN LUTHER KING WAY

Figure 5

TPHg ISOCONCENTRATION CONTOUR MAP
 FORMER TIDEWATER SERVICE STATION
 PHILLIPS 66 SITE 5173
 CHEVRON SITE 301233
 2800 MARTIN LUTHER KING WAY SOUTH
 Seattle, Washington
 February 26, 2013

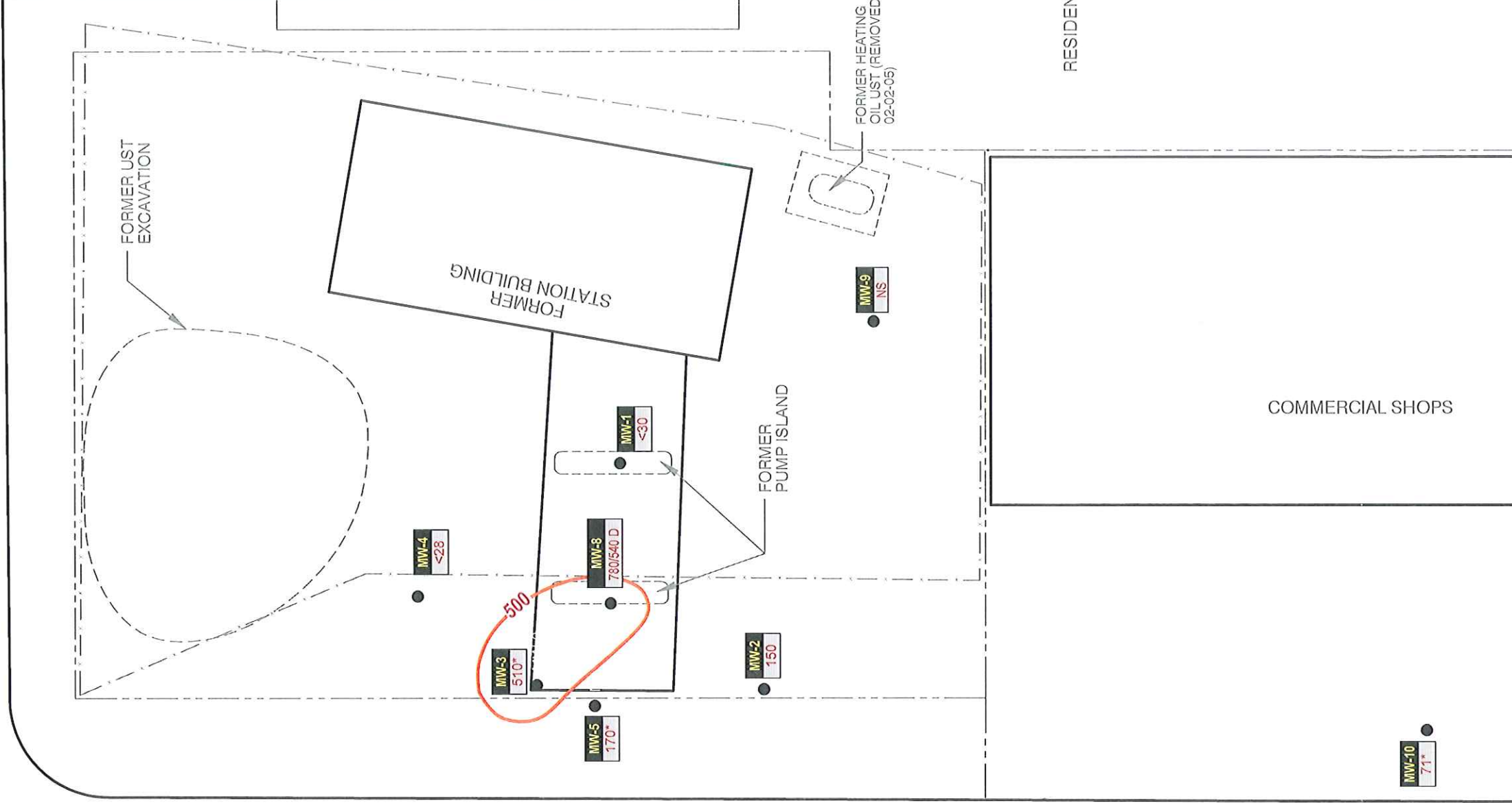




LEGEND

- MW-1 GROUNDWATER MONITORING WELL
- 500 TPHd CONCENTRATION CONTOUR IN MICROGRAMS PER LITER (µg/L), DASHED WHERE INFERRED
- WELL DESIGNATION
TPHd CONCENTRATION (µg/L)
- * SAMPLED ON 2/27/13
- D DUPLICATE
- NS NOT SAMPLED; INACCESSIBLE

SOUTH McCLELLAN STREET



MARTIN LUTHER KING WAY

Figure 6

TPHd ISOCONCENTRATION CONTOUR MAP
 FORMER TIDEWATER SERVICE STATION
 PHILLIPS 66 SITE 5173
 CHEVRON SITE 301233
 2800 MARTIN LUTHER KING WAY SOUTH
 Seattle, Washington
 February 26, 2013



TABLE

TABLE 1

SUMMARY OF GROUNDWATER MONITORING DATA
 FORMER TIDEWATER SERVICE STATION
 PHILLIPS 66 SITE 5173
 CHEVRON SITE 301233
 2800 MARTIN LUTHER KING JUNIOR WAY SOUTH
 SEATTLE, WASHINGTON

Location	Date	TOC	DTW	GWE	HYDROCARBONS			PRIMARY VOCs										Pb	Cu	Zn	Mn	Fe
					TPH-GRO	TPH-DRO	TPH-HRO	EDB	EDC	MIBE	Naphthalene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	N-Propylbenzene	Isopropylbenzene	Lead (Total)						
	Units	ft	ft	ft-usgal	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	
MW-1	08/19/2005	97.92	13.01	84.91	ND	-	-	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-
MW-1	10/27/2005	97.92	12.62	85.30	ND	-	-	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-
MW-1	12/27/2005	97.92	-	-	ND	-	-	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-
MW-1	01/12/2006	97.92	9.03	88.89	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-1	03/02/2006	97.92	10.56	87.36	ND	-	-	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-
MW-1	06/28/2006	97.92	12.42	85.50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-1	12/01/2006	97.92	9.33	88.59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-1	12/06/2006	97.92	9.72	88.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-1	02/28/2007	97.92	11.04	86.88	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-1	03/07/2007	97.92	11.14	86.78	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-1	04/11/2007	97.92	11.06	86.86	ND	-	-	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-
MW-1	11/12/2009	97.92	11.08	86.84	<50	-	-	<1.0	<1.0	<1.0	<3.0	-	-	-	-	-	-	-	-	-	-	-
MW-1	08/30/2011 ⁵	97.92	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-1	12/15/2011 ⁵	97.92	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-1	02/06/2012	62.35	9.84	52.51	260	430	620	<0.5	41	3	18	<1	<1	<0.5	<1	<1	<1	<1	<1	<1	1.7	0.007399
MW-1	05/30/2012	62.35	10.63	51.72	<50	35	170	<0.5	<0.7	<0.8	<0.8	<1	<1	<0.5	<1	<1	<1	<1	<1	<1	0.32	-
MW-1	08/08/2012	62.35	11.36	50.99	<50	<29 ⁴	<67 ⁴	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	27.7	-
MW-1	12/05/2012	62.35	9.51	52.84	<50	<29 ⁴	<69 ⁴	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.42	-
MW-1	02/26/2013	62.35	10.62	51.73	<50	<30 ⁴	<71 ⁴	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-
MW-2	08/19/2005	96.25	13.02	83.23	2,000	-	-	ND	10	81	91	-	-	-	-	-	-	-	-	-	-	-
MW-2	10/27/2005	96.25	13.62	82.63	2,300	-	-	ND	ND	89	93	-	-	-	-	-	-	-	-	-	-	-
MW-2	12/27/2005	96.25	-	-	820	-	-	ND	ND	21	66	-	-	-	-	-	-	-	-	-	-	-
MW-2	01/12/2006	96.25	5.77	90.48	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TABLE 1

SUMMARY OF GROUNDWATER MONITORING DATA
FORMER TIDEWATER SERVICE STATION
PHILLIPS 66 SITE 5173
CHEVRON SITE 301233
2800 MARTIN LUTHER KING JUNIOR WAY SOUTH
SEATTLE, WASHINGTON

Location	Date	TOC ft	DTW ft	GWE ft-msl	HYDROCARBONS			PRIMARY VOCs										Lead (Total) µg/L	PAHs µg/L										
					TPH-GRO µg/L	TPH-DRO µg/L	TPH-HRO µg/L	B µg/L	T µg/L	E µg/L	X µg/L	EDB µg/L	EDC µg/L	MIBF µg/L	Naphtalene µg/L	1,2,4-Trinitheylglybenzene µg/L	1,3,5-Trinitheylglybenzene µg/L			N-Propylbenzene µg/L	Isopropylbenzene µg/L								
MW-2	03/02/2006	96.25	11.82	84.43	1,300	-	-	-	ND	3.9	23	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-2	04/13/2006	96.25	13.06	83.19	470	-	-	-	ND	1.4	6.9	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-2	06/28/2006	96.25	12.40	83.85	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-2	09/11/2006	96.25	13.64	82.61	580	-	-	-	ND	1.6	2.9	6.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-2	12/01/2006	96.25	10.65	85.60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-2	12/06/2006	96.25	10.20	86.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-2	01/12/2007	96.25	11.06	85.19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-2	02/12/2007	96.25	-	-	1,400	-	-	-	1.4	3.5	16	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-2	02/28/2007	96.25	11.65	84.60	1,200	-	-	-	2	4	18	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-2	03/07/2007	96.25	11.43	84.82	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-2	04/11/2007	96.25	11.07	85.18	1,200	-	-	-	ND	3	11	63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-2	11/12/2009	96.25	12.35	83.90	455	-	-	-	<1.0	<1.0	<3.0	<3.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-2	08/31/2011	60.72	11.96	48.76	960	590	-	-	1	<0.7	1	6	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
MW-2	12/15/2011	60.72	11.53	49.19	750	30	-	-	1	<0.7	1	<1.6	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
MW-2	02/06/2012	60.72	10.26	50.46	780	390	-	-	1	2	<0.8	<1.6	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
MW-2	05/30/2012	60.72	10.83	49.89	480	210	<67	-	0.8	<0.7	<0.8	<0.8	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
MW-2	08/08/2012	60.72	11.95	48.77	670	160 ⁴	<67 ⁴	-	0.9	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-2	12/05/2012	60.72	10.61	50.11	590	250 ⁴	<73 ⁴	-	2	<0.5	3	11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-2	02/26/2013	60.72	10.57	50.15	770	150 ⁴	<68 ⁴	-	0.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-3	08/19/2005	97.43	12.72	84.71	44,000	-	-	-	4.1	18	780	3,600	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-3	12/27/2005	97.43	13.42	84.01	17,000	-	-	-	ND	38	580	3,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-3	12/28/2005	-	-	-	6,600	-	-	-	5	22	200	1,100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-3	01/12/2006	97.43	8.84	88.59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TABLE 1

SUMMARY OF GROUNDWATER MONITORING DATA
 FORMER IDEWATER SERVICE STATION
 PHILLIPS 66 SITE 5173
 CHEVRON SITE 301233
 2800 MARTIN LUTHER KING JUNIOR WAY SOUTH
 SEATTLE, WASHINGTON

Location	Date	TOC	DTW	GWE	HYDROCARBONS			PRIMARY VOCs										Lead (Total)	Pb				
					TPH-GRO	TPH-DRO	TPH-HRO	B	T	E	X	EDR	EDC	MIBE	Naphthalene	1,2,4-Trinitheylbenzene	1,3,5-Trinitheylbenzene			N-Propylbenzene	Isopropylbenzene		
	Units	ft	ft	ft-amsl	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	
MW-3	03/02/2006	97.43	10.90	86.53	22,000	-	-	ND	26	450	4,200	-	-	-	-	-	-	-	-	-	-	-	-
MW-3	04/13/2006	97.43	11.92	85.51	33,000	-	-	ND	3	700	3,100	-	-	-	-	-	-	-	-	-	-	-	-
MW-3	06/28/2006	97.43	12.17	85.26	53,000	-	-	ND	17	530	2,600	-	-	-	-	-	-	-	-	-	-	-	-
MW-3	08/13/2006	97.43	13.91	83.52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-3	09/11/2006	97.43	13.77	83.66	14,000	-	-	ND	5.6	180	1,100	-	-	-	-	-	-	-	-	-	-	-	-
MW-3	10/13/2006	97.43	-	-	1,400	-	-	ND	1	26	98	-	-	-	-	-	-	-	-	-	-	-	-
MW-3	11/17/2006	97.43	10.56	86.87	48,000	-	-	ND	34	490	4,100	-	-	-	-	-	-	-	-	-	-	-	-
MW-3	12/01/2006	97.43	9.78	87.65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-3	12/06/2006	97.43	10.01	87.42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-3	01/12/2007	97.43	10.90	86.53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-3	02/12/2007	97.43	-	-	36,000	-	-	ND	10	280	1,800	-	-	-	-	-	-	-	-	-	-	-	-
MW-3	02/28/2007	97.43	11.12	86.31	22,000	-	-	ND	6	280	1,400	-	-	-	-	-	-	-	-	-	-	-	-
MW-3	03/07/2007	97.43	11.17	86.26	21,000	-	-	ND	18	170	1,000	-	-	-	-	-	-	-	-	-	-	-	-
MW-3	04/11/2007	97.43	11.04	86.39	19,000	-	-	ND	6	110	1,100	-	-	-	-	-	-	-	-	-	-	-	-
MW-3	11/12/2009	97.43	11.98	85.45	71.7	-	-	ND	<1.0	<1.0	<3.0	-	-	-	-	-	-	-	-	-	-	-	-
MW-3	08/31/2011	61.81	12.10	49.71	7,400	370	<68	<1.0	<1	190	554	<2	<2	<1	<1	67	1,300	330	140	47	-	-	-
MW-3	12/15/2011	61.81	11.38	50.43	5,400	<29	<67	<0.5	<0.7	120	400	<1	<1	<1	<0.5	50	950	210	110	37	-	-	-
MW-3	02/06/2012	61.81	10.33	51.48	6,300	1,200	<68	<1	<1	130	523	<2	<2	<1	<1	49	870	190	74	27	-	-	-
MW-3	05/30/2012	61.81	10.87	50.94	7,400	520	<66	<1	<1	160	660	<2	<2	<1	<1	66	1,100	220	100	38	1.1	0.012868	-
MW-3	08/07/2012	61.81	11.42	50.39	8,100	290 ^d	<67 ^d	<1	<1	140	610	<1	<1	<1	<1	71	830	140	86	33	0.98	-	-
MW-3	12/06/2012	61.81	9.91	51.90	6,700	290 ^d	<69 ^d	<0.5	<0.5	160	480	<0.5	<0.5	<0.5	<0.5	75	860	160	100	41	0.36	-	-
MW-3	02/27/2013	61.81	10.88	50.93	9,500	510 ^d	<66 ^d	<0.5	<0.5	190	620	<0.5	<0.5	<0.5	<0.5	73	1,200	240	130	51	0.70	-	-
MW-4	06/28/2006	98.36	12.40	85.96	ND	-	-	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-

TABLE 1

SUMMARY OF GROUNDWATER MONITORING DATA
 FORMER TIDEWATER SERVICE STATION
 PHILLIPS 66 SITE 5173
 CHEVRON SITE 301233
 2800 MARTIN LUTHER KING JUNIOR WAY SOUTH
 SEATTLE, WASHINGTON

Location	Date	TOC	DTW	GWE	HYDROCARBONS			PRIMARY VOCs															
					TPH-GRO	TPH-DRO	TPH-HRO	B	T	E	X	EDB	EDC	MIBE	Naphthalene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	N-Propylbenzene	Isopropylbenzene	Lead (Total)	PAHs		
	Units	ft	ft	ft-cmsl	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
MW-4	12/01/2006	98.36	9.90	88.46	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-4	12/06/2006	98.36	10.21	88.15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-4	02/28/2007	98.36	11.43	86.93	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-4	03/07/2007	98.36	11.49	86.87	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-4	04/11/2007	98.36	11.27	87.09	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-4	11/12/2009	98.36	11.82	86.54	<50	<50	<50	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
MW-4	08/31/2011	62.75	12.42	50.33	<50	<29	<68	<0.5	<0.7	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	
MW-4	12/15/2011	62.75	11.69	51.06	<50	<29	<67	<0.5	<0.7	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	
MW-4	02/06/2012	62.75	10.50	52.25	<50	<29	<67	<0.5	<0.7	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	
MW-4	05/30/2012	62.75	11.11	51.64	<50	<29	<67	<0.5	<0.7	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	
MW-4	08/07/2012	62.75	11.76	50.99	<50	<29 ⁴	<68 ⁴	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
MW-4	12/05/2012	62.75	10.19	52.56	<50	<32 ⁴	<75 ⁴	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
MW-4	02/26/2013	62.75	11.15	51.60	<50	<28 ⁴	<66 ⁴	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
MW-5	06/28/2006	97.20	12.09	85.11	21,000	-	-	ND	14	290	920	-	-	-	-	-	-	-	-	-	-	-	
MW-5	09/11/2006	97.20	13.63	83.37	2,500	-	-	ND	ND	34	60	-	-	-	-	-	-	-	-	-	-	-	
MW-5	11/17/2006	97.20	10.57	86.63	23,000	-	-	ND	52	450	1,700	-	-	-	-	-	-	-	-	-	-	-	
MW-5	12/01/2006	97.20	9.75	87.45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MW-5	01/12/2007	97.20	10.85	86.35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MW-5	02/12/2007	97.20	-	-	37,000	-	-	ND	33	1,600	2,800	-	-	-	-	-	-	-	-	-	-	-	
MW-5	02/28/2007	97.20	11.05	86.15	29,000	-	-	ND	24	550	1,800	-	-	-	-	-	-	-	-	-	-	-	
MW-5	03/07/2007	97.20	11.11	86.09	42,000	-	-	11	24	740	2,500	-	-	-	-	-	-	-	-	-	-	-	
MW-5	04/11/2007	97.20	10.96	86.24	65,000	-	-	ND	79	850	4,000	-	-	-	-	-	-	-	-	-	-	-	
MW-5	11/12/2009	97.20	12.10	85.10	2,340	-	-	1	36	<10	125	-	-	-	-	-	-	-	-	-	-	-	

TABLE 1

SUMMARY OF GROUNDWATER MONITORING DATA
 FORMER TIDEWATER SERVICE STATION
 PHILLIPS 66 SITE 5173
 CHEVRON SITE 301233
 2800 MARTIN LUTHER KING JUNIOR WAY SOUTH
 SEATTLE, WASHINGTON

Location	Date	TOC	DTW	GWE	HYDROCARBONS				PRIMARY VOCs																														
					TPH-GRO	TPH-DRO	TPH-HRO	B	T	E	X	EDB	EDC	MIBE	Naphthalene	1,2,4-Trinitheylbenzene	1,3,5-Trinitheylbenzene	N-Propylbenzene	Isopropylbenzene	Lead (Total)	PPHMs																		
	Units	ft	ft	ft-amsl	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L						
MW-5	08/31/2011	61.66	12.80	48.86	3,100	770	<67	2	1	72	124	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-				
MW-5	12/15/2011	61.66	11.41	50.25	1,900	66	<67	1	0.9	24	33	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-		
MW-5	02/06/2012	61.66	10.54	51.12	1,200	34	<68	0.8	<0.7	12	43	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	
MW-5	05/30/2012	61.66	10.91	50.75	260	54	<66	<0.5	<0.7	3	7	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	0.48	0.009168	
MW-5	08/07/2012	61.66	11.39	50.27	610	190 ¹	<66 ¹	<0.5	<0.5	11	22	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
MW-5	12/06/2012	61.66	9.74	51.92	170	40 ¹	<76 ¹	<0.5	<0.5	2	8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
MW-5	02/27/2013	61.66	11.03	50.63	790	170 ¹	<69 ¹	<0.5	0.6	7	12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
MW-6	08/31/2011	58.03	12.33	45.70	<50	44	<67	<0.5	<0.7	<0.8	<0.8	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
MW-6	12/15/2011	58.03	12.09	45.94	<50	<29	<67	<0.5	<0.7	<0.8	<1.6	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
MW-6	02/06/2012	58.03	11.80	46.23	<50	<29	<68	<0.5	<0.7	<0.8	<1.6	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
MW-6	05/30/2012	58.03	12.03	46.00	<50	<29	<68	<0.5	<0.7	<0.8	<0.8	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
MW-6	08/07/2012	58.03	12.21	45.82	<50	<28 ¹	<66 ¹	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-6	12/06/2012	58.03	11.60	46.43	<50	<31 ¹	<73 ¹	<0.5	<0.5	1	6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-6	02/27/2013	58.03	11.77	46.26	<50	<30 ¹	<70 ¹	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-7	08/31/2011	56.96	11.15	45.81	<50	<29	<67	<0.5	<0.7	<0.8	<0.8	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
MW-7	12/15/2011	56.96	10.93	46.03	<50	45	89	<0.5	<0.7	<0.8	<1.6	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
MW-7	02/06/2012	56.96	10.75	46.21	<50	<29	<68	<0.5	2	<0.8	<1.6	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
MW-7	05/30/2012	56.96	10.93	46.03	<50	37	160	<0.5	<0.7	<0.8	<0.8	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
MW-7	08/07/2012	56.96	11.70	45.26	<50	<28 ¹	<66 ¹	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-7	12/06/2012	56.96	10.46	46.50	<50	<29 ¹	<67 ¹	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-7	02/27/2013	56.96	10.69	46.27	<50	<29 ¹	<68 ¹	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

TABLE 1

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 FORMER TIDEWATER SERVICE STATION
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 SEATTLE, WASHINGTON

Location	Date	TOC ft	DTW ft	GWE	HYDROCARBONS			PRIMARY VOCs										Lead (Total) µg/L	PPAHs µg/L						
					TPH-GRO µg/L	TPH-DRO µg/L	TPH-HRO µg/L	B µg/L	T µg/L	E µg/L	X µg/L	EDR µg/L	EDC µg/L	MTBE µg/L	Naphthalene µg/L	1,2,4-Trinitheylbenzene µg/L	1,3,5-Trinitheylbenzene µg/L			N-Propylbenzene µg/L	Isopropylbenzene µg/L				
MW-8	08/31/2011	61.71	12.01	49.70	4,400	240	<67	<0.5	<0.7	41	442	<1	<1	<1	<0.5	33	500	130	26	11	-	-	-	-	
MW-8	12/15/2011	61.71	11.25	50.46	8,100	96	<67	<0.5	<0.7	79	880	<1	<1	<1	<0.5	72	900	230	46	20	-	-	-	-	
MW-8	02/06/2012	61.71	10.00	51.71	13,000	290	<69	<1	<1	110	1,280	<2	<2	<2	<1	89	1,400	450	36	18	-	-	-	-	
MW-8	05/30/2012	61.71	10.69	51.02	9,500	700	<68	<1	<1	110	1,300	<2	<2	<2	<1	96	1,100	310	59	28	-	-	-	-	
MW-8 DUP	05/30/2012	61.71	10.69	51.02	10,000	450	<66	<1	<1	110	1,300	<2	<2	<2	<1	93	1,300	340	58	27	-	-	-	0.007324	
MW-8	08/08/2012	61.71	11.30	50.41	9,300	290 ¹	<66 ¹	<1	<1	92	850	<1	<1	<1	<1	73	910	190	49	22	-	-	-	-	
MW-8 DUP	08/08/2012	61.71	11.30	50.41	11,000	240 ¹	<66 ¹	<1	<1	83	710	<1	<1	<1	<1	67	680	140	44	20	-	-	-	-	
MW-8	12/05/2012	61.71	9.61	52.10	13,000	2,600 ¹	200 ¹	<0.5	0.8	95	1,100	<0.5	<0.5	<0.5	<0.5	93	1,400	380	61	27	-	-	-	-	
MW-8 DUP	12/05/2012	61.71	9.61	52.10	12,000	2,600 ¹	240 ¹	<0.5	0.8	91	1,100	<0.5	<0.5	<0.5	<0.5	91	1,400	360	58	26	-	-	-	-	
MW-8	02/26/2013	61.71	10.71	51.00	12,000	780 ¹	<70 ¹	<0.5	0.6	100	800	<0.5	<0.5	<0.5	<0.5	86	1,200	280	63	29	-	-	-	-	
MW-8 DUP	02/26/2013	61.71	10.71	51.00	11,000	540 ¹	<69 ¹	<0.5	0.6	100	770	<0.5	<0.5	<0.5	<0.5	72	1,100	280	60	29	-	-	-	-	
MW-9	08/31/2011	62.58	14.29	48.29	<50	78	<68	<0.5	<0.7	<0.8	<0.8	<1	<1	<1	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
MW-9	12/15/2011	62.58	13.01	49.57	<50	<29	<67	<0.5	<0.7	<0.8	<1.6	<1	<1	<1	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
MW-9	02/06/2012	62.58	12.04	50.54	66	<300 ¹	<700 ¹	<0.5	<0.7	<0.8	<1.6	<1	<1	<1	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
MW-9	05/30/2012	62.58	12.53	40.05	66	<29	<67	<0.5	<0.7	<0.8	<0.8	<1	<1	<1	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
MW-9	08/08/2012	62.58	13.37	49.21	<50	<29 ¹	<67 ¹	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
MW-9	12/05/2012	62.58	12.05	50.53	<50	39 ¹	<69 ¹	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
MW-9	02/26/2013 ⁵	62.58	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-10	08/31/2011	58.96	11.94	47.02	<50	260	100	2	<0.7	<0.8	<0.8	<1	<1	<1	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
MW-10	12/15/2011	58.96	11.13	47.83	51	<28	<66	3	<0.7	<0.8	0.8	<1	<1	<1	<0.5	<1	<1	<1	2	<1	<1	<1	<1	<1	<1
MW-10	02/06/2012	58.96	10.44	48.52	<50 ²	<29	<68	1	<0.7	<0.8	<1.6	<1	<1	<1	<0.5	<1	<1	<1	3	<1	<1	<1	<1	<1	<1
MW-10	05/30/2012	58.96	10.77	48.19	<50	74	<66	<0.5	<0.7	<0.8	<0.8	<1	<1	<1	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1

TABLE 1

SUMMARY OF GROUNDWATER MONITORING DATA
 FORMER TIDEWATER SERVICE STATION
 PHILLIPS 66 SITE 5173
 CHEVRON SITE 301233
 2800 MARTIN LUTHER KING JUNIOR WAY SOUTH
 SEATTLE, WASHINGTON

Location	Date	TOC	DTW	GWE	HYDROCARBONS			PRIMARY VOCs															
					TPH-GRO	TPH-DRO	TPH-HRO	B	T	E	X	EDB	EDC	MIBE	Naphthalene	1,2,4-Trimehtylhybenzene	1,3,5-Trimehtylhybenzene	N-Propylbenzene	Isopropylbenzene	Lead (Total)	PPAHs		
Units		ft	ft	ft-amsl	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	
MW-10 DUP	05/30/2012	58.96	10.77	48.19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.49
MW-10	08/07/2012	58.96	11.41	47.55	110	130 ⁴	<68 ⁴	1	<0.5	<0.5	1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.034
MW-10	12/06/2012	58.96	11.31	47.65	130	220 ⁴	<72 ⁴	4	0.6	<0.5	4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.28
MW-10	02/27/2013	58.96	10.49	48.47	<50	71 ⁴	<69 ⁴	0.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.073
Trip Blank	08/08/2012	-	-	-	<50	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
Trip Blank	12/05/2012	-	-	-	<50	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
Trip Blank	02/26/2013	-	-	-	<50	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-

Abbreviations and Notes

- TOC = Top of casing
- DTW = Depth to water
- GWE = Groundwater elevation
- (ft-amsl) = Feet above mean sea level
- ft = Feet
- µg/L = Micrograms per liter
- TPH-GRO = Total petroleum hydrocarbons - gasoline range organics
- TPH-DRO = Total petroleum hydrocarbons - diesel range organics
- TPH-HRO = Total petroleum hydrocarbons - oil range organics
- VOCs = Volatile organic compounds
- B = Benzene
- T = Toluene
- E = Ethylbenzene
- X = Xylene

TABLE 1

SUMMARY OF GROUNDWATER MONITORING DATA
 FORMER TIDEWATER SERVICE STATION
 PHILLIPS 66 SITE 5173
 CHEVRON SITE 301233
 2800 MARTIN LUTHER KING JUNIOR WAY SOUTH
 SEATTLE, WASHINGTON

Location	Date	Units	HYDROCARBONS			PRIMARY VOCs										TPHs							
			TOC	DTW	GWE	TPH-GRO	TPH-DRO	TPH-HRO	B	T	E	X	EDB	EDC	MTBE		Naphtalene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	N-Propylbenzene	Isopropylbenzene	Lead (Total)	TPAHs
			ft	ft	ft-amsl	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L

Xylenes = o-xylene + m,p-xylene
 BTEX = Benzene, toluene, ethylbenzene, and xylenes analyzed by EPA Method 8260B; except the April 25, 1990 sample from EW-1 analyzed by EPA Method 8020
 EDB = 1,2 Dibromoethane analyzed by EPA Method 8011
 EDC = 1,2 Dichloroethane analyzed by EPA Method 8260B
 MTBE = Methyl tert butyl ether
 cPAHs = Carcinogenic Polycyclic Aromatic Hydrocarbons analyzed by EPA Method 8270c Selective Ion Monitoring
 Total Lead analyzed by EPA Method 6020
 -- = Not available / not applicable. I286
 <x = Not detected above laboratory method detection limit.
 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.
 3 Well not sampled - well not found.
 4 Analysis with silica-gel cleanup.
 5 Inaccessible.

ATTACHMENT A

MONITORING DATA PACKAGE

WATER LEVEL RECORD

PROJECT NAME: 0101992 LOCATION: Seattle, WA
 JOB NO.: 2000 MLC Way S. DATE: 2/26/13
 CLIENT: Phillips 66 ENGINEER/GEOLOGIST: DE, NH

OBSERVATION WELL	TOP OF CASING ELEVATION		DEPTH TO WATER		WATER LEVEL ELEVATION	
	A		B		A-B	
	feet	metres	feet	metres	feet	metres
MW-7			10.109			
MW-6			11.77			
MW-3			10.88			
MW-5			11.03			
MW-10			10.49			
MW-2			10.57			
MW-4			11.15			
MW-1			10.62			
MW-8			10.71			
MW-9	no access					

CRA

Former Tidewater Site
Seattle, WA

Water Quality Meter S/N: _____

Date: 2/26/13

Location: MW-1
 Name of Sampler: D. Escobedo
 Weather: Overcast, 41°F
 Depth to Water: 10.02 Sample Depth: _____
 Depth to Bottom: _____

QA/QC
 MS/MSD _____
 Duplicate _____
 Blank _____

QA/QC Sample ID
 (GW-mmddyy-AA-XXX)

Sample IDs (GW-mmddyy-AA-XXX)

A Samplers Initials
 x Location ID

GW- 022613-DE-MW1

Sample Method: per pump 1 Well Volume: _____
 Purge Start: 13:05 3 Well Volumes: _____
 Sample Time: 14:05

water column height(ft) X
 0.162(2" casing)

Time	pH (+/- 0.1 S.U.)	Cond (mS/cm) 3%	Turb. (NTU)	DO (mg/L) 10%	Temp (C°) 3%	ORP (mV) 10%	Salinity (%)	TDS (ppm)	Total Volume Removed (gallons)	Flow (ml/min) < 0.2 LPM	W/L (Feet BTOC)	Water Quality/Description
13:10	6.69	0.090	7100	0.00	11.90	-29	0.1	0.3	1/4	0.17	11.31	very turbid
13:15	6.54	0.090	7107	0.00	12.11	-18	0.0	0.3	1/4	0.19	11.34	
13:20	6.52	0.090	4099	0.00	12.22	-12	0.0	0.3	3/8	0.18	11.34	
13:25	6.55	0.090	298	0.00	12.24	9	0.1	0.3	1/2	0.18	11.31	
13:30	6.55	0.090	262	0.06	12.23	17	0.0	0.3	5/8	0.18	11.31	
13:35	6.54	0.090	227	0.00	12.23	22	0.0	0.3	3/4	0.18	11.31	
13:40	6.49	0.090	208	0.00	12.22	23	0.0	0.3	1/8	0.18	11.32	

Analysis:
 Groundwater
 GRO
 DRO
 VOCs
 SVOCs
 Total Lead
PAH

X
X
X
X
X

Preservative
 HCL
 HCL
 HCL

Signed _____

Notes:

Former Tidewater Site
Seattle, WA

Water Quality Meter S/N: _____

Date: 2/20/13

Location: MW-4
 Name of Sampler: D Escobedo
 Weather: partly cloudy 39°F
 Depth to Water: 11.15 Sample Depth: _____
 Depth to Bottom: _____

QA/QC	X
MS/MSD	X
Duplicate	_____
Blank	_____
QA/QC Sample ID (GW-mmddyy-AA-XXX)	

Sample IDs (GW-mmddyy-AA-XXX)
GW-022613-DE-MW4

A Samplers Initials
 x Location ID

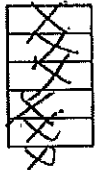
Sample Method: Peri Pump 1 Well Volume: _____
 Purge Start: 10:35 3 Well Volumes: _____
 Sample Time: 11:35

water column height(ft) X
 0.162(2" casing)

Time	pH (+/- 0.1 S.U.)	Cond (mS/cm) 3%	Turb. (NTU)	DO (mg/L) 10%	Temp (C°) 3%	ORP (mV) 10%	Salinity (%)	TDS (ppm)	Total Volume Removed (gallons)	Flow (ml/min) < 0.2 LPM	W/L (Feet BTOC)	Water Quality/Description
10:40	6.16	0.02	700	0.00	12.04	-75	6.1	0.5	1/8	0.19	11.40	
10:45	6.41	0.010	920	0.00	12.17	-77	0.0	0.5	1/4	0.18	11.38	
10:50	6.49	0.090	343	0.00	12.24	-79	0.0	0.4	3/8	0.18	11.39	
10:55	6.48	0.090	191	0.00	12.27	-81	0.1	0.4	1/2	0.18	11.40	
11:00	6.52	0.160	196	0.00	12.31	-81	0.1	0.4	5/8	0.18	11.41	

- Analysis:
Groundwater
 GRO
 DRO
 VOCs
 SVOCs
 Total Lead
PAH

Preservative
 HCL
 HCL
 HCL



Signed _____

Notes:

6

Former Tidewater Site
Seattle, WA

Water Quality Meter S/N: _____

Date: 02/26/13

Location: MW 2
Name of Sampler: N. Himpsey
Weather: Clear

QA/QC
MS/MSD _____
Duplicate _____
Blank _____

Depth to Water: 10.72 Sample Depth: _____
Depth to Bottom: _____

Sample IDs (GW-mmddyy-AA-XXX) A Samplers Initials
x Location ID
GW- 022613-NH-MW 2

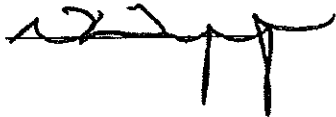
QA/QC Sample ID
(GW-mmddyy-AA-XXX)

Sample Method: Low Flow 1 Well Volume: _____ water column height(ft) X
Purge Start: 13:14 3 Well Volumes: _____ 0.162(2" casing)
Sample Time: 14:30

Time	pH (+/- 0.1 S.U.)	Cond (mS/cm) 3%	Turb. (NTU)	DO (mg/L) 10%	Temp (C°) 3%	ORP (mV) 10%	Salinity (%)	TDS (ppm)	Total Volume Removed (gallons)	Flow (ml/min) < 0.2 LPM	W/L (Feet BTOC)	Water Quality/Description
13:20	6.03	0.470	165.0	0.0	12.18	-36	0.0	0.31		0.100	11.08	Clear
13:31	6.03	0.479	151.0	0.0	12.05	-39	0.0	0.31		0.100	11.11	" "
13:36	6.03	0.483	135.0	0.0	12.01	-40	0.0	0.31		0.100	11.13	" "
13:41	6.03	0.485	127.0	0.0	12.03	-42	0.0	0.32		0.100	11.15	" "

Analysis: Groundwater
 GRO ✓
 DRO ✓
 VOCs ✓
 SVOCs ✓
 Total Lead ✓

Preservative
 HCL ✓
 HCL ✓
 HCL ✓

Signed 

Notes: _____

Location: MW8
Name of Sampler: N. Hinspaw
Weather: CLEAR

QA/QC
MS/MSD _____
Duplicate
Blank _____

QA/QC Sample ID
(GW-mmddy-AA-XXX)
GW-022613-NH-FD1

Depth to Water: 10.68 Sample Depth: _____
Depth to Bottom: _____

Sample IDs (GW-mmddy-AA-XXX) GW-022613-NH-MW8
A Samplers Initials
x Location ID

Sample Method: Low Flow 1 Well Volume: _____ water column height(ft) X
Purge Start: 10:29 3 Well Volumes: _____ 0.162(2" casing)
Sample Time: 11:36

Time	pH (+/- 0.1 S.U.)	Cond (mS/cm) 3%	Turb. (NTU)	DO (mg/L) 10%	Temp (C°) 3%	ORP (mV) 10%	Salinity (%)	TDS (ppm)	Total Volume Removed (gallons)	Flow (ml/min) < 0.2 LPM	W/L (Feet BTOC)	Water Quality/Description
10:38	6.00	0.505	98.6	0.77	10.17	-43	0.0	0.32		0.100	10.81	CLEAR
10:43	5.97	0.495	98.5	0.0	9.84	-48	0.0	0.32		0.100	10.82	" "
10:48	5.96	0.496	99.1	0.0	9.81	-52	0.0	0.32		0.100	10.84	" "
10:53	5.99	0.497	99.0	0.0	9.76	-53	0.0	0.32		0.100	10.86	" "

- Analysis:
Groundwater
GRO
DRO
VOCs
SVOCs
Total Lead

<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>

- Preservative
HCL
HCL
HCL

Signed [Signature]

Notes: _____

Former Tidewater Site
Seattle, WA

Water Quality Meter S/N: _____

Date: 2/27/13

Location: MW-7
 Name of Sampler: D. ESCOBEDO
 Weather: partly cloudy 40s
 Depth to Water: 10.70 Sample Depth: _____
 Depth to Bottom: _____

QA/QC
 MS/MSD _____
 Duplicate _____
 Blank _____

QA/QC Sample ID
 (GW-mmddyy-AA-XXX)

Sample IDs (GW-mmddyy-AA-XXX)

A Samplers Initials
 x Location ID

GW-022713-DE-MW7

Sample Method: Peri Pump 1 Well Volume: _____
 Purge Start: 0915 3 Well Volumes: _____
 Sample Time: 1015

water column height(ft) X
 0.162(2" casing)

Time	pH (+/- 0.1 S.U.)	Cond (mS/cm) 3%	Turb. (NTU)	DO (mg/L) 10%	Temp (C°) 3%	ORP (mV) 10%	Salinity (%)	TDS (ppm)	Total Volume Removed (gallons)	Flow (ml/min) < 0.2 LPM	W/L (Feet BTOC)	Water Quality/Description
0920	6.78	0.090	2100	0.00	13.73	-120	0.1	0.5	1/8	0.19	10.69	
0925	6.74	0.090	917	0.00	13.96	-115	0.0	0.5	1/4	0.19	10.69	
0930	6.75	0.090	312	0.00	13.49	-112	0.1	0.5	3/8	0.19	10.68	
0935	6.80	0.090	248	0.00	13.56	-108	0.1	0.5	1/2	0.19	10.68	
0940	6.80	0.090	215	0.00	13.63	-108	0.1	0.5	5/8	0.19	10.68	
0945	6.80	0.090	126	0.00	13.08	-106	0.1	0.5	3/4	0.19	10.68	
0950	6.80	0.090	12.1	0.00	13.11	-105	0.1	0.5	7/8	0.19	10.68	

Analysis:
 Groundwater
 GRO
 DRO
 VOCs
 SVOCs
 Total Lead

X
X
X
X
X

Preservative
 HCL
 HCL
 HCL

PALLS

Signed _____

Notes:

Former Tidewater Site
Seattle, WA

Water Quality Meter S/N: _____

Date: 2/27/13

Location: MW-10

Name of Sampler: D.F. Sandoval

Weather: cloudy 40°F

QA/QC	_____
MS/MSD	_____
Duplicate	_____
Blank	_____
QA/QC Sample ID (GW-mmddyy-AA-XXX)	

Depth to Water: 10.73 Sample Depth: _____

Depth to Bottom: _____

Sample IDs (GW-mmddyy-AA-XXX)

A Samplers Initials
x Location ID

GW- 022713-DE-MW10

water column height(ft) X
0.162(2" casing)

Sample Method: per pump 1 Well Volume: _____

Purge Start: 11:15 3 Well Volumes: _____

Sample Time: 12:15

Time	pH (+/- 0.1 S.U.)	Cond (mS/cm) 3%	Turb. (NTU)	DO (mg/L) 10%	Temp (C°) 3%	ORP (mV) 10%	Salinity (%)	TDS (ppm)	Total Volume Removed (gallons)	Flow (ml/min) < 0.2 LPM	W/L (Feet BTOC)	Water Quality/Description
11:30	6.64	0.229	102	1.37	12.40	-80	0.1	1.5	1/8	0.19	10.98	
11:35	6.68	0.227	76.1	0.00	12.45	-82	0.1	1.5	1/4	0.19	10.99	
11:40	6.68	0.227	49.6	0.00	12.60	-86	0.1	1.5	3/8	0.19	10.94	
11:45	6.68	0.228	49.9	0.00	12.60	-86	0.1	1.5	1/2	0.19	10.95	
11:50	6.68	0.228	45.8	0.00	12.63	-88	0.1	1.5	5/8	0.19	10.95	

Analysis:

Groundwater

- GRO
- DRO
- VOCs
- SVOCs
- Total Lead

Preservative

- HCL
- HCL
- HCL

X
X
X
X
X

PAHs

Signed _____

Notes:

Former Tidewater Site
Seattle, WA

Water Quality Meter S/N: _____

Date: 02/27/13

Location: MW3
Name of Sampler: N. Hinspenger
Weather: Clear

QA/QC
MS/MSD _____
Duplicate _____
Blank _____

Depth to Water: 10.91 Sample Depth: _____
Depth to Bottom: _____

Sample IDs (GW-mmddyy-AA-XXX)

A Samplers Initials
x Location ID

GW- 022713-NH-MW3

QA/QC Sample ID
(GW-mmddyy-AA-XXX)

Sample Method: LOW FLOW
Purge Start: 11:02
Sample Time: 12:00

1 Well Volume: _____
3 Well Volumes: _____

water column height(ft) X
0.162(2" casing)

Time	pH (+/- 0.1 S.U.)	Cond (mS/cm) 3%	Turb. (NTU)	DO (mg/L) 10%	Temp (C°) 3%	ORP (mV) 10%	Salinity (%)	TDS (ppm)	Total Volume Removed (gallons)	Flow (ml/min) < 0.2 LPM	W/L (Feet BTOC)	Water Quality/Description
10:10	6.21	0.463	675.0	1.00	11.50	-57	0.0	0.30		0.150	11.01	TURBID
11:15	6.17	0.466	272.0	0.0	11.45	-61	0.0	0.30		0.150	11.01	"
11:20	6.13	0.468	183.0	0.16	11.52	-64	0.0	0.30		0.150	11.05	"
11:25	6.11	0.469	223.0	0.16	11.57	-65	0.0	0.30		0.150	11.06	"
11:30	6.11	0.469	167.0	0.14	11.63	-67	0.0	0.30		0.150	11.06	

- Analysis:
Groundwater
GRO
DRO
VOCs
SVOCs
Total Lead

<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>

- Preservative
HCL
HCL
HCL

Signed 

Notes: _____

Former Tidewater Site
Seattle, WA

Water Quality Meter S/N: _____

Date: 02/27/13

Location: MW6
Name of Sampler: M. Hingsperger
Weather: CLEAR

QA/QC
MS/MSD _____
Duplicate _____
Blank _____

Depth to Water: 11.72 Sample Depth: _____
Depth to Bottom: _____

Sample IDs (GW-mmddyy-AA-XXX)

A Samplers Initials
x Location ID

GW- 022713-NH-MW6

QA/QC Sample ID
(GW-mmddyy-AA-XXX)

Sample Method: LOW FLOW
Purge Start: 9:17
Sample Time: 10:20

1 Well Volume: _____
3 Well Volumes: _____

water column height(ft) X
0.162(2" casing)

Time	pH (+/- 0.1 S.U.)	Cond (mS/cm) 3%	Turb. (NTU)	DO (mg/L) 10%	Temp (C°) 3%	ORP (mV) 10%	Salinity (%)	TDS (ppm)	Total Volume Removed (gallons)	Flow (ml/min) < 0.2 LPM	W/L (Feet BTOC)	Water Quality/Description
9:27	6.32	0.915	135.0	0.17	12.23	-85	0.0	0.58		0.100	11.72	CLEAR
9:32	6.33	0.908	127.0	0.07	12.16	-90	0.0	0.58		0.100	11.72	"
9:37	6.35	0.905	126.0	0.0	13.11	-94	0.0	0.58		0.100	11.72	"
9:42	6.37	0.901	127.0	0.0	13.17	-96	0.0	0.58		0.100	11.72	"
9:47	6.39	0.900	127.0	0.0	13.23	-99	0.0	0.58		0.100	11.72	"

Analysis:
Groundwater
GRO
DRO
VOCs
SVOCs
Total Lead

Preservative
HCL
HCL
HCL

Signed [Signature]

Notes:

[Empty box for notes]

Former Tidewater Site
Seattle, WA

Water Quality Meter S/N: _____

Date: 02/27/13

Location: MW5
Name of Sampler: N. Hinsperger
Weather: clear

QA/QC
MS/MSD _____
Duplicate _____
Blank _____

Depth to Water: 11.02 Sample Depth: _____
Depth to Bottom: _____

Sample IDs (GW-mmddyy-AA-XXX) A Samplers initials
GW- 022713-NH-MW5 x Location ID

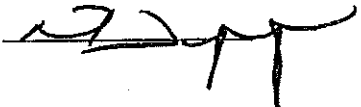
QA/QC Sample ID
(GW-mmddyy-AA-XXX)

Sample Method: LOW FLOW 1 Well Volume: _____
Purge Start: 12:45 3 Well Volumes: _____
Sample Time: 13:30 water column height(ft) X
0.162(2" casing)

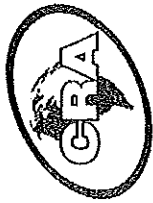
Time	pH (+/- 0.1 S.U.)	Cond (mS/cm) 3%	Turb. (NTU)	DO (mg/L) 10%	Temp (C°) 3%	ORP (mV) 10%	Salinity (%)	TDS (ppm)	Total Volume Removed (gallons)	Flow (ml/min) < 0.2 LPM	W/L (Feet BTOC)	Water Quality/Description
12:53	6.10	0.492	207.0	1.36	12.67	-32	0.0	0.32		0.100	11.02	CLEAR
12:58	6.08	0.486	219.0	0.55	12.47	-35	0.0	0.32		0.100	11.02	" "
13:03	6.08	0.481	231.0	0.0	12.35	-35	0.0	0.32		0.100	11.02	" "
13:08	6.09	0.479	232.0	0.0	12.32	-36	0.0	0.32		0.100	11.02	" "
13:12	6.05	0.478	224.0	0.0	12.29	-37	0.0	0.32		0.100	11.02	" "

Analysis:
Groundwater
GRO
DRO
VOCs
SVOCs
Total Lead

Preservative
HCL
HCL
HCL

Signed 

Notes:



CONESTOGA-ROVERS & ASSOCIATES

CHAIN OF CUSTODY RECORD

Address: **117 TACOMA AVE. SOUTH TACOMA, WA.**

Phone: **253-573-1218**

Fax: **253-573-1663**

COC NO: **37478**

PAGE **1** OF **1**

(See Reverse Side for Instructions)

Project No/ Phase/Task Code: 061992		Laboratory Name: LANCASTER		Lab Location: LANCASTER, PA.		SSOW ID:	
Project Name: TIDENATER - SEATTLE		Lab Contact:		Lab Quote No:		Cooler No:	
Project Location: MILK WAY S. SEATTLE, WA.		Methanol/Water (Soil)		ANALYSIS REQUESTED (See Back of COC for Definitions)		Carrier:	
Chemistry Contact: M. DAVIS / J. CLOUD		Sulfuric Acid (H ₂ SO ₄)		Total Containers/Sample		Airbill No:	
Sampler(s): D. ESCOBEDO / N. HUNSPERGER		Nitric Acid (HNO ₃)		MS/MSD Request		Date Shipped:	
SAMPLE IDENTIFICATION (Combination for each sample may be combined on one line)		Hydrochloric Acid (HCl)		Unpreserved		COMMENTS/SPECIAL INSTRUCTIONS:	
LINE	DATE (mm/dd/yyyy)	TIME (hh:mm)	MATRIX CODE (see back of COC)	SAMPLE TYPE	CONTAINER QUANTITY & PRESERVATION	Other:	MS/MSD Request
1	02/26/13	11:30	W6	G	Grab (G) or Comp (C)		
2	02/26/13		W6	G	Encores 3x5-g, 1x25-g		
3	02/26/13	14:30	W6	G	VOC		
4	02/27/13	10:26	W6	G	Methanol/Water (Soil)		
5	02/27/13	12:00	W6	G	Sodium Hydroxide (NaOH)		
6	02/27/13	13:30	W6	G	Sulfuric Acid (H ₂ SO ₄)		
7	02/27/13	12:25	W6	G	Nitric Acid (HNO ₃)		
8	02/26/13	11:35	W6	G	Hydrochloric Acid (HCl)		
9	02/27/13	10:15	W6	G	Unpreserved		
10	02/26/13	14:05	W6	G	Grab (G) or Comp (C)		
1					Unpreserved		
2					Encores 3x5-g, 1x25-g		
3					VOC		
4					Methanol/Water (Soil)		
1					Sodium Hydroxide (NaOH)		
5					Sulfuric Acid (H ₂ SO ₄)		

Notes/ Special Requirements:

Total Number of Containers: **12**

All Samples in Cooler must be on COC

TAT Required in business days (use separate COCs for different TATs):

1 Day 2 Days 3 Days 1 Week 2 Week Other: **STANDARD**

RELINQUISHED BY	COMPANY	DATE	RECEIVED BY	COMPANY	DATE	TIME
	CRA	02/26/13				



CONESTOGA-ROVERS & ASSOCIATES

CHAIN OF CUSTODY RECORD

Address: 117 Tacoma Ave South Tacoma, WA
 Phone: 253.533.7218 Fax: 253.533.1645

COC NO.: 37478

PAGE 1 OF 1
 (See Reverse Side for Instructions)

Project No/Phase/Task Code: <u>06197</u>		Laboratory Name: <u>SEATTLE</u>		Lab Location: <u>104</u>		SSOW ID:							
Project Name: <u>TLEWATER - SEATTLE</u>		Lab Contact: <u>MARK GAY</u>		Lab Quote No.:		Cooler No.:							
Project Location: <u>MILKWAY S. SEATTLE</u>		Carrier:		Airbill No.:		Date Shipped:							
Chemistry Contact: <u>M. DAVIS / J. CHOW</u>		Container Quantity & Preservation		Analysis Requested (See Back of COC for Definitions)		Comments/Special Instructions:							
Sampler(s): <u>D. ESCOBEDO / N. HINDERGER</u>		Sample Type		Total Containers/Sample		MS/MSD Request							
Item	Sample/Identification (Containers for each sample may be combined on one line)	Date (mm/dd/yy)	Time (hh:mm)	Matrix Code (see back of COC)	Unpreserved	Hydrochloric Acid (HCl)	Nitric Acid (HNO ₃)	Sulfuric Acid (H ₂ SO ₄)	Sodium Hydroxide (NaOH)	Methanol/Water (Soil)	VOC	Encores 3x5-g, 1x25-g	Other:
1	GW-022613-NH-NW-8	02/26/13	11:30	WS									
2	GW-022613-NH-FD-1	02/26/13	14:30	WF									
3	GW-022613-NH-NW-2	02/26/13	14:30	WS									
4	GW-022613-NH-NW-6	02/27/13	10:20	WS									
5	GW-022613-NH-NW-3	02/27/13	12:00	WS									
6	GW-022613-NH-NW-5	02/27/13	13:30	WS									
7	GW-022613-DE-NW-10	02/27/13	2:25	WS									
8	GW-022613-DE-NW-4	02/26/13	11:30	WS									
9	GW-022613-DE-NW-7	02/27/13	15:15	WF									
10	GW-022613-DE-NW-1	02/26/13	14:05	WS									
11	TRIP BLOWNS												
12													
13													
14													
15													

Total Number of Containers: 12

All Samples in Cooler must be on COC

Notes/Special Requirements:

RELINQUISHED BY	COMPANY	DATE	RECEIVED BY	COMPANY	DATE	TIME
<u>[Signature]</u>	<u>CRA</u>	<u>02/26/13</u>	<u>[Signature]</u>	<u>CRA</u>	<u>16:00</u>	<u>1</u>
					<u>2</u>	
					<u>3</u>	

ATTACHMENT B

LABORATORY ANALYTICAL REPORT

ANALYTICAL RESULTS

Prepared by:

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

Prepared for:

Conestoga-Rovers & Associates
Suite 190
20818 44th Ave W
Lynnwood WA 98036

March 14, 2013

Project: 301233 Tidewater Seattle

Submittal Date: 03/01/2013

Group Number: 1372475

PO Number: 4055960

State of Sample Origin: WA

Client Sample Description

GW-022613-NH-MW8 Grab Groundwater
GW-022613-NH-FD1 Grab Groundwater
GW-022613-NH-MW2 Grab Groundwater
GW-022713-NH-MW6 Grab Groundwater
GW-022713-NH-MW3 Grab Groundwater
GW-022713-NH-MW5 Grab Groundwater
GW-022713-DE-MW10 Grab Groundwater
GW-022613-DE-MW4 Grab Groundwater
GW-022613-DE-MW4 MS Grab Groundwater
GW-022613-DE-MW4 MSD Grab Groundwater
GW-022713-DE-MW7 Grab Groundwater
GW-022613-DE-MW1 Grab Groundwater
TRIP BLANK Water

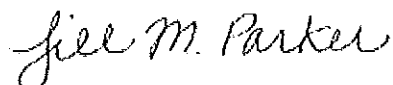
Lancaster Labs (LLI) #

6969727
6969728
6969729
6969730
6969731
6969732
6969733
6969734
6969735
6969736
6969737
6969738
6969739

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

ELECTRONIC COPY TO	Conestoga-Rovers & Associates	Attn: Haroon Rahmani
ELECTRONIC COPY TO	CRA	Attn: Edwin Turner
ELECTRONIC COPY TO	Conestoga-Rovers & Associates	Attn: Jeffrey Cloud
ELECTRONIC COPY TO	Conestoga-Rovers & Associates	Attn: Matt Davis
ELECTRONIC COPY TO	Chevron	Attn: Anna Avina
ELECTRONIC COPY TO	Chevron c/o CRA	Attn: Report Contact

Respectfully Submitted,



Jill M. Parker
Senior Specialist

(717) 556-7262

Sample Description: GW-022613-NH-MW8 Grab Groundwater
 MLK Tidewater Site
 2800 Martin Luther King Jr Way - Seattle, WA

LLI Sample # WW 6969727
 LLI Group # 1372475
 Account # 13534

Project Name: 301233 Tidewater Seattle

Collected: 02/26/2013 11:30 by NH

Conestoga-Rovers & Associates

Suite 190

Submitted: 03/01/2013 09:15

20818 44th Ave W

Reported: 03/14/2013 10:55

Lynnwood WA 98036

TSE08

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/l	ug/l	
10335	Acetone	67-64-1	N.D.	6	1
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Bromobenzene	108-86-1	N.D.	1	1
10335	Bromochloromethane	74-97-5	N.D.	1	1
10335	Bromodichloromethane	75-27-4	N.D.	1	1
10335	Bromoform	75-25-2	N.D.	1	1
10335	Bromomethane	74-83-9	N.D.	1	1
10335	2-Butanone	78-93-3	5	3	1
10335	n-Butylbenzene	104-51-8	13	1	1
10335	sec-Butylbenzene	135-98-8	10	1	1
10335	tert-Butylbenzene	98-06-6	N.D.	1	1
10335	Carbon Disulfide	75-15-0	N.D.	1	1
10335	Carbon Tetrachloride	56-23-5	N.D.	1	1
10335	Chlorobenzene	108-90-7	N.D.	0.8	1
10335	Chloroethane	75-00-3	N.D.	1	1
10335	Chloroform	67-66-3	N.D.	0.8	1
10335	Chloromethane	74-87-3	N.D.	1	1
10335	2-Chlorotoluene	95-49-8	N.D.	1	1
10335	4-Chlorotoluene	106-43-4	N.D.	1	1
10335	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	2	1
10335	Dibromochloromethane	124-48-1	N.D.	1	1
10335	1,2-Dibromoethane	106-93-4	N.D.	0.5	1
10335	Dibromomethane	74-95-3	N.D.	1	1
10335	1,2-Dichlorobenzene	95-50-1	N.D.	1	1
10335	1,3-Dichlorobenzene	541-73-1	N.D.	1	1
10335	1,4-Dichlorobenzene	106-46-7	N.D.	1	1
10335	Dichlorodifluoromethane	75-71-8	N.D.	2	1
10335	1,1-Dichloroethane	75-34-3	N.D.	1	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.8	1
10335	cis-1,2-Dichloroethene	156-59-2	3	0.8	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	1
10335	1,2-Dichloropropane	78-87-5	N.D.	1	1
10335	1,3-Dichloropropane	142-28-9	N.D.	1	1
10335	2,2-Dichloropropane	594-20-7	N.D.	1	1
10335	1,1-Dichloropropene	563-58-6	N.D.	1	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	1
10335	Ethylbenzene	100-41-4	100	0.5	1
10335	Hexachlorobutadiene	87-68-3	N.D.	2	1
10335	2-Hexanone	591-78-6	N.D.	3	1
10335	Isopropylbenzene	98-82-8	29	1	1
10335	p-Isopropyltoluene	99-87-6	8	1	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10335	4-Methyl-2-pentanone	108-10-1	N.D.	3	1
10335	Methylene Chloride	75-09-2	N.D.	2	1
10335	Naphthalene	91-20-3	86	1	1
10335	n-Propylbenzene	103-65-1	63	1	1
10335	Styrene	100-42-5	N.D.	1	1
10335	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	1	1

Sample Description: GW-022613-NH-MW8 Grab Groundwater
MLK Tidewater Site
2800 Martin Luther King Jr Way - Seattle, WA

LLI Sample # WW 6969727
LLI Group # 1372475
Account # 13534

Project Name: 301233 Tidewater Seattle

Collected: 02/26/2013 11:30 by NH

Conestoga-Rovers & Associates

Suite 190
20818 44th Ave W
Lynnwood WA 98036

Submitted: 03/01/2013 09:15
Reported: 03/14/2013 10:55

TSE08

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B			ug/l	ug/l	
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	1
10335	Tetrachloroethene	127-18-4	N.D.	0.8	1
10335	Toluene	108-88-3	0.6	0.5	1
10335	1,2,3-Trichlorobenzene	87-61-6	N.D.	1	1
10335	1,2,4-Trichlorobenzene	120-82-1	N.D.	1	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.8	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.8	1
10335	Trichloroethene	79-01-6	N.D.	1	1
10335	Trichlorofluoromethane	75-69-4	N.D.	2	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	1	1
10335	1,2,4-Trimethylbenzene	95-63-6	1,200	10	10
10335	1,3,5-Trimethylbenzene	108-67-8	280	1	1
10335	Vinyl Chloride	75-01-4	N.D.	1	1
10335	m+p-Xylene	179601-23-1	600	5	10
10335	o-Xylene	95-47-6	220	0.5	1
10335	Xylene (Total)	1330-20-7	800	5	10
GC/MS Semivolatiles SW-846 8270C SIM			ug/l	ug/l	
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	1
08357	Chrysene	218-01-9	N.D.	0.010	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	1
08357	1-Methylnaphthalene	90-12-0	19	0.21	20
08357	2-Methylnaphthalene	91-57-6	28	0.21	20
08357	Naphthalene	91-20-3	57	0.62	20
GC Volatiles ECY 97-602 NWTPH-Gx			ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	12,000	250	5
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons w/Si modified					
02211	DRO C12-C24 w/Si Gel	n.a.	780	30	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	70	1
Metals SW-846 6020			ug/l	ug/l	
06035	Lead	7439-92-1	5.2	0.073	1

General Sample Comments

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

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

Sample Description: GW-022613-NH-MW8 Grab Groundwater
 MLK Tidewater Site
 2800 Martin Luther King Jr Way - Seattle, WA

LLI Sample # WW 6969727
 LLI Group # 1372475
 Account # 13534

Project Name: 301233 Tidewater Seattle

Collected: 02/26/2013 11:30 by NH

Conestoga-Rovers & Associates
 Suite 190
 20818 44th Ave W
 Lynnwood WA 98036

Submitted: 03/01/2013 09:15

Reported: 03/14/2013 10:55

TSE08

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	8260 Solvent Compound - Water	SW-846 8260B	1	N130642AA	03/06/2013 03:59	Brett W Kenyon	1
10335	8260 Solvent Compound - Water	SW-846 8260B	1	N130642AA	03/06/2013 04:22	Brett W Kenyon	10
01163	GC/MS VOA Water Prep	SW-846 5030B	1	N130642AA	03/06/2013 03:59	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	2	N130642AA	03/06/2013 04:22	Brett W Kenyon	10
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13061WAD026	03/08/2013 11:55	Mark A Clark	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13061WAD026	03/09/2013 08:17	Mark A Clark	20
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13061WAD026	03/03/2013 07:15	Katheryne V Sponheimer	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	13063D20A	03/05/2013 18:43	Catherine J Schwarz	5
01146	GC VOA Water Prep	SW-846 5030B	1	13063D20A	03/05/2013 18:43	Catherine J Schwarz	5
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	130630019A	03/07/2013 13:27	Christine E Dolman	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	130630019A	03/05/2013 12:30	Katheryne V Sponheimer	1
06035	Lead	SW-846 6020	1	130636050004A	03/11/2013 13:35	Deborah A Krady	1
06050	ICE/MS SW-846 Water Digest	SW-846 3020A	1	130636050004	03/05/2013 11:36	James L Mertz	1

Sample Description: GW-022613-NH-FD1 Grab Groundwater
MLK Tidewater Site
2800 Martin Luther King Jr Way - Seattle, WA

LLI Sample # WW 6969728
LLI Group # 1372475
Account # 13534

Project Name: 301233 Tidewater Seattle

Collected: 02/26/2013 by NH

Conestoga-Rovers & Associates
Suite 190
20818 44th Ave W
Lynnwood WA 98036

Submitted: 03/01/2013 09:15

Reported: 03/14/2013 10:55

TSEFD

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/l	ug/l	
10335	Acetone	67-64-1	N.D.	6	1
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Bromobenzene	108-86-1	N.D.	1	1
10335	Bromochloromethane	74-97-5	N.D.	1	1
10335	Bromodichloromethane	75-27-4	N.D.	1	1
10335	Bromoform	75-25-2	N.D.	1	1
10335	Bromomethane	74-83-9	N.D.	1	1
10335	2-Butanone	78-93-3	5	3	1
10335	n-Butylbenzene	104-51-8	14	1	1
10335	sec-Butylbenzene	135-98-8	10	1	1
10335	tert-Butylbenzene	98-06-6	N.D.	1	1
10335	Carbon Disulfide	75-15-0	N.D.	1	1
10335	Carbon Tetrachloride	56-23-5	N.D.	1	1
10335	Chlorobenzene	108-90-7	N.D.	0.8	1
10335	Chloroethane	75-00-3	N.D.	1	1
10335	Chloroform	67-66-3	N.D.	0.8	1
10335	Chloromethane	74-87-3	N.D.	1	1
10335	2-Chlorotoluene	95-49-8	N.D.	1	1
10335	4-Chlorotoluene	106-43-4	N.D.	1	1
10335	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	2	1
10335	Dibromochloromethane	124-48-1	N.D.	1	1
10335	1,2-Dibromoethane	106-93-4	N.D.	0.5	1
10335	Dibromomethane	74-95-3	N.D.	1	1
10335	1,2-Dichlorobenzene	95-50-1	N.D.	1	1
10335	1,3-Dichlorobenzene	541-73-1	N.D.	1	1
10335	1,4-Dichlorobenzene	106-46-7	N.D.	1	1
10335	Dichlorodifluoromethane	75-71-8	N.D.	2	1
10335	1,1-Dichloroethane	75-34-3	N.D.	1	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.8	1
10335	cis-1,2-Dichloroethene	156-59-2	3	0.8	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	1
10335	1,2-Dichloropropane	78-87-5	N.D.	1	1
10335	1,3-Dichloropropane	142-28-9	N.D.	1	1
10335	2,2-Dichloropropane	594-20-7	N.D.	1	1
10335	1,1-Dichloropropene	563-58-6	N.D.	1	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	1
10335	Ethylbenzene	100-41-4	100	0.5	1
10335	Hexachlorobutadiene	87-68-3	N.D.	2	1
10335	2-Hexanone	591-78-6	N.D.	3	1
10335	Isopropylbenzene	98-82-8	29	1	1
10335	p-Isopropyltoluene	99-87-6	7	1	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10335	4-Methyl-2-pentanone	108-10-1	N.D.	3	1
10335	Methylene Chloride	75-09-2	N.D.	2	1
10335	Naphthalene	91-20-3	72	1	1
10335	n-Propylbenzene	103-65-1	60	1	1
10335	Styrene	100-42-5	N.D.	1	1
10335	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	1	1

Sample Description: GW-022613-NH-FD1 Grab Groundwater
 MLK Tidewater Site
 2800 Martin Luther King Jr Way - Seattle, WA

LLI Sample # WW 6969728
LLI Group # 1372475
Account # 13534

Project Name: 301233 Tidewater Seattle

Collected: 02/26/2013 by NH

Conestoga-Rovers & Associates
 Suite 190

Submitted: 03/01/2013 09:15

20818 44th Ave W

Reported: 03/14/2013 10:55

Lynnwood WA 98036

TSEFD

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B			ug/l	ug/l	
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	1
10335	Tetrachloroethene	127-18-4	N.D.	0.8	1
10335	Toluene	108-88-3	0.6	0.5	1
10335	1,2,3-Trichlorobenzene	87-61-6	N.D.	1	1
10335	1,2,4-Trichlorobenzene	120-82-1	N.D.	1	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.8	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.8	1
10335	Trichloroethene	79-01-6	N.D.	1	1
10335	Trichlorofluoromethane	75-69-4	N.D.	2	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	1	1
10335	1,2,4-Trimethylbenzene	95-63-6	1,100	10	10
10335	1,3,5-Trimethylbenzene	108-67-8	280	1	1
10335	Vinyl Chloride	75-01-4	N.D.	1	1
10335	m-p-Xylene	179601-23-1	580	5	10
10335	o-Xylene	95-47-6	220	0.5	1
10335	Xylene (Total)	1330-20-7	770	5	10
The LCS and/or LCS/D recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: chloromethane.					
GC/MS Semivolatiles SW-846 8270C SIM			ug/l	ug/l	
08357	Benzo(a)anthracene	56-55-3	N.D.	0.0095	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.0095	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.0095	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.0095	1
08357	Chrysene	218-01-9	N.D.	0.0095	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0095	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.0095	1
08357	1-Methylnaphthalene	90-12-0	17	0.19	20
08357	2-Methylnaphthalene	91-57-6	25	0.19	20
08357	Naphthalene	91-20-3	52	0.57	20
GC Volatiles ECY 97-602 NWTPH-Gx			ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	11,000	250	5
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons w/Si modified					
02211	DRO C12-C24 w/Si Gel	n.a.	540	29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	69	1
Metals SW-846 6020			ug/l	ug/l	
06035	Lead	7439-92-1	5.3	0.073	1



Lancaster
Laboratories

Analysis Report

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

Sample Description: GW-022613-NH-FD1 Grab Groundwater
MLK Tidewater Site
2800 Martin Luther King Jr Way - Seattle, WA

LLI Sample # WW 6969728
LLI Group # 1372475
Account # 13534

Project Name: 301233 Tidewater Seattle

Collected: 02/26/2013 by NH

Conestoga-Rovers & Associates

Submitted: 03/01/2013 09:15

Suite 190

Reported: 03/14/2013 10:55

20818 44th Ave W
Lynnwood WA 98036

TSEFD

General Sample Comments

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

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	8260 Solvent Compound - Water	SW-846 8260B	1	W130671AA	03/08/2013 12:02	Christopher G Torres	1
10335	8260 Solvent Compound - Water	SW-846 8260B	1	W130671AA	03/08/2013 12:26	Christopher G Torres	10
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W130671AA	03/08/2013 12:02	Christopher G Torres	1
01163	GC/MS VOA Water Prep	SW-846 5030B	2	W130671AA	03/08/2013 12:26	Christopher G Torres	10
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13061WAD026	03/08/2013 12:26	Mark A Clark	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13061WAD026	03/09/2013 08:48	Mark A Clark	20
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13061WAD026	03/03/2013 07:15	Katheryne V Sponheimer	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	13063D20A	03/05/2013 21:34	Catherine J Schwarz	5
01146	GC VOA Water Prep	SW-846 5030B	1	13063D20A	03/05/2013 21:34	Catherine J Schwarz	5
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	130630019A	03/07/2013 13:50	Christine E Dolman	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	130630019A	03/05/2013 12:30	Katheryne V Sponheimer	1
06035	Lead	SW-846 6020	1	130636050004A	03/11/2013 13:37	Deborah A Krady	1
06050	ICP/MS SW-846 Water Digest	SW-846 3020A	1	130636050004	03/05/2013 11:36	James L Mertz	1



Lancaster
Laboratories

Analysis Report

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

Sample Description: GW-022613-NH-MW2 Grab Groundwater
MLK Tidewater Site
2800 Martin Luther King Jr Way - Seattle, WA

LLI Sample # WW 6969729
LLI Group # 1372475
Account # 13534

Project Name: 301233 Tidewater Seattle

Collected: 02/26/2013 14:30 by NH

Conestoga-Rovers & Associates

Suite 190

Submitted: 03/01/2013 09:15

20818 44th Ave W

Reported: 03/14/2013 10:55

Lynnwood WA 98036

TSE02

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/l	ug/l	
10335	Acetone	67-64-1	N.D.	6	1
10335	Benzene	71-43-2	0.7	0.5	1
10335	Bromobenzene	108-86-1	N.D.	1	1
10335	Bromochloromethane	74-97-5	N.D.	1	1
10335	Bromodichloromethane	75-27-4	N.D.	1	1
10335	Bromoform	75-25-2	N.D.	1	1
10335	Bromomethane	74-83-9	N.D.	1	1
10335	2-Butanone	78-93-3	N.D.	3	1
10335	n-Butylbenzene	104-51-8	3	1	1
10335	sec-Butylbenzene	135-98-8	4	1	1
10335	tert-Butylbenzene	98-06-6	N.D.	1	1
10335	Carbon Disulfide	75-15-0	N.D.	1	1
10335	Carbon Tetrachloride	56-23-5	N.D.	1	1
10335	Chlorobenzene	108-90-7	N.D.	0.8	1
10335	Chloroethane	75-00-3	N.D.	1	1
10335	Chloroform	67-66-3	N.D.	0.8	1
10335	Chloromethane	74-87-3	N.D.	1	1
10335	2-Chlorotoluene	95-49-8	N.D.	1	1
10335	4-Chlorotoluene	106-43-4	N.D.	1	1
10335	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	2	1
10335	Dibromochloromethane	124-48-1	N.D.	1	1
10335	1,2-Dibromoethane	106-93-4	N.D.	0.5	1
10335	Dibromomethane	74-95-3	N.D.	1	1
10335	1,2-Dichlorobenzene	95-50-1	N.D.	1	1
10335	1,3-Dichlorobenzene	541-73-1	N.D.	1	1
10335	1,4-Dichlorobenzene	106-46-7	N.D.	1	1
10335	Dichlorodifluoromethane	75-71-8	N.D.	2	1
10335	1,1-Dichloroethane	75-34-3	N.D.	1	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.8	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.8	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	1
10335	1,2-Dichloropropane	78-87-5	N.D.	1	1
10335	1,3-Dichloropropane	142-28-9	N.D.	1	1
10335	2,2-Dichloropropane	594-20-7	N.D.	1	1
10335	1,1-Dichloropropene	563-58-6	N.D.	1	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	1
10335	Ethylbenzene	100-41-4	N.D.	0.5	1
10335	Hexachlorobutadiene	87-68-3	N.D.	2	1
10335	2-Hexanone	591-78-6	N.D.	3	1
10335	Isopropylbenzene	98-82-8	19	1	1
10335	p-Isopropyltoluene	99-87-6	N.D.	1	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10335	4-Methyl-2-pentanone	108-10-1	N.D.	3	1
10335	Methylene Chloride	75-09-2	N.D.	2	1
10335	Naphthalene	91-20-3	N.D.	1	1
10335	n-Propylbenzene	103-65-1	39	1	1
10335	Styrene	100-42-5	N.D.	1	1
10335	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	1	1

Sample Description: GW-022613-NH-MW2 Grab Groundwater
MLK Tidewater Site
2800 Martin Luther King Jr Way - Seattle, WA

LLI Sample # WW 6969729
LLI Group # 1372475
Account # 13534

Project Name: 301233 Tidewater Seattle

Collected: 02/26/2013 14:30 by NH

Conestoga-Rovers & Associates

Suite 190

Submitted: 03/01/2013 09:15

20818 44th Ave W

Reported: 03/14/2013 10:55

Lynnwood WA 98036

TSE02

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B			ug/l	ug/l	
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	1
10335	Tetrachloroethene	127-18-4	N.D.	0.8	1
10335	Toluene	108-88-3	N.D.	0.5	1
10335	1,2,3-Trichlorobenzene	87-61-6	N.D.	1	1
10335	1,2,4-Trichlorobenzene	120-82-1	N.D.	1	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.8	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.8	1
10335	Trichloroethene	79-01-6	N.D.	1	1
10335	Trichlorofluoromethane	75-69-4	N.D.	2	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	1	1
10335	1,2,4-Trimethylbenzene	95-63-6	N.D.	1	1
10335	1,3,5-Trimethylbenzene	108-67-8	N.D.	1	1
10335	Vinyl Chloride	75-01-4	N.D.	1	1
10335	m+p-Xylene	179601-23-1	N.D.	0.5	1
10335	o-Xylene	95-47-6	N.D.	0.5	1
10335	Xylene (Total)	1330-20-7	N.D.	0.5	1
The LCS and/or LCSd recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: chloromethane.					
GC/MS Semivolatiles SW-846 8270C SIM			ug/l	ug/l	
08357	Benzo(a)anthracene	56-55-3	N.D.	0.0098	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.0098	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.0098	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.0098	1
08357	Chrysene	218-01-9	N.D.	0.0098	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0098	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.0098	1
08357	1-Methylnaphthalene	90-12-0	0.11	0.0098	1
08357	2-Methylnaphthalene	91-57-6	0.012	0.0098	1
08357	Naphthalene	91-20-3	0.14	0.029	1
GC Volatiles ECY 97-602 NWTPH-Gx			ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	770	50	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons w/Si modified					
02211	DRO C12-C24 w/Si Gel	n.a.	150	29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	68	1
Metals SW-846 6020			ug/l	ug/l	
06035	Lead	7439-92-1	0.19	0.073	1

Sample Description: GW-022613-NH-MW2 Grab Groundwater
 MLK Tidewater Site
 2800 Martin Luther King Jr Way - Seattle, WA

LLI Sample # WW 6969729
 LLI Group # 1372475
 Account # 13534

Project Name: 301233 Tidewater Seattle

Collected: 02/26/2013 14:30 by NH

Conestoga-Rovers & Associates

Suite 190

Submitted: 03/01/2013 09:15

20818 44th Ave W

Reported: 03/14/2013 10:55

Lynnwood WA 98036

TSE02

General Sample Comments

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

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	8260 Solvent Compound - Water	SW-846 8260B	1	W130671AA	03/08/2013 06:27	Christopher G Torres	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W130671AA	03/08/2013 06:27	Christopher G Torres	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13061WAD026	03/08/2013 12:57	Mark A Clark	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13061WAD026	03/03/2013 07:15	Katheryne V Sponheimer	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	13063D20A	03/05/2013 16:09	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	13063D20A	03/05/2013 16:09	Catherine J Schwarz	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	130630019A	03/07/2013 11:09	Christine E Dolman	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	130630019A	03/05/2013 12:30	Katheryne V Sponheimer	1
06035	Lead	SW-846 6020	1	130636050004A	03/11/2013 13:39	Deborah A Krady	1
06050	ICP/MS SW-846 Water Digest	SW-846 3020A	1	130636050004	03/05/2013 11:36	James L Mertz	1

Sample Description: GW-022713-NH-MW6 Grab Groundwater
MLK Tidewater Site
2800 Martin Luther King Jr Way - Seattle, WA

LLI Sample # WW 6969730
LLI Group # 1372475
Account # 13534

Project Name: 301233 Tidewater Seattle

Collected: 02/27/2013 10:20 by NH

Conestoga-Rovers & Associates

Suite 190
20818 44th Ave W
Lynnwood WA 98036

Submitted: 03/01/2013 09:15

Reported: 03/14/2013 10:55

TSE06

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/l	ug/l	
10335	Acetone	67-64-1	N.D.	6	1
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Bromobenzene	108-86-1	N.D.	1	1
10335	Bromochloromethane	74-97-5	N.D.	1	1
10335	Bromodichloromethane	75-27-4	N.D.	1	1
10335	Bromoform	75-25-2	N.D.	1	1
10335	Bromomethane	74-83-9	N.D.	1	1
10335	2-Butanone	78-93-3	N.D.	3	1
10335	n-Butylbenzene	104-51-8	N.D.	1	1
10335	sec-Butylbenzene	135-98-8	N.D.	1	1
10335	tert-Butylbenzene	98-06-6	N.D.	1	1
10335	Carbon Disulfide	75-15-0	N.D.	1	1
10335	Carbon Tetrachloride	56-23-5	N.D.	1	1
10335	Chlorobenzene	108-90-7	N.D.	0.8	1
10335	Chloroethane	75-00-3	N.D.	1	1
10335	Chloroform	67-66-3	N.D.	0.8	1
10335	Chloromethane	74-87-3	N.D.	1	1
10335	2-Chlorotoluene	95-49-8	N.D.	1	1
10335	4-Chlorotoluene	106-43-4	N.D.	1	1
10335	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	2	1
10335	Dibromochloromethane	124-48-1	N.D.	1	1
10335	1,2-Dibromoethane	106-93-4	N.D.	0.5	1
10335	Dibromomethane	74-95-3	N.D.	1	1
10335	1,2-Dichlorobenzene	95-50-1	N.D.	1	1
10335	1,3-Dichlorobenzene	541-73-1	N.D.	1	1
10335	1,4-Dichlorobenzene	106-46-7	N.D.	1	1
10335	Dichlorodifluoromethane	75-71-8	N.D.	2	1
10335	1,1-Dichloroethane	75-34-3	N.D.	1	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.8	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.8	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	1
10335	1,2-Dichloropropane	78-87-5	N.D.	1	1
10335	1,3-Dichloropropane	142-28-9	N.D.	1	1
10335	2,2-Dichloropropane	594-20-7	N.D.	1	1
10335	1,1-Dichloropropene	563-58-6	N.D.	1	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	1
10335	Ethylbenzene	100-41-4	N.D.	0.5	1
10335	Hexachlorobutadiene	87-68-3	N.D.	2	1
10335	2-Hexanone	591-78-6	N.D.	3	1
10335	Isopropylbenzene	98-82-8	N.D.	1	1
10335	p-Isopropyltoluene	99-87-6	N.D.	1	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10335	4-Methyl-2-pentanone	108-10-1	N.D.	3	1
10335	Methylene Chloride	75-09-2	N.D.	2	1
10335	Naphthalene	91-20-3	N.D.	1	1
10335	n-Propylbenzene	103-65-1	N.D.	1	1
10335	Styrene	100-42-5	N.D.	1	1
10335	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	1	1

Sample Description: GW-022713-NH-MW6 Grab Groundwater
 MLK Tidewater Site
 2800 Martin Luther King Jr Way - Seattle, WA

LLI Sample # WW 6969730
 LLI Group # 1372475
 Account # 13534

Project Name: 301233 Tidewater Seattle

Collected: 02/27/2013 10:20 by NH

Conestoga-Rovers & Associates

Submitted: 03/01/2013 09:15

Suite 190

Reported: 03/14/2013 10:55

20818 44th Ave W
Lynnwood WA 98036

TSE06

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B			ug/l	ug/l	
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	1
10335	Tetrachloroethene	127-18-4	N.D.	0.8	1
10335	Toluene	108-88-3	N.D.	0.5	1
10335	1,2,3-Trichlorobenzene	87-61-6	N.D.	1	1
10335	1,2,4-Trichlorobenzene	120-82-1	N.D.	1	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.8	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.8	1
10335	Trichloroethene	79-01-6	N.D.	1	1
10335	Trichlorofluoromethane	75-69-4	N.D.	2	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	1	1
10335	1,2,4-Trimethylbenzene	95-63-6	N.D.	1	1
10335	1,3,5-Trimethylbenzene	108-67-8	N.D.	1	1
10335	Vinyl Chloride	75-01-4	N.D.	1	1
10335	m+p-Xylene	179601-23-1	N.D.	0.5	1
10335	o-Xylene	95-47-6	N.D.	0.5	1
10335	Xylene (Total)	1330-20-7	N.D.	0.5	1
The LCS and/or LCS/D recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: chloromethane.					
GC/MS Semivolatiles SW-846 8270C SIM			ug/l	ug/l	
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	1
08357	Chrysene	218-01-9	N.D.	0.010	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	1
08357	Naphthalene	91-20-3	N.D.	0.030	1
GC Volatiles ECY 97-602 NWTPH-Gx			ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons w/Si modified					
02211	DRO C12-C24 w/Si Gel	n.a.	N.D.	30	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	70	1
Metals SW-846 6020			ug/l	ug/l	
06035	Lead	7439-92-1	0.68	0.073	1



Lancaster
Laboratories

Analysis Report

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

Sample Description: GW-022713-NH-MW6 Grab Groundwater
MLK Tidewater Site
2800 Martin Luther King Jr Way - Seattle, WA

LLI Sample # WW 6969730
LLI Group # 1372475
Account # 13534

Project Name: 301233 Tidewater Seattle

Collected: 02/27/2013 10:20 by NH

Conestoga-Rovers & Associates
Suite 190

Submitted: 03/01/2013 09:15

20818 44th Ave W

Reported: 03/14/2013 10:55

Lynnwood WA 98036

TSE06

General Sample Comments

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

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	8260 Solvent Compound - Water	SW-846 8260B	1	W130671AA	03/08/2013 06:51	Christopher G Torres	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W130671AA	03/08/2013 06:51	Christopher G Torres	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13061WAD026	03/08/2013 13:28	Mark A Clark	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13061WAD026	03/03/2013 07:15	Katheryne V Sponheimer	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	13063D20A	03/05/2013 16:31	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	13063D20A	03/05/2013 16:31	Catherine J Schwarz	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	130630019A	03/07/2013 11:32	Christine E Dolman	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	130630019A	03/05/2013 12:30	Katheryne V Sponheimer	1
06035	Lead	SW-846 6020	1	130636050004A	03/11/2013 13:40	Deborah A Krady	1
06050	ICP/MS SW-846 Water Digest	SW-846 3020A	1	130636050004	03/05/2013 11:36	James L Mertz	1

Sample Description: GW-022713-NH-MW3 Grab Groundwater
 MLK Tidewater Site
 2800 Martin Luther King Jr Way - Seattle, WA

LLI Sample # WW 6969731
LLI Group # 1372475
Account # 13534

Project Name: 301233 Tidewater Seattle

Collected: 02/27/2013 12:00 by NH

Conestoga-Rovers & Associates

Submitted: 03/01/2013 09:15

Suite 190

Reported: 03/14/2013 10:55

20818 44th Ave W

Lynnwood WA 98036

TSE03

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/l	ug/l	
10335	Acetone	67-64-1	N.D.	6	1
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Bromobenzene	108-86-1	N.D.	1	1
10335	Bromochloromethane	74-97-5	N.D.	1	1
10335	Bromodichloromethane	75-27-4	N.D.	1	1
10335	Bromoform	75-25-2	N.D.	1	1
10335	Bromomethane	74-83-9	N.D.	1	1
10335	2-Butanone	78-93-3	4	3	1
10335	n-Butylbenzene	104-51-8	12	1	1
10335	sec-Butylbenzene	135-98-8	10	1	1
10335	tert-Butylbenzene	98-06-6	N.D.	1	1
10335	Carbon Disulfide	75-15-0	N.D.	1	1
10335	Carbon Tetrachloride	56-23-5	N.D.	1	1
10335	Chlorobenzene	108-90-7	N.D.	0.8	1
10335	Chloroethane	75-00-3	N.D.	1	1
10335	Chloroform	67-66-3	N.D.	0.8	1
10335	Chloromethane	74-87-3	N.D.	1	1
10335	2-Chlorotoluene	95-49-8	N.D.	1	1
10335	4-Chlorotoluene	106-43-4	N.D.	1	1
10335	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	2	1
10335	Dibromochloromethane	124-48-1	N.D.	1	1
10335	1,2-Dibromoethane	106-93-4	N.D.	0.5	1
10335	Dibromomethane	74-95-3	N.D.	1	1
10335	1,2-Dichlorobenzene	95-50-1	N.D.	1	1
10335	1,3-Dichlorobenzene	541-73-1	N.D.	1	1
10335	1,4-Dichlorobenzene	106-46-7	N.D.	1	1
10335	Dichlorodifluoromethane	75-71-8	N.D.	2	1
10335	1,1-Dichloroethane	75-34-3	N.D.	1	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.8	1
10335	cis-1,2-Dichloroethene	156-59-2	7	0.8	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	1
10335	1,2-Dichloropropane	78-87-5	N.D.	1	1
10335	1,3-Dichloropropane	142-28-9	N.D.	1	1
10335	2,2-Dichloropropane	594-20-7	N.D.	1	1
10335	1,1-Dichloropropene	563-58-6	N.D.	1	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	1
10335	Ethylbenzene	100-41-4	190	0.5	1
10335	Hexachlorobutadiene	87-68-3	N.D.	2	1
10335	2-Hexanone	591-78-6	N.D.	3	1
10335	Isopropylbenzene	98-82-8	51	1	1
10335	p-Isopropyltoluene	99-87-6	5	1	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10335	4-Methyl-2-pentanone	108-10-1	N.D.	3	1
10335	Methylene Chloride	75-09-2	N.D.	2	1
10335	Naphthalene	91-20-3	73	1	1
10335	n-Propylbenzene	103-65-1	130	1	1
10335	Styrene	100-42-5	N.D.	1	1
10335	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	1	1

Sample Description: GW-022713-NH-MW3 Grab Groundwater
 MLK Tidewater Site
 2800 Martin Luther King Jr Way - Seattle, WA

LLI Sample # WW 6969731
 LLI Group # 1372475
 Account # 13534

Project Name: 301233 Tidewater Seattle

Collected: 02/27/2013 12:00 by NH

Conestoga-Rovers & Associates

Submitted: 03/01/2013 09:15

Suite 190

Reported: 03/14/2013 10:55

20818 44th Ave W

Lynnwood WA 98036

TSE03

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B			ug/l	ug/l	
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	1
10335	Tetrachloroethene	127-18-4	N.D.	0.8	1
10335	Toluene	108-88-3	N.D.	0.5	1
10335	1,2,3-Trichlorobenzene	87-61-6	N.D.	1	1
10335	1,2,4-Trichlorobenzene	120-82-1	N.D.	1	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.8	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.8	1
10335	Trichloroethene	79-01-6	N.D.	1	1
10335	Trichlorofluoromethane	75-69-4	N.D.	2	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	1	1
10335	1,2,4-Trimethylbenzene	95-63-6	1,200	10	10
10335	1,3,5-Trimethylbenzene	108-67-8	240	1	1
10335	Vinyl Chloride	75-01-4	1	1	1
10335	m+p-Xylene	179601-23-1	550	0.5	1
10335	o-Xylene	95-47-6	69	0.5	1
10335	Xylene (Total)	1330-20-7	620	0.5	1
The LCS and/or LCS/D recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: chloromethane.					
GC/MS Semivolatiles SW-846 8270C SIM			ug/l	ug/l	
08357	Benzo(a)anthracene	56-55-3	N.D.	0.0095	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.0095	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.0095	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.0095	1
08357	Chrysene	218-01-9	N.D.	0.0095	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0095	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.0095	1
08357	1-Methylnaphthalene	90-12-0	10	0.19	20
08357	2-Methylnaphthalene	91-57-6	12	0.19	20
08357	Naphthalene	91-20-3	61	0.57	20
GC Volatiles ECY 97-602 NWTPH-Gx			ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	9,500	250	5
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons w/Si modified					
02211	DRO C12-C24 w/Si Gel	n.a.	510	28	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	66	1
Metals SW-846 6020			ug/l	ug/l	
06035	Lead	7439-92-1	0.70	0.073	1

Sample Description: GW-022713-NH-MW3 Grab Groundwater
 MLK Tidewater Site
 2800 Martin Luther King Jr Way - Seattle, WA

LLI Sample # WW 6969731
 LLI Group # 1372475
 Account # 13534

Project Name: 301233 Tidewater Seattle

Collected: 02/27/2013 12:00 by NH

Conestoga-Rovers & Associates
 Suite 190

Submitted: 03/01/2013 09:15

20818 44th Ave W

Reported: 03/14/2013 10:55

Lynnwood WA 98036

TSE03

General Sample Comments

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

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	8260 Solvent Compound - Water	SW-846 8260B	1	W130671AA	03/08/2013 13:55	Christopher G Torres	1
10335	8260 Solvent Compound - Water	SW-846 8260B	1	W130671AA	03/08/2013 14:18	Christopher G Torres	10
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W130671AA	03/08/2013 13:55	Christopher G Torres	1
01163	GC/MS VOA Water Prep	SW-846 5030B	2	W130671AA	03/08/2013 14:18	Christopher G Torres	10
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13061WAD026	03/08/2013 13:58	Mark A Clark	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13061WAD026	03/09/2013 09:19	Mark A Clark	20
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13061WAD026	03/03/2013 07:15	Katheryne V Sponheimer	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	13063D20A	03/05/2013 19:27	Catherine J Schwarz	5
01146	GC VOA Water Prep	SW-846 5030B	1	13063D20A	03/05/2013 19:27	Catherine J Schwarz	5
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	130630019A	03/07/2013 14:28	Christine E Dolman	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	130630019A	03/05/2013 12:30	Katheryne V Sponheimer	1
06035	Lead	SW-846 6020	1	130636050004A	03/11/2013 13:42	Deborah A Krady	1
06050	ICP/MS SW-846 Water Digest	SW-846 3020A	1	130636050004	03/05/2013 11:36	James L Mertz	1

Sample Description: GW-022713-NH-MW5 Grab Groundwater
 MLK Tidewater Site
 2800 Martin Luther King Jr Way - Seattle, WA

LLI Sample # WW 6969732
 LLI Group # 1372475
 Account # 13534

Project Name: 301233 Tidewater Seattle

Collected: 02/27/2013 13:30 by NH

Conestoga-Rovers & Associates

Submitted: 03/01/2013 09:15

Suite 190

Reported: 03/14/2013 10:55

20818 44th Ave W

Lynnwood WA 98036

TSE05

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/l	ug/l	
10335	Acetone	67-64-1	N.D.	6	1
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Bromobenzene	108-86-1	N.D.	1	1
10335	Bromochloromethane	74-97-5	N.D.	1	1
10335	Bromodichloromethane	75-27-4	N.D.	1	1
10335	Bromoform	75-25-2	N.D.	1	1
10335	Bromomethane	74-83-9	N.D.	1	1
10335	2-Butanone	78-93-3	N.D.	3	1
10335	n-Butylbenzene	104-51-8	2	1	1
10335	sec-Butylbenzene	135-98-8	2	1	1
10335	tert-Butylbenzene	98-06-6	N.D.	1	1
10335	Carbon Disulfide	75-15-0	N.D.	1	1
10335	Carbon Tetrachloride	56-23-5	N.D.	1	1
10335	Chlorobenzene	108-90-7	N.D.	0.8	1
10335	Chloroethane	75-00-3	N.D.	1	1
10335	Chloroform	67-66-3	N.D.	0.8	1
10335	Chloromethane	74-87-3	N.D.	1	1
10335	2-Chlorotoluene	95-49-8	N.D.	1	1
10335	4-Chlorotoluene	106-43-4	N.D.	1	1
10335	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	2	1
10335	Dibromochloromethane	124-48-1	N.D.	1	1
10335	1,2-Dibromoethane	106-93-4	N.D.	0.5	1
10335	Dibromomethane	74-95-3	N.D.	1	1
10335	1,2-Dichlorobenzene	95-50-1	N.D.	1	1
10335	1,3-Dichlorobenzene	541-73-1	N.D.	1	1
10335	1,4-Dichlorobenzene	106-46-7	N.D.	1	1
10335	Dichlorodifluoromethane	75-71-8	N.D.	2	1
10335	1,1-Dichloroethane	75-34-3	N.D.	1	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.8	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.8	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	1
10335	1,2-Dichloropropane	78-87-5	N.D.	1	1
10335	1,3-Dichloropropane	142-28-9	N.D.	1	1
10335	2,2-Dichloropropane	594-20-7	N.D.	1	1
10335	1,1-Dichloropropene	563-58-6	N.D.	1	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	1
10335	Ethylbenzene	100-41-4	7	0.5	1
10335	Hexachlorobutadiene	87-68-3	N.D.	2	1
10335	2-Hexanone	591-78-6	N.D.	3	1
10335	Isopropylbenzene	98-82-8	19	1	1
10335	p-Isopropyltoluene	99-87-6	N.D.	1	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10335	4-Methyl-2-pentanone	108-10-1	N.D.	3	1
10335	Methylene Chloride	75-09-2	N.D.	2	1
10335	Naphthalene	91-20-3	25	1	1
10335	n-Propylbenzene	103-65-1	42	1	1
10335	Styrene	100-42-5	N.D.	1	1
10335	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	1	1

Sample Description: GW-022713-NH-MW5 Grab Groundwater
 MLK Tidewater Site
 2800 Martin Luther King Jr Way - Seattle, WA

LLI Sample # WW 6969732
 LLI Group # 1372475
 Account # 13534

Project Name: 301233 Tidewater Seattle

Collected: 02/27/2013 13:30 by NH

Conestoga-Rovers & Associates

Submitted: 03/01/2013 09:15

Suite 190

Reported: 03/14/2013 10:55

20818 44th Ave W

Lynnwood WA 98036

TSE05

CAV No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B			ug/l	ug/l	
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	1
10335	Tetrachloroethene	127-18-4	N.D.	0.8	1
10335	Toluene	108-88-3	0.6	0.5	1
10335	1,2,3-Trichlorobenzene	87-61-6	N.D.	1	1
10335	1,2,4-Trichlorobenzene	120-82-1	N.D.	1	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.8	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.8	1
10335	Trichloroethene	79-01-6	N.D.	1	1
10335	Trichlorofluoromethane	75-69-4	N.D.	2	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	1	1
10335	1,2,4-Trimethylbenzene	95-63-6	9	1	1
10335	1,3,5-Trimethylbenzene	108-67-8	1	1	1
10335	Vinyl Chloride	75-01-4	N.D.	1	1
10335	m+p-Xylene	179601-23-1	10	0.5	1
10335	o-Xylene	95-47-6	2	0.5	1
10335	Xylene (Total)	1330-20-7	12	0.5	1
<p>The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: chloromethane.</p>					
GC/MS Semivolatiles SW-846 8270C SIM			ug/l	ug/l	
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	1
08357	Chrysene	218-01-9	N.D.	0.010	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	1
08357	1-Methylnaphthalene	90-12-0	2.3	0.010	1
08357	2-Methylnaphthalene	91-57-6	1.3	0.010	1
08357	Naphthalene	91-20-3	14	0.15	5
GC Volatiles ECY 97-602 NWTPH-Gx			ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	790	50	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons w/Si modified					
02211	DRO C12-C24 w/Si Gel	n.a.	170	30	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	69	1
Metals SW-846 6020			ug/l	ug/l	
06035	Lead	7439-92-1	0.76	0.073	1

Sample Description: GW-022713-NH-MW5 Grab Groundwater
 MLK Tidewater Site
 2800 Martin Luther King Jr Way - Seattle, WA

LLI Sample # WW 6969732
 LLI Group # 1372475
 Account # 13534

Project Name: 301233 Tidewater Seattle

Collected: 02/27/2013 13:30 by NH

Conestoga-Rovers & Associates

Submitted: 03/01/2013 09:15

Suite 190

Reported: 03/14/2013 10:55

20818 44th Ave W
Lynnwood WA 98036

TSE05

General Sample Comments

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

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	8260 Solvent Compound - Water	SW-846 8260B	1	W130671AA	03/08/2013 07:15	Christopher G Torres	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W130671AA	03/08/2013 07:15	Christopher G Torres	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13061WAD026	03/09/2013 05:41	Mark A Clark	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13061WAD026	03/09/2013 09:51	Mark A Clark	5
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13061WAD026	03/03/2013 07:15	Katheryne V Sponheimer	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	13063D20A	03/05/2013 16:53	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	13063D20A	03/05/2013 16:53	Catherine J Schwarz	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	130630019A	03/07/2013 11:54	Christine E Dolman	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	130630019A	03/05/2013 12:30	Katheryne V Sponheimer	1
06035	Lead	SW-846 6020	1	130636050004A	03/11/2013 13:44	Deborah A Krady	1
06050	ICP/MS SW-846 Water Digest	SW-846 3020A	1	130636050004	03/05/2013 11:36	James L Mertz	1

Sample Description: GW-022713-DE-MW10 Grab Groundwater
 MLK Tidewater Site
 2800 Martin Luther King Jr Way - Seattle, WA

LLI Sample # WW 6969733
 LLI Group # 1372475
 Account # 13534

Project Name: 301233 Tidewater Seattle

Collected: 02/27/2013 12:25 by DE

Conestoga-Rovers & Associates

Submitted: 03/01/2013 09:15

Suite 190

Reported: 03/14/2013 10:55

20818 44th Ave W

Lynnwood WA 98036

TSE10

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/l	ug/l	
10335	Acetone	67-64-1	N.D.	6	1
10335	Benzene	71-43-2	0.8	0.5	1
10335	Bromobenzene	108-86-1	N.D.	1	1
10335	Bromochloromethane	74-97-5	N.D.	1	1
10335	Bromodichloromethane	75-27-4	N.D.	1	1
10335	Bromoform	75-25-2	N.D.	1	1
10335	Bromomethane	74-83-9	N.D.	1	1
10335	2-Butanone	78-93-3	N.D.	3	1
10335	n-Butylbenzene	104-51-8	N.D.	1	1
10335	sec-Butylbenzene	135-98-8	N.D.	1	1
10335	tert-Butylbenzene	98-06-6	N.D.	1	1
10335	Carbon Disulfide	75-15-0	N.D.	1	1
10335	Carbon Tetrachloride	56-23-5	N.D.	1	1
10335	Chlorobenzene	108-90-7	N.D.	0.8	1
10335	Chloroethane	75-00-3	N.D.	1	1
10335	Chloroform	67-66-3	N.D.	0.8	1
10335	Chloromethane	74-87-3	N.D.	1	1
10335	2-Chlorotoluene	95-49-8	N.D.	1	1
10335	4-Chlorotoluene	106-43-4	N.D.	1	1
10335	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	2	1
10335	Dibromochloromethane	124-48-1	N.D.	1	1
10335	1,2-Dibromoethane	106-93-4	N.D.	0.5	1
10335	Dibromomethane	74-95-3	N.D.	1	1
10335	1,2-Dichlorobenzene	95-50-1	N.D.	1	1
10335	1,3-Dichlorobenzene	541-73-1	N.D.	1	1
10335	1,4-Dichlorobenzene	106-46-7	N.D.	1	1
10335	Dichlorodifluoromethane	75-71-8	N.D.	2	1
10335	1,1-Dichloroethane	75-34-3	N.D.	1	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.8	1
10335	cis-1,2-Dichloroethene	156-59-2	4	0.8	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	1
10335	1,2-Dichloropropane	78-87-5	N.D.	1	1
10335	1,3-Dichloropropane	142-28-9	N.D.	1	1
10335	2,2-Dichloropropane	594-20-7	N.D.	1	1
10335	1,1-Dichloropropene	563-58-6	N.D.	1	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	1
10335	Ethylbenzene	100-41-4	N.D.	0.5	1
10335	Hexachlorobutadiene	87-68-3	N.D.	2	1
10335	2-Hexanone	591-78-6	N.D.	3	1
10335	Isopropylbenzene	98-82-8	N.D.	1	1
10335	p-Isopropyltoluene	99-87-6	N.D.	1	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10335	4-Methyl-2-pentanone	108-10-1	N.D.	3	1
10335	Methylene Chloride	75-09-2	N.D.	2	1
10335	Naphthalene	91-20-3	N.D.	1	1
10335	n-Propylbenzene	103-65-1	2	1	1
10335	Styrene	100-42-5	N.D.	1	1
10335	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	1	1



Lancaster
Laboratories

Analysis Report

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

Sample Description: GW-022713-DE-MW10 Grab Groundwater
MLK Tidewater Site
2800 Martin Luther King Jr Way - Seattle, WA

LLI Sample # WW 6969733
LLI Group # 1372475
Account # 13534

Project Name: 301233 Tidewater Seattle

Collected: 02/27/2013 12:25 by DE

Conestoga-Rovers & Associates

Submitted: 03/01/2013 09:15
Reported: 03/14/2013 10:55

Suite 190
20818 44th Ave W
Lynnwood WA 98036

TSE10

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B			ug/l	ug/l	
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	1
10335	Tetrachloroethene	127-18-4	N.D.	0.8	1
10335	Toluene	108-88-3	N.D.	0.5	1
10335	1,2,3-Trichlorobenzene	87-61-6	N.D.	1	1
10335	1,2,4-Trichlorobenzene	120-82-1	N.D.	1	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.8	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.8	1
10335	Trichloroethene	79-01-6	N.D.	1	1
10335	Trichlorofluoromethane	75-69-4	N.D.	2	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	1	1
10335	1,2,4-Trimethylbenzene	95-63-6	N.D.	1	1
10335	1,3,5-Trimethylbenzene	108-67-8	N.D.	1	1
10335	Vinyl Chloride	75-01-4	32	1	1
10335	m+p-Xylene	179601-23-1	N.D.	0.5	1
10335	o-Xylene	95-47-6	N.D.	0.5	1
10335	Xylene (Total)	1330-20-7	N.D.	0.5	1
The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: chloromethane.					
GC/MS Semivolatiles SW-846 8270C SIM			ug/l	ug/l	
08357	Benzo(a)anthracene	56-55-3	N.D.	0.0098	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.0098	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.0098	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.0098	1
08357	Chrysene	218-01-9	N.D.	0.0098	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0098	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.0098	1
08357	1-Methylnaphthalene	90-12-0	0.21	0.0098	1
08357	2-Methylnaphthalene	91-57-6	0.099	0.0098	1
08357	Naphthalene	91-20-3	0.11	0.029	1
GC Volatiles ECY 97-602 NWTPH-Gx			ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons w/Si modified					
02211	DRO C12-C24 w/Si Gel	n.a.	71	29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	69	1
Metals SW-846 6020			ug/l	ug/l	
06035	Lead	7439-92-1	N.D.	0.073	1

Sample Description: GW-022713-DE-MW10 Grab Groundwater
 MLK Tidewater Site
 2800 Martin Luther King Jr Way - Seattle, WA

LLI Sample # WW 6969733
 LLI Group # 1372475
 Account # 13534

Project Name: 301233 Tidewater Seattle

Collected: 02/27/2013 12:25 by DE

Conestoga-Rovers & Associates

Suite 190

Submitted: 03/01/2013 09:15

20818 44th Ave W

Reported: 03/14/2013 10:55

Lynnwood WA 98036

TSE10

General Sample Comments

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

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	8260 Solvent Compound - Water	SW-846 8260B	1	W130671AA	03/08/2013 07:39	Christopher G Torres	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W130671AA	03/08/2013 07:39	Christopher G Torres	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13061WAD026	03/09/2013 06:13	Mark A Clark	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13061WAD026	03/03/2013 07:15	Katheryne V Sponheimer	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	13063D20A	03/05/2013 21:12	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	13063D20A	03/05/2013 21:12	Catherine J Schwarz	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	130630019A	03/07/2013 15:14	Christine E Dolman	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	130630019A	03/05/2013 12:30	Katheryne V Sponheimer	1
06035	Lead	SW-846 6020	1	130636050004A	03/11/2013 13:46	Deborah A Krady	1
06050	ICP/MS SW-846 Water Digest	SW-846 3020A	1	130636050004	03/05/2013 11:36	James L Mertz	1



Lancaster
Laboratories

Analysis Report

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

Sample Description: GW-022613-DE-MW4 Grab Groundwater
MLK Tidewater Site
2800 Martin Luther King Jr Way - Seattle, WA

LLI Sample # WW 6969734
LLI Group # 1372475
Account # 13534

Project Name: 301233 Tidewater Seattle

Collected: 02/26/2013 11:35 by DE

Conestoga-Rovers & Associates

Suite 190

Submitted: 03/01/2013 09:15

20818 44th Ave W

Reported: 03/14/2013 10:55

Lynnwood WA 98036

TSE04

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/l	ug/l	
10335	Acetone	67-64-1	N.D.	6	1
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Bromobenzene	108-86-1	N.D.	1	1
10335	Bromochloromethane	74-97-5	N.D.	1	1
10335	Bromodichloromethane	75-27-4	N.D.	1	1
10335	Bromoform	75-25-2	N.D.	1	1
10335	Bromomethane	74-83-9	N.D.	1	1
10335	2-Butanone	78-93-3	N.D.	3	1
10335	n-Butylbenzene	104-51-8	N.D.	1	1
10335	sec-Butylbenzene	135-98-8	N.D.	1	1
10335	tert-Butylbenzene	98-06-6	N.D.	1	1
10335	Carbon Disulfide	75-15-0	N.D.	1	1
10335	Carbon Tetrachloride	56-23-5	N.D.	1	1
10335	Chlorobenzene	108-90-7	N.D.	0.8	1
10335	Chloroethane	75-00-3	N.D.	1	1
10335	Chloroform	67-66-3	N.D.	0.8	1
10335	Chloromethane	74-87-3	N.D.	1	1
10335	2-Chlorotoluene	95-49-8	N.D.	1	1
10335	4-Chlorotoluene	106-43-4	N.D.	1	1
10335	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	2	1
10335	Dibromochloromethane	124-48-1	N.D.	1	1
10335	1,2-Dibromoethane	106-93-4	N.D.	0.5	1
10335	Dibromomethane	74-95-3	N.D.	1	1
10335	1,2-Dichlorobenzene	95-50-1	N.D.	1	1
10335	1,3-Dichlorobenzene	541-73-1	N.D.	1	1
10335	1,4-Dichlorobenzene	106-46-7	N.D.	1	1
10335	Dichlorodifluoromethane	75-71-8	N.D.	2	1
10335	1,1-Dichloroethane	75-34-3	N.D.	1	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.8	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.8	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	1
10335	1,2-Dichloropropane	78-87-5	N.D.	1	1
10335	1,3-Dichloropropane	142-28-9	N.D.	1	1
10335	2,2-Dichloropropane	594-20-7	N.D.	1	1
10335	1,1-Dichloropropene	563-58-6	N.D.	1	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	1
10335	Ethylbenzene	100-41-4	N.D.	0.5	1
10335	Hexachlorobutadiene	87-68-3	N.D.	2	1
10335	2-Hexanone	591-78-6	N.D.	3	1
10335	Isopropylbenzene	98-82-8	N.D.	1	1
10335	p-Isopropyltoluene	99-87-6	N.D.	1	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10335	4-Methyl-2-pentanone	108-10-1	N.D.	3	1
10335	Methylene Chloride	75-09-2	N.D.	2	1
10335	Naphthalene	91-20-3	N.D.	1	1
10335	n-Propylbenzene	103-65-1	N.D.	1	1
10335	Styrene	100-42-5	N.D.	1	1
10335	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	1	1

Sample Description: GW-022613-DE-MW4 Grab Groundwater
MLK Tidewater Site
2800 Martin Luther King Jr Way - Seattle, WA

LLI Sample # WW 6969734
LLI Group # 1372475
Account # 13534

Project Name: 301233 Tidewater Seattle

Collected: 02/26/2013 11:35 by DE

Conestoga-Rovers & Associates

Suite 190

Submitted: 03/01/2013 09:15

20818 44th Ave W

Reported: 03/14/2013 10:55

Lynnwood WA 98036

TSE04

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B			ug/l	ug/l	
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	1
10335	Tetrachloroethene	127-18-4	N.D.	0.8	1
10335	Toluene	108-88-3	N.D.	0.5	1
10335	1,2,3-Trichlorobenzene	87-61-6	N.D.	1	1
10335	1,2,4-Trichlorobenzene	120-82-1	N.D.	1	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.8	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.8	1
10335	Trichloroethene	79-01-6	N.D.	1	1
10335	Trichlorofluoromethane	75-69-4	N.D.	2	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	1	1
10335	1,2,4-Trimethylbenzene	95-63-6	N.D.	1	1
10335	1,3,5-Trimethylbenzene	108-67-8	N.D.	1	1
10335	Vinyl Chloride	75-01-4	N.D.	1	1
10335	m+p-Xylene	179601-23-1	N.D.	0.5	1
10335	o-Xylene	95-47-6	N.D.	0.5	1
10335	Xylene (Total)	1330-20-7	N.D.	0.5	1
The LCS and/or LCSd recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: chloromethane.					
GC/MS Semivolatiles SW-846 8270C SIM			ug/l	ug/l	
08357	Benzo(a)anthracene	56-55-3	N.D.	0.0099	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.0099	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.0099	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.0099	1
08357	Chrysene	218-01-9	N.D.	0.0099	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0099	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.0099	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.0099	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.0099	1
08357	Naphthalene	91-20-3	0.045	0.030	1
GC Volatiles ECY 97-602 NWTPH-Gx			ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons w/Si modified					
02211	DRO C12-C24 w/Si Gel	n.a.	N.D.	28	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	66	1
Metals SW-846 6020			ug/l	ug/l	
06035	Lead	7439-92-1	0.16	0.047	1



Lancaster
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Analysis Report

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

Sample Description: GW-022613-DE-MW4 Grab Groundwater
MLK Tidewater Site
2800 Martin Luther King Jr Way - Seattle, WA

LLI Sample # WW 6969734
LLI Group # 1372475
Account # 13534

Project Name: 301233 Tidewater Seattle

Collected: 02/26/2013 11:35 by DE

Conestoga-Rovers & Associates
Suite 190
20818 44th Ave W
Lynnwood WA 98036

Submitted: 03/01/2013 09:15

Reported: 03/14/2013 10:55

TSE04

General Sample Comments

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

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	8260 Solvent Compound - Water	SW-846 8260B	1	W130671AA	03/08/2013 08:03	Christopher G Torres	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W130671AA	03/08/2013 08:03	Christopher G Torres	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13061WAD026	03/09/2013 06:44	Mark A Clark	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13061WAD026	03/03/2013 07:15	Katheryne V Sponheimer	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	13063D20A	03/05/2013 17:37	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	13063D20A	03/05/2013 17:37	Catherine J Schwarz	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	130630019A	03/07/2013 12:18	Christine E Dolman	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	130630019A	03/05/2013 12:30	Katheryne V Sponheimer	1
06035	Lead	SW-846 6020	1	130666050002A	03/14/2013 07:57	Choon Y Tian	1
06050	ICP/MS SW-846 Water Digest	SW-846 3020A	1	130666050002	03/09/2013 08:00	James L Mertz	1

Sample Description: GW-022613-DE-MW4 MS Grab Groundwater
MLK Tidewater Site
2800 Martin Luther King Jr Way - Seattle, WA

LLI Sample # WW 6969735
LLI Group # 1372475
Account # 13534

Project Name: 301233 Tidewater Seattle

Collected: 02/26/2013 11:35 by DE

Conestoga-Rovers & Associates

Suite 190

Submitted: 03/01/2013 09:15

20818 44th Ave W

Reported: 03/14/2013 10:55

Lynnwood WA 98036

TSE04

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/l	ug/l	
10335	Acetone	67-64-1	140	6	1
10335	Benzene	71-43-2	25	0.5	1
10335	Bromobenzene	108-86-1	25	1	1
10335	Bromochloromethane	74-97-5	24	1	1
10335	Bromodichloromethane	75-27-4	24	1	1
10335	Bromoform	75-25-2	20	1	1
10335	Bromomethane	74-83-9	14	1	1
10335	2-Butanone	78-93-3	140	3	1
10335	n-Butylbenzene	104-51-8	23	1	1
10335	sec-Butylbenzene	135-98-8	24	1	1
10335	tert-Butylbenzene	98-06-6	25	1	1
10335	Carbon Disulfide	75-15-0	21	1	1
10335	Carbon Tetrachloride	56-23-5	27	1	1
10335	Chlorobenzene	108-90-7	25	0.8	1
10335	Chloroethane	75-00-3	13	1	1
10335	Chloroform	67-66-3	25	0.8	1
10335	Chloromethane	74-87-3	13	1	1
10335	2-Chlorotoluene	95-49-8	24	1	1
10335	4-Chlorotoluene	106-43-4	25	1	1
10335	1,2-Dibromo-3-chloropropane	96-12-8	18	2	1
10335	Dibromochloromethane	124-48-1	24	1	1
10335	1,2-Dibromoethane	106-93-4	24	0.5	1
10335	Dibromomethane	74-95-3	25	1	1
10335	1,2-Dichlorobenzene	95-50-1	25	1	1
10335	1,3-Dichlorobenzene	541-73-1	24	1	1
10335	1,4-Dichlorobenzene	106-46-7	24	1	1
10335	Dichlorodifluoromethane	75-71-8	17	2	1
10335	1,1-Dichloroethane	75-34-3	25	1	1
10335	1,2-Dichloroethane	107-06-2	28	0.5	1
10335	1,1-Dichloroethene	75-35-4	26	0.8	1
10335	cis-1,2-Dichloroethene	156-59-2	27	0.8	1
10335	trans-1,2-Dichloroethene	156-60-5	26	0.8	1
10335	1,2-Dichloropropane	78-87-5	23	1	1
10335	1,3-Dichloropropane	142-28-9	23	1	1
10335	2,2-Dichloropropane	594-20-7	24	1	1
10335	1,1-Dichloropropene	563-58-6	27	1	1
10335	cis-1,3-Dichloropropene	10061-01-5	24	1	1
10335	trans-1,3-Dichloropropene	10061-02-6	21	1	1
10335	Ethylbenzene	100-41-4	25	0.5	1
10335	Hexachlorobutadiene	87-68-3	23	2	1
10335	2-Hexanone	591-78-6	90	3	1
10335	Isopropylbenzene	98-82-8	25	1	1
10335	p-Isopropyltoluene	99-87-6	24	1	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	24	0.5	1
10335	4-Methyl-2-pentanone	108-10-1	95	3	1
10335	Methylene Chloride	75-09-2	25	2	1
10335	Naphthalene	91-20-3	20	1	1
10335	n-Propylbenzene	103-65-1	24	1	1
10335	Styrene	100-42-5	24	1	1
10335	1,1,1,2-Tetrachloroethane	630-20-6	24	1	1

Sample Description: GW-022613-DE-MW4 MS Grab Groundwater
MLK Tidewater Site
2800 Martin Luther King Jr Way - Seattle, WA

LLI Sample # WW 6969735
LLI Group # 1372475
Account # 13534

Project Name: 301233 Tidewater Seattle

Collected: 02/26/2013 11:35 by DE

Conestoga-Rovers & Associates

Submitted: 03/01/2013 09:15
Reported: 03/14/2013 10:55

Suite 190
20818 44th Ave W
Lynnwood WA 98036

TSE04

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B			ug/l	ug/l	
10335	1,1,2,2-Tetrachloroethane	79-34-5	20	1	1
10335	Tetrachloroethene	127-18-4	28	0.8	1
10335	Toluene	108-88-3	24	0.5	1
10335	1,2,3-Trichlorobenzene	87-61-6	23	1	1
10335	1,2,4-Trichlorobenzene	120-82-1	23	1	1
10335	1,1,1-Trichloroethane	71-55-6	27	0.8	1
10335	1,1,2-Trichloroethane	79-00-5	23	0.8	1
10335	Trichloroethene	79-01-6	27	1	1
10335	Trichlorofluoromethane	75-69-4	23	2	1
10335	1,2,3-Trichloropropane	96-18-4	23	1	1
10335	1,2,4-Trimethylbenzene	95-63-6	24	1	1
10335	1,3,5-Trimethylbenzene	108-67-8	24	1	1
10335	Vinyl Chloride	75-01-4	16	1	1
10335	m+p-Xylene	179601-23-1	51	0.5	1
10335	o-Xylene	95-47-6	25	0.5	1
10335	Xylene (Total)	1330-20-7	75	0.5	1

The LCS and/or LCSd recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: chloromethane.

GC Volatiles ECY 97-602 NWTPH-Gx			ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	920	50	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons w/Si modified					
02211	DRO C12-C24 w/Si Gel	n.a.	1,300	29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	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
10335	8260 Solvent Compound - Water	SW-846 8260B	1	W130671AA	03/08/2013 08:27	Christopher G Torres	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W130671AA	03/08/2013 08:27	Christopher G Torres	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	13063D20A	03/05/2013 17:59	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	13063D20A	03/05/2013 17:59	Catherine J Schwarz	1

Sample Description: GW-022613-DE-MW4 MS Grab Groundwater
MLK Tidewater Site
2800 Martin Luther King Jr Way - Seattle, WA

LLI Sample # WW 6969735
LLI Group # 1372475
Account # 13534

Project Name: 301233 Tidewater Seattle

Collected: 02/26/2013 11:35 by DE

Conestoga-Rovers & Associates

Suite 190

Submitted: 03/01/2013 09:15

20818 44th Ave W

Reported: 03/14/2013 10:55

Lynnwood WA 98036

TSE04

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	130630019A	03/07/2013 10:22	Christine E Dolman	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	130630019A	03/05/2013 12:30	Katheryne V Sponheimer	1

Sample Description: GW-022613-DE-MW4 MSD Grab Groundwater
 MLK Tidewater Site
 2800 Martin Luther King Jr Way - Seattle, WA

LLI Sample # WW 6969736
 LLI Group # 1372475
 Account # 13534

Project Name: 301233 Tidewater Seattle

Collected: 02/26/2013 11:35 by DE

Conestoga-Rovers & Associates

Suite 190

Submitted: 03/01/2013 09:15

20818 44th Ave W

Reported: 03/14/2013 10:55

Lynnwood WA 98036

TSE04

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/l	ug/l	
10335	Acetone	67-64-1	130	6	1
10335	Benzene	71-43-2	23	0.5	1
10335	Bromobenzene	108-86-1	23	1	1
10335	Bromochloromethane	74-97-5	25	1	1
10335	Bromodichloromethane	75-27-4	22	1	1
10335	Bromoform	75-25-2	18	1	1
10335	Bromomethane	74-83-9	14	1	1
10335	2-Butanone	78-93-3	130	3	1
10335	n-Butylbenzene	104-51-8	21	1	1
10335	sec-Butylbenzene	135-98-8	22	1	1
10335	tert-Butylbenzene	98-06-6	23	1	1
10335	Carbon Disulfide	75-15-0	19	1	1
10335	Carbon Tetrachloride	56-23-5	25	1	1
10335	Chlorobenzene	108-90-7	23	0.8	1
10335	Chloroethane	75-00-3	13	1	1
10335	Chloroform	67-66-3	23	0.8	1
10335	Chloromethane	74-87-3	14	1	1
10335	2-Chlorotoluene	95-49-8	23	1	1
10335	4-Chlorotoluene	106-43-4	23	1	1
10335	1,2-Dibromo-3-chloropropane	96-12-8	16	2	1
10335	Dibromochloromethane	124-48-1	22	1	1
10335	1,2-Dibromoethane	106-93-4	21	0.5	1
10335	Dibromomethane	74-95-3	23	1	1
10335	1,2-Dichlorobenzene	95-50-1	22	1	1
10335	1,3-Dichlorobenzene	541-73-1	23	1	1
10335	1,4-Dichlorobenzene	106-46-7	23	1	1
10335	Dichlorodifluoromethane	75-71-8	17	2	1
10335	1,1-Dichloroethane	75-34-3	23	1	1
10335	1,2-Dichloroethane	107-06-2	25	0.5	1
10335	1,1-Dichloroethene	75-35-4	25	0.8	1
10335	cis-1,2-Dichloroethene	156-59-2	24	0.8	1
10335	trans-1,2-Dichloroethene	156-60-5	24	0.8	1
10335	1,2-Dichloropropane	78-87-5	21	1	1
10335	1,3-Dichloropropane	142-28-9	21	1	1
10335	2,2-Dichloropropane	594-20-7	22	1	1
10335	1,1-Dichloropropene	563-58-6	25	1	1
10335	cis-1,3-Dichloropropene	10061-01-5	22	1	1
10335	trans-1,3-Dichloropropene	10061-02-6	20	1	1
10335	Ethylbenzene	100-41-4	23	0.5	1
10335	Hexachlorobutadiene	87-68-3	22	2	1
10335	2-Hexanone	591-78-6	82	3	1
10335	Isopropylbenzene	98-82-8	23	1	1
10335	p-Isopropyltoluene	99-87-6	23	1	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	22	0.5	1
10335	4-Methyl-2-pentanone	108-10-1	88	3	1
10335	Methylene Chloride	75-09-2	22	2	1
10335	Naphthalene	91-20-3	19	1	1
10335	n-Propylbenzene	103-65-1	23	1	1
10335	Styrene	100-42-5	22	1	1
10335	1,1,1,2-Tetrachloroethane	630-20-6	22	1	1

Sample Description: GW-022613-DE-MW4 MSD Grab Groundwater
 MLK Tidewater Site
 2800 Martin Luther King Jr Way - Seattle, WA

LLI Sample # WW 6969736
 LLI Group # 1372475
 Account # 13534

Project Name: 301233 Tidewater Seattle

Collected: 02/26/2013 11:35 by DE

Conestoga-Rovers & Associates

Suite 190

Submitted: 03/01/2013 09:15

20818 44th Ave W

Reported: 03/14/2013 10:55

Lynnwood WA 98036

TSE04

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B			ug/l	ug/l	
10335	1,1,2,2-Tetrachloroethane	79-34-5	19	1	1
10335	Tetrachloroethene	127-18-4	26	0.8	1
10335	Toluene	108-88-3	23	0.5	1
10335	1,2,3-Trichlorobenzene	87-61-6	22	1	1
10335	1,2,4-Trichlorobenzene	120-82-1	21	1	1
10335	1,1,1-Trichloroethane	71-55-6	25	0.8	1
10335	1,1,2-Trichloroethane	79-00-5	22	0.8	1
10335	Trichloroethene	79-01-6	25	1	1
10335	Trichlorofluoromethane	75-69-4	23	2	1
10335	1,2,3-Trichloropropane	96-18-4	21	1	1
10335	1,2,4-Trimethylbenzene	95-63-6	22	1	1
10335	1,3,5-Trimethylbenzene	108-67-8	22	1	1
10335	Vinyl Chloride	75-01-4	16	1	1
10335	m+p-Xylene	179601-23-1	47	0.5	1
10335	o-Xylene	95-47-6	22	0.5	1
10335	Xylene (Total)	1330-20-7	69	0.5	1

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: chloromethane.

GC Volatiles ECY 97-602 NWT PH-Gx			ug/l	ug/l	
08273	NWT PH-Gx water C7-C12	n.a.	960	50	1
GC Petroleum ECY 97-602 NWT PH-Dx			ug/l	ug/l	
Hydrocarbons w/Si modified					
02211	DRO C12-C24 w/Si Gel	n.a.	1,300	29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	68	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
10335	8260 Solvent Compound - Water	SW-846 8260B	1	W130671AA	03/08/2013 08:51	Christopher G Torres	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W130671AA	03/08/2013 08:51	Christopher G Torres	1
08273	NWT PH-Gx water C7-C12	ECY 97-602 NWT PH-Gx	1	13063D20A	03/05/2013 18:21	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	13063D20A	03/05/2013 18:21	Catherine J Schwarz	1

Sample Description: GW-022613-DE-MW4 MSD Grab Groundwater
MLK Tidewater Site
2800 Martin Luther King Jr Way - Seattle, WA

LLI Sample # WW 6969736
LLI Group # 1372475
Account # 13534

Project Name: 301233 Tidewater Seattle

Collected: 02/26/2013 11:35 by DE

Conestoga-Rovers & Associates
Suite 190
20818 44th Ave W
Lynnwood WA 98036

Submitted: 03/01/2013 09:15

Reported: 03/14/2013 10:55

TSE04

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	130630019A	03/07/2013 10:45	Christine E Dolman	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	130630019A	03/05/2013 12:30	Katheryne V Sponheimer	1



Lancaster
Laboratories

Analysis Report

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

Sample Description: GW-022713-DE-MW7 Grab Groundwater
MLK Tidewater Site
2800 Martin Luther King Jr Way - Seattle, WA

LLI Sample # WW 6969737
LLI Group # 1372475
Account # 13534

Project Name: 301233 Tidewater Seattle

Collected: 02/27/2013 10:15 by DE

Conestoga-Rovers & Associates
Suite 190
20818 44th Ave W
Lynnwood WA 98036

Submitted: 03/01/2013 09:15

Reported: 03/14/2013 10:55

TSE07

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/l	ug/l	
10335	Acetone	67-64-1	N.D.	6	1
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Bromobenzene	108-86-1	N.D.	1	1
10335	Bromochloromethane	74-97-5	N.D.	1	1
10335	Bromodichloromethane	75-27-4	N.D.	1	1
10335	Bromoform	75-25-2	N.D.	1	1
10335	Bromomethane	74-83-9	N.D.	1	1
10335	2-Butanone	78-93-3	N.D.	3	1
10335	n-Butylbenzene	104-51-8	N.D.	1	1
10335	sec-Butylbenzene	135-98-8	N.D.	1	1
10335	tert-Butylbenzene	98-06-6	N.D.	1	1
10335	Carbon Disulfide	75-15-0	N.D.	1	1
10335	Carbon Tetrachloride	56-23-5	N.D.	1	1
10335	Chlorobenzene	108-90-7	N.D.	0.8	1
10335	Chloroethane	75-00-3	N.D.	1	1
10335	Chloroform	67-66-3	N.D.	0.8	1
10335	Chloromethane	74-87-3	N.D.	1	1
10335	2-Chlorotoluene	95-49-8	N.D.	1	1
10335	4-Chlorotoluene	106-43-4	N.D.	1	1
10335	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	2	1
10335	Dibromochloromethane	124-48-1	N.D.	1	1
10335	1,2-Dibromoethane	106-93-4	N.D.	0.5	1
10335	Dibromomethane	74-95-3	N.D.	1	1
10335	1,2-Dichlorobenzene	95-50-1	N.D.	1	1
10335	1,3-Dichlorobenzene	541-73-1	N.D.	1	1
10335	1,4-Dichlorobenzene	106-46-7	N.D.	1	1
10335	Dichlorodifluoromethane	75-71-8	N.D.	2	1
10335	1,1-Dichloroethane	75-34-3	N.D.	1	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.8	1
10335	cis-1,2-Dichloroethene	156-59-2	16	0.8	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	1
10335	1,2-Dichloropropane	78-87-5	N.D.	1	1
10335	1,3-Dichloropropane	142-28-9	N.D.	1	1
10335	2,2-Dichloropropane	594-20-7	N.D.	1	1
10335	1,1-Dichloropropene	563-58-6	N.D.	1	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	1
10335	Ethylbenzene	100-41-4	N.D.	0.5	1
10335	Hexachlorobutadiene	87-68-3	N.D.	2	1
10335	2-Hexanone	591-78-6	N.D.	3	1
10335	Isopropylbenzene	98-82-8	N.D.	1	1
10335	p-Isopropyltoluene	99-87-6	N.D.	1	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10335	4-Methyl-2-pentanone	108-10-1	N.D.	3	1
10335	Methylene Chloride	75-09-2	N.D.	2	1
10335	Naphthalene	91-20-3	N.D.	1	1
10335	n-Propylbenzene	103-65-1	N.D.	1	1
10335	Styrene	100-42-5	N.D.	1	1
10335	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	1	1

Sample Description: GW-022713-DE-MW7 Grab Groundwater
 MLK Tidewater Site
 2800 Martin Luther King Jr Way - Seattle, WA

LLI Sample # WW 6969737
 LLI Group # 1372475
 Account # 13534

Project Name: 301233 Tidewater Seattle

Collected: 02/27/2013 10:15 by DE

Conestoga-Rovers & Associates
 Suite 190
 20818 44th Ave W
 Lynnwood WA 98036

Submitted: 03/01/2013 09:15

Reported: 03/14/2013 10:55

TSE07

General Sample Comments

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

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	8260 Solvent Compound - Water	SW-846 8260B	1	W130671AA	03/08/2013 09:15	Christopher G Torres	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W130671AA	03/08/2013 09:15	Christopher G Torres	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13061WAD026	03/09/2013 07:15	Mark A Clark	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13061WAD026	03/03/2013 07:15	Katheryne V Sponheimer	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	13063D20A	03/05/2013 11:45	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	13063D20A	03/05/2013 11:45	Catherine J Schwarz	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	130630019A	03/07/2013 13:03	Christine E Dolman	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	130630019A	03/05/2013 12:30	Katheryne V Sponheimer	1
06035	Lead	SW-846 6020	1	130666050002A	03/14/2013 08:08	Choon Y Tian	1
06050	ICP/MS SW-846 Water Digest	SW-846 3020A	1	130666050002	03/09/2013 08:00	James L Mertz	1

Sample Description: GW-022613-DE-MW1 Grab Groundwater
MLK Tidewater Site
2800 Martin Luther King Jr Way - Seattle, WA

LLI Sample # WW 6969738
LLI Group # 1372475
Account # 13534

Project Name: 301233 Tidewater Seattle

Collected: 02/26/2013 14:05 by DE

Conestoga-Rovers & Associates

Suite 190

Submitted: 03/01/2013 09:15

20818 44th Ave W

Reported: 03/14/2013 10:55

Lynnwood WA 98036

TSE01

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/l	ug/l	
10335	Acetone	67-64-1	N.D.	6	1
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Bromobenzene	108-86-1	N.D.	1	1
10335	Bromochloromethane	74-97-5	N.D.	1	1
10335	Bromodichloromethane	75-27-4	N.D.	1	1
10335	Bromoform	75-25-2	N.D.	1	1
10335	Bromomethane	74-83-9	N.D.	1	1
10335	2-Butanone	78-93-3	N.D.	3	1
10335	n-Butylbenzene	104-51-8	N.D.	1	1
10335	sec-Butylbenzene	135-98-8	N.D.	1	1
10335	tert-Butylbenzene	98-06-6	N.D.	1	1
10335	Carbon Disulfide	75-15-0	N.D.	1	1
10335	Carbon Tetrachloride	56-23-5	N.D.	1	1
10335	Chlorobenzene	108-90-7	N.D.	0.8	1
10335	Chloroethane	75-00-3	N.D.	1	1
10335	Chloroform	67-66-3	N.D.	0.8	1
10335	Chloromethane	74-87-3	N.D.	1	1
10335	2-Chlorotoluene	95-49-8	N.D.	1	1
10335	4-Chlorotoluene	106-43-4	N.D.	1	1
10335	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	2	1
10335	Dibromochloromethane	124-48-1	N.D.	1	1
10335	1,2-Dibromoethane	106-93-4	N.D.	0.5	1
10335	Dibromomethane	74-95-3	N.D.	1	1
10335	1,2-Dichlorobenzene	95-50-1	N.D.	1	1
10335	1,3-Dichlorobenzene	541-73-1	N.D.	1	1
10335	1,4-Dichlorobenzene	106-46-7	N.D.	1	1
10335	Dichlorodifluoromethane	75-71-8	N.D.	2	1
10335	1,1-Dichloroethane	75-34-3	N.D.	1	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.8	1
10335	cis-1,2-Dichloroethene	156-59-2	25	0.8	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	1
10335	1,2-Dichloropropane	78-87-5	N.D.	1	1
10335	1,3-Dichloropropane	142-28-9	N.D.	1	1
10335	2,2-Dichloropropane	594-20-7	N.D.	1	1
10335	1,1-Dichloropropene	563-58-6	N.D.	1	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	1
10335	Ethylbenzene	100-41-4	N.D.	0.5	1
10335	Hexachlorobutadiene	87-68-3	N.D.	2	1
10335	2-Hexanone	591-78-6	N.D.	3	1
10335	Isopropylbenzene	98-82-8	N.D.	1	1
10335	p-Isopropyltoluene	99-87-6	N.D.	1	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10335	4-Methyl-2-pentanone	108-10-1	N.D.	3	1
10335	Methylene Chloride	75-09-2	N.D.	2	1
10335	Naphthalene	91-20-3	N.D.	1	1
10335	n-Propylbenzene	103-65-1	N.D.	1	1
10335	Styrene	100-42-5	N.D.	1	1
10335	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	1	1

Sample Description: GW-022613-DE-MW1 Grab Groundwater
 MLK Tidewater Site
 2800 Martin Luther King Jr Way - Seattle, WA

LLI Sample # WW 6969738
 LLI Group # 1372475
 Account # 13534

Project Name: 301233 Tidewater Seattle

Collected: 02/26/2013 14:05 by DE

Conestoga-Rovers & Associates

Suite 190

Submitted: 03/01/2013 09:15

20818 44th Ave W

Reported: 03/14/2013 10:55

Lynnwood WA 98036

TSE01

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B			ug/l	ug/l	
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	1
10335	Tetrachloroethene	127-18-4	5	0.8	1
10335	Toluene	108-88-3	N.D.	0.5	1
10335	1,2,3-Trichlorobenzene	87-61-6	N.D.	1	1
10335	1,2,4-Trichlorobenzene	120-82-1	N.D.	1	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.8	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.8	1
10335	Trichloroethene	79-01-6	6	1	1
10335	Trichlorofluoromethane	75-69-4	N.D.	2	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	1	1
10335	1,2,4-Trimethylbenzene	95-63-6	N.D.	1	1
10335	1,3,5-Trimethylbenzene	108-67-8	N.D.	1	1
10335	Vinyl Chloride	75-01-4	1	1	1
10335	m+p-Xylene	179601-23-1	N.D.	0.5	1
10335	o-Xylene	95-47-6	N.D.	0.5	1
10335	Xylene (Total)	1330-20-7	N.D.	0.5	1
The LCS and/or LCS D recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: chloromethane.					
GC/MS Semivolatiles SW-846 8270C SIM			ug/l	ug/l	
08357	Benzo(a)anthracene	56-55-3	N.D.	0.0097	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.0097	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.0097	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.0097	1
08357	Chrysene	218-01-9	N.D.	0.0097	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0097	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.0097	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.0097	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.0097	1
08357	Naphthalene	91-20-3	N.D.	0.029	1
GC Volatiles ECY 97-602 NWTPH-Gx			ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Petroleum ECY 97-602 NWTPH-Dx			ug/l	ug/l	
Hydrocarbons w/Si modified					
02211	DRO C12-C24 w/Si Gel	n.a.	N.D.	30	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	71	1
Metals SW-846 6020			ug/l	ug/l	
06035	Lead	7439-92-1	0.42	0.047	1

Sample Description: GW-022613-DE-MW1 Grab Groundwater
 MLK Tidewater Site
 2800 Martin Luther King Jr Way - Seattle, WA

LLI Sample # WW 6969738
 LLI Group # 1372475
 Account # 13534

Project Name: 301233 Tidewater Seattle

Collected: 02/26/2013 14:05 by DE

Conestoga-Rovers & Associates

Suite 190

Submitted: 03/01/2013 09:15

20818 44th Ave W

Reported: 03/14/2013 10:55

Lynnwood WA 98036

TSE01

General Sample Comments

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

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	8260 Solvent Compound - Water	SW-846 8260B	1	W130671AA	03/08/2013 10:03	Christopher G Torres	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W130671AA	03/08/2013 10:03	Christopher G Torres	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	13061WAD026	03/09/2013 07:46	Mark A Clark	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	13061WAD026	03/03/2013 07:15	Katheryne V Sponheimer	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	13063D20A	03/05/2013 12:07	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	13063D20A	03/05/2013 12:07	Catherine J Schwarz	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	130630019A	03/07/2013 12:41	Christine E Dolman	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	130630019A	03/05/2013 12:30	Katheryne V Sponheimer	1
06035	Lead	SW-846 6020	1	130666050002A	03/14/2013 08:15	Choon Y Tian	1
06050	ICP/MS SW-846 Water Digest	SW-846 3020A	1	130666050002	03/09/2013 08:00	James L Mertz	1

Sample Description: TRIP BLANK Water
MLK Tidewater Site
2800 Martin Luther King Jr Way - Seattle, WA

LLI Sample # WW 6969739
LLI Group # 1372475
Account # 13534

Project Name: 301233 Tidewater Seattle

Collected: 02/26/2013

Conestoga-Rovers & Associates

Suite 190
20818 44th Ave W
Lynnwood WA 98036

Submitted: 03/01/2013 09:15

Reported: 03/14/2013 10:55

TSETB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846 8260B	ug/l	ug/l	
10335	Acetone	67-64-1	N.D.	6	1
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Bromobenzene	108-86-1	N.D.	1	1
10335	Bromochloromethane	74-97-5	N.D.	1	1
10335	Bromodichloromethane	75-27-4	N.D.	1	1
10335	Bromoform	75-25-2	N.D.	1	1
10335	Bromomethane	74-83-9	N.D.	1	1
10335	2-Butanone	78-93-3	N.D.	3	1
10335	n-Butylbenzene	104-51-8	N.D.	1	1
10335	sec-Butylbenzene	135-98-8	N.D.	1	1
10335	tert-Butylbenzene	98-06-6	N.D.	1	1
10335	Carbon Disulfide	75-15-0	N.D.	1	1
10335	Carbon Tetrachloride	56-23-5	N.D.	1	1
10335	Chlorobenzene	108-90-7	N.D.	0.8	1
10335	Chloroethane	75-00-3	N.D.	1	1
10335	Chloroform	67-66-3	N.D.	0.8	1
10335	Chloromethane	74-87-3	N.D.	1	1
10335	2-Chlorotoluene	95-49-8	N.D.	1	1
10335	4-Chlorotoluene	106-43-4	N.D.	1	1
10335	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	2	1
10335	Dibromochloromethane	124-48-1	N.D.	1	1
10335	1,2-Dibromoethane	106-93-4	N.D.	0.5	1
10335	Dibromomethane	74-95-3	N.D.	1	1
10335	1,2-Dichlorobenzene	95-50-1	N.D.	1	1
10335	1,3-Dichlorobenzene	541-73-1	N.D.	1	1
10335	1,4-Dichlorobenzene	106-46-7	N.D.	1	1
10335	Dichlorodifluoromethane	75-71-8	N.D.	2	1
10335	1,1-Dichloroethane	75-34-3	N.D.	1	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.8	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.8	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	1
10335	1,2-Dichloropropane	78-87-5	N.D.	1	1
10335	1,3-Dichloropropane	142-28-9	N.D.	1	1
10335	2,2-Dichloropropane	594-20-7	N.D.	1	1
10335	1,1-Dichloropropene	563-58-6	N.D.	1	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	1
10335	Ethylbenzene	100-41-4	N.D.	0.5	1
10335	Hexachlorobutadiene	87-68-3	N.D.	2	1
10335	2-Hexanone	591-78-6	N.D.	3	1
10335	Isopropylbenzene	98-82-8	N.D.	1	1
10335	p-Isopropyltoluene	99-87-6	N.D.	1	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10335	4-Methyl-2-pentanone	108-10-1	N.D.	3	1
10335	Methylene Chloride	75-09-2	N.D.	2	1
10335	Naphthalene	91-20-3	N.D.	1	1
10335	n-Propylbenzene	103-65-1	N.D.	1	1
10335	Styrene	100-42-5	N.D.	1	1
10335	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	1	1

Sample Description: TRIP BLANK Water
MLK Tidewater Site
2800 Martin Luther King Jr Way - Seattle, WA

LLI Sample # WW 6969739
LLI Group # 1372475
Account # 13534

Project Name: 301233 Tidewater Seattle

Collected: 02/26/2013

Conestoga-Rovers & Associates
Suite 190
20818 44th Ave W
Lynnwood WA 98036

Submitted: 03/01/2013 09:15

Reported: 03/14/2013 10:55

TSETB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B			ug/l	ug/l	
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	1
10335	Tetrachloroethene	127-18-4	N.D.	0.8	1
10335	Toluene	108-88-3	N.D.	0.5	1
10335	1,2,3-Trichlorobenzene	87-61-6	N.D.	1	1
10335	1,2,4-Trichlorobenzene	120-82-1	N.D.	1	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.8	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.8	1
10335	Trichloroethene	79-01-6	N.D.	1	1
10335	Trichlorofluoromethane	75-69-4	N.D.	2	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	1	1
10335	1,2,4-Trimethylbenzene	95-63-6	N.D.	1	1
10335	1,3,5-Trimethylbenzene	108-67-8	N.D.	1	1
10335	Vinyl Chloride	75-01-4	N.D.	1	1
10335	m+p-Xylene	179601-23-1	N.D.	0.5	1
10335	o-Xylene	95-47-6	N.D.	0.5	1
10335	Xylene (Total)	1330-20-7	N.D.	0.5	1
The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: chloromethane.					
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
10335	8260 Solvent Compound - Water	SW-846 8260B	1	W130671AA	03/08/2013 05:16	Christopher G Torres	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W130671AA	03/08/2013 05:16	Christopher G Torres	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	13063D20A	03/05/2013 11:23	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	13063D20A	03/05/2013 11:23	Catherine J Schwarz	1

Quality Control Summary

Client Name: Conestoga-Rovers & Associates
Reported: 03/14/13 at 10:55 AM

Group Number: 1372475

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: N130642AA								
Sample number(s): 6969727								
Acetone	N.D.	6.	ug/l	105		49-234		
Benzene	N.D.	0.5	ug/l	101		77-121		
Bromobenzene	N.D.	1.	ug/l	102		80-120		
Bromochloromethane	N.D.	1.	ug/l	101		80-121		
Bromodichloromethane	N.D.	1.	ug/l	100		73-120		
Bromoform	N.D.	1.	ug/l	98		61-120		
Bromomethane	N.D.	1.	ug/l	83		51-120		
2-Butanone	N.D.	3.	ug/l	102		57-141		
n-Butylbenzene	N.D.	1.	ug/l	100		73-130		
sec-Butylbenzene	N.D.	1.	ug/l	103		74-124		
tert-Butylbenzene	N.D.	1.	ug/l	101		80-120		
Carbon Disulfide	N.D.	1.	ug/l	94		68-121		
Carbon Tetrachloride	N.D.	1.	ug/l	105		65-137		
Chlorobenzene	N.D.	0.8	ug/l	104		80-120		
Chloroethane	N.D.	1.	ug/l	83		60-120		
Chloroform	N.D.	0.8	ug/l	105		77-122		
Chloromethane	N.D.	1.	ug/l	79		54-123		
2-Chlorotoluene	N.D.	1.	ug/l	101		80-120		
4-Chlorotoluene	N.D.	1.	ug/l	103		80-120		
1,2-Dibromo-3-chloropropane	N.D.	2.	ug/l	96		56-120		
Dibromochloromethane	N.D.	1.	ug/l	102		72-120		
1,2-Dibromoethane	N.D.	0.5	ug/l	101		76-120		
Dibromomethane	N.D.	1.	ug/l	105		80-120		
1,2-Dichlorobenzene	N.D.	1.	ug/l	103		80-120		
1,3-Dichlorobenzene	N.D.	1.	ug/l	105		80-120		
1,4-Dichlorobenzene	N.D.	1.	ug/l	102		80-120		
Dichlorodifluoromethane	N.D.	2.	ug/l	84		35-122		
1,1-Dichloroethane	N.D.	1.	ug/l	104		79-120		
1,2-Dichloroethane	N.D.	0.5	ug/l	110		64-130		
1,1-Dichloroethene	N.D.	0.8	ug/l	105		76-124		
cis-1,2-Dichloroethene	N.D.	0.8	ug/l	102		80-120		
trans-1,2-Dichloroethene	N.D.	0.8	ug/l	102		80-120		
1,2-Dichloropropane	N.D.	1.	ug/l	105		80-120		
1,3-Dichloropropane	N.D.	1.	ug/l	104		80-120		
2,2-Dichloropropane	N.D.	1.	ug/l	104		67-124		
1,1-Dichloropropene	N.D.	1.	ug/l	103		80-120		
cis-1,3-Dichloropropene	N.D.	1.	ug/l	107		78-120		
trans-1,3-Dichloropropene	N.D.	1.	ug/l	101		66-124		
Ethylbenzene	N.D.	0.5	ug/l	104		79-120		
Hexachlorobutadiene	N.D.	2.	ug/l	86		58-120		
2-Hexanone	N.D.	3.	ug/l	99		59-125		
Isopropylbenzene	N.D.	1.	ug/l	105		77-120		
p-Isopropyltoluene	N.D.	1.	ug/l	103		77-121		

*- 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: Conestoga-Rovers & Associates
 Reported: 03/14/13 at 10:55 AM

Group Number: 1372475

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	102		68-121		
4-Methyl-2-pentanone	N.D.	3.	ug/l	100		65-122		
Methylene Chloride	N.D.	2.	ug/l	106		84-118		
Naphthalene	N.D.	1.	ug/l	96		47-126		
n-Propylbenzene	N.D.	1.	ug/l	103		77-130		
Styrene	N.D.	1.	ug/l	107		77-120		
1,1,1,2-Tetrachloroethane	N.D.	1.	ug/l	102		79-120		
1,1,2,2-Tetrachloroethane	N.D.	1.	ug/l	100		70-129		
Tetrachloroethene	N.D.	0.8	ug/l	106		79-120		
Toluene	N.D.	0.5	ug/l	102		79-120		
1,2,3-Trichlorobenzene	N.D.	1.	ug/l	96		67-120		
1,2,4-Trichlorobenzene	N.D.	1.	ug/l	96		65-120		
1,1,1-Trichloroethane	N.D.	0.8	ug/l	114		66-126		
1,1,2-Trichloroethane	N.D.	0.8	ug/l	104		80-120		
Trichloroethene	N.D.	1.	ug/l	103		80-120		
Trichlorofluoromethane	N.D.	2.	ug/l	95		65-130		
1,2,3-Trichloropropane	N.D.	1.	ug/l	100		76-120		
1,2,4-Trimethylbenzene	N.D.	1.	ug/l	104		69-122		
1,3,5-Trimethylbenzene	N.D.	1.	ug/l	104		68-124		
Vinyl Chloride	N.D.	1.	ug/l	88		63-120		
m+p-Xylene	N.D.	0.5	ug/l	103		77-120		
o-Xylene	N.D.	0.5	ug/l	104		77-120		
Xylene (Total)	N.D.	0.5	ug/l	104		77-120		
Batch number: W130671AA Sample number(s): 6969728-6969739								
Acetone	N.D.	6.	ug/l	81		49-234		
Benzene	N.D.	0.5	ug/l	101		77-121		
Bromobenzene	N.D.	1.	ug/l	105		80-120		
Bromochloromethane	N.D.	1.	ug/l	114		80-121		
Bromodichloromethane	N.D.	1.	ug/l	100		73-120		
Bromoform	N.D.	1.	ug/l	84		61-120		
Bromomethane	N.D.	1.	ug/l	63		51-120		
2-Butanone	N.D.	3.	ug/l	83		57-141		
n-Butylbenzene	N.D.	1.	ug/l	92		73-130		
sec-Butylbenzene	N.D.	1.	ug/l	96		74-124		
tert-Butylbenzene	N.D.	1.	ug/l	101		80-120		
Carbon Disulfide	N.D.	1.	ug/l	81		68-121		
Carbon Tetrachloride	N.D.	1.	ug/l	104		65-137		
Chlorobenzene	N.D.	0.8	ug/l	104		80-120		
Chloroethane	N.D.	1.	ug/l	55*		60-120		
Chloroform	N.D.	0.8	ug/l	102		77-122		
Chloromethane	N.D.	1.	ug/l	59		54-123		
2-Chlorotoluene	N.D.	1.	ug/l	102		80-120		
4-Chlorotoluene	N.D.	1.	ug/l	102		80-120		
1,2-Dibromo-3-chloropropane	N.D.	2.	ug/l	77		56-120		
Dibromochloromethane	N.D.	1.	ug/l	100		72-120		
1,2-Dibromoethane	N.D.	0.5	ug/l	101		76-120		
Dibromomethane	N.D.	1.	ug/l	103		80-120		
1,2-Dichlorobenzene	N.D.	1.	ug/l	104		80-120		
1,3-Dichlorobenzene	N.D.	1.	ug/l	103		80-120		
1,4-Dichlorobenzene	N.D.	1.	ug/l	103		80-120		
Dichlorodifluoromethane	N.D.	2.	ug/l	55		35-122		
1,1-Dichloroethane	N.D.	1.	ug/l	101		79-120		
1,2-Dichloroethane	N.D.	0.5	ug/l	114		64-130		
1,1-Dichloroethene	N.D.	0.8	ug/l	101		76-124		
cis-1,2-Dichloroethene	N.D.	0.8	ug/l	106		80-120		

*- Outside of specification

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

Quality Control Summary

 Client Name: Conestoga-Rovers & Associates
 Reported: 03/14/13 at 10:55 AM

Group Number: 1372475

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCS/D %REC</u>	<u>LCS/LCS/D Limits</u>	<u>RPD</u>	<u>RPD Max</u>
trans-1,2-Dichloroethene	N.D.	0.8	ug/l	103		80-120		
1,2-Dichloropropane	N.D.	1.	ug/l	96		80-120		
1,3-Dichloropropane	N.D.	1.	ug/l	99		80-120		
2,2-Dichloropropane	N.D.	1.	ug/l	94		67-124		
1,1-Dichloropropene	N.D.	1.	ug/l	101		80-120		
cis-1,3-Dichloropropene	N.D.	1.	ug/l	102		78-120		
trans-1,3-Dichloropropene	N.D.	1.	ug/l	90		66-124		
Ethylbenzene	N.D.	0.5	ug/l	101		79-120		
Hexachlorobutadiene	N.D.	2.	ug/l	91		58-120		
2-Hexanone	N.D.	3.	ug/l	77		59-125		
Isopropylbenzene	N.D.	1.	ug/l	102		77-120		
p-Isopropyltoluene	N.D.	1.	ug/l	100		77-121		
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	100		68-121		
4-Methyl-2-pentanone	N.D.	3.	ug/l	82		65-122		
Methylene Chloride	N.D.	2.	ug/l	99		84-118		
Naphthalene	N.D.	1.	ug/l	87		47-126		
n-Propylbenzene	N.D.	1.	ug/l	98		77-130		
Styrene	N.D.	1.	ug/l	98		77-120		
1,1,1,2-Tetrachloroethane	N.D.	1.	ug/l	103		79-120		
1,1,2,2-Tetrachloroethane	N.D.	1.	ug/l	89		70-129		
Tetrachloroethene	N.D.	0.8	ug/l	110		79-120		
Toluene	N.D.	0.5	ug/l	100		79-120		
1,2,3-Trichlorobenzene	N.D.	1.	ug/l	99		67-120		
1,2,4-Trichlorobenzene	N.D.	1.	ug/l	97		65-120		
1,1,1-Trichloroethane	N.D.	0.8	ug/l	106		66-126		
1,1,2-Trichloroethane	N.D.	0.8	ug/l	100		80-120		
Trichloroethene	N.D.	1.	ug/l	108		80-120		
Trichlorofluoromethane	N.D.	2.	ug/l	84		65-130		
1,2,3-Trichloropropane	N.D.	1.	ug/l	98		76-120		
1,2,4-Trimethylbenzene	N.D.	1.	ug/l	99		69-122		
1,3,5-Trimethylbenzene	N.D.	1.	ug/l	99		68-124		
Vinyl Chloride	N.D.	1.	ug/l	64		63-120		
m+p-Xylene	N.D.	0.5	ug/l	103		77-120		
o-Xylene	N.D.	0.5	ug/l	101		77-120		
Xylene (Total)	N.D.	0.5	ug/l	102		77-120		

Batch number: 13061WAD026	Sample number(s): 6969727-6969734, 6969737-6969738							
Benzo(a) anthracene	N.D.	0.010	ug/l	92	94	75-115	2	30
Benzo(a) pyrene	N.D.	0.010	ug/l	89	90	72-120	2	30
Benzo(b) fluoranthene	N.D.	0.010	ug/l	95	97	74-130	3	30
Benzo(k) fluoranthene	N.D.	0.010	ug/l	89	91	74-118	2	30
Chrysene	N.D.	0.010	ug/l	87	88	75-112	1	30
Dibenz(a,h) anthracene	N.D.	0.010	ug/l	95	96	66-122	1	30
Indeno(1,2,3-cd)pyrene	N.D.	0.010	ug/l	94	96	66-122	2	30
1-Methylnaphthalene	N.D.	0.010	ug/l	92	91	72-114	1	30
2-Methylnaphthalene	N.D.	0.010	ug/l	98	97	74-119	1	30
Naphthalene	N.D.	0.030	ug/l	88	87	67-118	1	30

Batch number: 13063D20A	Sample number(s): 6969727-6969739							
NWTPH-Gx water C7-C12	N.D.	50.	ug/l	99		75-135		

Batch number: 130630019A	Sample number(s): 6969727-6969738							
DRO C12-C24 w/Si Gel	N.D.	30.	ug/l	80		50-120		
HRO C24-C40 w/Si Gel	N.D.	70.	ug/l					

Batch number: 130636050004A	Sample number(s): 6969727-6969733							

*- 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: Conestoga-Rovers & Associates
 Reported: 03/14/13 at 10:55 AM

Group Number: 1372475

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>	
Lead	N.D.	0.073	ug/l	100		90-115			
Batch number: 130666050002A	Sample number(s): 6969734, 6969737-6969738								
Lead	N.D.	0.047	ug/l	103		90-115			

Sample Matrix Quality Control

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

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: N130642AA	Sample number(s): 6969727				UNSPK: P967869				
Acetone	104	105	33-159	1	30				
Benzene	106	108	72-134	2	30				
Bromobenzene	104	106	82-115	2	30				
Bromochloromethane	103	105	76-134	2	30				
Bromodichloromethane	101	104	78-125	3	30				
Bromoform	96	99	48-118	3	30				
Bromomethane	85	87	47-129	3	30				
2-Butanone	101	104	57-138	3	30				
n-Butylbenzene	104	106	59-156	1	30				
sec-Butylbenzene	109	111	79-125	2	30				
tert-Butylbenzene	105	108	81-121	3	30				
Carbon Disulfide	101	103	67-135	2	30				
Carbon Tetrachloride	113	116	72-135	2	30				
Chlorobenzene	108	110	87-124	2	30				
Chloroethane	87	88	51-145	1	30				
Chloroform	110	112	81-134	2	30				
Chloromethane	82	85	46-137	3	30				
2-Chlorotoluene	105	107	82-118	2	30				
4-Chlorotoluene	105	107	84-122	2	30				
1,2-Dibromo-3-chloropropane	93	95	54-134	2	30				
Dibromochloromethane	103	106	74-116	3	30				
1,2-Dibromoethane	102	104	77-116	2	30				
Dibromomethane	104	105	83-119	1	30				
1,2-Dichlorobenzene	105	105	84-119	0	30				
1,3-Dichlorobenzene	107	107	86-121	0	30				
1,4-Dichlorobenzene	103	106	85-121	3	30				
Dichlorodifluoromethane	87	91	52-129	4	30				
1,1-Dichloroethane	110	112	84-129	1	30				
1,2-Dichloroethane	113	113	68-131	0	30				
1,1-Dichloroethene	115	115	75-155	0	30				
cis-1,2-Dichloroethene	105	108	80-141	2	30				
trans-1,2-Dichloroethene	110	110	81-142	0	30				
1,2-Dichloropropane	107	110	83-124	4	30				
1,3-Dichloropropane	104	106	81-120	2	30				
2,2-Dichloropropane	110	112	69-135	2	30				
1,1-Dichloropropene	111	113	86-137	2	30				
cis-1,3-Dichloropropene	108	110	70-116	2	30				
trans-1,3-Dichloropropene	100	103	74-119	3	30				
Ethylbenzene	109	111	71-134	2	30				
Hexachlorobutadiene	92	95	56-134	4	30				

*- Outside of specification

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

Quality Control Summary

 Client Name: Conestoga-Rovers & Associates
 Reported: 03/14/13 at 10:55 AM

Group Number: 1372475

Sample Matrix Quality Control

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

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
2-Hexanone	97	99	55-127	3	30				
Isopropylbenzene	110	112	75-128	2	30				
p-Isopropyltoluene	107	108	76-123	2	30				
Methyl Tertiary Butyl Ether	102	106	72-126	3	30				
4-Methyl-2-pentanone	100	103	63-123	3	30				
Methylene Chloride	108	110	78-133	1	30				
Naphthalene	94	98	52-125	4	30				
n-Propylbenzene	107	109	74-134	2	30				
Styrene	109	112	78-125	3	30				
1,1,1,2-Tetrachloroethane	105	107	74-136	2	30				
1,1,2,2-Tetrachloroethane	102	103	72-128	1	30				
Tetrachloroethene	111	114	80-128	3	30				
Toluene	108	110	80-125	2	30				
1,2,3-Trichlorobenzene	94	97	69-119	3	30				
1,2,4-Trichlorobenzene	97	99	70-124	2	30				
1,1,1-Trichloroethane	122	124	69-140	2	30				
1,1,2-Trichloroethane	104	108	71-141	3	30				
Trichloroethene	109	110	88-133	1	30				
Trichlorofluoromethane	105	108	64-146	3	30				
1,2,3-Trichloropropane	101	101	76-118	0	30				
1,2,4-Trimethylbenzene	106	108	72-130	2	30				
1,3,5-Trimethylbenzene	108	109	65-132	1	30				
Vinyl Chloride	94	97	66-133	4	30				
m+p-Xylene	108	110	79-125	2	30				
o-Xylene	107	110	79-125	2	30				
Xylene (Total)	108	110	79-125	2	30				

Batch number: W130671AA	Sample number(s): 6969728-6969739 UNSPK: 6969734				
Acetone	95	84	33-159	12	30
Benzene	126	115	72-134	8	30
Bromobenzene	126*	115	82-115	9	30
Bromochloromethane	120	124	76-134	3	30
Bromodichloromethane	122	111	78-125	9	30
Bromoform	99	92	48-118	7	30
Bromomethane	70	71	47-129	1	30
2-Butanone	96	89	57-138	7	30
n-Butylbenzene	115	106	59-156	8	30
sec-Butylbenzene	119	111	79-125	7	30
tert-Butylbenzene	123*	113	81-121	8	30
Carbon Disulfide	107	97	67-135	10	30
Carbon Tetrachloride	135	125	72-135	8	30
Chlorobenzene	127*	116	87-124	9	30
Chloroethane	66	65	51-145	2	30
Chloroform	126	115	81-134	9	30
Chloromethane	65	70	46-137	7	30
2-Chlorotoluene	122*	114	82-118	7	30
4-Chlorotoluene	125*	117	84-122	6	30
1,2-Dibromo-3-chloropropane	88	82	54-134	8	30
Dibromochloromethane	119*	108	74-116	10	30
1,2-Dibromoethane	119*	107	77-116	10	30
Dibromomethane	124*	115	83-119	8	30
1,2-Dichlorobenzene	123*	112	84-119	9	30

*- Outside of specification

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

Quality Control Summary

 Client Name: Conestoga-Rovers & Associates
 Reported: 03/14/13 at 10:55 AM

Group Number: 1372475

Sample Matrix Quality Control

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

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
1,3-Dichlorobenzene	122*	114	86-121	7	30				
1,4-Dichlorobenzene	122*	113	85-121	8	30				
Dichlorodifluoromethane	87	85	52-129	3	30				
1,1-Dichloroethane	126	113	84-129	11	30				
1,2-Dichloroethane	138*	126	68-131	9	30				
1,1-Dichloroethene	131	123	75-155	6	30				
cis-1,2-Dichloroethene	134	122	80-141	10	30				
trans-1,2-Dichloroethene	130	120	81-142	8	30				
1,2-Dichloropropane	114	106	83-124	7	30				
1,3-Dichloropropane	116	107	81-120	8	30				
2,2-Dichloropropane	122	110	69-135	10	30				
1,1-Dichloropropene	133	123	86-137	8	30				
cis-1,3-Dichloropropene	120*	111	70-116	8	30				
trans-1,3-Dichloropropene	106	98	74-119	8	30				
Ethylbenzene	124	114	71-134	8	30				
Hexachlorobutadiene	115	108	56-134	7	30				
2-Hexanone	90	82	55-127	10	30				
Isopropylbenzene	127	116	75-128	9	30				
p-Isopropyltoluene	121	113	76-123	7	30				
Methyl Tertiary Butyl Ether	118	108	72-126	9	30				
4-Methyl-2-pentanone	95	88	63-123	8	30				
Methylene Chloride	123	110	78-133	11	30				
Naphthalene	101	95	52-125	7	30				
n-Propylbenzene	121	113	74-134	7	30				
Styrene	121	110	78-125	10	30				
1,1,1,2-Tetrachloroethane	121	112	74-136	8	30				
1,1,2,2-Tetrachloroethane	102	95	72-128	7	30				
Tetrachloroethene	138*	128	80-128	7	30				
Toluene	122	113	80-125	7	30				
1,2,3-Trichlorobenzene	116	108	69-119	7	30				
1,2,4-Trichlorobenzene	117	107	70-124	9	30				
1,1,1-Trichloroethane	134	123	69-140	9	30				
1,1,2-Trichloroethane	115	108	71-141	6	30				
Trichloroethene	135*	124	88-133	9	30				
Trichlorofluoromethane	116	114	64-146	2	30				
1,2,3-Trichloropropane	113	105	76-118	8	30				
1,2,4-Trimethylbenzene	119	111	72-130	7	30				
1,3,5-Trimethylbenzene	122	112	65-132	9	30				
Vinyl Chloride	81	80	66-133	1	30				
m+p-Xylene	127*	116	79-125	9	30				
o-Xylene	123	112	79-125	10	30				
Xylene (Total)	126*	115	79-125	9	30				

 Batch number: 13063D20A
 NWTTPH-Gx water C7-C12

 Sample number(s): 6969727-6969739 UNSPK: 6969734
 84 87 75-135 4 30

 Batch number: 130630019A
 DRO C12-C24 w/Si Gel

 Sample number(s): 6969727-6969738 UNSPK: 6969734
 84 82 60-120 0 20

 Batch number: 130636050004A
 Lead

 Sample number(s): 6969727-6969733 UNSPK: P969574 BKG: P969574
 102 98 83-120 4 20 N.D. N.D. 0 (1) 20

*- Outside of specification

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

Quality Control Summary

 Client Name: Conestoga-Rovers & Associates
 Reported: 03/14/13 at 10:55 AM

Group Number: 1372475

Sample Matrix Quality Control

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

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	DUP RPD Max
Batch number: 130666050002A	Sample number(s): 6969734, 6969737-6969738 UNSPK: 6969734 BKG: 6969734								
Lead	104	101	83-120	3	20	0.16	0.15	10 (1)	20

Surrogate Quality Control

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

 Analysis Name: 8260 Ext. Water Master w/GRO
 Batch number: N130642AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
6969727	99	99	99	100
Blank	100	100	99	99
LCS	101	100	101	102
MS	101	100	100	101
MSD	102	100	100	100
Limits:	80-116	77-113	80-113	78-113

 Analysis Name: 8260 Ext. Water Master w/GRO
 Batch number: W130671AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
6969728	106	105	97	96
6969729	104	100	97	97
6969730	106	105	95	92
6969731	106	104	97	95
6969732	105	106	96	96
6969733	105	102	95	93
6969734	104	104	96	92
6969735	107	103	97	96
6969736	106	101	97	96
6969737	106	103	95	93
6969738	105	103	96	92
6969739	105	101	96	93
Blank	106	105	95	92
LCS	104	102	97	97
MS	107	103	97	96
MSD	106	101	97	96
Limits:	80-116	77-113	80-113	78-113

 Analysis Name: PAHs in waters by SIM
 Batch number: 13061WAD026

	Fluoranthene-d10	Benzo(a)pyrene-d12	1-Methylnaphthalene-d10

*- 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: Conestoga-Rovers & Associates
Reported: 03/14/13 at 10:55 AM

Group Number: 1372475

Surrogate Quality Control

6969727	103	109	111
6969728	102	111	112
6969729	99	102	101
6969730	105	112	104
6969731	106	108	109
6969732	104	109	102
6969733	106	107	106
6969734	104	107	104
6969737	107	105	105
6969738	105	109	100
Blank	100	106	101
LCS	102	107	101
LCSD	103	110	103

Limits: 64-120 62-141 58-134

Analysis Name: NWTPH-Gx water C7-C12
Batch number: 13063D20A
Trifluorotoluene-F

6969727	93
6969728	92
6969729	97
6969730	86
6969731	98
6969732	101
6969733	85
6969734	84
6969735	103
6969736	103
6969737	86
6969738	87
6969739	84
Blank	83
LCS	105
MS	103
MSD	103

Limits: 63-135

Analysis Name: NWTPH-Dx water w/Si Gel
Batch number: 130630019A
Orthoterphenyl

6969727	98
6969728	97
6969729	92
6969730	93
6969731	77
6969732	92
6969733	97
6969734	89
6969735	93
6969736	90
6969737	90
6969738	90

*- 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 SummaryClient Name: Conestoga-Rovers & Associates
Reported: 03/14/13 at 10:55 AM

Group Number: 1372475

Surrogate Quality Control

Blank	91
LCS	97
MS	93
MSD	90

Limits: 50-150

*- Outside of specification

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

Acc# 13534 Cup 1072475

CHAIN OF CUSTODY RECORD

COC NO: 37478

PAGE 1 OF 1

CONESTOGA-ROVERS & ASSOCIATES

Address: 117 TACOMA AVE SOUTH, TACOMA, WA
Phone: 253-573-1218 Fax: 253-573-1563

(See Reverse Side for Instructions)

SSOW ID:

Cooler No:

Carrier:

Airbill No:

Date Shipped:

COMMENTS / SPECIAL INSTRUCTIONS

SVOCs = CPAHS and Naphthalenes. No PAHS or Pb or MSX PER M. DAVIS. JMP/SHS

X MS/MSD

X DRO

X GRO

X VOC's

X SVOC's

X TOTAL PA

X

X

X

X

X

X

X

X

X

X

X

X

X

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Lab Location: LANCASTER, PA.

Lab Quote No:

Lab Contact: LANCASTER

Lab Contact:

LABOR QUANTITY & PRESERVATION

Matrix Code (see back of COC)

Grab (g) or Comp (c)

Unpreserved

Hydrochloric Acid (HCl)

Nitric Acid (HNO₃)

Sulfuric Acid (H₂SO₄)

Sodium Hydroxide (NaOH)

Methanol/Water (Soil)

VOC

EnCores 3x5-g, 1x25-g

Other:

Total Containers/Sample

MS/MSD Request

ANALYSIS REQUESTED

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Project No/Phase/Task Code: 061997

Project Name: TIDENWATER - SEATTLE

Project Location: MLKWAY S. SEATTLE, WA.

Chemistry Contact: M. DAVIS / J. CLOUD

Sampler(s): D. ESCOBEDO / N. HUNSPERGER

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TAT Required in business days (use separate COCs for different TATs):

1 Day 2 Days 3 Days 1 Week 2 Week Other STANDARD

RELINQUISHED BY: CRA

DATE: 02/26/13

COMPANY: CRA

DATE: 02/26/13

COMPANY: CRA

DATE: 02/26/13

COMPANY: CRA

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COMPANY: CRA

DATE: 02/26/13

COMPANY: CRA

Total Number of Containers: 121

All Samples in Cooler must be on COC

Notes/Special Requirements:

RECEIVED BY: [Signature]

DATE: 02/26/13

COMPANY: CRA

DATE: 02/26/13

COMPANY: CRA

DATE: 02/26/13

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DATE: 02/26/13

THE CHAIN OF CUSTODY IS A LEGAL DOCUMENT - ALL FIELDS MUST BE COMPLETED ACCURATELY

WHITE - Fully Executed Copy (CRA)

YELLOW - Receiving Laboratory Copy, page 50 of 51

PINK - Shipper

GOLDENROD - Sampling Crew

CRA Form: CCC-108 (201108)

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 <u>limit of quantitation</u> , 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		Inorganic Qualifiers	
A	TIC is a possible aldol-condensation product	B	Value is <CRDL, but ≥IDL
B	Analyte was also detected in the blank	E	Estimated due to interference
C	Pesticide result confirmed by GC/MS	M	Duplicate injection precision not met
D	Compound quantitated on a diluted sample	N	Spike sample not within control limits
E	Concentration exceeds the calibration range of the instrument	S	Method of standard additions (MSA) used for calculation
N	Presumptive evidence of a compound (TICs only)	U	Compound was not detected
P	Concentration difference between primary and confirmation columns >25%	W	Post digestion spike out of control limits
U	Compound was not detected	*	Duplicate analysis not within control limits
X,Y,Z	Defined in case narrative	+	Correlation coefficient for MSA <0.995

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

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

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

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

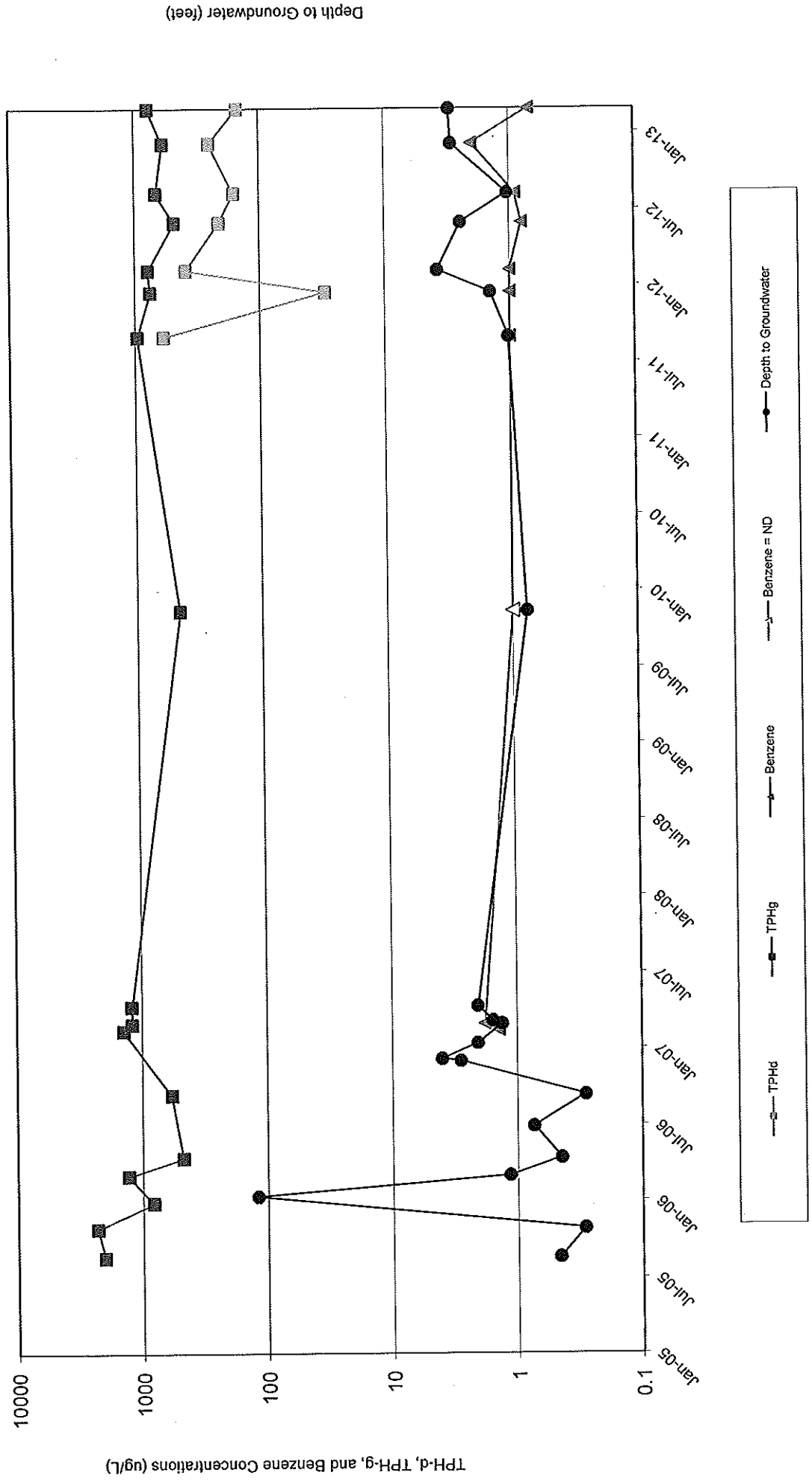
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ATTACHMENT C

CONCENTRATION TREND GRAPHS

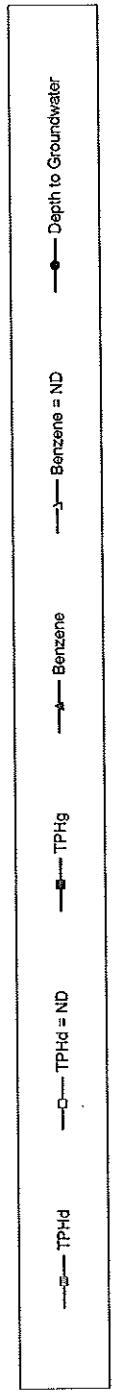
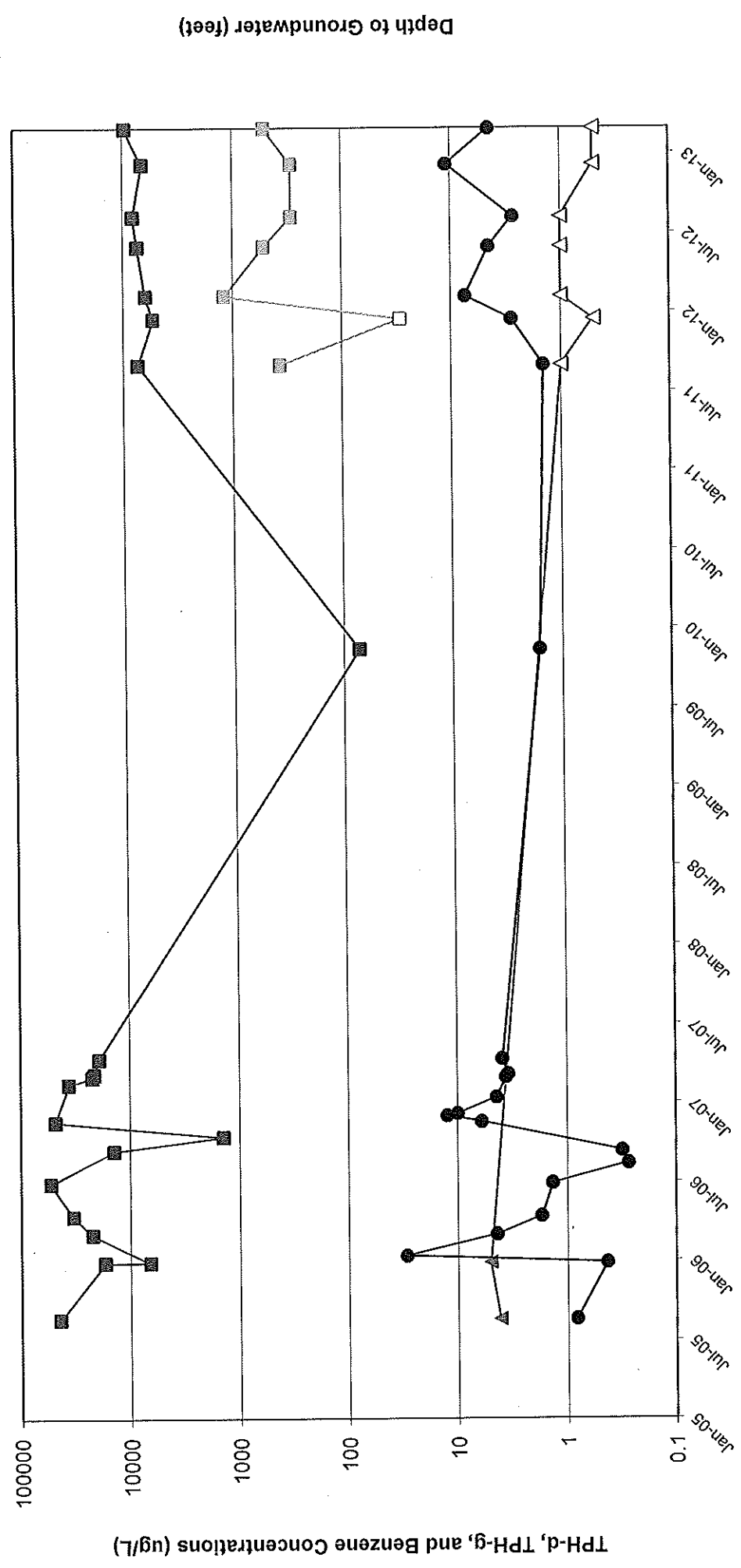
GRAPH 1

CHEMICAL CONCENTRATION VERSUS TIME
MW-2
 FORMER TIDEWATER SITE
 2800 MARTIN LUTHER KING JUNIOR WAY SOUTH
 SEATTLE, WASHINGTON



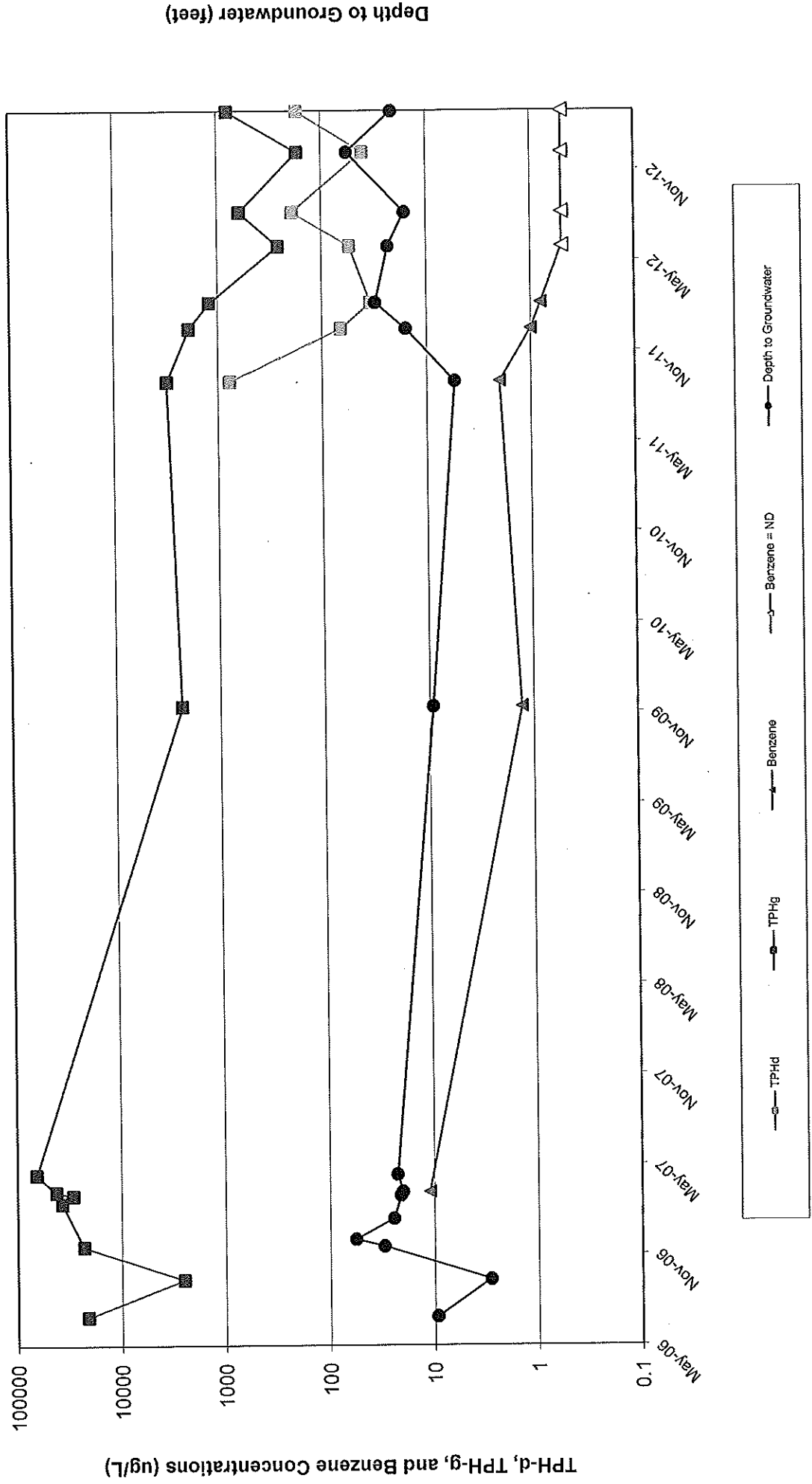
GRAPH 2

CHEMICAL CONCENTRATION VERSUS TIME
 MW-3
 FORMER TIDEWATER SITE
 2800 MARTIN LUTHER KING JUNIOR WAY SOUTH
 SEATTLE, WASHINGTON



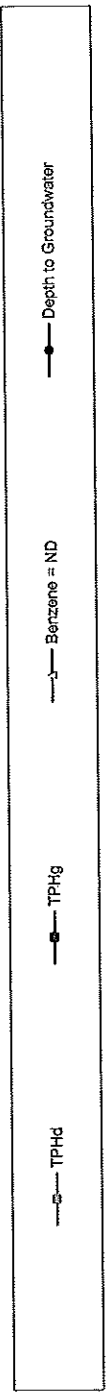
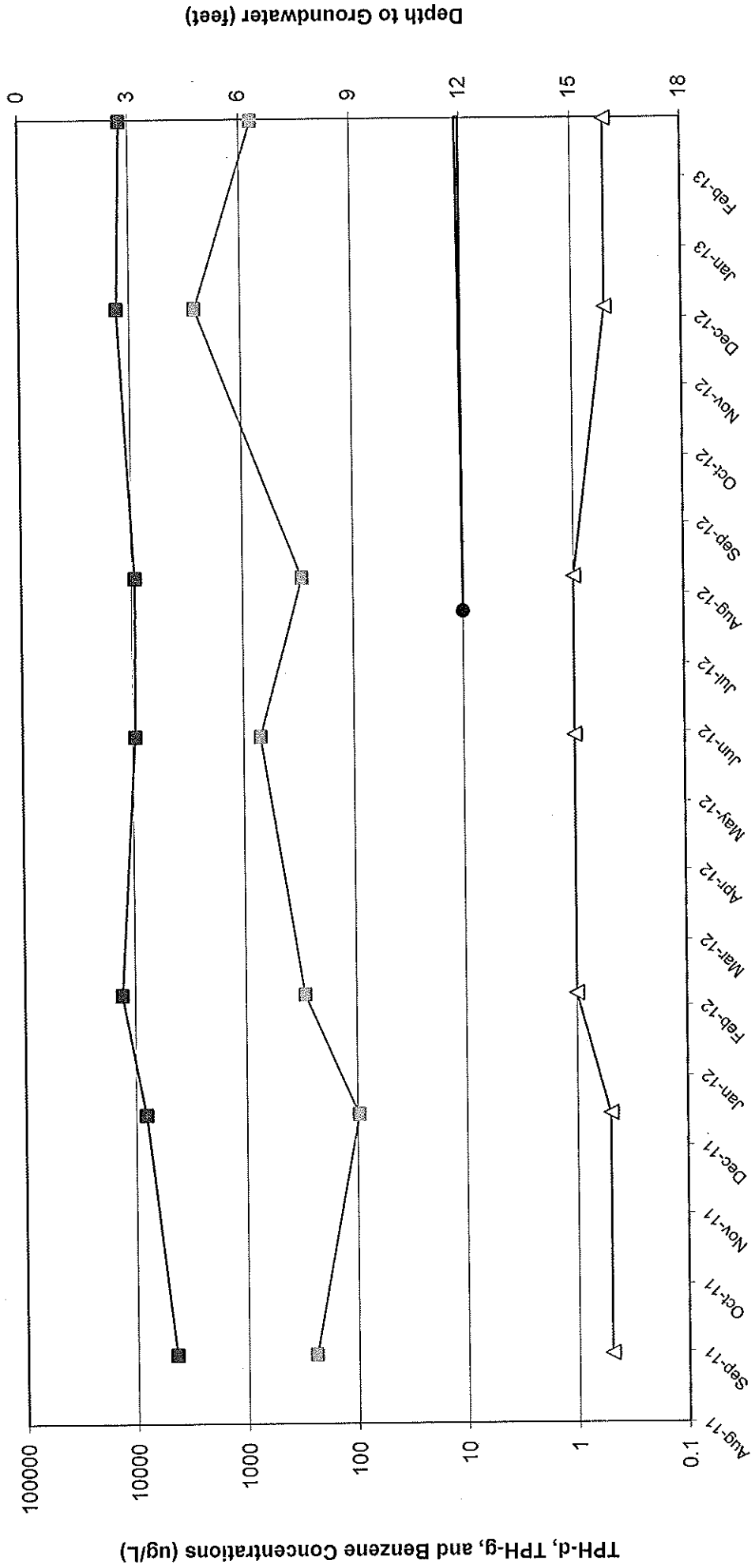
GRAPH 3

CHEMICAL CONCENTRATION VERSUS TIME
MW-5
FORMER TIDEWATER SITE
2800 MARTIN LUTHER KING JUNIOR WAY SOUTH
SEATTLE, WASHINGTON



GRAPH 4

CHEMICAL CONCENTRATION VERSUS TIME
MW-8
FORMER TIDEWATER SITE
2800 MARTIN LUTHER KING JUNIOR WAY SOUTH
SEATTLE, WASHINGTON



ATTACHMENT D

SUMMARY OF PREVIOUS INVESTIGATIONS

SUMMARY OF PREVIOUS INVESTIGATIONS AND REMEDIATION

Former Tidewater Site
Phillips 66 Site 5173
Chevron Site 301233
2800 Martin Luther King Junior Way South
Seattle, Washington

1989

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 Model Toxics Control Act (MTCA) Method A Cleanup Levels for constituents of concern (COC). (Stantec, 2012).

February 2005

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 (TPH) in the gasoline range (TPHg) at 5,900 micrograms per liter ($\mu\text{g/L}$). 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. (Stantec, 2012).

June 2005

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 P7, P8, and P9 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). (Stantec, 2012).

August 2005

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. (Stantec, 2012).

June 2006

Elevated concentrations of TPHg 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 TPHg 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. (Stantec, 2012).

August 2006

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. (Stantec, 2012).

December 2006 through June 2007

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 6 to 7 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. (Stantec, 2012).

April through July 2011

In April and July 2011, Stantec Consulting oversaw Cascade Drilling, L.P. advance seven soil borings (B-1 through B-7) and install five 2-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 TPHg, TPH in the diesel range (TPHd), TPH in the heavy oil range (TPHo) and benzene, toluene, ethylbenzene, and total xylenes (collectively referred to as 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 TPHg, TPHd, TPHo, and BTEX. Groundwater samples collected in borings B-1 through B-7 showed slightly elevated concentrations of TPHg 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 TPHg and BTEX were below the laboratory method detection limit (MDL). (Stantec, 2012).

References

Stantec Consulting Corporation (Stantec, 2012), First Quarter 2012 Monitoring and Sampling Report, April 27, 2012.