



**CONESTOGA-ROVERS  
& ASSOCIATES**

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February 26, 2013

Reference No. 061992

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

Re: Fourth Quarter 2012 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

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Dear Mr. Bails,

Conestoga-Rovers & Associates (CRA) is submitting this *Fourth Quarter 2012 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 investigation is included as Attachment D. A site map is presented on Figure 2.

### **RESULTS OF FOURTH QUARTER 2012 EVENT**

On December 5 and 6, 2012, 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                | 0.04 foot/foot                     |
| • Approximate Depth to Water        | 9.5 to 12 feet below grade         |
| • Approximate Groundwater Elevation | 46 to 53 feet above mean sea level |

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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)
<i>MTCA Method A Cleanup Levels</i>	<b>800/1000*</b>	<b>500</b>	<b>500</b>	<b>5</b>	<b>1000</b>	<b>700</b>	<b>1000</b>
MW-1	<50	<29	<69	<0.5	<0.5	<0.5	<0.5
MW-2	590	250	<73	2	<0.5	3	11
MW-3	<b>6,700</b>	290	<69	<0.5	<0.5	160	480
MW-4	<50	<32	<75	<0.5	<0.5	<0.5	<0.5
MW-5	170	40	<76	<0.5	<0.5	2	8
MW-6	<50	<31	<73	<0.5	<0.5	1	6
MW-7	<50	<29	<67	<0.5	<0.5	<0.5	<0.5
MW-8	<b>13,000</b>	<b>2,600</b>	200	<0.5	0.8	95	<b>1,100</b>
MW-8 DUP	<b>12,000</b>	<b>2,600</b>	240	<0.5	0.8	91	<b>1,100</b>
MW-9	<50	39	<69	<0.5	<0.5	<0.5	<0.5
MW-10	130	220	<72	3	0.6	<0.5	4
<b>Bold</b>	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 only in well MW-8 (Figure 6).
- TPHo concentrations were below MTCA Method A cleanup levels in all wells.
- With the exception of total xylenes in MW-8, Benzene, toluene, ethylbenzene, and total xylenes concentrations were all below the MTCA Method A cleanup levels in groundwater.



**CONESTOGA-ROVERS  
& ASSOCIATES**

February 26, 2013

Reference No. 061992

- 3 -

- 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 assess concentration trends over time.

### **ANTICIPATED FUTURE ACTIVITIES**

#### ***Groundwater Monitoring***

CRA will monitor and sample site wells per the established schedule. The first quarter 2013 event is scheduled for February 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 first 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/3

Encl.



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February 26, 2013

Reference No. 061992

- 4 -

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. Louis Mosconi, Phillips 66 (*electronic copy*)  
Greg McCormick, EP Inc. (*electronic copy*)

## FIGURES

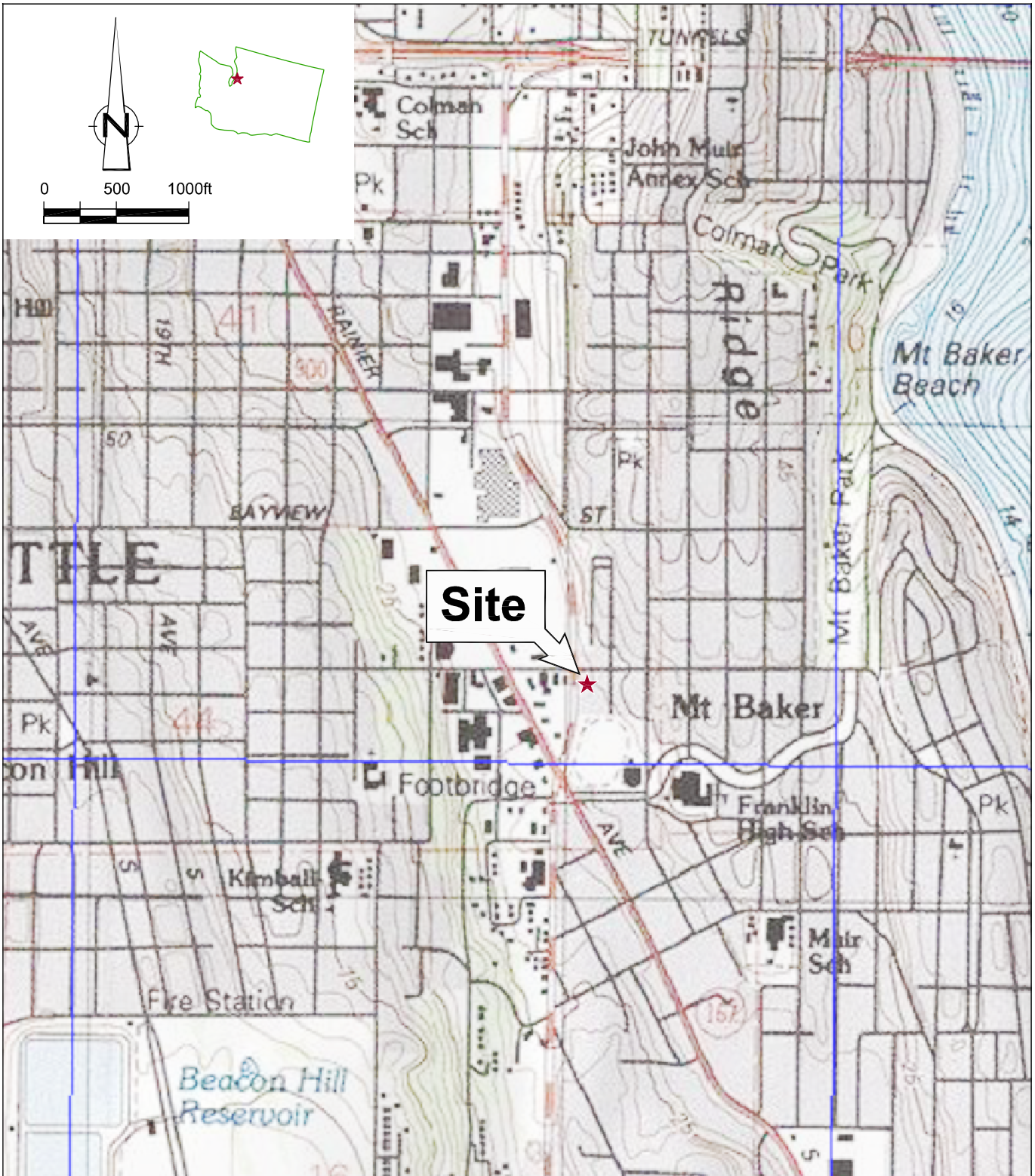
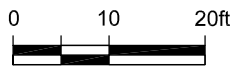
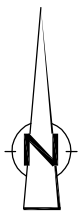


Figure 1  
 VICINITY MAP  
 FORMER TIDEWATER SERVICE STATION  
 PHILLIPS 66 SITE 5173  
 CHEVRON SITE 301233  
 2800 MARTIN LUTHER KING WAY SOUTH  
*Seattle, Washington*



SOUTH McCLELLAN STREET



**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



MARTIN LUTHER KING WAY

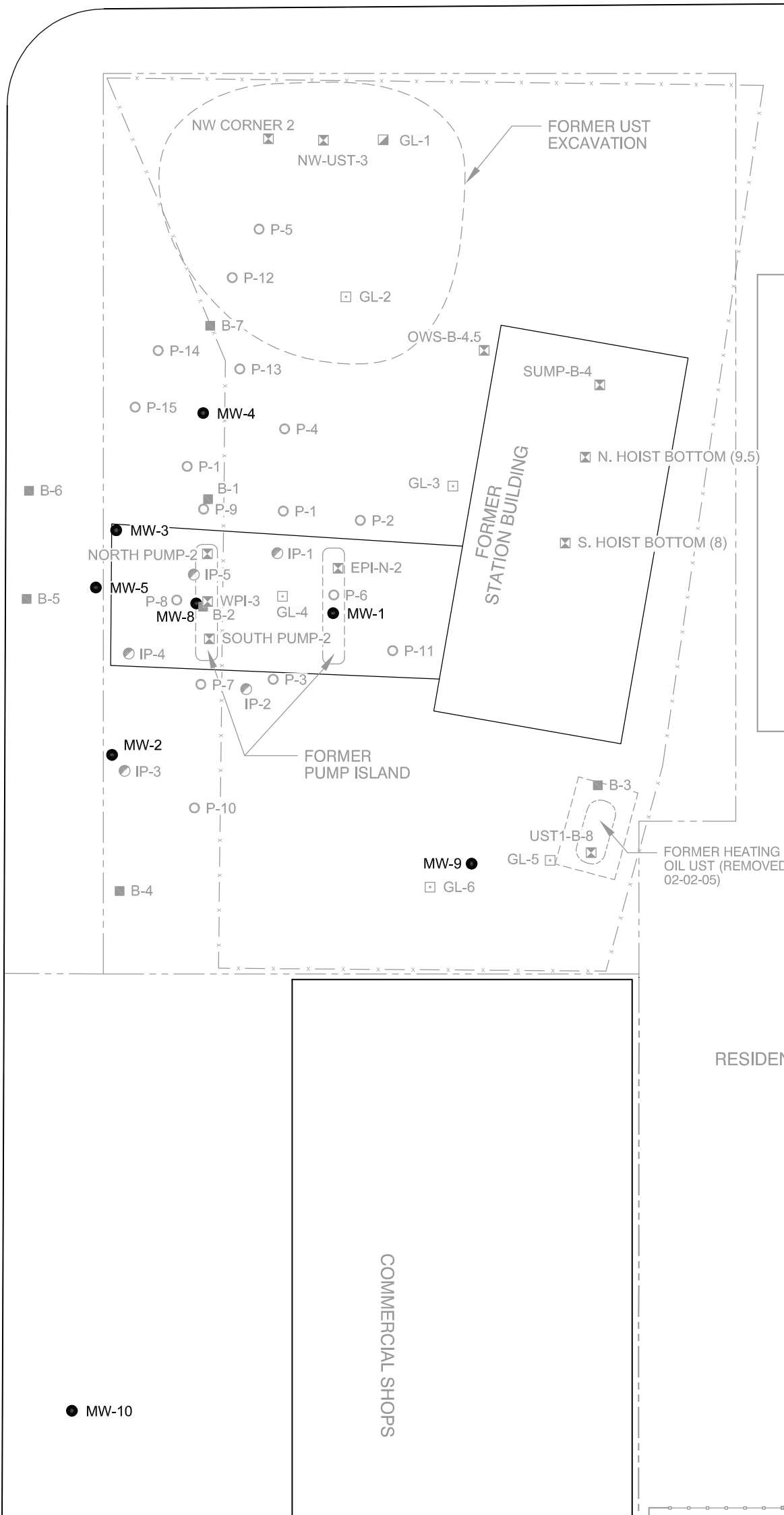
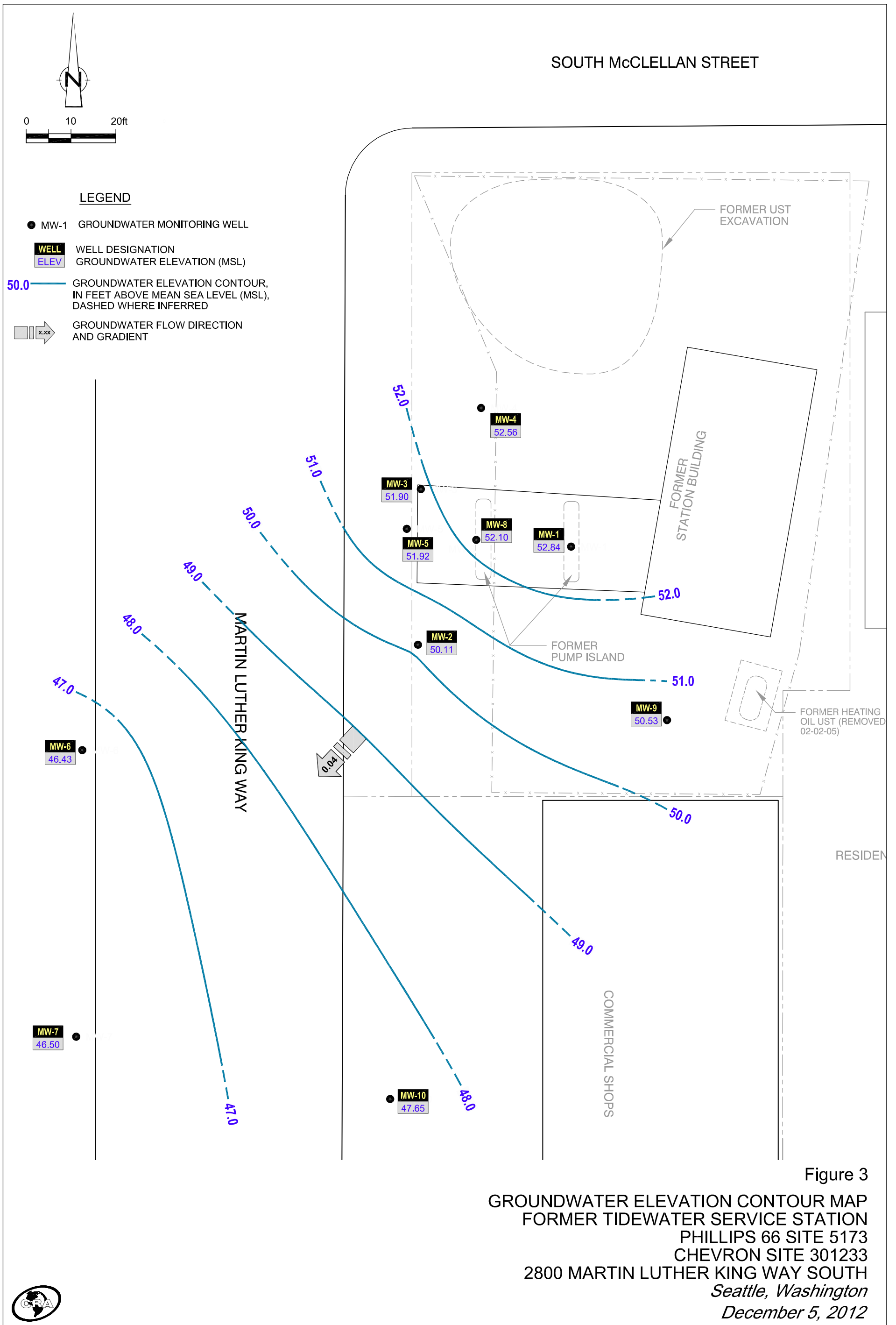


Figure 2

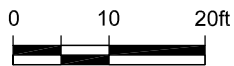
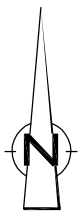
**SITE PLAN**  
**FORMER TIDEWATER SERVICE STATION**  
**PHILLIPS 66 SITE 5173**  
**CHEVRON SITE 301233**  
**2800 MARTIN LUTHER KING WAY SOUTH**  
*Seattle, Washington*







SOUTH McCLELLAN STREET



**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 12/6/12

D DUPLICATE

MARTIN LUTHER KING WAY

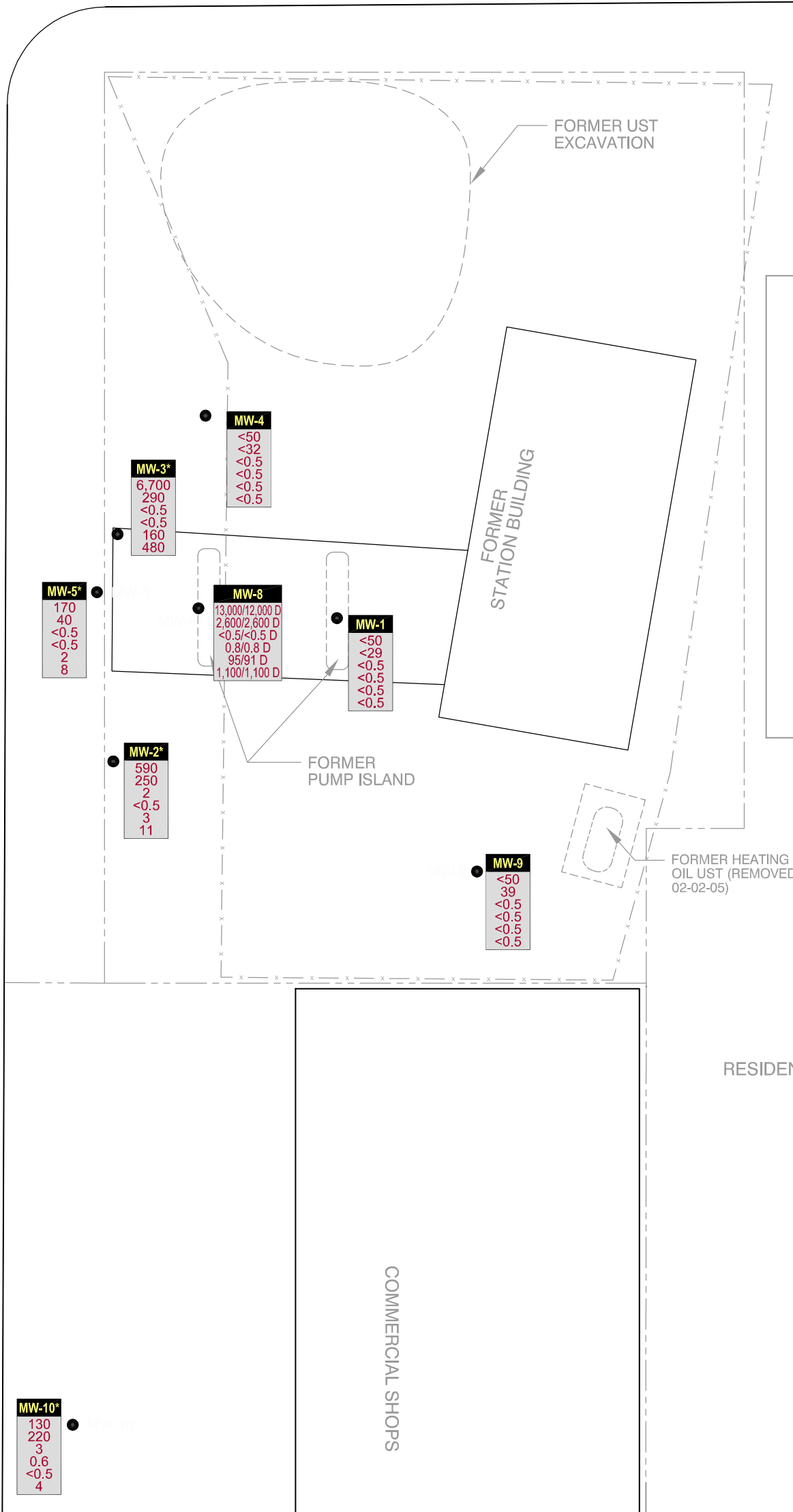


Figure 4

GROUNDWATER CONCENTRATION MAP  
 FORMER TIDEWATER SERVICE STATION  
 PHILLIPS 66 SITE 5173  
 CHEVRON SITE 301233  
 2800 MARTIN LUTHER KING WAY SOUTH  
 Seattle, Washington  
 December 5, 2012



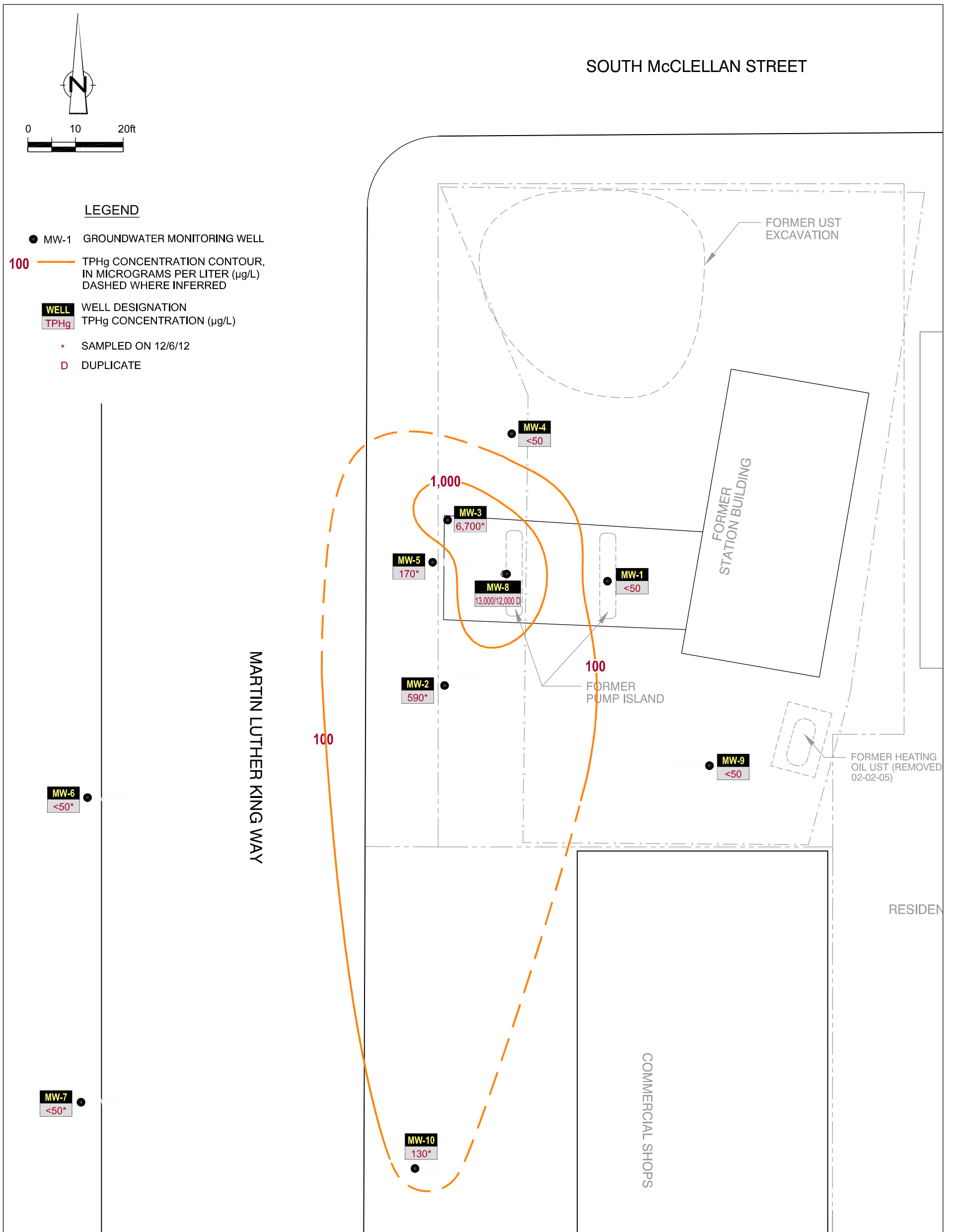


Figure 5  
 TPHg ISOCONCENTRATION CONTOUR MAP  
 FORMER TIDEWATER SERVICE STATION  
 PHILLIPS 66 SITE 5173  
 CHEVRON SITE 301233  
 2800 MARTIN LUTHER KING WAY SOUTH  
 Seattle, Washington  
 December 5, 2012



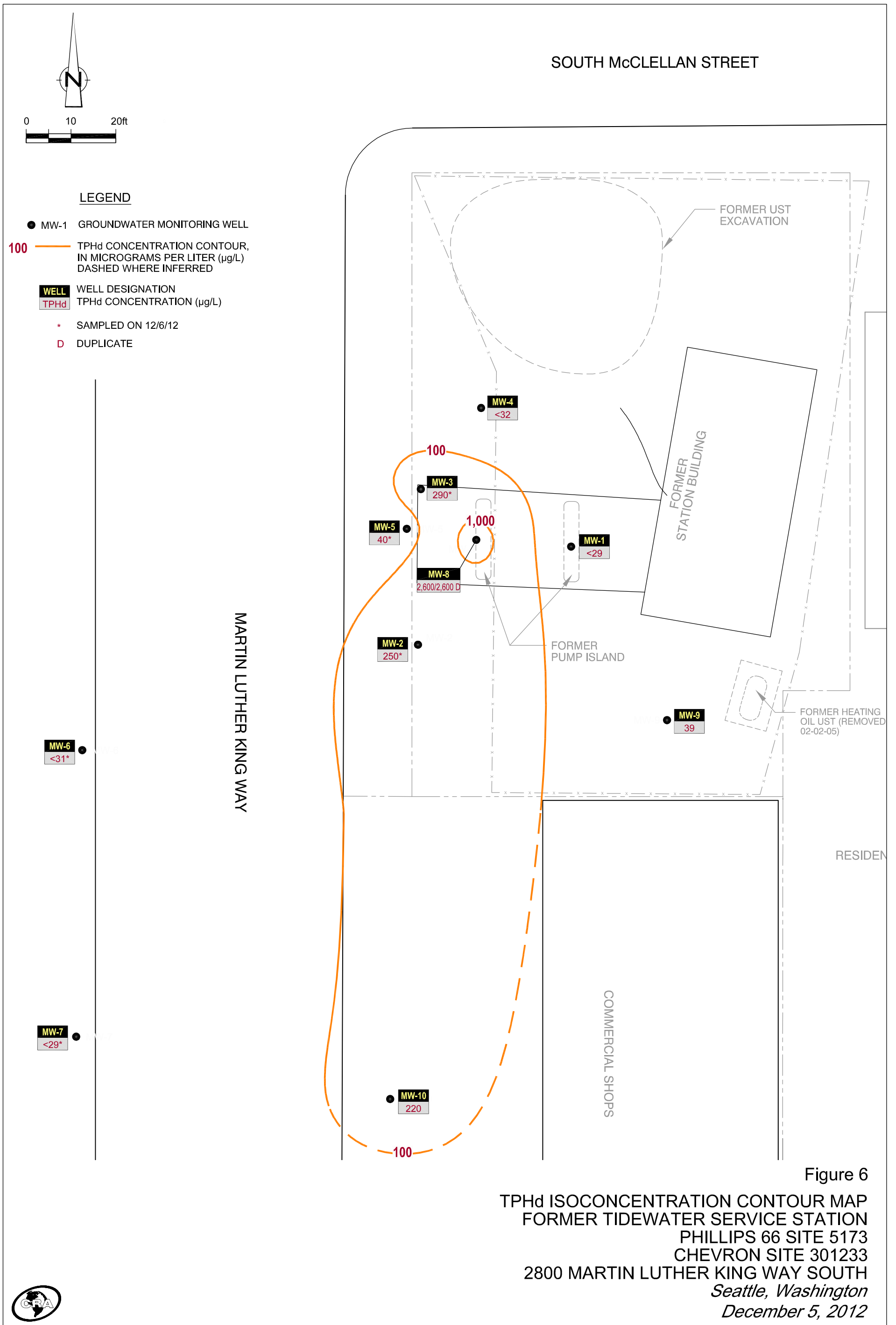


Figure 6  
 TPHd ISOCONCENTRATION CONTOUR MAP  
 FORMER TIDEWATER SERVICE STATION  
 PHILLIPS 66 SITE 5173  
 CHEVRON SITE 301233  
 2800 MARTIN LUTHER KING WAY SOUTH  
 Seattle, Washington  
 December 5, 2012



## 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														
					TPH-GRO	TPH-DRO	TPH-HRO	B	T	E	X	EDB	EDC	MTBE	Naphthalene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	N-Propylbenzene	Isopropyl benzene	Lead (Total)	ePAHs	
	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-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 <sup>3</sup>	97.92	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-1	12/15/2011 <sup>3</sup>	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	-	-
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	1.7	0.007399
MW-1	08/08/2012	62.35	11.36	50.99	<50	<29 <sup>4</sup>	<67 <sup>4</sup>	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<1	<1	<1	<1	0.32	-
MW-1	12/05/2012	62.35	9.51	52.84	<50	<29 <sup>4</sup>	<69 <sup>4</sup>	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<1	<1	<1	<1	27.7	-
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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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	-	-	-	-	-	-	-	-	-	-	-

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	MTBE	Naphthalene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	N-Propylbenzene	Isopropylbenzene	Lead (Total)	cPAHs		
	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-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	<1.0	<3.0	-	-	-	-	-	-	-	-	-	-	-	-
MW-2	08/31/2011	60.72	11.96	48.76	960	590	-	1	<0.7	1	6	<1	<1	<0.5	<1	<1	<1	59	24	-	-	-	-
MW-2	12/15/2011	60.72	11.53	49.19	750	30	-	1	<0.7	1	<1.6	<1	<1	<0.5	<1	<1	<1	60	25	-	-	-	-
MW-2	02/06/2012	60.72	10.26	50.46	780	390	-	1	2	<0.8	<1.6	<1	<1	<0.5	<1	<1	<1	55	22	-	-	-	-
MW-2	05/30/2012	60.72	10.83	49.89	480	210	<67	0.8	<0.7	<0.8	<0.8	<1	<1	<0.5	<1	<1	<1	47	21	3.8	0.007173	-	-
MW-2	08/08/2012	60.72	11.95	48.77	670	160 <sup>†</sup>	<67 <sup>†</sup>	0.9	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	<1	<1	<1	48	24	8.3	-	-	-
MW-2	12/05/2012	60.72	10.61	50.11	590	250 <sup>†</sup>	<73 <sup>†</sup>	2	<0.5	3	11	<0.5	<0.5	<0.5	<1	<1	<1	37	17	13.1	-	-	-
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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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	MTBE	Naphthalene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	N-Propylbenzene	Isopropylbenzene	Lead (Total)	ePAHs	
	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	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	200	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	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	<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	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	66	1,100	220	100	38	1.1	0.012868	-
MW-3	08/07/2012	61.81	11.42	50.39	8,100	290 <sup>†</sup>	<67 <sup>†</sup>	<1	<1	140	610	<1	<1	<1	71	830	140	86	33	0.98	-	-
<b>MW-3</b>	<b>12/06/2012</b>	<b>61.81</b>	<b>9.91</b>	<b>51.90</b>	<b>6,700</b>	<b>290<sup>†</sup></b>	<b>&lt;69<sup>†</sup></b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>160</b>	<b>480</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>75</b>	<b>860</b>	<b>160</b>	<b>100</b>	<b>41</b>	<b>0.36</b>	<b>-</b>	<b>-</b>
MW-4	06/28/2006	98.36	12.40	85.96	ND	-	-	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-
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	-	-	-	-	-	-	-	-	-	-	-
MW-4	04/11/2007	98.36	11.27	87.09	ND	-	-	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-
MW-4	11/12/2009	98.36	11.82	86.54	<50	-	-	<1.0	<1.0	<1.0	<3.0	-	-	-	-	-	-	-	-	-	-	-

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	MTBE	Naphthalene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	N-Propylbenzene	Isopropylbenzene	Lead (Total)	ePAHs	
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
MW-4	08/31/2011	62.75	12.42	50.33	<50	<29	<68	<0.5	<0.7	<0.8	<0.8	<2	<2	<0.5	<1	<1	<1	<1	<1	-	-	
MW-4	12/15/2011	62.75	11.69	51.06	<50	<29	<67	<0.5	<0.7	<0.8	<1.6	<1	<1	<0.5	<1	<1	<1	<1	<1	-	-	
MW-4	02/06/2012	62.75	10.50	52.25	<50	55	<67	<0.5	<0.7	<0.8	<1.6	<2	<2	<0.5	<1	<1	<1	<1	<1	-	-	
MW-4	05/30/2012	62.75	11.11	51.64	<50	<29	<67	<0.5	<0.7	<0.8	<0.8	<1	<1	<0.5	<1	<1	<1	<1	<1	1.8	0.007248	
MW-4	08/07/2012	62.75	11.76	50.99	<50	<29 <sup>4</sup>	<68 <sup>4</sup>	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<1	<1	<1	0.34	-	
<b>MW-4</b>	<b>12/05/2012</b>	<b>62.75</b>	<b>10.19</b>	<b>52.56</b>	<b>&lt;50</b>	<b>&lt;32<sup>4</sup></b>	<b>&lt;75<sup>4</sup></b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;1</b>	<b>&lt;1</b>	<b>&lt;1</b>	<b>&lt;1</b>	<b>&lt;1</b>	<b>4.0</b>	<b>-</b>	
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	83.57	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	<1.0	125	-	-	-	-	-	-	-	-	-	-	
MW-5	08/31/2011	61.66	12.80	48.86	3,100	770	<67	2	1	72	124	<1	<1	<0.5	120	130	18	210	78	-	-	
MW-5	12/15/2011	61.66	11.41	50.25	1,900	66	<67	1	0.9	24	33	<1	<1	<0.5	81	43	3	120	43	-	-	
MW-5	02/06/2012	61.66	10.54	51.12	1,200	34	<68	0.8	<0.7	12	43	<1	<1	<0.5	37	31	6	55	21	-	-	
MW-5	05/30/2012	61.66	10.91	50.75	260	54	<66	<0.5	<0.7	3	7	<1	<1	<0.5	12	4	<1	24	9	0.48	0.009168	
MW-5	08/07/2012	61.66	11.39	50.27	610	190 <sup>4</sup>	<66 <sup>4</sup>	<0.5	<0.5	11	22	<0.5	<0.5	<0.5	21	33	12	32	13	5.1	-	
<b>MW-5</b>	<b>12/06/2012</b>	<b>61.66</b>	<b>9.74</b>	<b>51.92</b>	<b>170</b>	<b>40<sup>4</sup></b>	<b>&lt;76<sup>4</sup></b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>2</b>	<b>8</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>8</b>	<b>3</b>	<b>&lt;1</b>	<b>12</b>	<b>4</b>	<b>0.17</b>	<b>-</b>	
MW-6	08/31/2011	58.03	12.33	45.70	<50	44	<67	<0.5	<0.7	<0.8	<0.8	<1	<1	<0.5	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														
					IPH-GRO	IPH-DRO	IPH-HRO	B	T	E	X	EDB	EDC	MTBE	Naphthalene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	N-Propylbenzene	Isopropylbenzene	Lead (Total)	ePAHs	
	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-6	12/15/2011	58.03	12.09	45.94	<50	<29	<67	<0.5	<0.7	<0.8	<1.6	<1	<1	<0.5	<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	<0.5	<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	<0.5	<1	<1	<1	<1	<1	2.5	-	
MW-6	08/07/2012	58.03	12.21	45.82	<50	<28 <sup>d</sup>	<66 <sup>d</sup>	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<1	<1	<1	0.15	-	
<b>MW-6</b>	<b>12/06/2012</b>	<b>58.03</b>	<b>11.60</b>	<b>46.43</b>	<b>&lt;50</b>	<b>&lt;31<sup>d</sup></b>	<b>&lt;73<sup>d</sup></b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>1</b>	<b>6</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;1</b>	<b>&lt;1</b>	<b>&lt;1</b>	<b>&lt;1</b>	<b>&lt;1</b>	<b>1.1</b>	<b>-</b>	
MW-7	08/31/2011	56.96	11.15	45.81	<50	<29	<67	<0.5	<0.7	<0.8	<0.8	<1	<1	<0.5	<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	<0.5	<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	<0.5	<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	<0.5	<1	<1	<1	<1	<1	13.8	0.097	
MW-7	08/07/2012	56.96	11.70	45.26	<50	<28 <sup>d</sup>	<66 <sup>d</sup>	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<1	<1	<1	31.7	-	
<b>MW-7</b>	<b>12/06/2012</b>	<b>56.96</b>	<b>10.46</b>	<b>46.50</b>	<b>&lt;50</b>	<b>&lt;29<sup>d</sup></b>	<b>&lt;67<sup>d</sup></b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;1</b>	<b>&lt;1</b>	<b>&lt;1</b>	<b>&lt;1</b>	<b>&lt;1</b>	<b>40.3</b>	<b>-</b>	
MW-8	08/31/2011	61.71	12.01	49.70	4,400	240	<67	<0.5	<0.7	41	442	<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	<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	<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	<1	96	1,100	310	59	28	7.1	0.007324	
MW-8 DUP	05/30/2012	61.71	10.69	51.02	10,000	450	<66	<1	<1	110	1,300	<2	<2	<1	93	1,300	340	58	27	5.3	0.007248	
MW-8	08/08/2012	61.71	11.30	50.41	9,300	290 <sup>d</sup>	<66 <sup>d</sup>	<1	<1	92	850	<1	<1	<1	73	910	190	49	22	3.4	-	
MW-8 DUP	08/08/2012	61.71	11.30	50.41	11,000	240 <sup>d</sup>	<66 <sup>d</sup>	<1	<1	83	710	<1	<1	<1	67	680	140	44	20	3.6	-	
<b>MW-8</b>	<b>12/05/2012</b>	<b>61.71</b>	<b>9.61</b>	<b>52.10</b>	<b>13,000</b>	<b>2,600<sup>d</sup></b>	<b>200<sup>d</sup></b>	<b>&lt;0.5</b>	<b>0.8</b>	<b>95</b>	<b>1,100</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>93</b>	<b>1,400</b>	<b>380</b>	<b>61</b>	<b>27</b>	<b>27.6</b>	<b>-</b>	
<b>MW-8 DUP</b>	<b>12/05/2012</b>	<b>61.71</b>	<b>9.61</b>	<b>52.10</b>	<b>12,000</b>	<b>2,600<sup>d</sup></b>	<b>240<sup>d</sup></b>	<b>&lt;0.5</b>	<b>0.8</b>	<b>91</b>	<b>1,100</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>91</b>	<b>1,400</b>	<b>360</b>	<b>58</b>	<b>26</b>	<b>27.4</b>	<b>-</b>	
MW-9	08/31/2011	62.58	14.29	48.29	<50	78	<68	<0.5	<0.7	<0.8	<0.8	<1	<1	<0.5	<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	<0.5	<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	MTBE	Naphthalene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	N-Propylbenzene	Isopropylbenzene	Lead (Total)	ePAHs	
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
MW-9	02/06/2012	62.58	12.04	50.54	66	<300	<700 <sup>1</sup>	<0.5	<0.7	<0.8	<1.6	<1	<1	<0.5	<1	<1	<1	<1	<1	<1	-	-
MW-9	05/30/2012	52.58	12.53	40.05	66	<29	<67	<0.5	<0.7	<0.8	<0.8	<1	<1	<0.5	<1	<1	<1	<1	<1	<1	0.31	0.007248
MW-9	08/08/2012	62.58	13.37	49.21	<50	<29 <sup>4</sup>	<67 <sup>4</sup>	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<1	<1	<1	<1	0.87	-
<b>MW-9</b>	<b>12/05/2012</b>	<b>62.58</b>	<b>12.05</b>	<b>50.53</b>	<b>&lt;50</b>	<b>39<sup>4</sup></b>	<b>&lt;69<sup>4</sup></b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;1</b>	<b>&lt;1</b>	<b>&lt;1</b>	<b>&lt;1</b>	<b>&lt;1</b>	<b>&lt;1</b>	<b>0.33</b>	<b>-</b>
MW-10	08/31/2011	58.96	11.94	47.02	<50	260	100	2	<0.7	<0.8	<0.8	<1	<1	<0.5	<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	<0.5	<1	<1	<1	2	<1	<1	-	-
MW-10	02/06/2012	58.96	10.44	48.52	<50 <sup>2</sup>	<29	<68	1	<0.7	<0.8	<1.6	<1	<1	<0.5	<1	<1	<1	3	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	<0.5	<1	<1	<1	<1	<1	<1	0.46	0.007248
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 <sup>4</sup>	<68 <sup>4</sup>	1	<0.5	<0.5	1	<0.5	<0.5	<0.5	<1	<1	<1	10	4	<0.034	-	-
<b>MW-10</b>	<b>12/06/2012</b>	<b>58.96</b>	<b>11.31</b>	<b>47.65</b>	<b>130</b>	<b>220<sup>4</sup></b>	<b>&lt;72<sup>4</sup></b>	<b>3</b>	<b>0.6</b>	<b>&lt;0.5</b>	<b>4</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;1</b>	<b>&lt;1</b>	<b>&lt;1</b>	<b>24</b>	<b>10</b>	<b>0.28</b>	<b>-</b>	<b>-</b>
Trip Blank	08/08/2012	-	-	-	<50	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<1	<1	<1	<1	-	-
<b>Trip Blank</b>	<b>12/05/2012</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>&lt;50</b>	<b>-</b>	<b>-</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;1</b>	<b>&lt;1</b>	<b>&lt;1</b>	<b>&lt;1</b>	<b>&lt;1</b>	<b>&lt;1</b>	<b>-</b>	<b>-</b>

**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

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	MTBE	Naphthalene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	N-Propylbenzene	Isopropylbenzene	Lead (Total)	cPAHs		
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	

TPH-HRO = Total petroleum hydrocarbons - oil range organics

VOCS = Volatile organic compounds

B = Benzene

T = Toluene

E = Ethylbenzene

X = Xylene

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.

ATTACHMENT A

MONITORING DATA PACKAGE

# WATER LEVEL RECORD

PROJECT NAME: \_\_\_\_\_ LOCATION: 2800 MLK Way  
JOB NO.: 619 DATE: 12/5/12  
CLIENT: POB ENGINEER/GEOLOGIST: NH, DE

OBSERVATION WELL	TOP OF CASING ELEVATION		DEPTH TO WATER		WATER LEVEL ELEVATION	
	A		B		A-B	
	feet	metres	feet	metres	feet	metres
MW-7			10.46			
MW-6			11.60			
MW-10			11.31			
MW-1			9.51			
MW-3			9.91			
MW-5			9.74			
MW-2			10.61			
MW-8			9.61			
MW-4			10.19			
MW-9			12.05			

**CRA**

Former Tidewater Site  
Seattle, WA

Water Quality Meter S/N: \_\_\_\_\_

Date: 12/6/12

Location: MW-7  
 Name of Sampler: D Escobedo  
 Weather: Cloudy, 50°F  
 Depth to Water: 10.44 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- 120612-DE-MW7

Sample Method: per pump 1 Well Volume: \_\_\_\_\_  
 Purge Start: 13:00 3 Well Volumes: \_\_\_\_\_  
 Sample Time: 14:00

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
13:05	7.00	0.90	7000	0.00	13.55	-129	0.1	0.50	1/8	0.19	10.45	
13:10	7.01	0.90	457	0.00	13.32	-126	0.1	0.50	1/4	0.19	10.45	
13:15	7.02	0.90	513	0.00	13.55	-126	0.1	0.50	3/8	0.19	10.45	
13:20	7.06	0.90	165	0.00	13.44	-126	0.1	0.50	1/2	0.19	10.45	

Analysis:  
Groundwater  
 GRO  
 DRO  
 VOCs  
 SVOCs  
 Total Lead

XXXX

Preservative  
 HCL  
 HCL  
 HCL

Notes:  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Signed \_\_\_\_\_

Former Tidewater Site  
Seattle, WA

Water Quality Meter S/N: \_\_\_\_\_

Date: 12/05/12

Location: MW-4  
Name of Sampler: DESCOBORO  
Weather: 50°F  
Depth to Water: 10.16 Sample Depth: \_\_\_\_\_  
Depth to Bottom: \_\_\_\_\_

QA/QC  
MS/MSD \_\_\_\_\_  
Duplicate \_\_\_\_\_  
Blank \_\_\_\_\_

Sample IDs (GW-mmddyy-AA-XXX)

A Samplers Initials  
x Location ID

GW- 120512-DE-MW4

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

Sample Method: PER Pump 1 Well Volume: \_\_\_\_\_  
Purge Start: 10:55 3 Well Volumes: \_\_\_\_\_  
Sample Time: 11:50

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
<u>11:00</u>	<u>6.25</u>	<u>0.90</u>	<u>&gt;1000</u>	<u>0.05</u>	<u>12.97</u>	<u>-38</u>	<u>0.1</u>	<u>0.4</u>	<u>1/8</u>	<u>0.19</u>	<u>10.28</u>	
<u>11:05</u>	<u>6.69</u>	<u>0.90</u>	<u>7000</u>	<u>0.00</u>	<u>12.93</u>	<u>-102</u>	<u>0.0</u>	<u>0.4</u>	<u>1/4</u>	<u>0.19</u>	<u>10.28</u>	
<u>11:10</u>	<u>6.67</u>	<u>0.90</u>	<u>71000</u>	<u>0.00</u>	<u>12.88</u>	<u>-100</u>	<u>0.0</u>	<u>0.3</u>	<u>3/8</u>	<u>0.19</u>	<u>10.27</u>	
<u>11:15</u>	<u>6.66</u>	<u>0.90</u>	<u>71000</u>	<u>0.00</u>	<u>13.22</u>	<u>-99</u>	<u>0.0</u>	<u>0.3</u>	<u>1/2</u>	<u>0.19</u>	<u>10.28</u>	
<u>11:20</u>	<u>6.66</u>	<u>0.90</u>	<u>962</u>	<u>0.00</u>	<u>13.07</u>	<u>-99</u>	<u>0.0</u>	<u>0.3</u>	<u>5/8</u>	<u>0.19</u>	<u>10.28</u>	
<u>11:25</u>	<u>6.64</u>	<u>0.90</u>	<u>983</u>	<u>0.00</u>	<u>13.08</u>	<u>-99</u>	<u>0.0</u>	<u>0.3</u>	<u>3/4</u>	<u>0.19</u>	<u>10.28</u>	

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

**Preservative**  
HCL  
HCL  
HCL

Notes:

\_\_\_\_\_

Signed \_\_\_\_\_

Former Tidewater Site  
Seattle, WA

Water Quality Meter S/N: \_\_\_\_\_

Date: 12/05/12

Location: MW-1  
Name of Sampler: D. Escobedo  
Weather: Sunny, 50°F  
Depth to Water: 9.38 Sample Depth: \_\_\_\_\_  
Depth to Bottom: \_\_\_\_\_

QA/QC  
MS/MSD \_\_\_\_\_  
Duplicate \_\_\_\_\_  
Blank \_\_\_\_\_

Sample IDs (GW-mmddyy-AA-XXX)

A Samplers Initials  
x Location ID

GW- 120512-DE-MW1

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

Sample Method: Peri pump Well Volume: \_\_\_\_\_  
Purge Start: 12:50 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
12:55	6.78	0.90	7000	2.10	12.45	-81	0.1	0.3	1/8	0.19	9.55	
13:00	6.78	0.90	513	0.00	12.72	-94	0.0	0.3	1/4	0.19	9.59	
13:05	6.77	0.90	285	0.00	12.66	-88	0.1	0.3	3/8	0.19	9.60	
13:10	6.75	0.90	231	0.00	12.67	-82	0.1	0.3	1/2	0.19	9.60	
13:15	6.73	0.90	833	0.00	13.02	-78	0.1	0.3	5/8	0.19	9.60	
13:20	6.72	0.90	39.10	2.00	12.77	-76	0.1	0.3	3/4	0.19	9.60	

**Analysis:**  
**Groundwater**

- GRO
- DRO
- VOCs
- SVOCs
- Total Lead

X
X
X
X
X

**Preservative**

- HCL
- HCL
- HCL

Signed \_\_\_\_\_

**Notes:**

\_\_\_\_\_



Former Tidewater Site  
Seattle, WA

Water Quality Meter S/N: \_\_\_\_\_

Date: 12/6/12

Location: MW-3  
Name of Sampler: Discobed  
Weather: raining, cloudy  
Depth to Water: 9.63  
Depth to Bottom: \_\_\_\_\_  
Sample Depth: \_\_\_\_\_

QA/QC  
MS/MSD X  
Duplicate \_\_\_\_\_  
Blank \_\_\_\_\_

Sample IDs (GW-mmddyy-AA-XXX)

A Samplers Initials  
x Location ID

GW- 120612-DE-MW3

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

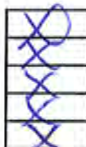
Sample Method: peripump  
Purge Start: 0945  
Sample Time: 10:45

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
0950	6.72	0.90	901	0.5	10.52	-99	0.1	0.3	1/8	0.17	9.85	
0955	6.70	0.90	739	0.0	10.71	-93	0.1	0.3	1/4	0.17	9.87	
1000	6.65	0.90	652	0.10	10.72	-83	0.1	0.3	3/8	0.17	9.89	
1005	6.64	0.90	408	0.00	10.8	-74	0.1	0.3	1/2	0.17	9.91	
1010	6.64	0.90	150	0.00	10.8	-73	0.1	0.3	5/8	0.17	9.93	
1015	6.64	0.90	66.0	0.00	10.23	-74	0.1	0.3	3/4	0.17	9.95	

Analysis:  
Groundwater  
GRO  
DRO  
VOCs  
SVOCs  
Total Lead



Preservative  
HCL  
HCL  
HCL

Notes:

Notes box

Signed \_\_\_\_\_

Former Tidewater Site  
Seattle, WA

Water Quality Meter S/N: \_\_\_\_\_

Date: \_\_\_\_\_

Location: MW-10  
Name of Sampler: D. Guobedo  
Weather: rain 40s

QA/QC  
MS/MSD \_\_\_\_\_  
Duplicate \_\_\_\_\_  
Blank \_\_\_\_\_

Depth to Water: 10.08 Sample Depth: \_\_\_\_\_  
Depth to Bottom: \_\_\_\_\_

Sample IDs (GW-mmddyy-AA-XXX)

A Samplers Initials  
x Location ID

GW- 120612-DE-MW10

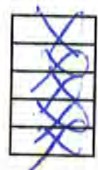
QA/QC Sample ID  
(GW-mmddyy-AA-XXX)

Sample Method: periphump 1 Well Volume: \_\_\_\_\_  
Purge Start: 12:00 3 Well Volumes: \_\_\_\_\_  
Sample Time: 12:45

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
12:05	6.75	2.15	161.0	6.20	14.19	-60	0.1	1.4	1/9	0.19	10.69	
12:10	6.64	2.18	135.0	4.36	14.35	-73	0.1	1.4	1/4	0.19	10.69	
12:15	6.65	2.20	111.0	0.12	14.56	-79	0.1	1.4	3/6	0.19	10.69	
12:20	6.68	2.21	97.5	0.00	14.86	-89	0.1	1.4	3/4	0.19	10.69	
12:25	6.69	2.24	81.4	0.00	14.69	-92	0.1	1.4	5/8	0.19	10.69	
12:30	6.70	2.27	73.6	0.00	14.56	-95	0.1	1.4	7	0.19	10.69	

Analysis:  
Groundwater  
GRO  
DRO  
VOCs  
SVOCs  
Total Lead



Preservative  
HCL  
HCL  
HCL

Notes:  
\_\_\_\_\_

Signed \_\_\_\_\_

Former Tidewater Site  
Seattle, WA

Water Quality Meter S/N: \_\_\_\_\_

Date: 12/05/12

Location: MW9  
Name of Sampler: N. Hinsinger  
Weather: clear

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

Depth to Water: 12.03 Sample Depth: \_\_\_\_\_  
Depth to Bottom: \_\_\_\_\_

Sample IDs (GW-mmddyy-AA-XXX) \_\_\_\_\_  
A Samplers Initials  
x Location ID

GW- 120512-NH-MW9

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

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
13:38	6.58	0.90	5.0	2.54	13.74	-82	0.0	0.4		.100	12.03	TURBID
13:43	6.59	0.90	5.0	2.51	13.75	-84	0.0	0.4		.100	12.08	" "
13:48	6.63	0.90	5.0	2.50	13.83	-86	0.0	0.4		.100	12.08	" "

Analysis:  
Groundwater  
GRO  
DRO  
VOCs  
SVOCs  
Total Lead

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

Signed [Signature]

Notes:  
\_\_\_\_\_

Former Tidewater Site  
Seattle, WA

Water Quality Meter S/N: \_\_\_\_\_

Date: 12/05/12

Location: MW 8  
Name of Sampler: N. Hinsperger  
Weather: Clear

QA/QC	_____
MS/MSD	_____
Duplicate	<u>X</u>
Blank	_____
QA/QC Sample ID (GW-mmddy-AA-XXX)	
<u>GW-120512-NH-</u>	
<u>FD 1</u>	

Depth to Water: 9.41 Sample Depth: \_\_\_\_\_  
Depth to Bottom: \_\_\_\_\_

Sample IDs (GW-mmddy-AA-XXX)

A Samplers Initials  
x Location ID

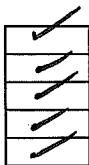
GW- 120512-NH-MW 8

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

Sample Method: Low Flow 1 Well Volume: \_\_\_\_\_  
Purge Start: 10:53 3 Well Volumes: \_\_\_\_\_  
Sample Time: 11:45

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	6.55	0.002	11.90	11.23	15.12	111	0.0	0.0		.150	9.70	clear
11:05	6.86	0.999	2.0	1.45	11.60	87	0.0	0.0		.156	9.70	"
11:10	6.42	0.999	1.9	0.0	12.08	97	0.1	1.25		.150	9.70	"
11:15	6.10	0.999	1.7	0.0	12.00	99	0.0	0.4		.150	9.70	"
11:20	6.12	0.779	0.0	0.0	12.38	99	0.0	0.4		.150	9.70	"
11:25	6.13	0.999	0.0	0.0	12.40	99	0.0	0.5		.150	9.70	"

Analysis:  
Groundwater  
GRO  
DRO  
VOCs  
SVOCs  
Total Lead



Preservative  
HCL  
HCL  
HCL

Signed [Signature]

Notes: \_\_\_\_\_

Former Tidewater Site  
Seattle, WA

Water Quality Meter S/N: \_\_\_\_\_

Date: 12/06/12

Location: MW 5  
Name of Sampler: N. Hinsparger  
Weather: RAIN

QA/QC  
MS/MSD \_\_\_\_\_  
Duplicate \_\_\_\_\_  
Blank \_\_\_\_\_

Depth to Water: 10:00 Sample Depth: \_\_\_\_\_  
Depth to Bottom: \_\_\_\_\_

Sample IDs (GW-mmddyy-AA-XXX)

A Samplers Initials  
x Location ID

GW- 120612 - NH - MW5

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

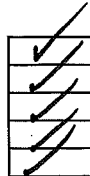
Sample Method: LOW FLOW  
Purge Start: 10:11  
Sample Time: 11:00

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
10:17	6.24	0.90	7.9	0.0	10.14	43	0.0	0.3		0.100	10.00	CLEAR
10:22	6.25	0.90	4.3	0.0	9.91	42	0.1	0.3		0.100	10.00	" "
10:27	6.27	0.90	0.0	0.0	9.98	41	0.1	0.3		0.100	10.00	" "

Analysis:  
Groundwater  
GRO  
DRO  
VOCs  
SVOCs  
Total Lead



Preservative  
HCL  
HCL  
HCL

Signed [Signature]

Notes:

Former Tidewater Site  
Seattle, WA

Water Quality Meter S/N: \_\_\_\_\_

Date: 12/06/12

Location: MW 6  
Name of Sampler: N. Himpfegger  
Weather: RAIN

QA/QC  
MS/MSD \_\_\_\_\_  
Duplicate \_\_\_\_\_  
Blank \_\_\_\_\_

Depth to Water: 11.49 Sample Depth: \_\_\_\_\_  
Depth to Bottom: \_\_\_\_\_

Sample IDs (GW-mmddy-AA-XXX)

A Samplers Initials  
x Location ID

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

GW- 120612-NH-MW6

Sample Method: LOW FLOW  
Purge Start: 13:03  
Sample Time: 14:00

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
13:10	6.31	1.16	0.0	0.0	15.00	-157	0.1	0.8		100	11.49	CLEAR
13:15	6.31	1.18	0.0	0.0	14.80	-158	0.1	0.8		100	11.49	" "
15:20	6.32	1.19	0.0	0.0	14.77	-163	0.1	0.8		100	11.49	" "
15:25	6.32	1.20	0.0	0.0	14.63	-165	0.1	0.8		100	11.49	" "

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:  
[Empty Box]

Former Tidewater Site  
Seattle, WA

Water Quality Meter S/N: \_\_\_\_\_

Date: 12/06/12

Location: MW 2  
Name of Sampler: N. Hinsperger  
Weather: RAIN

QA/QC  
MS/MSD \_\_\_\_\_  
Duplicate \_\_\_\_\_  
Blank \_\_\_\_\_

Depth to Water: 9.99 Sample Depth: \_\_\_\_\_  
Depth to Bottom: \_\_\_\_\_

Sample IDs (GW-mmddyy-AA-XXX)

A Samplers Initials  
x Location ID

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

GW- 120612-NH-MW 2

Sample Method: LOW FLOW  
Purge Start: 11:41  
Sample Time: 12:30

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
11:49	6.11	0.99	530.0	0.0	12.09	-102	0.1	0.4		100	9.99	THREE
11:54	6.15	0.99	647.0	0.0	12.13	-101	0.1	0.4		100	9.99	"
11:59	6.10	0.99	647.0	0.0	12.29	-100	0.1	0.4		100	9.99	"
12:04	6.09	0.99	626.0	0.0	12.21	-101	0.1	0.4		100	9.99	"

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

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

**Preservative**  
HCL  
HCL  
HCL

Signed [Signature]

Notes:

ATTACHMENT B

LABORATORY ANALYTICAL REPORT



## ANALYTICAL RESULTS

Prepared by:

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

Prepared for:

Conestoga-Rovers & Associates  
10969 Trade Center Drive  
Suite 107  
Rancho Cordova CA 95670

December 21, 2012

Project: 301233 Tidewater Seattle

Submittal Date: 12/11/2012  
Group Number: 1355354  
PO Number: 061992-2012.3  
State of Sample Origin: WA

<u>Client Sample Description</u>	<u>Lancaster Labs (LLI) #</u>
GW-120512-DE-MW1 Grab Groundwater	6890265
GW-120612-DE-MW7 Grab Groundwater	6890266
GW-120612-DE-MW3 Grab Groundwater	6890267
GW-120612-DE-MW3 MS Grab Groundwater	6890268
GW-120612-DE-MW3 MSD Grab Groundwater	6890269
GW-120512-NH-MW8 Grab Groundwater	6890270
GW-120512-NH-FD1 Grab Groundwater	6890271
GW-120612-NH-MW5 Grab Groundwater	6890272
GW-120512-DE-MW4 Grab Groundwater	6890273
GW-120612-NH-MW6 Grab Groundwater	6890274
GW-120612-DE-MW10 Grab Groundwater	6890275
GW-120512-NH-MW9 Grab Groundwater	6890276
GW-120612-NH-MW2 Grab Groundwater	6890277
Trip Blank Water	6890278

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

COPY TO

Respectfully Submitted,



Jill M. Parker  
Senior Specialist

(717) 556-7262

**Sample Description:** GW-120512-DE-MW1 Grab Groundwater  
MLK Tidewater Site  
2800 Martin Luther King Jr Way - Seattle, WA

LLI Sample # WW 6890265  
LLI Group # 1355354  
Account # 13534

**Project Name:** 301233 Tidewater Seattle

Collected: 12/05/2012 13:50 by DE

Conestoga-Rovers & Associates

10969 Trade Center Drive

Submitted: 12/11/2012 09:25

Suite 107

Reported: 12/21/2012 10:21

Rancho Cordova CA 95670

TDS01

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
<b>GC/MS</b>	<b>Volatiles</b>	<b>SW-846 8260B</b>	<b>ug/l</b>	<b>ug/l</b>	
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	2	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	34	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-120512-DE-MW1 Grab Groundwater  
MLK Tidewater Site  
2800 Martin Luther King Jr Way - Seattle, WA

LLI Sample # WW 6890265  
LLI Group # 1355354  
Account # 13534

**Project Name:** 301233 Tidewater Seattle

Collected: 12/05/2012 13:50 by DE

Conestoga-Rovers & Associates

10969 Trade Center Drive

Submitted: 12/11/2012 09:25

Suite 107

Reported: 12/21/2012 10:21

Rancho Cordova CA 95670

TDS01

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
<b>GC/MS Volatiles SW-846 8260B</b>			ug/l	ug/l	
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	1
10335	Tetrachloroethene	127-18-4	6	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	8	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	4	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
<b>GC/MS Semivolatiles SW-846 8270C SIM</b>			ug/l	ug/l	
08357	Benzo(a)anthracene	56-55-3	N.D.	0.0096	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.0096	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.0096	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.0096	1
08357	Chrysene	218-01-9	N.D.	0.0096	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0096	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.0096	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.0096	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.0096	1
08357	Naphthalene	91-20-3	N.D.	0.029	1
The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken: The sample was re-extracted outside the method required holding time and the QC is compliant. All results are reported from the first trial. Similar results were obtained in both trials.					
<b>GC Volatiles ECY 97-602 NWT PH-Gx</b>			ug/l	ug/l	
08273	NWT PH-Gx water C7-C12	n.a.	N.D.	50	1
<b>GC Petroleum ECY 97-602 NWT PH-Dx</b>			ug/l	ug/l	
<b>Hydrocarbons w/Si modified</b>					
02211	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	69	1
<b>Metals SW-846 6020</b>			ug/l	ug/l	
06035	Lead	7439-92-1	27.7	0.047	1

**Sample Description:** GW-120512-DE-MW1 Grab Groundwater  
MLK Tidewater Site  
2800 Martin Luther King Jr Way - Seattle, WA

LLI Sample # WW 6890265  
LLI Group # 1355354  
Account # 13534

**Project Name:** 301233 Tidewater Seattle

Collected: 12/05/2012 13:50 by DE

Conestoga-Rovers & Associates

10969 Trade Center Drive

Submitted: 12/11/2012 09:25

Suite 107

Reported: 12/21/2012 10:21

Rancho Cordova CA 95670

TDS01

### 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	Y123492AA	12/14/2012 15:35	Chelsea B Stong	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Y123492AA	12/14/2012 15:35	Chelsea B Stong	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	12347WAD026	12/17/2012 13:07	Mark A Clark	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	12347WAD026	12/12/2012 18:30	Nicholas W Shroyer	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	12347A20A	12/13/2012 18:19	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	12347A20A	12/13/2012 18:19	Catherine J Schwarz	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	123520016A	12/20/2012 22:16	Christine E Dolman	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	123520016A	12/17/2012 22:00	Elaine F Stoltzfus	1
06035	Lead	SW-846 6020	1	123476050002A	12/13/2012 10:47	Choon Y Tian	1
06050	ICP/MS SW-846 Water Digest	SW-846 3020A	1	123476050002	12/12/2012 23:45	Annamaria Stipkovits	1

**Sample Description:** GW-120612-DE-MW7 Grab Groundwater  
MLK Tidewater Site  
2800 Martin Luther King Jr Way - Seattle, WA

LLI Sample # WW 6890266  
LLI Group # 1355354  
Account # 13534

**Project Name:** 301233 Tidewater Seattle

Collected: 12/06/2012 14:00 by DE

Conestoga-Rovers & Associates

10969 Trade Center Drive

Submitted: 12/11/2012 09:25

Suite 107

Reported: 12/21/2012 10:21

Rancho Cordova CA 95670

TDS07

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
<b>GC/MS</b>	<b>Volatiles</b>	<b>SW-846 8260B</b>	<b>ug/l</b>	<b>ug/l</b>	
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	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	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-120612-DE-MW7 Grab Groundwater  
MLK Tidewater Site  
2800 Martin Luther King Jr Way - Seattle, WA

LLI Sample # WW 6890266  
LLI Group # 1355354  
Account # 13534

**Project Name:** 301233 Tidewater Seattle

Collected: 12/06/2012 14:00 by DE

Conestoga-Rovers & Associates

Submitted: 12/11/2012 09:25

10969 Trade Center Drive

Reported: 12/21/2012 10:21

Suite 107

Rancho Cordova CA 95670

TDS07

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
<b>GC/MS Volatiles SW-846 8260B</b>			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	7	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

<b>GC/MS Semivolatiles SW-846 8270C SIM</b>			ug/l	ug/l	
08357	Benzo(a)anthracene	56-55-3	0.013	0.0099	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.0099	1
08357	Benzo(b)fluoranthene	205-99-2	0.011	0.0099	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.0099	1
08357	Chrysene	218-01-9	0.030	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	0.016	0.0099	1
08357	Naphthalene	91-20-3	N.D.	0.030	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken:

The sample was re-extracted outside the method required holding time and the QC is compliant. All results are reported from the first trial. Similar results were obtained in both trials.

<b>GC Volatiles ECY 97-602 NWT PH-Gx</b>			ug/l	ug/l	
08273	NWT PH-Gx water C7-C12	n.a.	N.D.	50	1

<b>GC Petroleum ECY 97-602 NWT PH-Dx</b>			ug/l	ug/l	
<b>Hydrocarbons w/Si modified</b>					
02211	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1

<b>Metals SW-846 6020</b>			ug/l	ug/l	
06035	Lead	7439-92-1	40.3	0.047	1

**Sample Description:** GW-120612-DE-MW7 Grab Groundwater  
MLK Tidewater Site  
2800 Martin Luther King Jr Way - Seattle, WA

LLI Sample # WW 6890266  
LLI Group # 1355354  
Account # 13534

**Project Name:** 301233 Tidewater Seattle

Collected: 12/06/2012 14:00 by DE

Conestoga-Rovers & Associates

Submitted: 12/11/2012 09:25

10969 Trade Center Drive

Reported: 12/21/2012 10:21

Suite 107

Rancho Cordova CA 95670

TDS07

### 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	Y123492AA	12/14/2012 15:56	Chelsea B Stong	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Y123492AA	12/14/2012 15:56	Chelsea B Stong	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	12347WAD026	12/17/2012 13:39	Mark A Clark	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	12347WAD026	12/12/2012 18:30	Nicholas W Shroyer	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	12348A53A	12/13/2012 21:27	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	12348A53A	12/13/2012 21:27	Catherine J Schwarz	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	123520016A	12/20/2012 22:39	Christine E Dolman	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	123520016A	12/17/2012 22:00	Elaine F Stoltzfus	1
06035	Lead	SW-846 6020	1	123476050002A	12/13/2012 10:49	Choon Y Tian	1
06050	ICP/MS SW-846 Water Digest	SW-846 3020A	1	123476050002	12/12/2012 23:45	Annamaria Stipkovits	1



**Sample Description:** GW-120612-DE-MW3 Grab Groundwater  
MLK Tidewater Site  
2800 Martin Luther King Jr Way - Seattle, WA

LLI Sample # WW 6890267  
LLI Group # 1355354  
Account # 13534

**Project Name:** 301233 Tidewater Seattle

Collected: 12/06/2012 10:45 by DE

Conestoga-Rovers & Associates

10969 Trade Center Drive

Submitted: 12/11/2012 09:25

Suite 107

Reported: 12/21/2012 10:21

Rancho Cordova CA 95670

TDS03

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
<b>GC/MS</b>	<b>Volatiles</b>	<b>SW-846 8260B</b>	<b>ug/l</b>	<b>ug/l</b>	
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	3	3	1
10335	n-Butylbenzene	104-51-8	9	1	1
10335	sec-Butylbenzene	135-98-8	8	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	5	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	160	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	41	1	1
10335	p-Isopropyltoluene	99-87-6	4	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	75	1	1
10335	n-Propylbenzene	103-65-1	100	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-120612-DE-MW3 Grab Groundwater  
MLK Tidewater Site  
2800 Martin Luther King Jr Way - Seattle, WA

LLI Sample # WW 6890267  
LLI Group # 1355354  
Account # 13534

**Project Name:** 301233 Tidewater Seattle

Collected: 12/06/2012 10:45 by DE

Conestoga-Rovers & Associates

10969 Trade Center Drive

Submitted: 12/11/2012 09:25

Suite 107

Reported: 12/21/2012 10:21

Rancho Cordova CA 95670

TDS03

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
<b>GC/MS Volatiles SW-846 8260B</b>			ug/l	ug/l	
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	1
10335	Tetrachloroethane	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	860	10	10
10335	1,3,5-Trimethylbenzene	108-67-8	160	1	1
10335	Vinyl Chloride	75-01-4	N.D.	1	1
10335	m+p-Xylene	179601-23-1	440	5	10
10335	o-Xylene	95-47-6	58	0.5	1
10335	Xylene (Total)	1330-20-7	480	5	10
<b>GC/MS Semivolatiles SW-846 8270C SIM</b>			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	4.5	0.010	1
08357	2-Methylnaphthalene	91-57-6	3.3	0.010	1
08357	Naphthalene	91-20-3	32	0.31	10

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken:

The sample was re-extracted outside the method required holding time and the QC is compliant. All results are reported from the first trial. Similar results were obtained in both trials.

<b>GC Volatiles ECY 97-602 NWT PH-Gx</b>			ug/l	ug/l	
08273	NWT PH-Gx water C7-C12	n.a.	6,700	250	5
<b>GC Petroleum ECY 97-602 NWT PH-Dx</b>			ug/l	ug/l	
<b>Hydrocarbons w/Si modified</b>					
02211	DRO C12-C24 w/Si Gel	n.a.	290	29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	69	1
<b>Metals SW-846 6020</b>			ug/l	ug/l	
06035	Lead	7439-92-1	0.36	0.047	1

**Sample Description:** GW-120612-DE-MW3 Grab Groundwater  
MLK Tidewater Site  
2800 Martin Luther King Jr Way - Seattle, WA

LLI Sample # WW 6890267  
LLI Group # 1355354  
Account # 13534

**Project Name:** 301233 Tidewater Seattle

Collected: 12/06/2012 10:45 by DE

Conestoga-Rovers & Associates

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Suite 107

Rancho Cordova CA 95670

TDS03

### 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	Y123492AA	12/14/2012 16:17	Chelsea B Stong	1
10335	8260 Solvent Compound - Water	SW-846 8260B	1	Y123492AA	12/14/2012 17:18	Chelsea B Stong	10
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Y123492AA	12/14/2012 16:17	Chelsea B Stong	1
01163	GC/MS VOA Water Prep	SW-846 5030B	2	Y123492AA	12/14/2012 17:18	Chelsea B Stong	10
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	12347WAD026	12/17/2012 14:10	Mark A Clark	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	12347WAD026	12/18/2012 08:57	Mark A Clark	10
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	12347WAD026	12/12/2012 18:30	Nicholas W Shroyer	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	12348A53A	12/13/2012 22:20	Catherine J Schwarz	5
01146	GC VOA Water Prep	SW-846 5030B	1	12348A53A	12/13/2012 22:20	Catherine J Schwarz	5
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	123520016A	12/20/2012 23:02	Christine E Dolman	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	123520016A	12/17/2012 22:00	Elaine F Stoltzfus	1
06035	Lead	SW-846 6020	1	123476050002A	12/13/2012 10:37	Choon Y Tian	1
06050	ICP/MS SW-846 Water Digest	SW-846 3020A	1	123476050002	12/12/2012 23:45	Annamaria Stipkovits	1

**Sample Description:** GW-120612-DE-MW3 MS Grab Groundwater  
MLK Tidewater Site  
2800 Martin Luther King Jr Way - Seattle, WA

LLI Sample # WW 6890268  
LLI Group # 1355354  
Account # 13534

**Project Name:** 301233 Tidewater Seattle

Collected: 12/06/2012 10:45 by DE

Conestoga-Rovers & Associates

10969 Trade Center Drive

Submitted: 12/11/2012 09:25

Suite 107

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Rancho Cordova CA 95670

TDS03

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
<b>GC/MS</b>	<b>Volatiles</b>	<b>SW-846 8260B</b>	<b>ug/l</b>	<b>ug/l</b>	
10335	Acetone	67-64-1	130	6	1
10335	Benzene	71-43-2	23	0.5	1
10335	Bromobenzene	108-86-1	20	1	1
10335	Bromochloromethane	74-97-5	21	1	1
10335	Bromodichloromethane	75-27-4	22	1	1
10335	Bromoform	75-25-2	15	1	1
10335	Bromomethane	74-83-9	21	1	1
10335	2-Butanone	78-93-3	140	3	1
10335	n-Butylbenzene	104-51-8	32	1	1
10335	sec-Butylbenzene	135-98-8	31	1	1
10335	tert-Butylbenzene	98-06-6	23	1	1
10335	Carbon Disulfide	75-15-0	22	1	1
10335	Carbon Tetrachloride	56-23-5	23	1	1
10335	Chlorobenzene	108-90-7	22	0.8	1
10335	Chloroethane	75-00-3	21	1	1
10335	Chloroform	67-66-3	23	0.8	1
10335	Chloromethane	74-87-3	18	1	1
10335	2-Chlorotoluene	95-49-8	22	1	1
10335	4-Chlorotoluene	106-43-4	22	1	1
10335	1,2-Dibromo-3-chloropropane	96-12-8	20	2	1
10335	Dibromochloromethane	124-48-1	19	1	1
10335	1,2-Dibromoethane	106-93-4	21	0.5	1
10335	Dibromomethane	74-95-3	22	1	1
10335	1,2-Dichlorobenzene	95-50-1	22	1	1
10335	1,3-Dichlorobenzene	541-73-1	21	1	1
10335	1,4-Dichlorobenzene	106-46-7	21	1	1
10335	Dichlorodifluoromethane	75-71-8	18	2	1
10335	1,1-Dichloroethane	75-34-3	23	1	1
10335	1,2-Dichloroethane	107-06-2	21	0.5	1
10335	1,1-Dichloroethene	75-35-4	25	0.8	1
10335	cis-1,2-Dichloroethene	156-59-2	28	0.8	1
10335	trans-1,2-Dichloroethene	156-60-5	23	0.8	1
10335	1,2-Dichloropropane	78-87-5	23	1	1
10335	1,3-Dichloropropane	142-28-9	21	1	1
10335	2,2-Dichloropropane	594-20-7	24	1	1
10335	1,1-Dichloropropene	563-58-6	23	1	1
10335	cis-1,3-Dichloropropene	10061-01-5	23	1	1
10335	trans-1,3-Dichloropropene	10061-02-6	20	1	1
10335	Ethylbenzene	100-41-4	150	0.5	1
10335	Hexachlorobutadiene	87-68-3	20	2	1
10335	2-Hexanone	591-78-6	97	3	1
10335	Isopropylbenzene	98-82-8	58	1	1
10335	p-Isopropyltoluene	99-87-6	27	1	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	20	0.5	1
10335	4-Methyl-2-pentanone	108-10-1	100	3	1
10335	Methylene Chloride	75-09-2	25	2	1
10335	Naphthalene	91-20-3	82	1	1
10335	n-Propylbenzene	103-65-1	110	1	1
10335	Styrene	100-42-5	18	1	1
10335	1,1,1,2-Tetrachloroethane	630-20-6	21	1	1

**Sample Description:** GW-120612-DE-MW3 MS Grab Groundwater  
MLK Tidewater Site  
2800 Martin Luther King Jr Way - Seattle, WA

LLI Sample # WW 6890268  
LLI Group # 1355354  
Account # 13534

**Project Name:** 301233 Tidewater Seattle

Collected: 12/06/2012 10:45 by DE

Conestoga-Rovers & Associates

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Suite 107

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Rancho Cordova CA 95670

TDS03

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
<b>GC/MS Volatiles SW-846 8260B</b>			ug/l	ug/l	
10335	1,1,2,2-Tetrachloroethane	79-34-5	21	1	1
10335	Tetrachloroethene	127-18-4	22	0.8	1
10335	Toluene	108-88-3	22	0.5	1
10335	1,2,3-Trichlorobenzene	87-61-6	19	1	1
10335	1,2,4-Trichlorobenzene	120-82-1	20	1	1
10335	1,1,1-Trichloroethane	71-55-6	21	0.8	1
10335	1,1,2-Trichloroethane	79-00-5	23	0.8	1
10335	Trichloroethene	79-01-6	24	1	1
10335	Trichlorofluoromethane	75-69-4	21	2	1
10335	1,2,3-Trichloropropane	96-18-4	20	1	1
10335	1,2,4-Trimethylbenzene	95-63-6	560	1	1
10335	1,3,5-Trimethylbenzene	108-67-8	170	1	1
10335	Vinyl Chloride	75-01-4	21	1	1
10335	m+p-Xylene	179601-23-1	600	0.5	1
10335	o-Xylene	95-47-6	72	0.5	1
10335	Xylene (Total)	1330-20-7	670	0.5	1
<b>GC Volatiles ECY 97-602 NWTPH-Gx</b>			ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	12,000	250	5
<b>GC Petroleum ECY 97-602 NWTPH-Dx</b>			ug/l	ug/l	
<b>Hydrocarbons w/Si modified</b>					
02211	DRO C12-C24 w/Si Gel	n.a.	1,700	32	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	74	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	Y123492AA	12/14/2012 16:37	Chelsea B Stong	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Y123492AA	12/14/2012 16:37	Chelsea B Stong	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	12348A53A	12/13/2012 22:47	Catherine J Schwarz	5
01146	GC VOA Water Prep	SW-846 5030B	1	12348A53A	12/13/2012 22:47	Catherine J Schwarz	5
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	123520016A	12/20/2012 21:31	Christine E Dolman	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	123520016A	12/17/2012 22:00	Elaine F Stoltzfus	1

**Sample Description:** GW-120612-DE-MW3 MSD Grab Groundwater  
MLK Tidewater Site  
2800 Martin Luther King Jr Way - Seattle, WA

LLI Sample # WW 6890269  
LLI Group # 1355354  
Account # 13534

**Project Name:** 301233 Tidewater Seattle

Collected: 12/06/2012 10:45 by DE

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TDS03

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
<b>GC/MS</b>	<b>Volatiles</b>	<b>SW-846 8260B</b>	<b>ug/l</b>	<b>ug/l</b>	
10335	Acetone	67-64-1	130	6	1
10335	Benzene	71-43-2	23	0.5	1
10335	Bromobenzene	108-86-1	21	1	1
10335	Bromochloromethane	74-97-5	21	1	1
10335	Bromodichloromethane	75-27-4	22	1	1
10335	Bromoform	75-25-2	14	1	1
10335	Bromomethane	74-83-9	21	1	1
10335	2-Butanone	78-93-3	150	3	1
10335	n-Butylbenzene	104-51-8	32	1	1
10335	sec-Butylbenzene	135-98-8	31	1	1
10335	tert-Butylbenzene	98-06-6	23	1	1
10335	Carbon Disulfide	75-15-0	21	1	1
10335	Carbon Tetrachloride	56-23-5	23	1	1
10335	Chlorobenzene	108-90-7	22	0.8	1
10335	Chloroethane	75-00-3	21	1	1
10335	Chloroform	67-66-3	23	0.8	1
10335	Chloromethane	74-87-3	19	1	1
10335	2-Chlorotoluene	95-49-8	22	1	1
10335	4-Chlorotoluene	106-43-4	23	1	1
10335	1,2-Dibromo-3-chloropropane	96-12-8	21	2	1
10335	Dibromochloromethane	124-48-1	19	1	1
10335	1,2-Dibromoethane	106-93-4	21	0.5	1
10335	Dibromomethane	74-95-3	22	1	1
10335	1,2-Dichlorobenzene	95-50-1	22	1	1
10335	1,3-Dichlorobenzene	541-73-1	22	1	1
10335	1,4-Dichlorobenzene	106-46-7	21	1	1
10335	Dichlorodifluoromethane	75-71-8	17	2	1
10335	1,1-Dichloroethane	75-34-3	24	1	1
10335	1,2-Dichloroethane	107-06-2	21	0.5	1
10335	1,1-Dichloroethene	75-35-4	25	0.8	1
10335	cis-1,2-Dichloroethene	156-59-2	27	0.8	1
10335	trans-1,2-Dichloroethene	156-60-5	23	0.8	1
10335	1,2-Dichloropropane	78-87-5	23	1	1
10335	1,3-Dichloropropane	142-28-9	22	1	1
10335	2,2-Dichloropropane	594-20-7	24	1	1
10335	1,1-Dichloropropene	563-58-6	23	1	1
10335	cis-1,3-Dichloropropene	10061-01-5	23	1	1
10335	trans-1,3-Dichloropropene	10061-02-6	21	1	1
10335	Ethylbenzene	100-41-4	130	0.5	1
10335	Hexachlorobutadiene	87-68-3	21	2	1
10335	2-Hexanone	591-78-6	100	3	1
10335	Isopropylbenzene	98-82-8	55	1	1
10335	p-Isopropyltoluene	99-87-6	27	1	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	20	0.5	1
10335	4-Methyl-2-pentanone	108-10-1	100	3	1
10335	Methylene Chloride	75-09-2	25	2	1
10335	Naphthalene	91-20-3	74	1	1
10335	n-Propylbenzene	103-65-1	110	1	1
10335	Styrene	100-42-5	20	1	1
10335	1,1,1,2-Tetrachloroethane	630-20-6	22	1	1

**Sample Description:** GW-120612-DE-MW3 MSD Grab Groundwater  
MLK Tidewater Site  
2800 Martin Luther King Jr Way - Seattle, WA

LLI Sample # WW 6890269  
LLI Group # 1355354  
Account # 13534

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Rancho Cordova CA 95670

TDS03

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
<b>GC/MS Volatiles SW-846 8260B</b>			ug/l	ug/l	
10335	1,1,2,2-Tetrachloroethane	79-34-5	22	1	1
10335	Tetrachloroethene	127-18-4	22	0.8	1
10335	Toluene	108-88-3	23	0.5	1
10335	1,2,3-Trichlorobenzene	87-61-6	20	1	1
10335	1,2,4-Trichlorobenzene	120-82-1	21	1	1
10335	1,1,1-Trichloroethane	71-55-6	22	0.8	1
10335	1,1,2-Trichloroethane	79-00-5	24	0.8	1
10335	Trichloroethene	79-01-6	24	1	1
10335	Trichlorofluoromethane	75-69-4	21	2	1
10335	1,2,3-Trichloropropane	96-18-4	20	1	1
10335	1,2,4-Trimethylbenzene	95-63-6	530	1	1
10335	1,3,5-Trimethylbenzene	108-67-8	150	1	1
10335	Vinyl Chloride	75-01-4	20	1	1
10335	m+p-Xylene	179601-23-1	510	0.5	1
10335	o-Xylene	95-47-6	64	0.5	1
10335	Xylene (Total)	1330-20-7	570	0.5	1
<b>GC Volatiles ECY 97-602 NWTPH-Gx</b>			ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	11,000	250	5
<b>GC Petroleum ECY 97-602 NWTPH-Dx</b>			ug/l	ug/l	
<b>Hydrocarbons w/Si modified</b>					
02211	DRO C12-C24 w/Si Gel	n.a.	1,800	32	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	75	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	Y123492AA	12/14/2012 16:57	Chelsea B Stong	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Y123492AA	12/14/2012 16:57	Chelsea B Stong	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	12348A53A	12/13/2012 23:14	Catherine J Schwarz	5
01146	GC VOA Water Prep	SW-846 5030B	1	12348A53A	12/13/2012 23:14	Catherine J Schwarz	5
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	123520016A	12/20/2012 21:54	Christine E Dolman	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	123520016A	12/17/2012 22:00	Elaine F Stoltzfus	1

**Sample Description:** GW-120512-NH-MW8 Grab Groundwater  
MLK Tidewater Site  
2800 Martin Luther King Jr Way - Seattle, WA

LLI Sample # WW 6890270  
LLI Group # 1355354  
Account # 13534

**Project Name:** 301233 Tidewater Seattle

Collected: 12/05/2012 11:45 by NH

Conestoga-Rovers & Associates

Submitted: 12/11/2012 09:25

10969 Trade Center Drive

Reported: 12/21/2012 10:21

Suite 107

Rancho Cordova CA 95670

TDS08

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
<b>GC/MS</b>	<b>Volatiles</b>	<b>SW-846 8260B</b>	<b>ug/l</b>	<b>ug/l</b>	
10335	Acetone	67-64-1	13	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	9	3	1
10335	n-Butylbenzene	104-51-8	14	1	1
10335	sec-Butylbenzene	135-98-8	9	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	5	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	95	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	27	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	93	1	1
10335	n-Propylbenzene	103-65-1	61	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-120512-NH-MW8 Grab Groundwater  
MLK Tidewater Site  
2800 Martin Luther King Jr Way - Seattle, WA

LLI Sample # WW 6890270  
LLI Group # 1355354  
Account # 13534

**Project Name:** 301233 Tidewater Seattle

Collected: 12/05/2012 11:45 by NH

Conestoga-Rovers & Associates

10969 Trade Center Drive

Submitted: 12/11/2012 09:25

Suite 107

Reported: 12/21/2012 10:21

Rancho Cordova CA 95670

TDS08

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
<b>GC/MS Volatiles SW-846 8260B</b>			ug/l	ug/l	
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	1
10335	Tetrachloroethene	127-18-4	0.8	0.8	1
10335	Toluene	108-88-3	0.8	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	1,400	10	10
10335	1,3,5-Trimethylbenzene	108-67-8	380	10	10
10335	Vinyl Chloride	75-01-4	N.D.	1	1
10335	m+p-Xylene	179601-23-1	840	5	10
10335	o-Xylene	95-47-6	280	5	10
10335	Xylene (Total)	1330-20-7	1,100	5	10
<b>GC/MS Semivolatiles SW-846 8270C SIM</b>			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	5.6	0.010	1
08357	2-Methylnaphthalene	91-57-6	1.1	0.010	1
08357	Naphthalene	91-20-3	17	0.31	10

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken:

The sample was re-extracted outside the method required holding time and the QC is compliant. All results are reported from the first trial. Similar results were obtained in both trials.

<b>GC Volatiles ECY 97-602 NWTTPH-Gx</b>			ug/l	ug/l	
08273	NWTTPH-Gx water C7-C12	n.a.	13,000	250	5
<b>GC Petroleum ECY 97-602 NWTTPH-Dx</b>			ug/l	ug/l	
<b>Hydrocarbons w/Si modified</b>					
02211	DRO C12-C24 w/Si Gel	n.a.	2,600	35	1
02211	HRO C24-C40 w/Si Gel	n.a.	200	82	1
<b>Metals SW-846 6020</b>			ug/l	ug/l	
06035	Lead	7439-92-1	27.6	0.047	1

**Sample Description:** GW-120512-NH-MW8 Grab Groundwater  
MLK Tidewater Site  
2800 Martin Luther King Jr Way - Seattle, WA

LLI Sample # WW 6890270  
LLI Group # 1355354  
Account # 13534

**Project Name:** 301233 Tidewater Seattle

Collected: 12/05/2012 11:45 by NH

Conestoga-Rovers & Associates

Submitted: 12/11/2012 09:25

10969 Trade Center Drive

Reported: 12/21/2012 10:21

Suite 107

Rancho Cordova CA 95670

TDS08

### 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	Y123492AA	12/14/2012 17:38	Chelsea B Stong	1
10335	8260 Solvent Compound - Water	SW-846 8260B	1	Y123492AA	12/14/2012 17:59	Chelsea B Stong	10
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Y123492AA	12/14/2012 17:38	Chelsea B Stong	1
01163	GC/MS VOA Water Prep	SW-846 5030B	2	Y123492AA	12/14/2012 17:59	Chelsea B Stong	10
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	12347WAD026	12/17/2012 14:42	Mark A Clark	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	12347WAD026	12/18/2012 09:29	Mark A Clark	10
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	12347WAD026	12/12/2012 18:30	Nicholas W Shroyer	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	12347A20A	12/13/2012 20:09	Catherine J Schwarz	5
01146	GC VOA Water Prep	SW-846 5030B	1	12347A20A	12/13/2012 20:09	Catherine J Schwarz	5
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	123520016A	12/21/2012 01:20	Christine E Dolman	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	123520016A	12/17/2012 22:00	Elaine F Stoltzfus	1
06035	Lead	SW-846 6020	1	123476050002A	12/13/2012 10:54	Choon Y Tian	1
06050	ICP/MS SW-846 Water Digest	SW-846 3020A	1	123476050002	12/12/2012 23:45	Annamaria Stipkovits	1

**Sample Description:** GW-120512-NH-FD1 Grab Groundwater  
MLK Tidewater Site  
2800 Martin Luther King Jr Way - Seattle, WA

LLI Sample # WW 6890271  
LLI Group # 1355354  
Account # 13534

**Project Name:** 301233 Tidewater Seattle

Collected: 12/05/2012 by NH

Conestoga-Rovers & Associates

Submitted: 12/11/2012 09:25

10969 Trade Center Drive

Reported: 12/21/2012 10:21

Suite 107

Rancho Cordova CA 95670

TDSFD

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
<b>GC/MS</b>	<b>Volatiles</b>	<b>SW-846 8260B</b>	<b>ug/l</b>	<b>ug/l</b>	
10335	Acetone	67-64-1	14	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	10	3	1
10335	n-Butylbenzene	104-51-8	13	1	1
10335	sec-Butylbenzene	135-98-8	9	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	5	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	91	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	26	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	91	1	1
10335	n-Propylbenzene	103-65-1	58	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-120512-NH-FD1 Grab Groundwater  
MLK Tidewater Site  
2800 Martin Luther King Jr Way - Seattle, WA

LLI Sample # WW 6890271  
LLI Group # 1355354  
Account # 13534

**Project Name:** 301233 Tidewater Seattle

Collected: 12/05/2012 by NH

Conestoga-Rovers & Associates

Submitted: 12/11/2012 09:25

10969 Trade Center Drive

Reported: 12/21/2012 10:21

Suite 107

Rancho Cordova CA 95670

TDSFD

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
<b>GC/MS Volatiles SW-846 8260B</b>			<b>ug/l</b>	<b>ug/l</b>	
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	1
10335	Tetrachloroethene	127-18-4	0.8	0.8	1
10335	Toluene	108-88-3	0.8	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	1,400	10	10
10335	1,3,5-Trimethylbenzene	108-67-8	360	10	10
10335	Vinyl Chloride	75-01-4	N.D.	1	1
10335	m+p-Xylene	179601-23-1	810	5	10
10335	o-Xylene	95-47-6	270	5	10
10335	Xylene (Total)	1330-20-7	1,100	5	10
<b>GC/MS Semivolatiles SW-846 8270C SIM</b>			<b>ug/l</b>	<b>ug/l</b>	
08357	Benzo(a)anthracene	56-55-3	N.D.	0.0096	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.0096	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.0096	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.0096	1
08357	Chrysene	218-01-9	N.D.	0.0096	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0096	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.0096	1
08357	1-Methylnaphthalene	90-12-0	6.3	0.0096	1
08357	2-Methylnaphthalene	91-57-6	0.91	0.0096	1
08357	Naphthalene	91-20-3	17	0.29	10
<p>The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken: The sample was re-extracted outside the method required holding time and the QC is compliant. All results are reported from the first trial. Similar results were obtained in both trials.</p>					
<b>GC Volatiles ECY 97-602 NWT PH-Gx</b>			<b>ug/l</b>	<b>ug/l</b>	
08273	NWT PH-Gx water C7-C12	n.a.	12,000	250	5
<b>GC Petroleum ECY 97-602 NWT PH-Dx</b>			<b>ug/l</b>	<b>ug/l</b>	
<b>Hydrocarbons w/Si modified</b>					
02211	DRO C12-C24 w/Si Gel	n.a.	2,600	32	1
02211	HRO C24-C40 w/Si Gel	n.a.	240	76	1
<b>Metals SW-846 6020</b>			<b>ug/l</b>	<b>ug/l</b>	
06035	Lead	7439-92-1	27.4	0.047	1

**Sample Description:** GW-120512-NH-FD1 Grab Groundwater  
MLK Tidewater Site  
2800 Martin Luther King Jr Way - Seattle, WA

LLI Sample # WW 6890271  
LLI Group # 1355354  
Account # 13534

**Project Name:** 301233 Tidewater Seattle

Collected: 12/05/2012 by NH

Conestoga-Rovers & Associates

Submitted: 12/11/2012 09:25

10969 Trade Center Drive

Reported: 12/21/2012 10:21

Suite 107

Rancho Cordova CA 95670

TDSFD

### 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	Y123492AA	12/14/2012 18:19	Chelsea B Stong	1
10335	8260 Solvent Compound - Water	SW-846 8260B	1	Y123492AA	12/14/2012 18:40	Chelsea B Stong	10
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Y123492AA	12/14/2012 18:19	Chelsea B Stong	1
01163	GC/MS VOA Water Prep	SW-846 5030B	2	Y123492AA	12/14/2012 18:40	Chelsea B Stong	10
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	12347WAD026	12/17/2012 15:13	Mark A Clark	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	12347WAD026	12/18/2012 10:00	Mark A Clark	10
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	12347WAD026	12/12/2012 18:30	Nicholas W Shroyer	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	12347A20A	12/13/2012 20:32	Catherine J Schwarz	5
01146	GC VOA Water Prep	SW-846 5030B	1	12347A20A	12/13/2012 20:32	Catherine J Schwarz	5
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	123520016A	12/21/2012 01:42	Christine E Dolman	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	123520016A	12/17/2012 22:00	Elaine F Stoltzfus	1
06035	Lead	SW-846 6020	1	123476050002A	12/13/2012 10:56	Choon Y Tian	1
06050	ICP/MS SW-846 Water Digest	SW-846 3020A	1	123476050002	12/12/2012 23:45	Annamaria Stipkovits	1

**Sample Description:** GW-120612-NH-MW5 Grab Groundwater  
MLK Tidewater Site  
2800 Martin Luther King Jr Way - Seattle, WA

LLI Sample # WW 6890272  
LLI Group # 1355354  
Account # 13534

**Project Name:** 301233 Tidewater Seattle

Collected: 12/06/2012 11:00 by NH

Conestoga-Rovers & Associates

10969 Trade Center Drive

Submitted: 12/11/2012 09:25

Suite 107

Reported: 12/21/2012 10:21

Rancho Cordova CA 95670

TDS05

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
<b>GC/MS</b>	<b>Volatiles</b>	<b>SW-846 8260B</b>	<b>ug/l</b>	<b>ug/l</b>	
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	2	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	4	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	8	1	1
10335	n-Propylbenzene	103-65-1	12	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-120612-NH-MW5 Grab Groundwater  
MLK Tidewater Site  
2800 Martin Luther King Jr Way - Seattle, WA

LLI Sample # WW 6890272  
LLI Group # 1355354  
Account # 13534

**Project Name:** 301233 Tidewater Seattle

Collected: 12/06/2012 11:00 by NH

Conestoga-Rovers & Associates

10969 Trade Center Drive

Submitted: 12/11/2012 09:25

Suite 107

Reported: 12/21/2012 10:21

Rancho Cordova CA 95670

TDS05

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
<b>GC/MS Volatiles SW-846 8260B</b>			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	3	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	6	0.5	1
10335	o-Xylene	95-47-6	1	0.5	1
10335	Xylene (Total)	1330-20-7	8	0.5	1

<b>GC/MS Semivolatiles SW-846 8270C SIM</b>			ug/l	ug/l	
08357	Benzo(a)anthracene	56-55-3	N.D.	0.011	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.011	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.011	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.011	1
08357	Chrysene	218-01-9	N.D.	0.011	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.011	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.011	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.011	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.011	1
08357	Naphthalene	91-20-3	N.D.	0.033	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken:

The sample was re-extracted outside the method required holding time and the QC is compliant. All results are reported from the first trial. Similar results were obtained in both trials.

<b>GC Volatiles ECY 97-602 NWTTPH-Gx</b>			ug/l	ug/l	
08273	NWTTPH-Gx water C7-C12	n.a.	170	50	1

<b>GC Petroleum ECY 97-602 NWTTPH-Dx</b>			ug/l	ug/l	
<b>Hydrocarbons w/Si modified</b>					
02211	DRO C12-C24 w/Si Gel	n.a.	40	33	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	76	1

<b>Metals SW-846 6020</b>			ug/l	ug/l	
06035	Lead	7439-92-1	0.17	0.047	1

**Sample Description:** GW-120612-NH-MW5 Grab Groundwater  
MLK Tidewater Site  
2800 Martin Luther King Jr Way - Seattle, WA

LLI Sample # WW 6890272  
LLI Group # 1355354  
Account # 13534

**Project Name:** 301233 Tidewater Seattle

Collected: 12/06/2012 11:00 by NH

Conestoga-Rovers & Associates

10969 Trade Center Drive

Submitted: 12/11/2012 09:25

Suite 107

Reported: 12/21/2012 10:21

Rancho Cordova CA 95670

TDS05

### 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	Y123492AA	12/14/2012 19:00	Chelsea B Stong	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Y123492AA	12/14/2012 19:00	Chelsea B Stong	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	12347WAD026	12/17/2012 15:45	Mark A Clark	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	12347WAD026	12/12/2012 18:30	Nicholas W Shroyer	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	12348A07A	12/17/2012 20:02	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	12348A07A	12/17/2012 20:02	Marie D John	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	123520016A	12/20/2012 23:25	Christine E Dolman	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	123520016A	12/17/2012 22:00	Elaine F Stoltzfus	1
06035	Lead	SW-846 6020	1	123476050002A	12/13/2012 10:58	Choon Y Tian	1
06050	ICP/MS SW-846 Water Digest	SW-846 3020A	1	123476050002	12/12/2012 23:45	Annamaria Stipkovits	1



**Sample Description:** GW-120512-DE-MW4 Grab Groundwater  
MLK Tidewater Site  
2800 Martin Luther King Jr Way - Seattle, WA

LLI Sample # WW 6890273  
LLI Group # 1355354  
Account # 13534

**Project Name:** 301233 Tidewater Seattle

Collected: 12/05/2012 11:50 by DE

Conestoga-Rovers & Associates

10969 Trade Center Drive

Submitted: 12/11/2012 09:25

Suite 107

Reported: 12/21/2012 10:21

Rancho Cordova CA 95670

TDS04

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
<b>GC/MS</b>	<b>Volatiles</b>	<b>SW-846 8260B</b>	<b>ug/l</b>	<b>ug/l</b>	
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-120512-DE-MW4 Grab Groundwater  
MLK Tidewater Site  
2800 Martin Luther King Jr Way - Seattle, WA

LLI Sample # WW 6890273  
LLI Group # 1355354  
Account # 13534

**Project Name:** 301233 Tidewater Seattle

Collected: 12/05/2012 11:50 by DE

Conestoga-Rovers & Associates

10969 Trade Center Drive

Submitted: 12/11/2012 09:25

Suite 107

Reported: 12/21/2012 10:21

Rancho Cordova CA 95670

TDS04

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
<b>GC/MS Volatiles SW-846 8260B</b>			ug/l	ug/l	
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	1
10335	Tetrachloroethane	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

<b>GC/MS Semivolatiles SW-846 8270C SIM</b>			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

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken:

The sample was re-extracted outside the method required holding time and the QC is compliant. All results are reported from the first trial. Similar results were obtained in both trials.

<b>GC Volatiles ECY 97-602 NWT PH-Gx</b>			ug/l	ug/l	
08273	NWT PH-Gx water C7-C12	n.a.	N.D.	50	1

<b>GC Petroleum ECY 97-602 NWT PH-Dx</b>			ug/l	ug/l	
<b>Hydrocarbons w/Si modified</b>					
02211	DRO C12-C24 w/Si Gel	n.a.	N.D.	32	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	75	1

<b>Metals SW-846 6020</b>			ug/l	ug/l	
06035	Lead	7439-92-1	4.0	0.047	1

**Sample Description:** GW-120512-DE-MW4 Grab Groundwater  
MLK Tidewater Site  
2800 Martin Luther King Jr Way - Seattle, WA

LLI Sample # WW 6890273  
LLI Group # 1355354  
Account # 13534

**Project Name:** 301233 Tidewater Seattle

Collected: 12/05/2012 11:50 by DE

Conestoga-Rovers & Associates

10969 Trade Center Drive

Submitted: 12/11/2012 09:25

Suite 107

Reported: 12/21/2012 10:21

Rancho Cordova CA 95670

TDS04

### 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	Y123492AA	12/14/2012 19:21	Chelsea B Stong	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Y123492AA	12/14/2012 19:21	Chelsea B Stong	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	12347WAD026	12/17/2012 16:16	Mark A Clark	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	12347WAD026	12/12/2012 18:30	Nicholas W Shroyer	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	12347A20A	12/13/2012 18:41	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	12347A20A	12/13/2012 18:41	Catherine J Schwarz	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	123520016A	12/20/2012 23:48	Christine E Dolman	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	123520016A	12/17/2012 22:00	Elaine F Stoltzfus	1
06035	Lead	SW-846 6020	1	123476050002A	12/13/2012 11:00	Choon Y Tian	1
06050	ICP/MS SW-846 Water Digest	SW-846 3020A	1	123476050002	12/12/2012 23:45	Annamaria Stipkovits	1

**Sample Description:** GW-120612-NH-MW6 Grab Groundwater  
MLK Tidewater Site  
2800 Martin Luther King Jr Way - Seattle, WA

LLI Sample # WW 6890274  
LLI Group # 1355354  
Account # 13534

**Project Name:** 301233 Tidewater Seattle

Collected: 12/06/2012 14:00 by NH

Conestoga-Rovers & Associates

10969 Trade Center Drive

Submitted: 12/11/2012 09:25

Suite 107

Reported: 12/21/2012 10:21

Rancho Cordova CA 95670

TDS06

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
<b>GC/MS</b>	<b>Volatiles</b>	<b>SW-846 8260B</b>	<b>ug/l</b>	<b>ug/l</b>	
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	1	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-120612-NH-MW6 Grab Groundwater  
MLK Tidewater Site  
2800 Martin Luther King Jr Way - Seattle, WA

LLI Sample # WW 6890274  
LLI Group # 1355354  
Account # 13534

**Project Name:** 301233 Tidewater Seattle

Collected: 12/06/2012 14:00 by NH

Conestoga-Rovers & Associates

10969 Trade Center Drive

Submitted: 12/11/2012 09:25

Suite 107

Reported: 12/21/2012 10:21

Rancho Cordova CA 95670

TDS06

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
<b>GC/MS Volatiles SW-846 8260B</b>			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	5	0.5	1
10335	o-Xylene	95-47-6	1	0.5	1
10335	Xylene (Total)	1330-20-7	6	0.5	1

<b>GC/MS Semivolatiles SW-846 8270C SIM</b>			ug/l	ug/l	
08357	Benzo(a)anthracene	56-55-3	N.D.	0.010	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.010	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.010	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	1
08357	Chrysene	218-01-9	N.D.	0.010	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	1
08357	1-Methylnaphthalene	90-12-0	N.D.	0.010	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.010	1
08357	Naphthalene	91-20-3	N.D.	0.031	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken:

The sample was re-extracted outside the method required holding time and the QC is compliant. All results are reported from the first trial. Similar results were obtained in both trials.

<b>GC Volatiles ECY 97-602 NWT PH-Gx</b>			ug/l	ug/l	
08273	NWT PH-Gx water C7-C12	n.a.	N.D.	50	1

<b>GC Petroleum ECY 97-602 NWT PH-Dx</b>			ug/l	ug/l	
<b>Hydrocarbons w/Si modified</b>					
02211	DRO C12-C24 w/Si Gel	n.a.	N.D.	31	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	73	1

<b>Metals SW-846 6020</b>			ug/l	ug/l	
06035	Lead	7439-92-1	1.1	0.047	1

**Sample Description:** GW-120612-NH-MW6 Grab Groundwater  
MLK Tidewater Site  
2800 Martin Luther King Jr Way - Seattle, WA

LLI Sample # WW 6890274  
LLI Group # 1355354  
Account # 13534

**Project Name:** 301233 Tidewater Seattle

Collected: 12/06/2012 14:00 by NH

Conestoga-Rovers & Associates

10969 Trade Center Drive

Submitted: 12/11/2012 09:25

Suite 107

Reported: 12/21/2012 10:21

Rancho Cordova CA 95670

TDS06

### 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	Y123492AA	12/14/2012 19:41	Chelsea B Stong	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Y123492AA	12/14/2012 19:41	Chelsea B Stong	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	12347WAD026	12/17/2012 16:48	Mark A Clark	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	12347WAD026	12/12/2012 18:30	Nicholas W Shroyer	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	12348A07A	12/17/2012 20:27	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	12348A07A	12/17/2012 20:27	Marie D John	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	123520016A	12/21/2012 00:11	Christine E Dolman	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	123520016A	12/17/2012 22:00	Elaine F Stoltzfus	1
06035	Lead	SW-846 6020	1	123476050002A	12/13/2012 11:02	Choon Y Tian	1
06050	ICP/MS SW-846 Water Digest	SW-846 3020A	1	123476050002	12/12/2012 23:45	Annamaria Stipkovits	1

**Sample Description:** GW-120612-DE-MW10 Grab Groundwater  
MLK Tidewater Site  
2800 Martin Luther King Jr Way - Seattle, WA

LLI Sample # WW 6890275  
LLI Group # 1355354  
Account # 13534

**Project Name:** 301233 Tidewater Seattle

Collected: 12/06/2012 12:45 by DE

Conestoga-Rovers & Associates

10969 Trade Center Drive

Submitted: 12/11/2012 09:25

Suite 107

Reported: 12/21/2012 10:21

Rancho Cordova CA 95670

TDS10

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
<b>GC/MS</b>	<b>Volatiles</b>	<b>SW-846 8260B</b>	<b>ug/l</b>	<b>ug/l</b>	
10335	Acetone	67-64-1	N.D.	6	1
10335	Benzene	71-43-2	3	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	1	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	10	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	24	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-120612-DE-MW10 Grab Groundwater  
MLK Tidewater Site  
2800 Martin Luther King Jr Way - Seattle, WA

LLI Sample # WW 6890275  
LLI Group # 1355354  
Account # 13534

**Project Name:** 301233 Tidewater Seattle

Collected: 12/06/2012 12:45 by DE

Conestoga-Rovers & Associates

10969 Trade Center Drive

Submitted: 12/11/2012 09:25

Suite 107

Reported: 12/21/2012 10:21

Rancho Cordova CA 95670

TDS10

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
<b>GC/MS Volatiles SW-846 8260B</b>			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	N.D.	1	1
10335	1,3,5-Trimethylbenzene	108-67-8	N.D.	1	1
10335	Vinyl Chloride	75-01-4	10	1	1
10335	m+p-Xylene	179601-23-1	3	0.5	1
10335	o-Xylene	95-47-6	0.7	0.5	1
10335	Xylene (Total)	1330-20-7	4	0.5	1

<b>GC/MS Semivolatiles SW-846 8270C SIM</b>			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	0.89	0.0099	1
08357	2-Methylnaphthalene	91-57-6	0.41	0.0099	1
08357	Naphthalene	91-20-3	0.23	0.030	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken:

The sample was re-extracted outside the method required holding time and the QC is compliant. All results are reported from the first trial. Similar results were obtained in both trials.

<b>GC Volatiles ECY 97-602 NWT PH-Gx</b>			ug/l	ug/l	
08273	NWT PH-Gx water C7-C12	n.a.	130	50	1

<b>GC Petroleum ECY 97-602 NWT PH-Dx</b>			ug/l	ug/l	
<b>Hydrocarbons w/Si modified</b>					
02211	DRO C12-C24 w/Si Gel	n.a.	220	31	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	72	1

<b>Metals SW-846 6020</b>			ug/l	ug/l	
06035	Lead	7439-92-1	0.28	0.047	1



**Sample Description:** GW-120612-DE-MW10 Grab Groundwater  
MLK Tidewater Site  
2800 Martin Luther King Jr Way - Seattle, WA

LLI Sample # WW 6890275  
LLI Group # 1355354  
Account # 13534

**Project Name:** 301233 Tidewater Seattle

Collected: 12/06/2012 12:45 by DE

Conestoga-Rovers & Associates

Submitted: 12/11/2012 09:25

10969 Trade Center Drive

Reported: 12/21/2012 10:21

Suite 107

Rancho Cordova CA 95670

TDS10

### 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	Y123492AA	12/14/2012 20:02	Chelsea B Stong	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Y123492AA	12/14/2012 20:02	Chelsea B Stong	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	12347WAD026	12/17/2012 17:20	Mark A Clark	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	12347WAD026	12/12/2012 18:30	Nicholas W Shroyer	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	12348A07A	12/17/2012 20:53	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	12348A07A	12/17/2012 20:53	Marie D John	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	123520016A	12/21/2012 00:34	Christine E Dolman	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	123520016A	12/17/2012 22:00	Elaine F Stoltzfus	1
06035	Lead	SW-846 6020	1	123476050002A	12/13/2012 11:03	Choon Y Tian	1
06050	ICP/MS SW-846 Water Digest	SW-846 3020A	1	123476050002	12/12/2012 23:45	Annamaria Stipkovits	1

**Sample Description:** GW-120512-NH-MW9 Grab Groundwater  
MLK Tidewater Site  
2800 Martin Luther King Jr Way - Seattle, WA

LLI Sample # WW 6890276  
LLI Group # 1355354  
Account # 13534

**Project Name:** 301233 Tidewater Seattle

Collected: 12/05/2012 14:30 by NH

Conestoga-Rovers & Associates

10969 Trade Center Drive

Submitted: 12/11/2012 09:25

Suite 107

Reported: 12/21/2012 10:21

Rancho Cordova CA 95670

TDS09

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
<b>GC/MS</b>	<b>Volatiles</b>	<b>SW-846 8260B</b>	<b>ug/l</b>	<b>ug/l</b>	
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	90	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-120512-NH-MW9 Grab Groundwater  
MLK Tidewater Site  
2800 Martin Luther King Jr Way - Seattle, WA

LLI Sample # WW 6890276  
LLI Group # 1355354  
Account # 13534

**Project Name:** 301233 Tidewater Seattle

Collected: 12/05/2012 14:30 by NH

Conestoga-Rovers & Associates

10969 Trade Center Drive

Submitted: 12/11/2012 09:25

Suite 107

Reported: 12/21/2012 10:21

Rancho Cordova CA 95670

TDS09

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
<b>GC/MS Volatiles SW-846 8260B</b>			ug/l	ug/l	
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	1
10335	Tetrachloroethene	127-18-4	55	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	36	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	11	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

<b>GC/MS Semivolatiles SW-846 8270C SIM</b>			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	0.036	0.0095	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.0095	1
08357	Naphthalene	91-20-3	N.D.	0.028	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken:

The sample was re-extracted outside the method required holding time and the QC is compliant. All results are reported from the first trial. Similar results were obtained in both trials.

<b>GC Volatiles ECY 97-602 NWT PH-Gx</b>			ug/l	ug/l	
08273	NWT PH-Gx water C7-C12	n.a.	N.D.	50	1

<b>GC Petroleum ECY 97-602 NWT PH-Dx</b>			ug/l	ug/l	
<b>Hydrocarbons w/Si modified</b>					
02211	DRO C12-C24 w/Si Gel	n.a.	39	30	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	69	1

<b>Metals SW-846 6020</b>			ug/l	ug/l	
06035	Lead	7439-92-1	0.33	0.047	1

**Sample Description:** GW-120512-NH-MW9 Grab Groundwater  
MLK Tidewater Site  
2800 Martin Luther King Jr Way - Seattle, WA

LLI Sample # WW 6890276  
LLI Group # 1355354  
Account # 13534

**Project Name:** 301233 Tidewater Seattle

Collected: 12/05/2012 14:30 by NH

Conestoga-Rovers & Associates

10969 Trade Center Drive

Submitted: 12/11/2012 09:25

Suite 107

Reported: 12/21/2012 10:21

Rancho Cordova CA 95670

TDS09

### 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	Y123492AA	12/14/2012 20:22	Chelsea B Stong	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Y123492AA	12/14/2012 20:22	Chelsea B Stong	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	12347WAD026	12/17/2012 17:51	Mark A Clark	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	12347WAD026	12/12/2012 18:30	Nicholas W Shroyer	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	12347A20A	12/13/2012 19:03	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	12347A20A	12/13/2012 19:03	Catherine J Schwarz	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	123520016A	12/21/2012 00:57	Christine E Dolman	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	123520016A	12/17/2012 22:00	Elaine F Stoltzfus	1
06035	Lead	SW-846 6020	1	123476050002A	12/13/2012 11:12	Choon Y Tian	1
06050	ICP/MS SW-846 Water Digest	SW-846 3020A	1	123476050002	12/12/2012 23:45	Annamaria Stipkovits	1

**Sample Description:** GW-120612-NH-MW2 Grab Groundwater  
MLK Tidewater Site  
2800 Martin Luther King Jr Way - Seattle, WA

LLI Sample # WW 6890277  
LLI Group # 1355354  
Account # 13534

**Project Name:** 301233 Tidewater Seattle

Collected: 12/05/2012 12:30 by NH

Conestoga-Rovers & Associates

10969 Trade Center Drive

Submitted: 12/11/2012 09:25

Suite 107

Reported: 12/21/2012 10:21

Rancho Cordova CA 95670

TDS02

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
<b>GC/MS</b>	<b>Volatiles</b>	<b>SW-846 8260B</b>	<b>ug/l</b>	<b>ug/l</b>	
10335	Acetone	67-64-1	N.D.	6	1
10335	Benzene	71-43-2	2	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	3	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	17	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	37	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-120612-NH-MW2 Grab Groundwater  
MLK Tidewater Site  
2800 Martin Luther King Jr Way - Seattle, WA

LLI Sample # WW 6890277  
LLI Group # 1355354  
Account # 13534

**Project Name:** 301233 Tidewater Seattle

Collected: 12/05/2012 12:30 by NH

Conestoga-Rovers & Associates

10969 Trade Center Drive

Submitted: 12/11/2012 09:25

Suite 107

Reported: 12/21/2012 10:21

Rancho Cordova CA 95670

TDS02

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
<b>GC/MS Volatiles SW-846 8260B</b>			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	9	0.5	1
10335	o-Xylene	95-47-6	2	0.5	1
10335	Xylene (Total)	1330-20-7	11	0.5	1

<b>GC/MS Semivolatiles SW-846 8270C SIM</b>			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	0.23	0.010	1
08357	2-Methylnaphthalene	91-57-6	0.030	0.010	1
08357	Naphthalene	91-20-3	0.22	0.030	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken:

The sample was re-extracted outside the method required holding time and the QC is compliant. All results are reported from the first trial. Similar results were obtained in both trials.

<b>GC Volatiles ECY 97-602 NWT PH-Gx</b>			ug/l	ug/l	
08273	NWT PH-Gx water C7-C12	n.a.	590	50	1

<b>GC Petroleum ECY 97-602 NWT PH-Dx</b>			ug/l	ug/l	
<b>Hydrocarbons w/Si modified</b>					
02211	DRO C12-C24 w/Si Gel	n.a.	250	31	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	73	1

<b>Metals SW-846 6020</b>			ug/l	ug/l	
06035	Lead	7439-92-1	13.1	0.047	1

**Sample Description:** GW-120612-NH-MW2 Grab Groundwater  
MLK Tidewater Site  
2800 Martin Luther King Jr Way - Seattle, WA

LLI Sample # WW 6890277  
LLI Group # 1355354  
Account # 13534

**Project Name:** 301233 Tidewater Seattle

Collected: 12/05/2012 12:30 by NH

Conestoga-Rovers & Associates

10969 Trade Center Drive

Submitted: 12/11/2012 09:25

Suite 107

Reported: 12/21/2012 10:21

Rancho Cordova CA 95670

TDS02

### 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	Y123492AA	12/14/2012 20:42	Chelsea B Stong	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Y123492AA	12/14/2012 20:42	Chelsea B Stong	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	12347WAD026	12/17/2012 18:23	Mark A Clark	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	12347WAD026	12/12/2012 18:30	Nicholas W Shroyer	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	12348A53A	12/13/2012 21:54	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	12348A53A	12/13/2012 21:54	Catherine J Schwarz	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	123520017A	12/20/2012 14:06	Nicholas R Rossi	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	123520017A	12/17/2012 22:00	Elaine F Stoltzfus	1
06035	Lead	SW-846 6020	1	123476050002A	12/13/2012 11:07	Choon Y Tian	1
06050	ICP/MS SW-846 Water Digest	SW-846 3020A	1	123476050002	12/12/2012 23:45	Annamaria Stipkovits	1

**Sample Description: Trip Blank Water**  
**MLK Tidewater Site**  
**2800 Martin Luther King Jr Way - Seattle, WA**

**LLI Sample # WW 6890278**  
**LLI Group # 1355354**  
**Account # 13534**

**Project Name: 301233 Tidewater Seattle**

Collected: 12/05/2012

Conestoga-Rovers & Associates

Submitted: 12/11/2012 09:25

10969 Trade Center Drive

Reported: 12/21/2012 10:21

Suite 107

Rancho Cordova CA 95670

TDSTB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
<b>GC/MS</b>	<b>Volatiles</b>	<b>SW-846 8260B</b>	<b>ug/l</b>	<b>ug/l</b>	
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 6890278  
LLI Group # 1355354  
Account # 13534

**Project Name:** 301233 Tidewater Seattle

Collected: 12/05/2012

Conestoga-Rovers & Associates

Submitted: 12/11/2012 09:25

10969 Trade Center Drive

Reported: 12/21/2012 10:21

Suite 107

Rancho Cordova CA 95670

TDSTB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
<b>GC/MS Volatiles SW-846 8260B</b>			<b>ug/l</b>	<b>ug/l</b>	
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
<b>GC Volatiles ECY 97-602 NWTPH-Gx</b>			<b>ug/l</b>	<b>ug/l</b>	
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	Y123492AA	12/14/2012 15:15	Chelsea B Stong	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Y123492AA	12/14/2012 15:15	Chelsea B Stong	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	12348A53A	12/13/2012 14:46	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	12348A53A	12/13/2012 14:46	Catherine J Schwarz	1

## Quality Control Summary

Client Name: Conestoga-Rovers & Associates  
Reported: 12/21/12 at 10:21 AM

Group Number: 1355354

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

### Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: Y123492AA	Sample number(s): 6890265-6890278							
Acetone	N.D.	6.	ug/l	151		49-234		
Benzene	N.D.	0.5	ug/l	107		77-121		
Bromobenzene	N.D.	1.	ug/l	102		80-120		
Bromochloromethane	N.D.	1.	ug/l	102		80-121		
Bromodichloromethane	N.D.	1.	ug/l	103		73-120		
Bromoform	N.D.	1.	ug/l	88		61-120		
Bromomethane	N.D.	1.	ug/l	94		44-120		
2-Butanone	N.D.	3.	ug/l	124		53-155		
n-Butylbenzene	N.D.	1.	ug/l	111		73-130		
sec-Butylbenzene	N.D.	1.	ug/l	112		74-124		
tert-Butylbenzene	N.D.	1.	ug/l	107		80-120		
Carbon Disulfide	N.D.	1.	ug/l	97		62-125		
Carbon Tetrachloride	N.D.	1.	ug/l	103		67-122		
Chlorobenzene	N.D.	0.8	ug/l	102		80-120		
Chloroethane	N.D.	1.	ug/l	95		49-129		
Chloroform	N.D.	0.8	ug/l	100		77-122		
Chloromethane	N.D.	1.	ug/l	86		60-129		
2-Chlorotoluene	N.D.	1.	ug/l	105		80-120		
4-Chlorotoluene	N.D.	1.	ug/l	104		80-120		
1,2-Dibromo-3-chloropropane	N.D.	2.	ug/l	94		56-126		
Dibromochloromethane	N.D.	1.	ug/l	104		72-120		
1,2-Dibromoethane	N.D.	0.5	ug/l	103		76-120		
Dibromomethane	N.D.	1.	ug/l	104		80-120		
1,2-Dichlorobenzene	N.D.	1.	ug/l	107		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	72		47-120		
1,1-Dichloroethane	N.D.	1.	ug/l	106		79-120		
1,2-Dichloroethane	N.D.	0.5	ug/l	101		64-130		
1,1-Dichloroethene	N.D.	0.8	ug/l	110		76-124		
cis-1,2-Dichloroethene	N.D.	0.8	ug/l	109		80-120		
trans-1,2-Dichloroethene	N.D.	0.8	ug/l	108		80-120		
1,2-Dichloropropane	N.D.	1.	ug/l	107		80-120		
1,3-Dichloropropane	N.D.	1.	ug/l	104		80-120		
2,2-Dichloropropane	N.D.	1.	ug/l	105		67-124		
1,1-Dichloropropene	N.D.	1.	ug/l	102		80-120		
cis-1,3-Dichloropropene	N.D.	1.	ug/l	114		78-120		
trans-1,3-Dichloropropene	N.D.	1.	ug/l	104		73-120		
Ethylbenzene	N.D.	0.5	ug/l	102		79-120		
Hexachlorobutadiene	N.D.	2.	ug/l	92		58-120		
2-Hexanone	N.D.	3.	ug/l	106		53-139		
Isopropylbenzene	N.D.	1.	ug/l	102		77-120		
p-Isopropyltoluene	N.D.	1.	ug/l	111		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: 12/21/12 at 10:21 AM

Group Number: 1355354

<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>
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	99		68-121		
4-Methyl-2-pentanone	N.D.	3.	ug/l	102		58-133		
Methylene Chloride	N.D.	2.	ug/l	104		84-118		
Naphthalene	N.D.	1.	ug/l	97		47-126		
n-Propylbenzene	N.D.	1.	ug/l	113		77-130		
Styrene	N.D.	1.	ug/l	103		77-120		
1,1,1,2-Tetrachloroethane	N.D.	1.	ug/l	100		79-120		
1,1,2,2-Tetrachloroethane	N.D.	1.	ug/l	107		75-123		
Tetrachloroethene	N.D.	0.8	ug/l	101		79-120		
Toluene	N.D.	0.5	ug/l	103		79-120		
1,2,3-Trichlorobenzene	N.D.	1.	ug/l	99		71-120		
1,2,4-Trichlorobenzene	N.D.	1.	ug/l	98		65-120		
1,1,1-Trichloroethane	N.D.	0.8	ug/l	96		66-126		
1,1,2-Trichloroethane	N.D.	0.8	ug/l	104		80-120		
Trichloroethene	N.D.	1.	ug/l	106		80-120		
Trichlorofluoromethane	N.D.	2.	ug/l	92		65-130		
1,2,3-Trichloropropane	N.D.	1.	ug/l	101		76-120		
1,2,4-Trimethylbenzene	N.D.	1.	ug/l	107		69-122		
1,3,5-Trimethylbenzene	N.D.	1.	ug/l	109		68-124		
Vinyl Chloride	N.D.	1.	ug/l	86		56-123		
m+p-Xylene	N.D.	0.5	ug/l	104		77-120		
o-Xylene	N.D.	0.5	ug/l	101		77-120		
Xylene (Total)	N.D.	0.5	ug/l	103		77-120		
Batch number: 12347WAD026 Sample number(s): 6890265-6890267,6890270-6890277								
Benzo(a)anthracene	N.D.	0.010	ug/l	86	85	63-124	1	30
Benzo(a)pyrene	N.D.	0.010	ug/l	84	83	60-127	1	30
Benzo(b)fluoranthene	N.D.	0.010	ug/l	82	100	58-151	20	30
Benzo(k)fluoranthene	N.D.	0.010	ug/l	96	87	59-130	10	30
Chrysene	N.D.	0.010	ug/l	85	83	65-124	2	30
Dibenz(a,h)anthracene	N.D.	0.010	ug/l	84	84	55-134	1	30
Indeno(1,2,3-cd)pyrene	N.D.	0.010	ug/l	83	83	66-122	1	30
1-Methylnaphthalene	N.D.	0.010	ug/l	78	76	71-120	2	30
2-Methylnaphthalene	N.D.	0.010	ug/l	82	80	61-127	3	30
Naphthalene	N.D.	0.030	ug/l	74	70*	72-120	5	30
Batch number: 12347A20A Sample number(s): 6890265,6890270-6890271,6890273,6890276								
NWTPH-Gx water C7-C12	N.D.	50.	ug/l	96	96	75-135	0	30
Batch number: 12348A07A Sample number(s): 6890272,6890274-6890275								
NWTPH-Gx water C7-C12	N.D.	50.	ug/l	88	91	75-135	4	30
Batch number: 12348A53A Sample number(s): 6890266-6890269,6890277-6890278								
NWTPH-Gx water C7-C12	N.D.	50.	ug/l	88		75-135		
Batch number: 123520016A Sample number(s): 6890265-6890276								
DRO C12-C24 w/Si Gel	N.D.	30.	ug/l	81		50-120		
HRO C24-C40 w/Si Gel	N.D.	70.	ug/l					
Batch number: 123520017A Sample number(s): 6890277								
DRO C12-C24 w/Si Gel	N.D.	30.	ug/l	91	92	50-120	1	20
HRO C24-C40 w/Si Gel	N.D.	70.	ug/l					
Batch number: 123476050002A Sample number(s): 6890265-6890267,6890270-6890277								
Lead	N.D.	0.047	ug/l	106		90-115		

\*- Outside of specification

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

## Quality Control Summary

Client Name: Conestoga-Rovers & Associates  
Reported: 12/21/12 at 10:21 AM

Group Number: 1355354

### Sample Matrix Quality Control

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

<u>Analysis Name</u>	<u>MS</u> <u>%REC</u>	<u>MSD</u> <u>%REC</u>	<u>MS/MSD</u> <u>Limits</u>	<u>RPD</u>	<u>RPD</u> <u>MAX</u>	<u>BKG</u> <u>Conc</u>	<u>DUP</u> <u>Conc</u>	<u>DUP</u> <u>RPD</u>	<u>Dup RPD</u> <u>Max</u>
Batch number: Y123492AA	Sample number(s): 6890265-6890278 UNSPK: 6890267								
Acetone	89	90	33-159	1	30				
Benzene	116	117	72-134	1	30				
Bromobenzene	102	103	82-115	1	30				
Bromochloromethane	106	107	76-134	1	30				
Bromodichloromethane	108	111	78-125	3	30				
Bromoform	73	72	48-118	1	30				
Bromomethane	103	105	47-129	2	30				
2-Butanone	94	97	57-138	3	30				
n-Butylbenzene	116	115	73-128	0	30				
sec-Butylbenzene	116	117	79-125	1	30				
tert-Butylbenzene	114	115	81-121	1	30				
Carbon Disulfide	110	106	67-135	3	30				
Carbon Tetrachloride	113	115	72-135	1	30				
Chlorobenzene	109	110	87-124	2	30				
Chloroethane	103	103	51-145	0	30				
Chloroform	115	114	81-134	0	30				
Chloromethane	91	95	46-137	5	30				
2-Chlorotoluene	109	110	82-118	1	30				
4-Chlorotoluene	111	113	84-122	1	30				
1,2-Dibromo-3-chloropropane	102	103	54-134	1	30				
Dibromochloromethane	96	94	74-116	2	30				
1,2-Dibromoethane	104	107	77-116	3	30				
Dibromomethane	109	109	83-119	0	30				
1,2-Dichlorobenzene	108	109	84-119	0	30				
1,3-Dichlorobenzene	107	108	86-121	1	30				
1,4-Dichlorobenzene	105	106	85-121	1	30				
Dichlorodifluoromethane	88	86	52-129	2	30				
1,1-Dichloroethane	116	119	84-129	2	30				
1,2-Dichloroethane	105	107	68-131	1	30				
1,1-Dichloroethene	124	124	85-142	0	30				
cis-1,2-Dichloroethene	112	110	85-125	2	30				
trans-1,2-Dichloroethene	116	116	87-126	0	30				
1,2-Dichloropropane	116	116	83-124	0	30				
1,3-Dichloropropane	106	108	81-120	2	30				
2,2-Dichloropropane	119	120	69-135	1	30				
1,1-Dichloropropene	114	117	86-137	2	30				
cis-1,3-Dichloropropene	114	117*	70-116	3	30				
trans-1,3-Dichloropropene	102	107	74-119	5	30				
Ethylbenzene	-27 (2)	-126 (2)	71-134	14	30				
Hexachlorobutadiene	99	103	56-134	4	30				
2-Hexanone	97	100	55-127	3	30				
Isopropylbenzene	87	71*	75-128	6	30				
p-Isopropyltoluene	119	119	76-123	0	30				
Methyl Tertiary Butyl Ether	101	100	72-126	2	30				
4-Methyl-2-pentanone	103	104	63-123	2	30				
Methylene Chloride	124	123	78-133	1	30				

\*- Outside of specification

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

## Quality Control Summary

Client Name: Conestoga-Rovers & Associates  
Reported: 12/21/12 at 10:21 AM

Group Number: 1355354

### Sample Matrix Quality Control

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

<u>Analysis Name</u>	<u>MS</u> <u>%REC</u>	<u>MSD</u> <u>%REC</u>	<u>MS/MSD</u> <u>Limits</u>	<u>RPD</u> <u>RPD</u>	<u>RPD</u> <u>MAX</u>	<u>BKG</u> <u>Conc</u>	<u>DUP</u> <u>Conc</u>	<u>DUP</u> <u>RPD</u>	<u>Dup RPD</u> <u>Max</u>
Naphthalene	38*	0*	52-125	10	30				
n-Propylbenzene	57 (2)	27 (2)	74-134	6	30				
Styrene	91	101	78-125	10	30				
1,1,1,2-Tetrachloroethane	106	108	82-119	2	30				
1,1,2,2-Tetrachloroethane	105	108	72-128	2	30				
Tetrachloroethene	110	110	80-128	0	30				
Toluene	112	114	80-125	2	30				
1,2,3-Trichlorobenzene	96	100	69-119	4	30				
1,2,4-Trichlorobenzene	101	105	70-124	3	30				
1,1,1-Trichloroethane	107	109	69-140	2	30				
1,1,2-Trichloroethane	117	118	77-124	1	30				
Trichloroethene	119	119	88-133	1	30				
Trichlorofluoromethane	106	105	64-146	1	30				
1,2,3-Trichloropropane	99	102	76-118	3	30				
1,2,4-Trimethylbenzene	-140 (2)	-274 (2)	72-130	5	30				
1,3,5-Trimethylbenzene	52 (2)	-79 (2)	65-132	16	30				
Vinyl Chloride	104	102	66-133	1	30				
m+p-Xylene	-123 (2)	-346 (2)	79-125	16	30				
o-Xylene	69*	30*	79-125	11	30				
Xylene (Total)	-58 (2)	-220 (2)	79-125	16	30				

Batch number: 12348A53A      Sample number(s): 6890266-6890269,6890277-6890278      UNSPK: 6890267  
NWTPH-Gx water C7-C12      90      83      75-135      3      30

Batch number: 123520016A      Sample number(s): 6890265-6890276      UNSPK: 6890267  
DRO C12-C24 w/Si Gel      84      88      60-120      4      20

Batch number: 123476050002A      Sample number(s): 6890265-6890267,6890270-6890277      UNSPK: 6890267      BKG: 6890267  
Lead      106      107      83-120      1      20      0.36      0.38      5 (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: Y123492AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
6890265	98	98	99	94
6890266	98	97	100	95
6890267	99	98	100	101
6890268	99	102	101	100
6890269	99	102	102	101
6890270	98	98	101	102
6890271	98	98	101	103

\*- 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: 12/21/12 at 10:21 AM

Group Number: 1355354

### Surrogate Quality Control

6890272	97	98	101	99
6890273	99	99	99	97
6890274	99	100	99	98
6890275	99	99	101	99
6890276	99	98	100	97
6890277	98	97	98	99
6890278	99	99	100	96
Blank	99	100	100	94
LCS	100	102	101	98
MS	99	102	101	100
MSD	99	102	102	101

Limits: 80-116                      77-113                      80-113                      78-113

Analysis Name: PAHs in waters by SIM  
Batch number: 12347WAD026

	Fluoranthene-d10	Benzo(a)pyrene-d12	1-Methylnaphthalene-d10
6890265	77	95	94
6890266	84	97	103
6890267	86	99	98
6890270	99	101	117
6890271	91	99	113
6890272	84	101	106
6890273	82	95	98
6890274	84	100	104
6890275	79	100	104
6890276	79	95	99
6890277	79	66	101
Blank	78	96	88
LCS	84	104	103
LCSD	82	100	100

Limits: 64-120                      44-127                      61-120

Analysis Name: NWTPH-Gx water C7-C12  
Batch number: 12347A20A  
Trifluorotoluene-F

6890265	73
6890270	72
6890271	73
6890273	72
6890276	73
Blank	71
LCS	93
LCSD	91

Limits: 63-135

Analysis Name: NWTPH-Gx water C7-C12  
Batch number: 12348A07A  
Trifluorotoluene-F

6890272	87
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\*- Outside of specification

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

## Quality Control Summary

Client Name: Conestoga-Rovers & Associates  
Reported: 12/21/12 at 10:21 AM

Group Number: 1355354

### Surrogate Quality Control

6890274	83
6890275	90
Blank	82
LCS	93
LCSD	96

Limits: 63-135

Analysis Name: NWTPH-Gx water C7-C12  
Batch number: 12348A53A  
Trifluorotoluene-F

6890266	73
6890267	73
6890268	91
6890269	92
6890277	74
6890278	73
Blank	74
LCS	86
MS	91
MSD	92

Limits: 63-135

Analysis Name: NWTPH-Dx water w/Si Gel  
Batch number: 123520016A  
Orthoterphenyl

6890265	92
6890266	93
6890267	96
6890268	108
6890269	107
6890270	84
6890271	81
6890272	92
6890273	91
6890274	94
6890275	97
6890276	93
Blank	98
LCS	108
MS	108
MSD	107

Limits: 50-150

Analysis Name: NWTPH-Dx water w/Si Gel  
Batch number: 123520017A  
Orthoterphenyl

6890277	101
Blank	102
LCS	107
LCSD	107

\*- 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: 12/21/12 at 10:21 AM

Group Number: 1355354

### Surrogate Quality Control

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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.





Acet #13534 Cup #1355354 Sample #0890265-18

**CONESTOGA-ROVERS & ASSOCIATES**

**CHAIN OF CUSTODY RECORD**

Address: 1117 TACOMA AVE. SOUTH, TACOMA, WA.

Phone: \_\_\_\_\_

Fax: \_\_\_\_\_

COC NO.: **38429**

PAGE 1 OF 1

(See Reverse Side for Instructions)

Project No/Phase/Task Code: <u>061992</u>			Laboratory Name: <u>LANCASTER</u>				Lab Location:				SSOW ID:						
Project Name: <u>MLK - SEATTLE, WA.</u>			Lab Contact:				Lab Quote No:				Cooler No:						
Project Location: <u>2800 MLK WAYS., SEATTLE, WA</u>			SAMPLE TYPE				CONTAINER QUANTITY & PRESERVATION				ANALYSIS REQUESTED (See Back of COC for Definitions)						
Chemistry Contact: <u>J. Cloud</u>			Matrix Code (see back of COC)				Unpreserved				Carrier:						
Sampler(s): <u>N. Hinsperger / D. Escobedo</u>			Grab (G) or Comp (C)				Hydrochloric Acid (HCl)				Airbill No:						
							Nitric Acid (HNO <sub>3</sub> )				Date Shipped:						
							Sulfuric Acid (H <sub>2</sub> SO <sub>4</sub> )				MS/MSD Request						
							Sodium Hydroxide (NaOH)										
							Methanol/Water (Soil VOC)				COMMENTS/ SPECIAL INSTRUCTIONS:						
							Encores 3x5-g, 1x25-g										
							Other:				MS/MSD Request						
							Total Containers/Sample										
							GRO				MS/MSD Request						
							GRO										
							VOC's				MS/MSD Request						
							SVOC's										
							Total				MS/MSD Request						
							Total Pb										
SAMPLE IDENTIFICATION <small>(Containers for each sample may be combined on one line)</small>			DATE <small>(mm/dd/yy)</small>		TIME <small>(hr:mm)</small>												
1	GW-120512-DE-MW1		12/05/12	13:50	WG	G											
2	GW-120612-DE-MW7		12/06/12	14:00	WG	G											
3	GW-120612-DE-MW3		12/06/12	10:45	WG	G							X MS/MSD				
4	GW-120512-NH-MW8		12/05/12	11:45	WG	G											
5	GW-120512-NH-FD1		12/05/12		WG	G											
6	GW-120612-NH-MW5		12/06/12	11:00	WG	G							CPAHs + naphthalenes on				
7	GW-120512-DE-MW4		12/05/12	11:50	WG	G							all samples per M. Davis				
8	GW-120612-NH-MW6		12/06/12	14:00	WG	G							Only 8260, 6x+Dx for MS				
9	GW-120612-DE-MW10		12/06/12	12:45	WG	G							MSD per E. Turner.				
10	GW-120512-NH-MW9		12/05/12	14:30	WG	G							jmp 12/12/12				
11	GW-120612-NH-MW6		12/06/12	12:30	WG	G											
12																	
13																	
14																	
15																	
TAT Required in business days (use separate COCs for different TATs):						Total Number of Containers:				Notes/ Special Requirements:							
<input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Days <input type="checkbox"/> 3 Days <input type="checkbox"/> 1 Week <input type="checkbox"/> 2 Week <input checked="" type="checkbox"/> Other: <u>STANDARD</u>						All Samples in Cooler must be on COC											
RELINQUISHED BY			COMPANY		DATE		TIME		RECEIVED BY			COMPANY		DATE		TIME	
1. <u>[Signature]</u>			CRA		12/10/12		10:00		1. <u>[Signature]</u>								
2. <u>[Signature]</u>									2. <u>[Signature]</u>								
3. <u>[Signature]</u>									3. <u>[Signature]</u>			LLR		12/11/12		925	

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

Distribution: WHITE - Fully Executed Copy (CRA)

YELLOW - Receiving Laboratory Copy

PINK - Shipper

GOLDENROD - Sampling Crew

CRA Form: COC-10B (20110804)

# Explanation of Symbols and Abbreviations

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

<b>RL</b>	Reporting Limit	<b>BMQL</b>	Below Minimum Quantitation Level
<b>N.D.</b>	none detected	<b>MPN</b>	Most Probable Number
<b>TNTC</b>	Too Numerous To Count	<b>CP Units</b>	cobalt-chloroplatinate units
<b>IU</b>	International Units	<b>NTU</b>	nephelometric turbidity units
<b>umhos/cm</b>	micromhos/cm	<b>ng</b>	nanogram(s)
<b>C</b>	degrees Celsius	<b>F</b>	degrees Fahrenheit
<b>meq</b>	milliequivalents	<b>lb.</b>	pound(s)
<b>g</b>	gram(s)	<b>kg</b>	kilogram(s)
<b>µg</b>	microgram(s)	<b>mg</b>	milligram(s)
<b>mL</b>	milliliter(s)	<b>L</b>	liter(s)
<b>m3</b>	cubic meter(s)	<b>µL</b>	microliter(s)
		<b>pg/L</b>	picogram/liter
<b>&lt;</b>	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.		
<b>&gt;</b>	greater than		
<b>J</b>	estimated value – The result is $\geq$ the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ).		
<b>ppm</b>	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.		
<b>ppb</b>	parts per billion		
<b>Dry weight basis</b>	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
<b>A</b> TIC is a possible aldol-condensation product	<b>B</b> Value is $<$ CRDL, but $\geq$ IDL
<b>B</b> Analyte was also detected in the blank	<b>E</b> Estimated due to interference
<b>C</b> Pesticide result confirmed by GC/MS	<b>M</b> Duplicate injection precision not met
<b>D</b> Compound quantitated on a diluted sample	<b>N</b> Spike sample not within control limits
<b>E</b> Concentration exceeds the calibration range of the instrument	<b>S</b> Method of standard additions (MSA) used for calculation
<b>N</b> Presumptive evidence of a compound (TICs only)	<b>U</b> Compound was not detected
<b>P</b> Concentration difference between primary and confirmation columns $>$ 25%	<b>W</b> Post digestion spike out of control limits
<b>U</b> Compound was not detected	<b>*</b> Duplicate analysis not within control limits
<b>X,Y,Z</b> Defined in case narrative	<b>+</b> Correlation coefficient for MSA $<$ 0.995

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

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

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

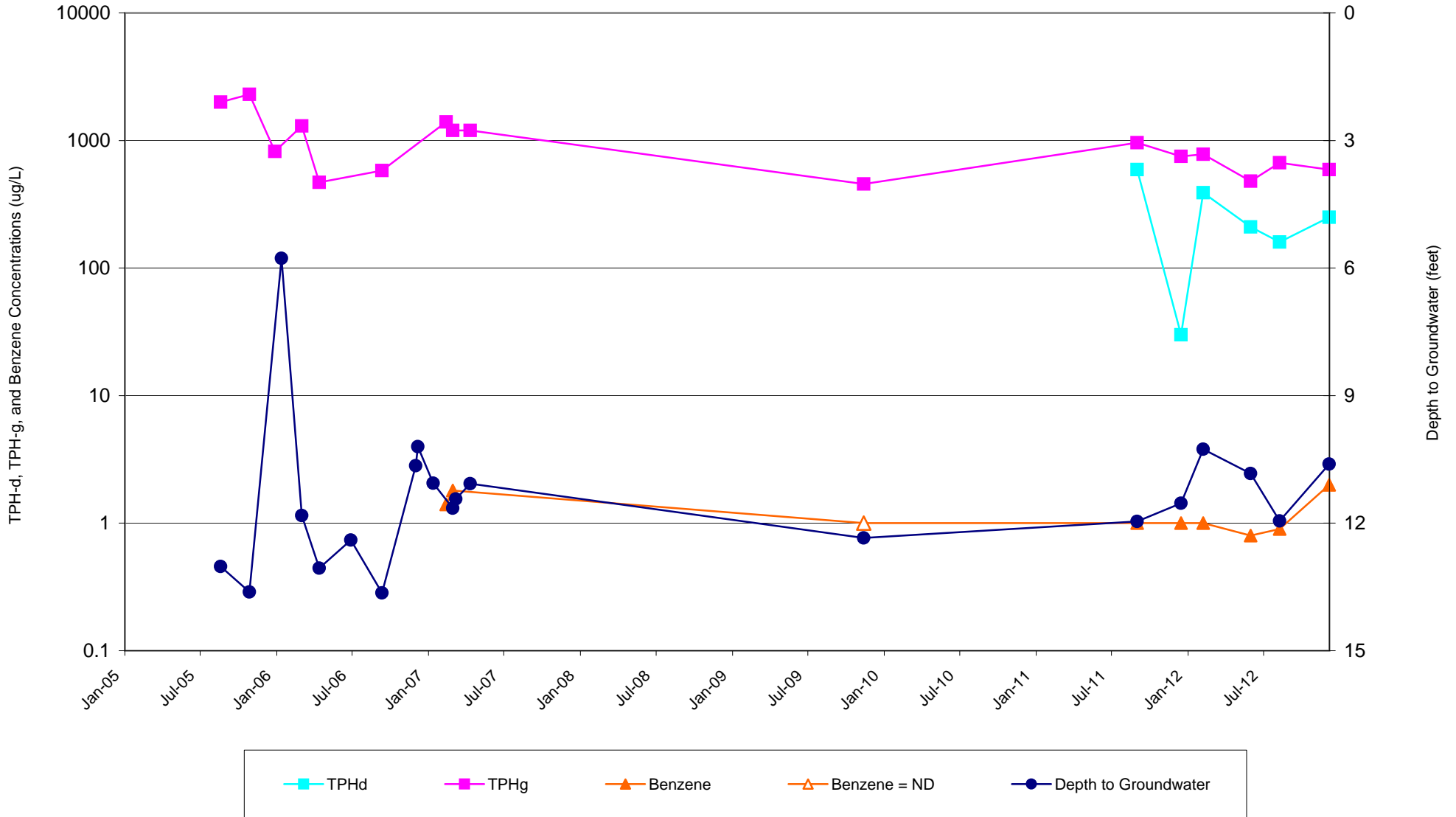
Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions, and Lancaster hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

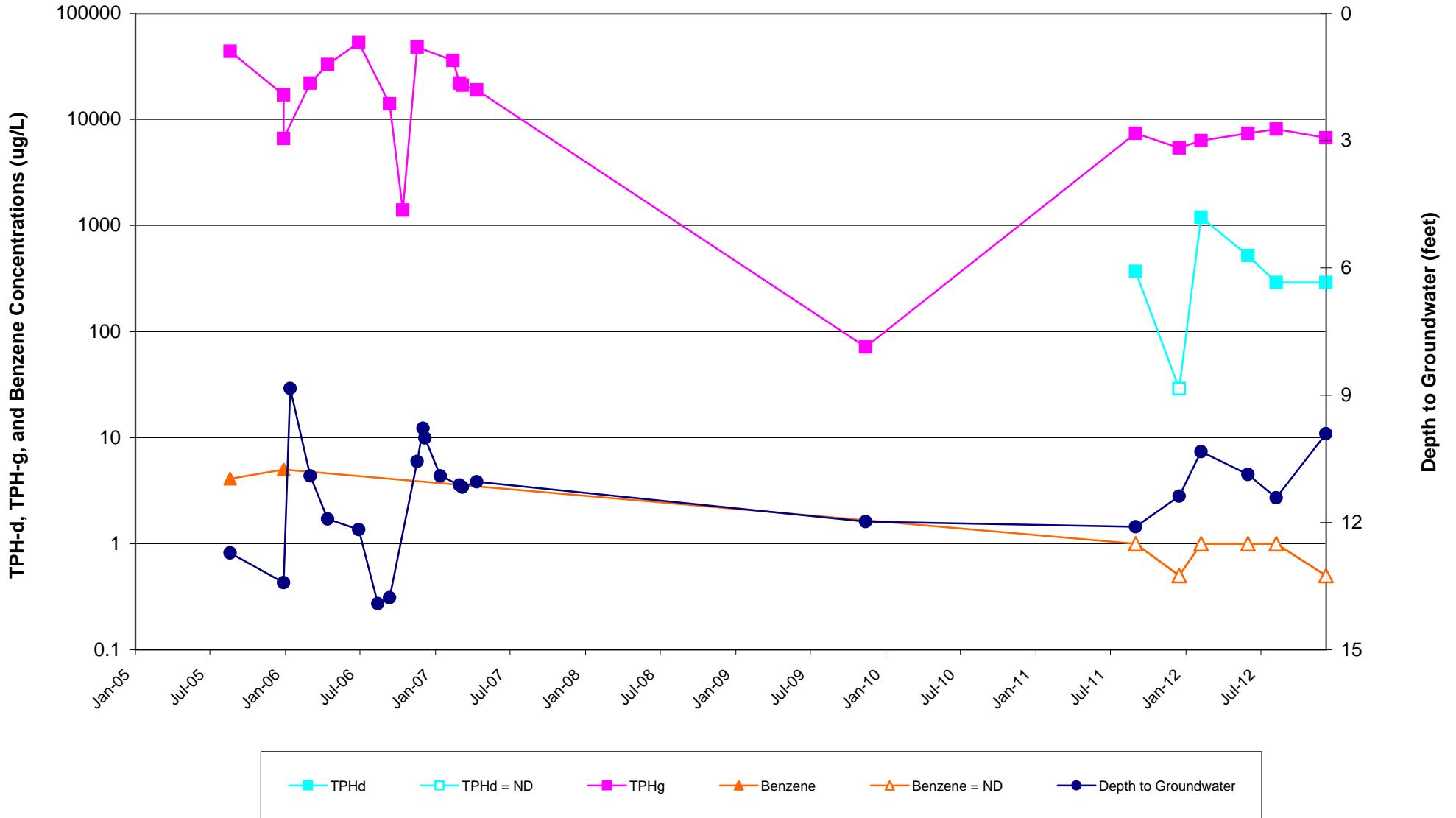
ATTACHMENT C

CONCENTRATION TREND GRAPHS

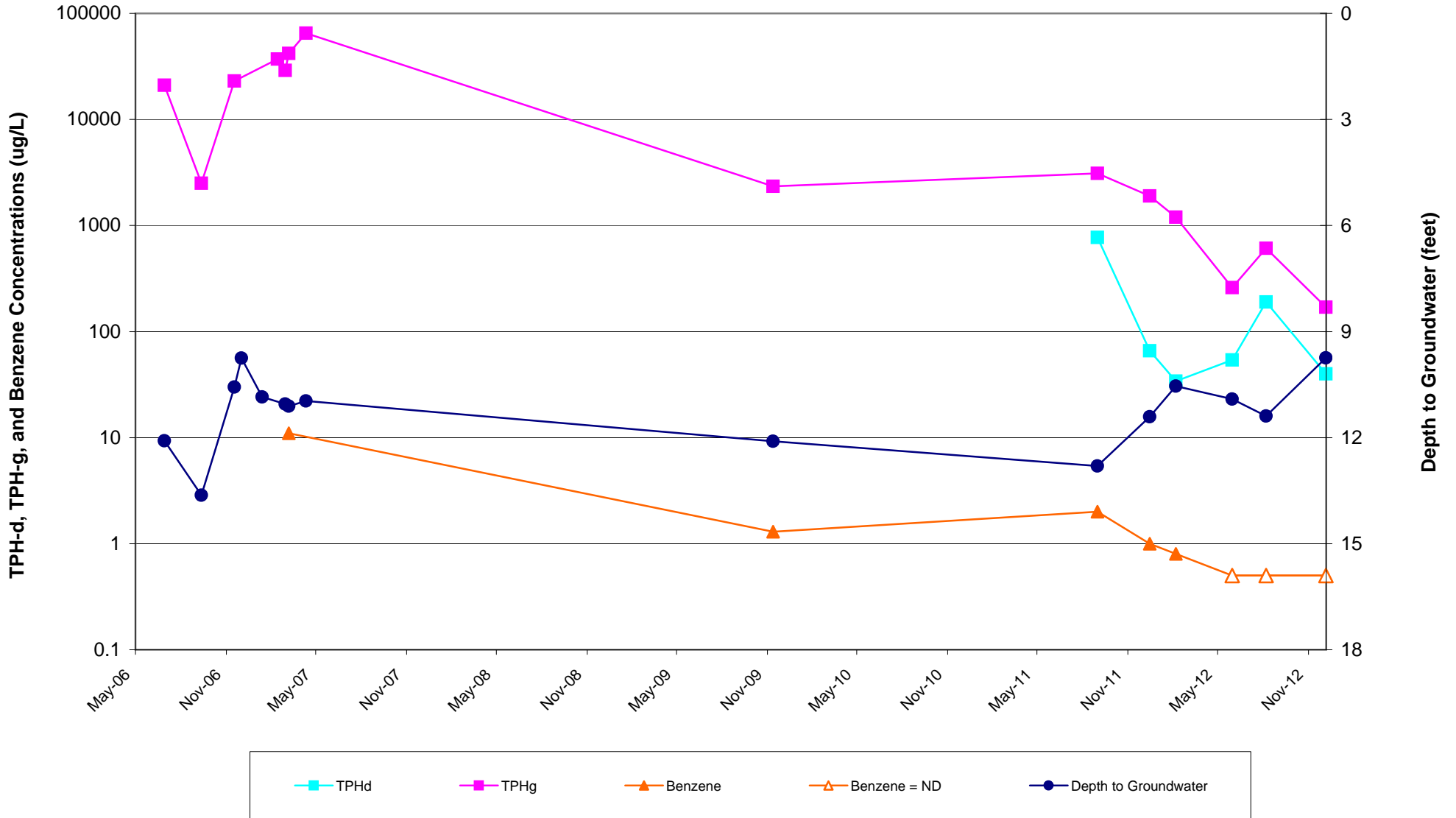
**GRAPH 1**  
**CHEMICAL CONCENTRATION VERSUS TIME**  
**MW-2**  
 FORMER TIDEWATER SITE  
 2800 MARTIN LUTHER KING JUNIOR WAY SOUTH  
 SEATTLE, WASHINGTON



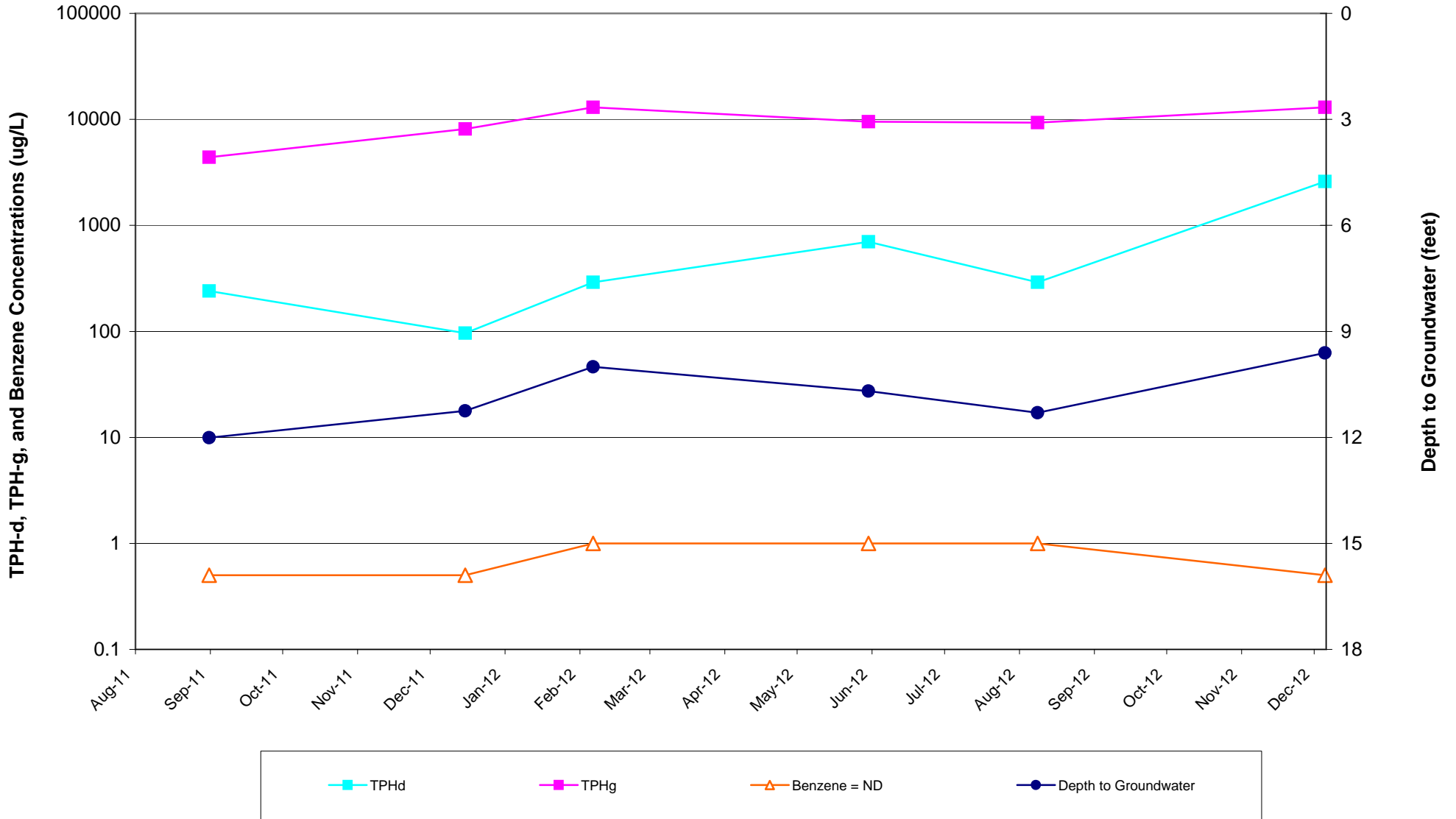
**GRAPH 2**  
**CHEMICAL CONCENTRATION VERSUS TIME**  
**MW-3**  
 FORMER TIDEWATER SITE  
 2800 MARTIN LUTHER KING JUNIOR WAY SOUTH  
 SEATTLE, WASHINGTON



**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.