CONESTOGA-ROVERS & ASSOCIATES

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November 7, 2013 Reference No. 061992

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

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

Dear Mr. Bails,

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

## RESULTS OF SECOND QUARTER 2013 EVENT

On May 23 and 24, 2013, CRA monitored and sampled the site wells per the established schedule. Results of the current monitoring event indicate the following.

- Groundwater Flow Direction — Southwest (Figure 3)
- Hydraulic Gradient — 0.04 foot/foot
- Approximate Depth to Water — 11 to 13 feet below grade
- Approximate Groundwater Elevation — 46 to 51 feet above mean sea level

Equal
Employment Opportunity
Employer

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

**TABLE A: GROUNDWATER ANALYTICAL DATA**

| *Well ID* | *TPHg (µg/L)* | *TPHd (µg/L)* | *TPHo (µg/L)* | *Benzene (µg/L)* | *Toluene (µg/L)* | *Ethylbenzene (µg/L)* | *Total Xylenes (µg/L)* |
|---|---|---|---|---|---|---|---|
| ***MTCA Method A Cleanup Levels*** | ***800/1000**** | ***500*** | ***500*** | ***5*** | ***1000*** | ***700*** | ***1000*** |
| MW-1 | <50 | <29 | <67 | <0.5 | <0.5 | <0.5 | <0.5 |
| MW-2 | 470 | 200 | <66 | 0.7 | <0.5 | <0.5 | 3 |
| MW-3 | **5,800** | 240 | <67 | <0.5 | <0.5 | 160 | 550 |
| MW-4 | <50 | <29 | <67 | <0.5 | <0.5 | <0.5 | <0.5 |
| MW-5 | 360 | 64 | <67 | <0.5 | <0.5 | 4 | 6 |
| MW-6 | <50 | <30 | <70 | <0.5 | <0.5 | <0.5 | <0.5 |
| MW-7 | <50 | <31 | <72 | <0.5 | <0.5 | <0.5 | <0.5 |
| MW-8 | **6,800** | 380 | <68 | <0.5 | <0.5 | 87 | 700 |
| MW-8 DUP | **7,000** | 380 | <68 | <0.5 | 0.5 | 100 | 810 |
| MW-9 | 100 | <29 | <67 | <0.5 | <0.5 | <0.5 | <0.5 |
| MW-10 | <50 | <29 | <67 | <0.5 | <0.5 | <0.5 | <0.5 |

**Bold** Indicates concentration exceed MTCA Method A cleanup level
* TPHg Cleanup Level for wells containing benzene is 800 µg/L; otherwise cleanup level is 1,000 µg/L.
TPHo Total petroleum hydrocarbons as oil

## 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 were below MTCA Method A cleanup levels in all wells.
- TPHo concentrations were below MTCA Method A cleanup levels in all wells.
- Benzene, toluene, ethylbenzene, and total xylenes concentrations were all below the MTCA Method A cleanup levels in groundwater.

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

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

## ANTICIPATED FUTURE ACTIVITIES

***Groundwater Monitoring***
CRA will monitor and sample site wells per the established schedule. The third quarter 2013 event is scheduled for August 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 fourth 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/6
Encl.

| | |
|---|---|
| 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. Brett Hunter, Chevron *(electronic copy)*
Mr. Ed Ralston, Phillips 66 (*electronic copy*)
Thom Morin, EP Inc. (*electronic copy*)

FIGURES

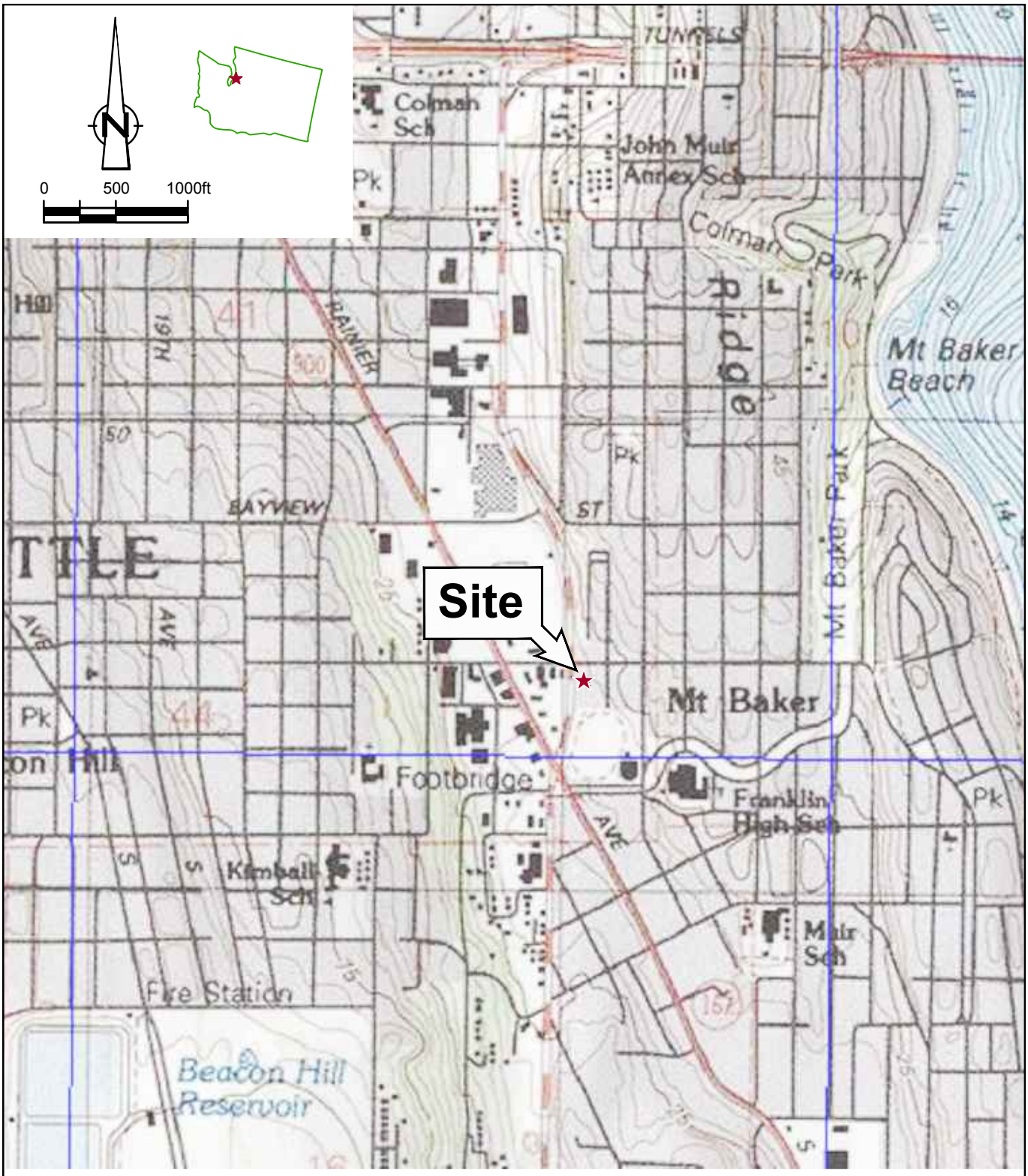
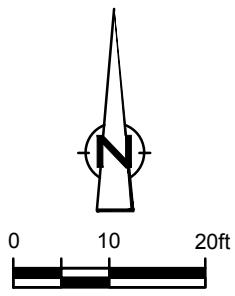



Figure 1

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




LEGEND

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

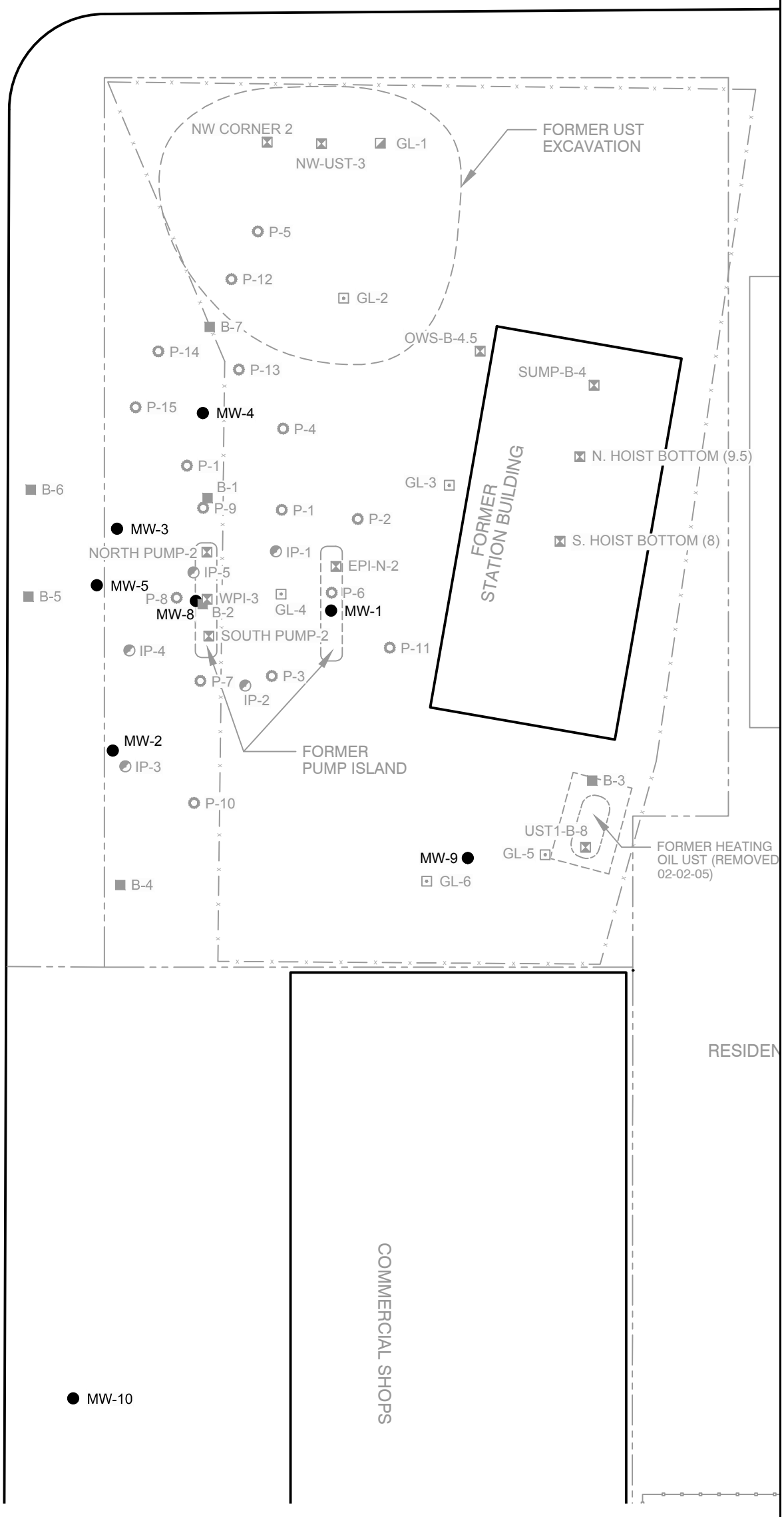



Figure 2

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

CRA

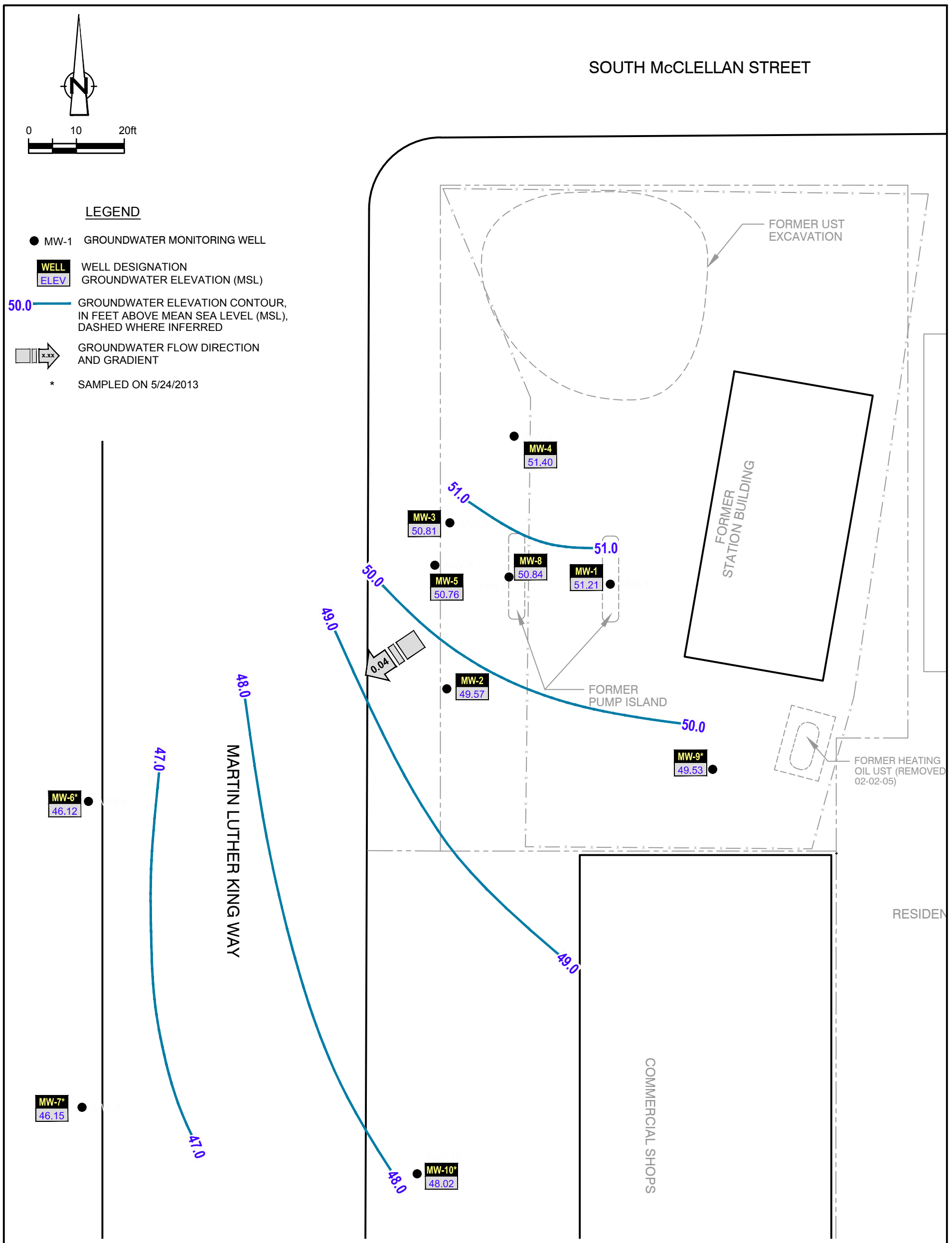
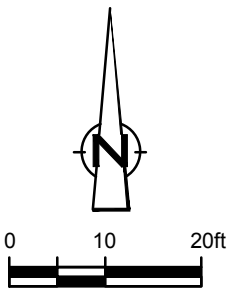



Figure 3

GROUNDWATER ELEVATION CONTOUR MAP
FORMER TIDEWATER SERVICE STATION
PHILLIPS 66 SITE 5173
CHEVRON SITE 301233
2800 MARTIN LUTHER KING WAY SOUTH
*Seattle, Washington*
*May 23, 2013*

CRA

061992-95(006)GN-BR003 JULY 23/2013




LEGEND

- MW-1 GROUNDWATER MONITORING WELL
- WELL DESIGNATION
- TPHg CONCENTRATION (µg/L)
- TPHd CONCENTRATION (µg/L)
- BENZ BENZENE CONCENTRATION (µg/L)
- TOUL TOULENE CONCENTRATION (µg/L)
- ETH ETHYLBENZENE CONCENTRATION (µg/L)
- TOTAL TOTAL XYLENES CONCENTRATION (µg/L)
- * SAMPLED ON 5/24/2013
- D DUPLICATE

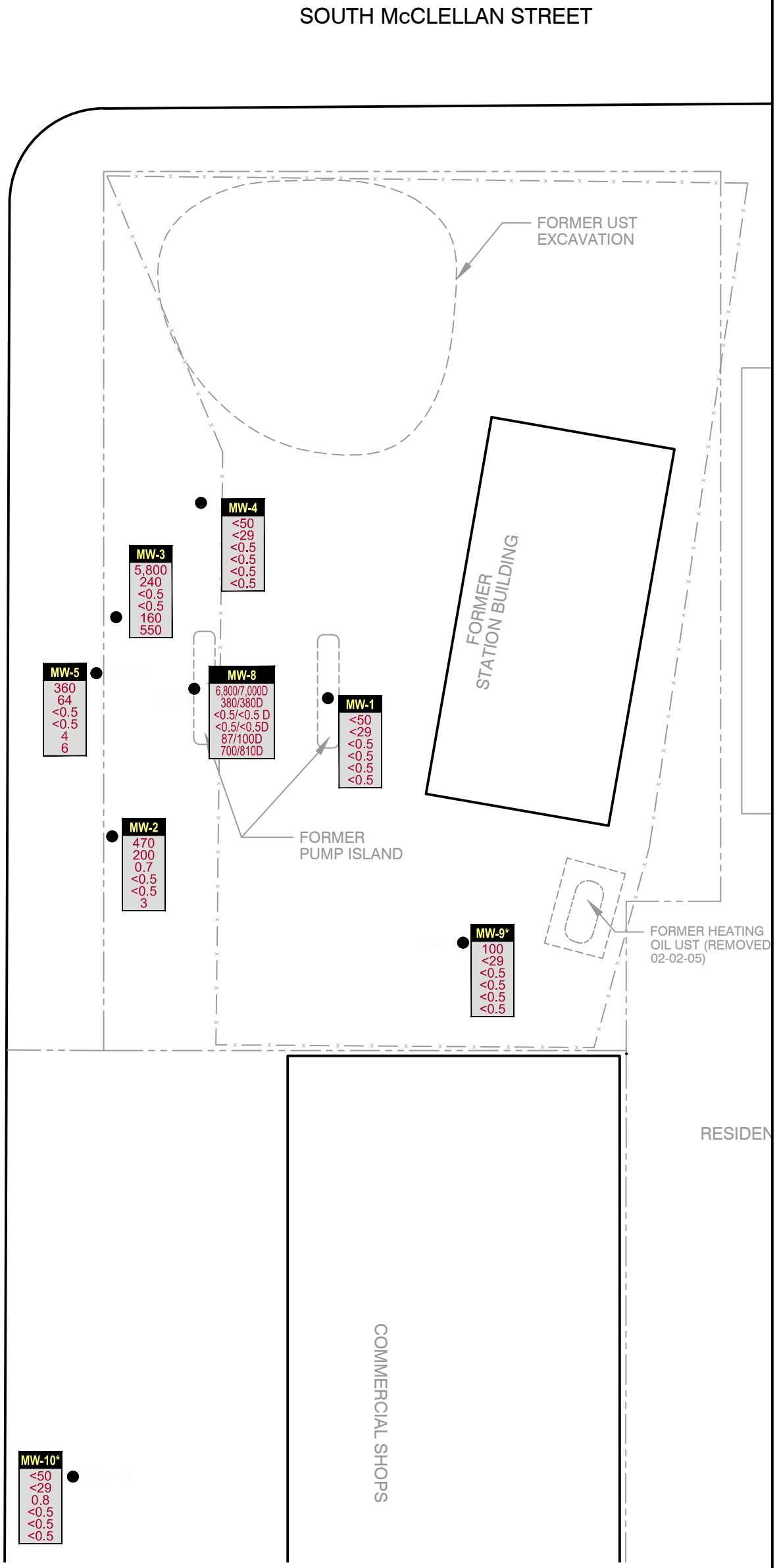



Figure 4

GROUNDWATER CONCENTRATION MAP
FORMER TIDEWATER SERVICE STATION
PHILLIPS 66 SITE 5173
CHEVRON SITE 301233
2800 MARTIN LUTHER KING WAY SOUTH
*Seattle, Washington*
*May 23, 2013*

CRA

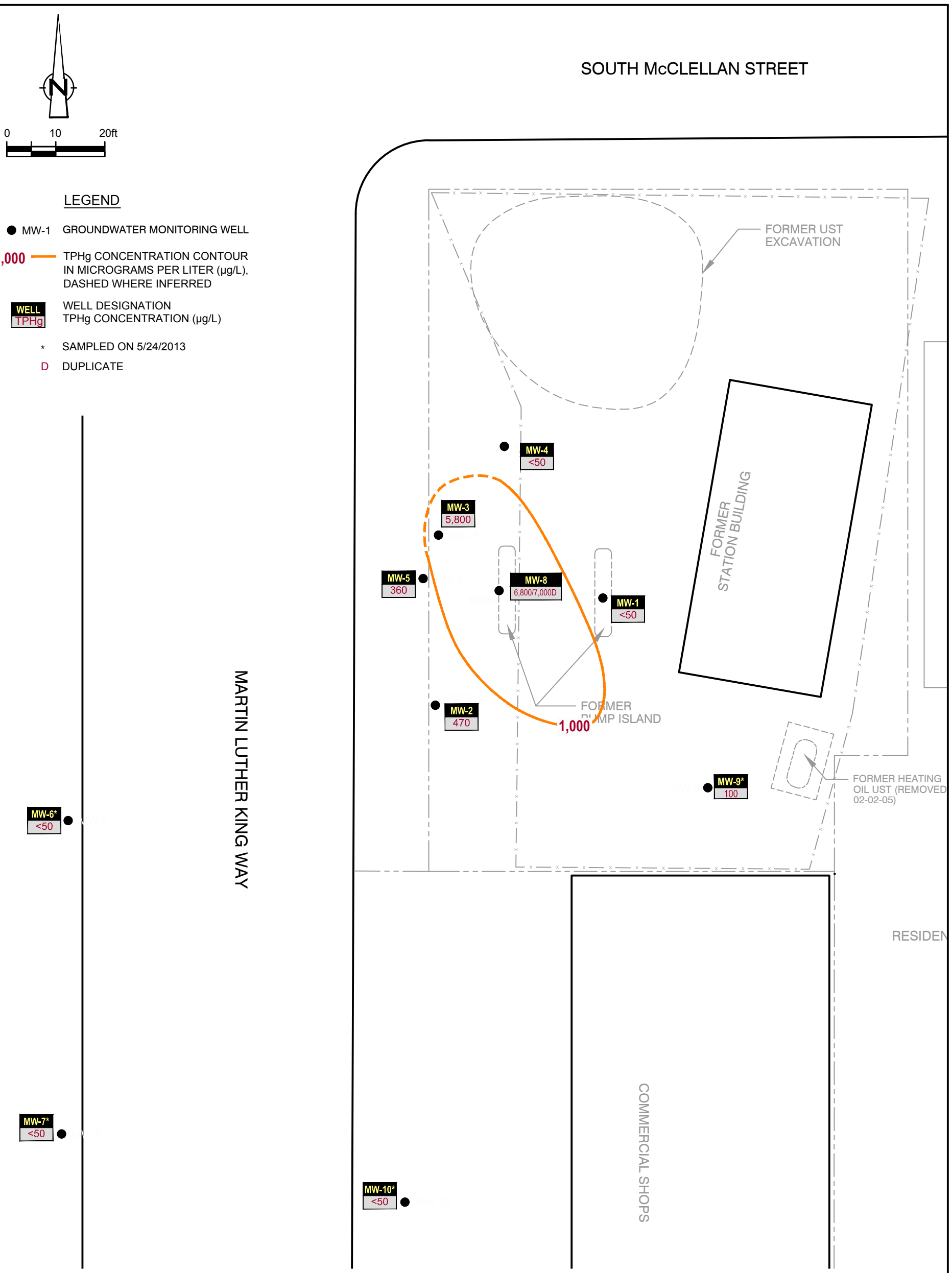
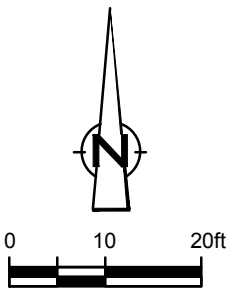



Figure 5

TPHg ISOCONCENTRATION CONTOUR MAP
FORMER TIDEWATER SERVICE STATION
PHILLIPS 66 SITE 5173
CHEVRON SITE 301233
2800 MARTIN LUTHER KING WAY SOUTH
*Seattle, Washington*
*May 23, 2013*




LEGEND

- MW-1 GROUNDWATER MONITORING WELL
- WELL / TPHd — WELL DESIGNATION, TPHd CONCENTRATION (µg/L)
- * SAMPLED ON 5/24/2013
- D DUPLICATE

SOUTH McCLELLAN STREET

MARTIN LUTHER KING WAY

COMMERCIAL SHOPS

RESIDEN

FORMER UST EXCAVATION

FORMER STATION BUILDING

FORMER PUMP ISLAND

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

MW-1 <29

MW-2 200

MW-3 240

MW-4 <29

MW-5 64

MW-6* <30

MW-7* <31

MW-8 380/380D

MW-9* <29

MW-10* <29

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*
*May 23, 2013*

CRA

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**

| | | | | | HYDROCARBONS | | | PRIMARY VOCS | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | Date | TOC | DTW | GWE | 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) | 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 |
| 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[3] | 97.92 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| MW-1 | 12/15/2011[3] | 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 | - | - |
| 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 | 1.7 | 0.007399 |
| MW-1 | 08/08/2012 | 62.35 | 11.36 | 50.99 | <50 | <29[4] | <67[4] | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <1 | <1 | <1 | <1 | 0.32 | - |
| MW-1 | 12/05/2012 | 62.35 | 9.51 | 52.84 | <50 | <29[4] | <69[4] | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <1 | <1 | <1 | <1 | 27.7 | - |
| MW-1 | 02/26/2013 | 62.35 | 10.62 | 51.73 | <50 | <30[4] | <71[4] | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <1 | <1 | <1 | <1 | 0.42 | - |
| **MW-1** | **05/23/2013** | **62.35** | **11.14** | **51.21** | **<50** | **<29[4]** | **<67[4]** | **<0.5** | **<0.5** | **<0.5** | **<0.5** | **<0.5** | **<0.5** | **<0.5** | **<1** | **<1** | **<1** | **<1** | **<1** | **1.7** | **-** |
| 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 | - | - | - | - | - | - | - | - | - | - |

**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**

| | | | | | HYDROCARBONS | | | PRIMARY VOCS | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | Date | TOC | DTW | GWE | 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) | 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 |
| 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 | - | - | - | - | - | - | - | - | - | - |
| 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[4] | <67[4] | 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[4] | <73[4] | 2 | <0.5 | 3 | 11 | <0.5 | <0.5 | <0.5 | <1 | <1 | <1 | 37 | 17 | 13.1 | - |
| MW-2 | 02/26/2013 | 60.72 | 10.57 | 50.15 | 770 | 150[4] | <68[4] | 0.7 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <1 | <1 | 39 | 19 | 0.19 | - |
| **MW-2** | **05/23/2013** | **60.72** | **11.15** | **49.57** | **470** | **200[4]** | **<66[4]** | **0.7** | **<0.5** | **<0.5** | **3** | **<0.5** | **<0.5** | **<0.5** | **<1** | **<1** | **<1** | **46** | **21** | **0.12** | **-** |

**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**

| | | | | | *HYDROCARBONS* | | | *PRIMARY VOCS* | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | Date | *TOC* | *DTW* | *GWE* | *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)* | *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* |
| 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 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 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 |

**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**

| | | | | | *HYDROCARBONS* | | | *PRIMARY VOCS* | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | Date | *TOC* | *DTW* | *GWE* | *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)* | *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* |
| MW-3 | 08/07/2012 | 61.81 | 11.42 | 50.39 | 8,100 | 290[4] | <67[4] | <1 | <1 | 140 | 610 | <1 | <1 | <1 | 71 | 830 | 140 | 86 | 33 | 0.98 | - |
| MW-3 | 12/06/2012 | 61.81 | 9.91 | 51.90 | 6,700 | 290[4] | <69[4] | <0.5 | <0.5 | 160 | 480 | <0.5 | <0.5 | <0.5 | 75 | 860 | 160 | 100 | 41 | 0.36 | - |
| MW-3 | 02/27/2013 | 61.81 | 10.88 | 50.93 | 9,500 | 510[4] | <66[4] | <0.5 | <0.5 | 190 | 620 | <0.5 | <0.5 | <0.5 | 73 | 1,200 | 240 | 130 | 51 | 0.70 | - |
| **MW-3** | **05/23/2013** | **61.81** | **11.00** | **50.81** | **5,800** | **240[4]** | **<67[4]** | **<0.5** | **<0.5** | **160** | **550** | **<0.5** | **<0.5** | **<0.5** | **82** | **1,200** | **170** | **130** | **45** | **2.6** | **-** |
| 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 | - | - | - | - | - | - | - | - | - | - |
| 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[4] | <68[4] | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <1 | <1 | <1 | <1 | 0.34 | - |
| MW-4 | 12/05/2012 | 62.75 | 10.19 | 52.56 | <50 | <32[4] | <75[4] | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <1 | <1 | <1 | <1 | 4.0 | - |
| MW-4 | 02/26/2013 | 62.75 | 11.15 | 51.60 | <50 | <28[4] | <66[4] | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <1 | <1 | <1 | <1 | 0.16 | - |
| **MW-4** | **05/23/2013** | **62.75** | **11.35** | **51.40** | **<50** | **<29[4]** | **<67[4]** | **<0.5** | **<0.5** | **<0.5** | **<0.5** | **<0.5** | **<0.5** | **<0.5** | **<1** | **<1** | **<1** | **<1** | **<1** | **0.74** | **-** |
| 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 | - | - | - | - | - | - | - | - | - | - |

**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**

| | | | | | *HYDROCARBONS* | | | *PRIMARY VOCS* | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | Date | *TOC* | *DTW* | *GWE* | *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)* | *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* |
| 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[4] | <66[4] | <0.5 | <0.5 | 11 | 22 | <0.5 | <0.5 | <0.5 | 21 | 33 | 12 | 32 | 13 | 5.1 | - |
| MW-5 | 12/06/2012 | 61.66 | 9.74 | 51.92 | 170 | 40[4] | <76[4] | <0.5 | <0.5 | 2 | 8 | <0.5 | <0.5 | <0.5 | 8 | 3 | <1 | 12 | 4 | 0.17 | - |
| MW-5 | 02/27/2013 | 61.66 | 11.03 | 50.63 | 790 | 170[4] | <69[4] | <0.5 | 0.6 | 7 | 12 | <0.5 | <0.5 | <0.5 | 25 | 9 | 1 | 42 | 19 | 0.76 | - |
| **MW-5** | **05/23/2013** | **61.66** | **10.90** | **50.76** | **360** | **64[4]** | **<67[4]** | **<0.5** | **<0.5** | **4** | **6** | **<0.5** | **<0.5** | **<0.5** | **25** | **4** | **<1** | **34** | **13** | **0.80** | **-** |
| 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 | - | - |
| 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[4] | <66[4] | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <1 | <1 | <1 | <1 | 0.15 | - |
| MW-6 | 12/06/2012 | 58.03 | 11.60 | 46.43 | <50 | <31[4] | <73[4] | <0.5 | <0.5 | 1 | 6 | <0.5 | <0.5 | <0.5 | <1 | <1 | <1 | <1 | <1 | 1.1 | - |

**TABLE 1**

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

| | | | | | *HYDROCARBONS* | | | *PRIMARY VOCS* | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | Date | *TOC* | *DTW* | *GWE* | *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)* | *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* |
| MW-6 | 02/27/2013 | 58.03 | 11.77 | 46.26 | <50 | <30[4] | <70[4] | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <1 | <1 | <1 | <1 | 0.68 | - |
| **MW-6** | **05/24/2013** | **58.03** | **11.91** | **46.12** | **<50** | **<30[4]** | **<70[4]** | **<0.5** | **<0.5** | **<0.5** | **<0.5** | **<0.5** | **<0.5** | **<0.5** | **<1** | **<1** | **<1** | **<1** | **<1** | **0.20** | **-** |
| 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[4] | <66[4] | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <1 | <1 | <1 | <1 | 31.7 | - |
| MW-7 | 12/06/2012 | 56.96 | 10.46 | 46.50 | <50 | <29[4] | <67[4] | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <1 | <1 | <1 | <1 | 40.3 | - |
| MW-7 | 02/27/2013 | 56.96 | 10.69 | 46.27 | <50 | <29[4] | <68[4] | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <1 | <1 | <1 | <1 | 76.5 | - |
| **MW-7** | **05/24/2013** | **56.96** | **10.81** | **46.15** | **<50** | **<31[4]** | **<72[4]** | **<0.5** | **<0.5** | **<0.5** | **<0.5** | **<0.5** | **<0.5** | **<0.5** | **<1** | **<1** | **<1** | **<1** | **<1** | **1.9** | **-** |
| 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[4] | <66[4] | <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[4] | <66[4] | <1 | <1 | 83 | 710 | <1 | <1 | <1 | 67 | 680 | 140 | 44 | 20 | 3.6 | - |
| MW-8 | 12/05/2012 | 61.71 | 9.61 | 52.10 | 13,000 | 2,600[4] | 200[4] | <0.5 | 0.8 | 95 | 1,100 | <0.5 | <0.5 | <0.5 | 93 | 1,400 | 380 | 61 | 27 | 27.6 | - |
| MW-8 DUP | 12/05/2012 | 61.71 | 9.61 | 52.10 | 12,000 | 2,600[4] | 240[4] | <0.5 | 0.8 | 91 | 1,100 | <0.5 | <0.5 | <0.5 | 91 | 1,400 | 360 | 58 | 26 | 27.4 | - |
| MW-8 | 02/26/2013 | 61.71 | 10.71 | 51.00 | 12,000 | 780[4] | <70[4] | <0.5 | 0.6 | 100 | 800 | <0.5 | <0.5 | <0.5 | 86 | 1,200 | 280 | 63 | 29 | 5.2 | - |
| MW-8 DUP | 02/26/2013 | 61.71 | 10.71 | 51.00 | 11,000 | 540[4] | <69[4] | <0.5 | 0.6 | 100 | 770 | <0.5 | <0.5 | <0.5 | 72 | 1,100 | 280 | 60 | 29 | 5.3 | - |

**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**

| | | | | | *HYDROCARBONS* | | | *PRIMARY VOCS* | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | Date | *TOC* | *DTW* | *GWE* | *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)* | *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* |
| **MW-8** | **05/23/2013** | **61.71** | **10.87** | **50.84** | **6,800** | **380[4]** | **<68[4]** | **<0.5** | **<0.5** | **87** | **700** | **<0.5** | **<0.5** | **<0.5** | **86** | **1,200** | **190** | **62** | **25** | **4.0** | **-** |
| **MW-8 DUP** | **05/23/2013** | **61.71** | **10.87** | **50.84** | **7,000** | **380[4]** | **<68[4]** | **<0.5** | **0.5** | **100** | **810** | **<0.5** | **<0.5** | **<0.5** | **94** | **1,300** | **240** | **73** | **29** | **3.5** | **-** |
| 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 | - | - |
| MW-9 | 02/06/2012 | 62.58 | 12.04 | 50.54 | 66 | <300 | <700[1] | <0.5 | <0.7 | <0.8 | <1.6 | <1 | <1 | <0.5 | <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 | 0.31 | 0.007248 |
| MW-9 | 08/08/2012 | 62.58 | 13.37 | 49.21 | <50 | <29[4] | <67[4] | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <1 | <1 | <1 | <1 | 0.87 | - |
| MW-9 | 12/05/2012 | 62.58 | 12.05 | 50.53 | <50 | 39[4] | <69[4] | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <1 | <1 | <1 | <1 | 0.33 | - |
| MW-9 | 02/26/2013[5] | 62.58 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| **MW-9** | **05/24/2013** | **62.58** | **13.05** | **49.53** | **100** | **<29[4]** | **<68[4]** | **<0.5** | **<0.5** | **<0.5** | **<0.5** | **<0.5** | **<0.5** | **<0.5** | **<1** | **<1** | **<1** | **<1** | **<1** | **0.24** | **-** |
| 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 | - | - |
| 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 | - | - |
| MW-10 | 02/06/2012 | 58.96 | 10.44 | 48.52 | <50[2] | <29 | <68 | 1 | <0.7 | <0.8 | <1.6 | <1 | <1 | <0.5 | <1 | <1 | <1 | 3 | 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 | 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[4] | <68[4] | 1 | <0.5 | <0.5 | 1 | <0.5 | <0.5 | <0.5 | <1 | <1 | <1 | 10 | 4 | <0.034 | - |
| MW-10 | 12/06/2012 | 58.96 | 11.31 | 47.65 | 130 | 220[4] | <72[4] | 3 | 0.6 | <0.5 | 4 | <0.5 | <0.5 | <0.5 | <1 | <1 | <1 | 24 | 10 | 0.28 | - |
| MW-10 | 02/27/2013 | 58.96 | 10.49 | 48.47 | <50 | 71[4] | <69[4] | 0.8 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <1 | <1 | 2 | <1 | <0.073 | - |
| **MW-10** | **05/24/2013** | **58.96** | **10.94** | **48.02** | **<50** | **<29[4]** | **<67[4]** | **<0.5** | **<0.5** | **<0.5** | **<0.5** | **<0.5** | **<0.5** | **<0.5** | **<1** | **<1** | **<1** | **<1** | **<1** | **<0.073** | **-** |
| 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 | - | - |

**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**

| | | | | | *HYDROCARBONS* | | | *PRIMARY VOCS* | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | Date | *TOC* | *DTW* | *GWE* | *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)* | *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* |
| Trip Blank | 12/05/2012 | - | - | - | <50 | - | - | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <1 | <1 | <1 | <1 | - | - |
| Trip Blank | 02/26/2013 | - | - | - | <50 | - | - | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <1 | <1 | <1 | <1 | - | - |
| **Trip Blank** | **05/23/2013** | **-** | **-** | **-** | **<50** | **-** | **-** | **<0.5** | **<0.5** | **<0.5** | **<0.5** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** |

**Abbreviations and Notes**

TOC = Top of casing

DTW = Depth to water

GWE = Groundwater elevation

(ft-amsl) = Feet above mean sea level

ft = Feet

µg/L = Micrograms per liter

TPH-GRO = Total petroleum hydrocarbons - gasoline range organics

TPH-DRO = Total petroleum hydrocarbons - diesel range organics

TPH-HRO = Total petroleum hydrocarbons - oil range organics

VOCS = Volatile organic compounds

B = Benzene

T = Toluene

E = Ethylbenzene

X = Xylene's (Total)

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

**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**

| | | | | | *HYDROCARBONS* | | | *PRIMARY VOCS* | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | Date | *TOC* | *DTW* | *GWE* | *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)* | *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* |

MTBE = Methyl tert butyl ether

cPAHs = Carcinogenic Polycyclic Aromatic Hydrocarbons analyzed by EPA Method 8270c Selective Ion Monitoring

Total Lead analyzed by EPA Method 6020

-- = Not available / not applicable.I286

<x = Not detected above laboratory method detection limit.

1 Reporting limits were raised due to interference from the sample matrix. The surrogate data is outside the QC limits due to unresolvable matrix problems evident in the sample chromatogram.

2 A preserved vial was submitted for analysis. However, the pH at the time of analysis was 4.

3 Well not sampled - well not found.

4 Analysis with silica-gel cleanup.

5 Inaccessible.

ATTACHMENT A

MONITORING DATA PACKAGE

# WATER LEVEL RECORD

PROJECT NAME: FORMER TIDEWATER SITE LOCATION: MLK - SEATTLE

JOB NO. : 061992 DATE: 05/23/13

CLIENT: PGG ENGINEER/GEOLOGIST: NH/SR

| OBSERVATION WELL | TOP OF CASING ELEVATION A | | DEPTH TO WATER B | | WATER LEVEL ELEVATION A-B | |
|---|---|---|---|---|---|---|
| | feet | metres | feet | metres | feet | metres |
| MW 1 | | | 11.14 | | | |
| MW 8 | | | 10.87 | | | |
| MW 2 | | | 11.15 | | | |
| MW 9 | | | 13.05 | | | |
| MW 10 | | | 10.94 | | | |
| MW 3 | | | 11.65 | | | |
| MW 5 | | | 10.90 | | | |
| MW 7 | | | 10.81 | | | |
| MW 6 | | | 11.91 | | | |
| MW 4 | | | 11.35 | | | |
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CRA

Former Tidewater Site
Seattle, WA

Water Quality Meter S/N: 1113788

Date: 5-24-13

Location: MW-06
Name of Sampler: NH
Weather: Cloudy

Depth to Water: 11.92
Depth to Bottom:

Sample Depth:

QA/QC
MS/MSD
Duplicate
Blank

Sample IDs (GW-mmddyy-AA-XXX)

GW-052413-NH-MW-06

*A Samplers Initials*
*x Location ID*

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

Sample Method: Low Flow
Purge Start: 11:52
Sample Time: 12:45

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | |
| 11:56 | 6.24 | 0.196 | 21.7 | 4.35 | 15.45 | -165 | 0.0 | 0.7 | | 0.200 | 11.92 | CLEAR |
| 12:01 | 6.34 | 0.102 | 24.1 | 0.0 | 14.93 | -171 | 0.0 | 0.7 | | 0.200 | 11.92 | " " |
| 12:06 | 6.35 | 0.162 | 16.0 | 0.0 | 14.72 | -173 | 0.0 | 0.7 | | 0.200 | 11.92 | " " |
| 12:11 | 6.37 | 0.102 | 23.0 | 0.0 | 14.71 | -175 | 0.0 | 0.7 | | 0.200 | 11.92 | " " |
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**Analysis:**
**Groundwater**
GRO
DRO
VOCs
SVOCs
Total Lead

| | |
|---|---|
| ✓ | |
| ✓ | |
| ✓ | |
| ✓ | |
| ✓ | |

**Preservative**
HCL
HCL
HCL

Signed

Notes:
1 PAH

Former Tidewater Site
Seattle, WA

Water Quality Meter S/N: _____

Date: 05/24/13

Location: MW7
Name of Sampler: N. Hinspeiger
Weather: clear

Depth to Water: 10.85
Depth to Bottom: _____

Sample Depth: _____

QA/QC
MS/MSD _____
Duplicate _____
Blank _____

Sample IDs (GW-mmddyy-AA-XXX)

*A Samplers Initials*
*x Location ID*

GW- 052413-NH-MW7

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

_____

Sample Method: LOW FLOW
Purge Start: 10:37
Sample Time: 11:30

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10:48 | 6.35 | 99.9 | 48.2 | 1.35 | 16.22 | -163 | 0.0 | 1.6 | | 0.100 | 10.86 | CLEAR |
| 10:53 | 6.32 | 99.9 | 32.5 | 1.07 | 16.21 | -165 | 0.0 | 1.6 | | 0.100 | 10.86 | " |
| 10:58 | 6.31 | 99.8 | 28.2 | 1.05 | 16.10 | -165 | 0.0 | 1.6 | | 0.100 | 10.86 | " |
| 11:03 | 6.30 | 99.9 | 35.7 | 1.04 | 16.08 | -168 | 0.0 | 1.6 | | 0.100 | 10.86 | " |
| 11:08 | 6.29 | 99.9 | 26.3 | 1.04 | 16.08 | -169 | 0.0 | 1.6 | | 0.100 | 10.86 | " |
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**Analysis:**

| **Groundwater** | | **Preservative** |
|---|---|---|
| GRO | ✓ | HCL |
| DRO | ✓ | HCL |
| VOCs | ✓ | HCL |
| SVOCs | ✓ | |
| Total Lead | ✓ | |

Signed _____

Notes:

1 PAH

Former Tidewater Site
Seattle, WA

Water Quality Meter S/N: _____

Date: 05/24/13

Location: MW 10
Name of Sampler: N. Hinsperger
Weather: CLEAR

QA/QC
MS/MSD _____
Duplicate _____
Blank _____

Depth to Water: 10.96
Depth to Bottom: _____

Sample Depth: _____

Sample IDs (GW-mmddyy-AA-XXX)

*A Samplers Initials*
*x Location ID*

GW- 052413-NH-MW 10

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

_____

Sample Method: Low Flow
Purge Start: 9:48
Sample Time: 10:30

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9:58 | 6.20 | 0.217 | 21.9 | 0.77 | 14.76 | -118 | 0.0 | 1.4 | | 0.100 | 11.08 | CLEAR |
| 10:03 | 6.23 | 0.219 | 31.0 | 0.31 | 14.70 | -129 | 0.0 | 1.4 | | 0.100 | 11.11 | " " |
| 10:08 | 6.23 | 0.223 | 20.6 | 0.32 | 14.67 | -135 | 0.0 | 1.4 | | 0.100 | 11.16 | " " |
| 10:13 | 6.23 | 0.229 | 20.8 | 0.32 | 14.59 | -138 | 0.0 | 1.4 | | 0.100 | 11.17 | " " |
| 10:18 | 6.23 | 0.231 | 21.3 | 0.31 | 14.58 | -139 | 0.0 | 1.4 | | 0.100 | 11.18 | " " |
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**Analysis:**

| **Groundwater** | | **Preservative** |
|---|---|---|
| GRO | ✓ | HCL |
| DRO | ✓ | HCL |
| VOCs | ✓ | HCL |
| SVOCs | ✓ | |
| Total Lead | ✓ | |

Signed _____

Notes:

1 PAH

Former Tidewater Site
Seattle, WA

Water Quality Meter S/N: _____

Date: 05/24/13

Location: MW9
Name of Sampler: N. Hingerger
Weather: CLEAR

QA/QC
MS/MSD ✓
Duplicate _____
Blank _____

Depth to Water: 12.99
Depth to Bottom: _____

Sample Depth: _____

Sample IDs (GW-mmddyy-AA-XXX)

*A Samplers Initials*
*x Location ID*

GW- 052413-NH-MW9

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

_____

Sample Method: Low Flow
Purge Start: 8:30
Sample Time: 9:30

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8:35 | 5.42 | 0.089 | 209.0 | 1.56 | 12.65 | -3 | 0.0 | 0.4 | | 0.100 | 13.13 | CLEAR |
| 8:40 | 5.42 | 0.089 | 114.0 | 0.34 | 12.70 | -7 | 0.0 | 0.4 | | 0.100 | 13.16 | " " |
| 8:45 | 5.41 | 0.089 | 77.8 | 0.0 | 12.70 | -7 | 0.0 | 0.4 | | 0.100 | 13.19 | " " |
| 8:50 | 5.41 | 0.089 | 68.3 | 0.0 | 12.71 | -8 | 0.0 | 0.4 | | 0.100 | 13.21 | " " |
| 8:55 | 5.39 | 0.087 | 39.6 | 0.0 | 12.75 | -8 | 0.0 | 0.4 | | 0.100 | 13.25 | " |
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**Analysis:**

| **Groundwater** | | **Preservative** |
|---|---|---|
| GRO | ✓ | HCL |
| DRO | ✓ | HCL |
| VOCs | ✓ | HCL |
| SVOCs | ✓ | |
| Total Lead | ✓ | |

Signed _____

Notes:

Former Tidewater Site
Seattle, WA

Water Quality Meter S/N: _____

Date: 05/23/13

Location: MW5
Name of Sampler: D. Hinspeiger
Weather: _____

Depth to Water: 10.90
Depth to Bottom: _____

Sample Depth: _____

QA/QC
MS/MSD _____
Duplicate _____
Blank _____

Sample IDs (GW-mmddyy-AA-XXX)

*A Samplers Initials*
*x Location ID*

GW- 052313 - NH - MW5

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

_____

Sample Method: Low Flow
Purge Start: 15:06
Sample Time: 16:00

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 15:11 | 5.84 | 99.9 | 123.0 | 1.68 | 13.37 | -98 | 0.0 | 0.4 | | 0.100 | 10.90 | CLEAR |
| 15:16 | 5.65 | 99.9 | 111.0 | 0.67 | 13.45 | -89 | 0.0 | 0.4 | | 0.100 | 10.90 | " |
| 15:21 | 5.71 | 99.9 | 108.0 | 0.65 | 13.45 | -82 | 0.0 | 0.4 | | 0.100 | 10.90 | " |
| 15:26 | 5.73 | 99.9 | 88.9 | 0.61 | 13.59 | -85 | 0.0 | 0.4 | | 0.100 | 10.90 | " |
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**Analysis:**
**Groundwater**

| | | Preservative |
|---|---|---|
| GRO | ✓ | HCL |
| DRO | ✓ | HCL |
| VOCs | ✓ | HCL |
| SVOCs | ✓ | |
| Total Lead | ✓ | |

Signed _____

Notes:

Former Tidewater Site
Seattle, WA

Water Quality Meter S/N: _____

Date: 05/23/13

Location: MW2
Name of Sampler: N. Hinspeter
Weather: RAIN

Depth to Water: 11.01
Depth to Bottom: _____

Sample Depth: _____

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- 052313 - NH - MW2

Sample Method: LOW FLOW
Purge Start: 13:52
Sample Time: 14:30

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 13:59 | 5.79 | 99.9 | -5.0 | 3.31 | 13.73 | -136 | 0.0 | 0.4 | | 0.100 | 11.19 | TURBID |
| 14:04 | 5.79 | 99.9 | -5.0 | 0.68 | 13.66 | -146 | 0.0 | 0.4 | | 0.100 | 11.22 | " |
| 14:09 | 5.86 | 99.9 | -5.0 | 0.67 | 13.71 | -141 | 0.0 | 0.4 | | 0.100 | 11.25 | " |
| 14:14 | 5.83 | 99.9 | -5.0 | 0.65 | 13.90 | -146 | 0.0 | 0.4 | | 0.100 | 11.28 | " |
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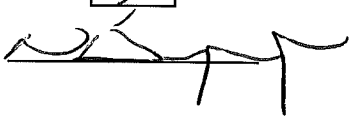
**Analysis:**

| **Groundwater** | | **Preservative** |
|---|---|---|
| GRO | ✓ | HCL |
| DRO | ✓ | HCL |
| VOCs | ✓ | HCL |
| SVOCs | ✓ | |
| Total Lead | ✓ | |

Signed 

Notes:

Former Tidewater Site
Seattle, WA

Water Quality Meter S/N: _____

Date: 05/23/13

11:35

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

Depth to Water: 10.86
Depth to Bottom: _____

Sample Depth: _____

QA/QC
MS/MSD _____
Duplicate ✓
Blank _____

Sample IDs (GW-mmddyy-AA-XXX)

*A Samplers Initials*
*x Location ID*

GW- 052313-NH-FD1

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

GW-052313-NH-FD1

Sample Method: Low Flow
Purge Start: 11:08
Sample Time: _____

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11:17 | 5.62 | 0.090 | 33.2 | 1.56 | 14.20 | -145 | 0.0 | 1.26 | | 0.150 | 11.00 | CLEAR |
| 11:22 | 5.69 | 0.090 | 38.4 | 0.72 | 14.46 | -153 | 0.0 | 0.4 | | 0.150 | 11.02 | " |
| 11:27 | 5.73 | 0.090 | 33.6 | 0.0 | 14.71 | -153 | 0.0 | 0.4 | | 0.150 | 11.02 | " |
| 11:32 | 5.75 | 0.090 | 31.0 | 0.0 | 14.88 | -154 | 0.0 | 0.4 | | 0.150 | 11.04 | |
| 11:37 | 5.77 | 0.090 | 28.3 | 0.0 | 14.92 | -161 | 0.0 | 0.4 | | 0.150 | 11.06 | |
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**Analysis:**

| **Groundwater** | | **Preservative** |
|---|---|---|
| GRO | ✓ | HCL |
| DRO | ✓ | HCL |
| VOCs | ✓ | HCL |
| SVOCs | ✓ | |
| Total Lead | ✓ | |

Signed _____

Notes:

Former Tidewater Site
Seattle, WA

Water Quality Meter S/N: _____

Date: 05/23/13

Location: MW 1
Name of Sampler: NH/JR
Weather: CLEAR

Depth to Water: 11.01
Depth to Bottom: _____

Sample Depth: _____

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- 052313 - NH - MW 1

Sample Method: LOW FLOW
Purge Start: 9:37
Sample Time: 10:30

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9:46 | 5.30 | 0.096 | -5.0 | 1.06 | 14.11 | -140 | 0.0 | 0.3 | | 0.150 | 11.39 | TURBID |
| 9:51 | 5.45 | 0.091 | -5.0 | 0.61 | 14.25 | -138 | 0.0 | 0.3 | | 0.150 | 11.32 | " " |
| 9:56 | 5.43 | 0.096 | 811.0 | 0.45 | 14.52 | -143 | 0.0 | 0.3 | | 0.186 | 11.10 | " " |
| 10:01 | 5.48 | 0.090 | 5.0 | 0.0 | 14.10 | -127 | 0.0 | 0.3 | | 0.200 | 11.31 | " " |
| 10:06 | 5.52 | 0.090 | -5.0 | 0.0 | 14.12 | -132 | 0.0 | 0.3 | | 0.156 | 11.39 | " " |
| 10:11 | 5.55 | 0.090 | -5.0 | 0.0 | 14.15 | -136 | 0.0 | 0.3 | | 0.156 | 11.41 | " " |
| | | | | | | | | | | | | |
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**Analysis:**
**Groundwater**
GRO
DRO
VOCs
SVOCs
Total Lead

| |
|---|
| ✓ |
| ✓ |
| ✓ |
| ✓ |
| ✓ |

**Preservative**
HCL
HCL
HCL

Signed _____

Notes:

Former Tidewater Site
Seattle, WA

Water Quality Meter S/N: 1113788

Date: 5.23.13

Location: MW-3
Name of Sampler: SR/NH
Weather: Cloudy

Depth to Water: 11.00
Depth to Bottom: _____

Sample Depth: _____

QA/QC
MS/MSD _____
Duplicate _____
Blank _____

Sample IDs (GW-mmddyy-AA-XXX)

*A Samplers Initials*
*x Location ID*

GW- 052313 NH- MW-3

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

_____

Sample Method: _____
Purge Start: 1445
Sample Time: 1520

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1450 | 5.95 | .662 | ~5 | 2.35 | 12.99 | -124 | 0.0 | .42 | | | 11.00 | |
| 1500 | 5.93 | .658 | 850 | 1.69 | 13.11 | -118 | 0.0 | 4.2 | | | 11.21 | |
| 1505 | 5.91 | .655 | 316 | 0.0 | 13.05 | -123 | 0.0 | .42 | | | 11.22 | |
| 1510 | 5.90 | .650 | 134 | 0.0 | 13.01 | -127 | 0.0 | .42 | | | 11.24 | |
| 1520 | | | | | | | | | | | | Sample |
| | | | | | | | | | | | | |
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**Analysis:**

| **Groundwater** | | **Preservative** |
|---|---|---|
| GRO | | HCL |
| DRO | | HCL |
| VOCs | | HCL |
| SVOCs | | |
| Total Lead | | |

Signed _____

Notes:

Former Tidewater Site
Seattle, WA

Water Quality Meter S/N: 1113788

Date: 05/23/13

Location: MW 4
Name of Sampler: SR
Weather: CLEAR

Depth to Water: 11.35
Depth to Bottom: _____

Sample Depth: _____

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- 052313 - NH - MW-4

Sample Method: _____
Purge Start: 1115
Sample Time: 1145

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1117 | 5.43 | .769 | -5.0 | 2.40 | 13.56 | -156 | 0.0 | .49 | | .150 | 1144 | |
| 1122 | 5.64 | .770 | -5.0 | 0.00 | 13.80 | -162 | 0.0 | .49 | | .150 | 1145 | |
| 1127 | 5.76 | .769 | -5.0 | 0.00 | 14.41 | -150 | 0.0 | .49 | | .150 | 1144 | |
| 1132 | 5.80 | .767 | .76 | 0.00 | 14.26 | -149 | 0.0 | .49 | | .150 | 1146 | |
| 1137 | 5.82 | .766 | .76 | 0.00 | 14.32 | -149 | 0.0 | .49 | | .150 | 1145 | |
| 1145 | | | | | | | | | | | | Sample |
| | | | | | | | | | | | 1146 | Following Sampling |

**Analysis:**

| **Groundwater** | | **Preservative** |
|---|---|---|
| GRO | ✓ | HCL |
| DRO | ✓ | HCL |
| VOCs | ✓ | HCL |
| SVOCs | ✓ | |
| Total Lead | ✓ | |

Signed _____

Notes:

# CHAIN OF CUSTODY RECORD

COC NO.: 37484

PAGE 1 OF 1

(See Reverse Side for Instructions)


CONESTOGA-ROVERS & ASSOCIATES

Address: 1117 TACOMA AVE. S. TACOMA, WA. 98402

Phone: 253.573.1218 Fax: 253.573.1663


| | | | |
|---|---|---|---|
| **Project No/ Phase/Task Code:** 061992-2013.1 | **Laboratory Name:** LANCASTER | **Lab Location:** LANCASTER, PA | **SSOW ID:** |
| **Project Name:** TIDEWATER - MLK SEATTLE | **Lab Contact:** | **Lab Quote No:** | **Cooler No:** |
| **Project Location:** SEATTLE, WA. | | | **Carrier:** |
| **Chemistry Contact:** J. CLOUD / M. DAVIS | | | **Airbill No:** |
| **Sampler(s):** N. HINSPERGER | | | **Date Shipped:** |

| Item | Sample Identification (Containers for each sample may be combined on one line) | Date (mm/dd/yy) | Time (hh:mm) | Sample Type: Matrix Code (see back of COC) | Sample Type: Grab (G) or Comp (C) | Container Quantity & Preservation: Unpreserved | Hydrochloric Acid (HCl) | Nitric Acid ($HNO_3$) | Sulfuric Acid ($H_2SO_4$) | Sodium Hydroxide (NaOH) | Methanol/Water (Soil VOC) | EnCores 3x5-g, 1x25-g | Other: | Total Containers/Sample | Analysis Requested: TPH D | TPH g | SVOC's | VOC's | TOTAL LEAD | MS/MSD Request | Comments/ Special Instructions: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | GW-052313-NH-MW4 | 05/23/13 | 11:45 | WG | G | | | | | | | | | 11 | X | X | X | X | X | | |
| 2 | GW-052313-NH-MW3 | 05/23/13 | 15:20 | WG | G | | | | | | | | | 11 | X | X | X | X | X | | |
| 3 | GW-052313-NH-MW1 | 05/23/13 | 10:30 | WG | G | | | | | | | | | 11 | X | X | X | X | X | | |
| 4 | GW-052313-NH-MW8 | 05/23/13 | 12:30 | WG | G | | | | | | | | | 11 | X | X | X | X | X | | |
| 5 | GW-052313-NH-FD1 | 05/23/13 | | WG | G | | | | | | | | | 11 | X | X | X | X | X | | |
| 6 | GW-052313-NH-MW2 | 05/23/13 | 14:30 | WG | G | | | | | | | | | 11 | X | X | X | X | X | | |
| 7 | GW-052313-NH-MW5 | 05/23/13 | 16:00 | WG | G | | | | | | | | | 11 | X | X | X | X | X | | |
| 8 | GW-052413-NH-MW4 | 05/24/13 | 9:30 | WG | G | | | | | | | | | 22 | X | X | X | X | X | X | MS/MSD |
| 9 | GW-052413-NH-MW10 | 05/24/13 | 10:30 | WG | G | | | | | | | | | 10 | X | X | X | X | X | | |
| 10 | GW-052413-NH-MW7 | 05/24/13 | 11:30 | WG | G | | | | | | | | | 10 | X | X | X | X | X | | |
| 11 | GW-052413-NH-MW6 | 05/24/13 | 12:30 | WG | G | | | | | | | | | 10 | X | X | X | X | X | | |
| 12 | TRIP BLANKS | | | | | | | | | | | | | 4 | | | | X | | | |
| 13 | | | | | | | | | | | | | | | | | | | | | |
| 14 | | | | | | | | | | | | | | | | | | | | | |
| 15 | | | | | | | | | | | | | | | | | | | | | |

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

☐ 1 Day ☐ 2 Days ☐ 3 Days ☐ 1 Week ☐ 2 Week ☒ Other: STANDARD

**Total Number of Containers:** 133

**All Samples in Cooler must be on COC**

**Notes/ Special Requirements:**

| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |
|---|---|---|---|---|---|---|---|
| 1. | CRA | 05/24/13 | 16:00 | 1. | | | |
| 2. | | | | 2. | | | |
| 3. | | | | 3. | | | |

*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)

## Field Calibration Sheet: HORIBA U-20XD series Multimeter

pH, Conductivity, Turbidity, Dissolved Oxygen, Temperature, Salinity, Total Dissolved Solids, and ORP

| | | | | | |
|---|---|---|---|---|---|
| DATE | | | | TIME | |
| PROJECT NAME | | | | | |
| PROJECT # | | PHASE | | TASK | |
| Unit Control # | | | | | |

PAGE _____ of _____

Auto Calibration

1 Place some of the pH 4 standard AutoCal solution into the calibration cup.
2 Wash the sensors in distilled water several times
3 Immerse the sensors into the solution and wait several minutes for the reading to stabilize.
4 Press the **CAL** button once while in the pH measurement mode. Look for the **AUTO** and **CAL** functions to appear in the LCD display
5 Press **ENT** to start the auto calibration. The sensors must remain within the calibration solution during this time.
The auto cal process is complete when **END** is displayed
6 Press **MEAS** to return to measurement mode
7 Cycle through the 5 parameters being calibrated and record the readings in the following table:
8 Repeat as necessary

| | AUTO 4 CALIBRATION | | | | |
|---|---|---|---|---|---|
| Time | pH | Cond | Turb | DO | Temp |
| | 3.83 | 0.450 | 1.9 | 10.06 | 17.72 |
| | | | | | |
| | | | | | |
| | | | | | |

Manual 2 point pH calibration

1 After the AutoCal procedure, rinse the sensors with distilled water several times.
2 Place pH 7.0 buffer solution into another calibration cup. If only one calibration cup is available, completely wash the cup with distilled water several times.
3 Immerse the sensor into the solution and wait several minutes for the reading to stabilize.
4 Press the **CAL** button twice while in the pH measurement mode. Look for the **MAN, ZERO** and **CAL** functions to appear in the LCD display
5 Use the **UP/DOWN** keys to adjust the pH value for temperature variations using the table at the end of this sheet
6 Press the **ENT** key to start the calibration. The measured value and the **DATA IN** will blink until the calibration finishes.
7 When the values stop flashing record the pH reading being displayed.
8 Remove the sensors and rinse several tims with distilled water.
9 Place pH 10.0 buffer solution into another calibration cup. If only one calibration cup is available, completely wash the cup with distilled water several times.
10 Immerse the sensors into the solution and wait several minutes for the reading to stabilize.
11 Press the **CAL** button once. Look for the **MAN, SPAN** and **CAL** functions to appear in the LCD display
12 Use the **UP/DOWN** keys to adjust the pH value for temperature variations using the table at the end of this sheet
13 Press the **ENT** key to start the calibration. The measured value and the **DATA IN** will blink until the calibration finishes.
14 When the values stop flashing record the pH reading being displayed.
15 Press the **MEAS** button to return to the measurement mode.

| pH Calibration Buffer Temperature Adjustment Table | | | | |
|---|---|---|---|---|
| Temperature Celsius | pH 4 Phthalate | pH 7 N. phosphat | pH 9 Borate | pH 10 |
| 0 | 4.01 | 6.98 | 9.46 | |
| 5 | 4.01 | 6.95 | 9.39 | |
| 10 | 4.00 | 6.92 | 9.33 | 10.18 |
| 15 | 4.00 | 6.90 | 9.27 | 10.14 |
| 20 | 4.00 | 6.88 | 9.22 | 10.06 |
| 25 | 4.01 | 6.86 | 9.18 | 10.00 |
| 30 | 4.01 | 6.85 | 9.14 | 9.95 |
| 35 | 4.02 | 6.84 | 9.10 | 9.91 |
| 40 | 4.03 | 6.84 | 9.07 | 9.85 |
| 45 | 4.04 | 6.84 | 9.04 | |

| | MANUAL CALIBRATION | | | |
|---|---|---|---|---|
| Time | pH 7 | pH 9 | pH 10 | Temp |
| | | | | |
| | | | | |
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### Midday and as needed calibration check record

| Time | Temperature | pH 4 | pH 7 | pH 9 | pH 10 | Initials |
|---|---|---|---|---|---|---|
| | | | | | | |
| | | | | | | |
| | | | | | | |

SIGNATURE [signature] NAME N. Hinspeger DATE 6/23/13

ATTACHMENT B

LABORATORY ANALYTICAL REPORT

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

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

June 12, 2013

Project: 301233 Tidewater Seattle

Submittal Date: 05/25/2013
Group Number: 1392664
PO Number: 4058681
State of Sample Origin: WA

| Client Sample Description | Lancaster Labs (LLI) # |
|---|---|
| GW-052313-NH-MW4 Grab Groundwater | 7071406 |
| GW-052313-NH-MW3 Grab Groundwater | 7071407 |
| GW-052313-NH-MW1 Grab Groundwater | 7071408 |
| GW-052313-NH-MW8 Grab Groundwater | 7071409 |
| GW-052313-NH-FD1 Grab Groundwater | 7071410 |
| GW-052313-NH-MW2 Grab Groundwater | 7071411 |
| GW-052313-NH-MW5 Grab Groundwater | 7071412 |
| GW-052413-NH-MW9 Grab Groundwater | 7071413 |
| GW-052413-NH-MW9 MS Grab Groundwater | 7071414 |
| GW-052413-NH-MW9 MSD Grab Groundwater | 7071415 |
| GW-052413-NH-MW10 Grab Groundwater | 7071417 |
| GW-052413-NH-MW7 Grab Groundwater | 7071418 |
| GW-052413-NH-MW6 Grab Groundwater | 7071419 |
| TRIP BLANK Water | 7071420 |

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 | Chevron c/o CRA | Attn: Report Contact |

COPY TO

Respectfully Submitted,

Jill M. Parker
Senior Specialist

(717) 556-7262

**Sample Description:** GW-052313-NH-MW4 Grab Groundwater
MLK Tidewater Site
2800 Martin Luther King Jr Way - Seattle, WA

**LLI Sample #** WW 7071406
**LLI Group #** 1392664
**Account #** 13534

**Project Name: 301233 Tidewater Seattle**

Collected: 05/23/2013 11:45 by NH

Submitted: 05/25/2013 09:15
Reported: 06/12/2013 16:06

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

TSMW4

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

**Sample Description:** GW-052313-NH-MW4 Grab Groundwater
MLK Tidewater Site
2800 Martin Luther King Jr Way - Seattle, WA

**LLI Sample #** WW 7071406
**LLI Group #** 1392664
**Account #** 13534

**Project Name: 301233 Tidewater Seattle**

Collected: 05/23/2013 11:45 by NH

Submitted: 05/25/2013 09:15
Reported: 06/12/2013 16:06

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

TSMW4

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | **ug/l** | **ug/l** | |
| 10335 | 1,1,2,2-Tetrachloroethane | 79-34-5 | N.D. | 1 | 1 |
| 10335 | Tetrachloroethene | 127-18-4 | N.D. | 0.8 | 1 |
| 10335 | Toluene | 108-88-3 | N.D. | 0.5 | 1 |
| 10335 | 1,2,3-Trichlorobenzene | 87-61-6 | N.D. | 1 | 1 |
| 10335 | 1,2,4-Trichlorobenzene | 120-82-1 | N.D. | 1 | 1 |
| 10335 | 1,1,1-Trichloroethane | 71-55-6 | N.D. | 0.8 | 1 |
| 10335 | 1,1,2-Trichloroethane | 79-00-5 | N.D. | 0.8 | 1 |
| 10335 | Trichloroethene | 79-01-6 | N.D. | 1 | 1 |
| 10335 | Trichlorofluoromethane | 75-69-4 | N.D. | 2 | 1 |
| 10335 | 1,2,3-Trichloropropane | 96-18-4 | N.D. | 1 | 1 |
| 10335 | 1,2,4-Trimethylbenzene | 95-63-6 | N.D. | 1 | 1 |
| 10335 | 1,3,5-Trimethylbenzene | 108-67-8 | N.D. | 1 | 1 |
| 10335 | Vinyl Chloride | 75-01-4 | N.D. | 1 | 1 |
| 10335 | m+p-Xylene | 179601-23-1 | N.D. | 0.5 | 1 |
| 10335 | o-Xylene | 95-47-6 | N.D. | 0.5 | 1 |
| 10335 | Xylene (Total) | 1330-20-7 | N.D. | 0.5 | 1 |
| **GC/MS Semivolatiles** | **SW-846 8270C SIM** | | **ug/l** | **ug/l** | |
| 08357 | Benzo(a)anthracene | 56-55-3 | N.D. | 0.010 | 1 |
| 08357 | Benzo(a)pyrene | 50-32-8 | N.D. | 0.010 | 1 |
| 08357 | Benzo(b)fluoranthene | 205-99-2 | N.D. | 0.010 | 1 |
| 08357 | Benzo(k)fluoranthene | 207-08-9 | N.D. | 0.010 | 1 |
| 08357 | Chrysene | 218-01-9 | N.D. | 0.010 | 1 |
| 08357 | Dibenz(a,h)anthracene | 53-70-3 | N.D. | 0.010 | 1 |
| 08357 | Indeno(1,2,3-cd)pyrene | 193-39-5 | N.D. | 0.010 | 1 |
| 08357 | 1-Methylnaphthalene | 90-12-0 | N.D. | 0.010 | 1 |
| 08357 | 2-Methylnaphthalene | 91-57-6 | N.D. | 0.010 | 1 |
| 08357 | Naphthalene | 91-20-3 | N.D. | 0.030 | 1 |
| **GC Volatiles** | **ECY 97-602 NWTPH-Gx** | | **ug/l** | **ug/l** | |
| 08273 | NWTPH-Gx water C7-C12 | n.a. | N.D. | 50 | 1 |
| **GC Petroleum Hydrocarbons w/Si** | **ECY 97-602 NWTPH-Dx modified** | | **ug/l** | **ug/l** | |
| 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 |
| **Metals** | **SW-846 6020** | | **ug/l** | **ug/l** | |
| 06035 | Lead | 7439-92-1 | 0.74 | 0.073 | 1 |

## General Sample Comments

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

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

**Sample Description:** GW-052313-NH-MW4 Grab Groundwater
MLK Tidewater Site
2800 Martin Luther King Jr Way - Seattle, WA

**LLI Sample # WW 7071406**
**LLI Group # 1392664**
**Account # 13534**

**Project Name: 301233 Tidewater Seattle**

Collected: 05/23/2013 11:45 by NH

Submitted: 05/25/2013 09:15
Reported: 06/12/2013 16:06

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

TSMW4

## 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 | Y131492AA | 05/30/2013 00:14 | Christopher G Torres | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | Y131492AA | 05/30/2013 00:14 | Christopher G Torres | 1 |
| 08357 | PAHs in waters by SIM | SW-846 8270C SIM | 1 | 13149WAB026 | 06/11/2013 01:55 | Holly Berry | 1 |
| 10470 | BNA Water Extraction (SIM) | SW-846 3510C | 1 | 13149WAB026 | 05/29/2013 16:00 | David S Schrum | 1 |
| 08273 | NWTPH-Gx water C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 13156C07A | 06/06/2013 20:54 | Catherine J Schwarz | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 13156C07A | 06/06/2013 20:54 | Catherine J Schwarz | 1 |
| 02211 | NWTPH-Dx water w/Si Gel | ECY 97-602 NWTPH-Dx modified | 1 | 131500021A | 06/07/2013 10:54 | Christine E Dolman | 1 |
| 02135 | Extraction - DRO Water Special | ECY 97-602 NWTPH-Dx 06/97 | 1 | 131500021A | 05/31/2013 09:00 | Olivia Arosemena | 1 |
| 06035 | Lead | SW-846 6020 | 1 | 131546050002A | 06/05/2013 04:16 | Choon Y Tian | 1 |
| 06050 | ICP/MS SW-846 Water Digest | SW-846 3020A | 1 | 131546050002 | 06/04/2013 12:00 | James L Mertz | 1 |

**Sample Description:** GW-052313-NH-MW3 Grab Groundwater
MLK Tidewater Site
2800 Martin Luther King Jr Way - Seattle, WA

**LLI Sample #** WW 7071407
**LLI Group #** 1392664
**Account #** 13534

**Project Name: 301233 Tidewater Seattle**

Collected: 05/23/2013 15:20 by NH

Submitted: 05/25/2013 09:15
Reported: 06/12/2013 16:06

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

TSMW3

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/l | ug/l | |
| 10335 | Acetone | 67-64-1 | N.D. | 6 | 1 |
| 10335 | Benzene | 71-43-2 | N.D. | 0.5 | 1 |
| 10335 | Bromobenzene | 108-86-1 | N.D. | 1 | 1 |
| 10335 | Bromochloromethane | 74-97-5 | N.D. | 1 | 1 |
| 10335 | Bromodichloromethane | 75-27-4 | N.D. | 1 | 1 |
| 10335 | Bromoform | 75-25-2 | N.D. | 1 | 1 |
| 10335 | Bromomethane | 74-83-9 | N.D. | 1 | 1 |
| 10335 | 2-Butanone | 78-93-3 | 4 | 3 | 1 |
| 10335 | n-Butylbenzene | 104-51-8 | 14 | 1 | 1 |
| 10335 | sec-Butylbenzene | 135-98-8 | 11 | 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 | 6 | 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 | 45 | 1 | 1 |
| 10335 | p-Isopropyltoluene | 99-87-6 | 5 | 1 | 1 |
| 10335 | Methyl Tertiary Butyl Ether | 1634-04-4 | N.D. | 0.5 | 1 |
| 10335 | 4-Methyl-2-pentanone | 108-10-1 | N.D. | 3 | 1 |
| 10335 | Methylene Chloride | 75-09-2 | N.D. | 2 | 1 |
| 10335 | Naphthalene | 91-20-3 | 82 | 1 | 1 |
| 10335 | n-Propylbenzene | 103-65-1 | 130 | 1 | 1 |
| 10335 | Styrene | 100-42-5 | N.D. | 1 | 1 |
| 10335 | 1,1,1,2-Tetrachloroethane | 630-20-6 | N.D. | 1 | 1 |

**Sample Description:** GW-052313-NH-MW3 Grab Groundwater
MLK Tidewater Site
2800 Martin Luther King Jr Way - Seattle, WA

**LLI Sample #** WW 7071407
**LLI Group #** 1392664
**Account #** 13534

**Project Name: 301233 Tidewater Seattle**

Collected: 05/23/2013 15:20 by NH

Submitted: 05/25/2013 09:15
Reported: 06/12/2013 16:06

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

TSMW3

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | **ug/l** | **ug/l** | |
| 10335 | 1,1,2,2-Tetrachloroethane | 79-34-5 | N.D. | 1 | 1 |
| 10335 | Tetrachloroethene | 127-18-4 | N.D. | 0.8 | 1 |
| 10335 | Toluene | 108-88-3 | N.D. | 0.5 | 1 |
| 10335 | 1,2,3-Trichlorobenzene | 87-61-6 | N.D. | 1 | 1 |
| 10335 | 1,2,4-Trichlorobenzene | 120-82-1 | N.D. | 1 | 1 |
| 10335 | 1,1,1-Trichloroethane | 71-55-6 | N.D. | 0.8 | 1 |
| 10335 | 1,1,2-Trichloroethane | 79-00-5 | N.D. | 0.8 | 1 |
| 10335 | Trichloroethene | 79-01-6 | N.D. | 1 | 1 |
| 10335 | Trichlorofluoromethane | 75-69-4 | N.D. | 2 | 1 |
| 10335 | 1,2,3-Trichloropropane | 96-18-4 | N.D. | 1 | 1 |
| 10335 | 1,2,4-Trimethylbenzene | 95-63-6 | 1,200 | 10 | 10 |
| 10335 | 1,3,5-Trimethylbenzene | 108-67-8 | 170 | 1 | 1 |
| 10335 | Vinyl Chloride | 75-01-4 | 2 | 1 | 1 |
| 10335 | m+p-Xylene | 179601-23-1 | 500 | 0.5 | 1 |
| 10335 | o-Xylene | 95-47-6 | 42 | 0.5 | 1 |
| 10335 | Xylene (Total) | 1330-20-7 | 550 | 0.5 | 1 |
| **GC/MS Semivolatiles** | **SW-846 8270C SIM** | | **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 | 8.5 | 0.011 | 1 |
| 08357 | 2-Methylnaphthalene | 91-57-6 | 10 | 0.011 | 1 |
| 08357 | Naphthalene | 91-20-3 | 46 | 0.32 | 10 |
| **GC Volatiles** | **ECY 97-602 NWTPH-Gx** | | **ug/l** | **ug/l** | |
| 08273 | NWTPH-Gx water C7-C12 | n.a. | 5,800 | 250 | 5 |
| **GC Petroleum Hydrocarbons w/Si** | **ECY 97-602 NWTPH-Dx modified** | | **ug/l** | **ug/l** | |
| 02211 | DRO C12-C24 w/Si Gel | n.a. | 240 | 29 | 1 |
| 02211 | HRO C24-C40 w/Si Gel | n.a. | N.D. | 67 | 1 |
| **Metals** | **SW-846 6020** | | **ug/l** | **ug/l** | |
| 06035 | Lead | 7439-92-1 | 2.6 | 0.073 | 1 |

## General Sample Comments

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

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

**Sample Description:** GW-052313-NH-MW3 Grab Groundwater
MLK Tidewater Site
2800 Martin Luther King Jr Way - Seattle, WA

**LLI Sample #** WW 7071407
**LLI Group #** 1392664
**Account #** 13534

**Project Name: 301233 Tidewater Seattle**

Collected: 05/23/2013 15:20 by NH

Submitted: 05/25/2013 09:15
Reported: 06/12/2013 16:06

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

TSMW3

## 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 | Y131492AA | 05/30/2013 00:35 | Christopher G Torres | 1 |
| 10335 | 8260 Solvent Compound - Water | SW-846 8260B | 1 | Y131492AA | 05/30/2013 00:56 | Christopher G Torres | 10 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | Y131492AA | 05/30/2013 00:35 | Christopher G Torres | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 2 | Y131492AA | 05/30/2013 00:56 | Christopher G Torres | 10 |
| 08357 | PAHs in waters by SIM | SW-846 8270C SIM | 1 | 13149WAB026 | 06/11/2013 02:23 | Holly Berry | 1 |
| 08357 | PAHs in waters by SIM | SW-846 8270C SIM | 1 | 13149WAB026 | 06/11/2013 13:46 | Chad A Moline | 10 |
| 10470 | BNA Water Extraction (SIM) | SW-846 3510C | 1 | 13149WAB026 | 05/29/2013 16:00 | David S Schrum | 1 |
| 08273 | NWTPH-Gx water C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 13156C07A | 06/06/2013 22:36 | Catherine J Schwarz | 5 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 13156C07A | 06/06/2013 22:36 | Catherine J Schwarz | 5 |
| 02211 | NWTPH-Dx water w/Si Gel | ECY 97-602 NWTPH-Dx modified | 1 | 131500021A | 06/07/2013 11:16 | Christine E Dolman | 1 |
| 02135 | Extraction - DRO Water Special | ECY 97-602 NWTPH-Dx 06/97 | 1 | 131500021A | 05/31/2013 09:00 | Olivia Arosemena | 1 |
| 06035 | Lead | SW-846 6020 | 1 | 131546050002A | 06/05/2013 04:18 | Choon Y Tian | 1 |
| 06050 | ICP/MS SW-846 Water Digest | SW-846 3020A | 1 | 131546050002 | 06/04/2013 12:00 | James L Mertz | 1 |

**Sample Description:** GW-052313-NH-MW1 Grab Groundwater
MLK Tidewater Site
2800 Martin Luther King Jr Way - Seattle, WA

**LLI Sample #** WW 7071408
**LLI Group #** 1392664
**Account #** 13534

**Project Name: 301233 Tidewater Seattle**

Collected: 05/23/2013 10:30 by NH

Submitted: 05/25/2013 09:15
Reported: 06/12/2013 16:06

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

TSMW1

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/l | ug/l | |
| 10335 | Acetone | 67-64-1 | N.D. | 6 | 1 |
| 10335 | Benzene | 71-43-2 | N.D. | 0.5 | 1 |
| 10335 | Bromobenzene | 108-86-1 | N.D. | 1 | 1 |
| 10335 | Bromochloromethane | 74-97-5 | N.D. | 1 | 1 |
| 10335 | Bromodichloromethane | 75-27-4 | N.D. | 1 | 1 |
| 10335 | Bromoform | 75-25-2 | N.D. | 1 | 1 |
| 10335 | Bromomethane | 74-83-9 | N.D. | 1 | 1 |
| 10335 | 2-Butanone | 78-93-3 | N.D. | 3 | 1 |
| 10335 | n-Butylbenzene | 104-51-8 | N.D. | 1 | 1 |
| 10335 | sec-Butylbenzene | 135-98-8 | N.D. | 1 | 1 |
| 10335 | tert-Butylbenzene | 98-06-6 | N.D. | 1 | 1 |
| 10335 | Carbon Disulfide | 75-15-0 | N.D. | 1 | 1 |
| 10335 | Carbon Tetrachloride | 56-23-5 | N.D. | 1 | 1 |
| 10335 | Chlorobenzene | 108-90-7 | N.D. | 0.8 | 1 |
| 10335 | Chloroethane | 75-00-3 | N.D. | 1 | 1 |
| 10335 | Chloroform | 67-66-3 | N.D. | 0.8 | 1 |
| 10335 | Chloromethane | 74-87-3 | N.D. | 1 | 1 |
| 10335 | 2-Chlorotoluene | 95-49-8 | N.D. | 1 | 1 |
| 10335 | 4-Chlorotoluene | 106-43-4 | N.D. | 1 | 1 |
| 10335 | 1,2-Dibromo-3-chloropropane | 96-12-8 | N.D. | 2 | 1 |
| 10335 | Dibromochloromethane | 124-48-1 | N.D. | 1 | 1 |
| 10335 | 1,2-Dibromoethane | 106-93-4 | N.D. | 0.5 | 1 |
| 10335 | Dibromomethane | 74-95-3 | N.D. | 1 | 1 |
| 10335 | 1,2-Dichlorobenzene | 95-50-1 | N.D. | 1 | 1 |
| 10335 | 1,3-Dichlorobenzene | 541-73-1 | N.D. | 1 | 1 |
| 10335 | 1,4-Dichlorobenzene | 106-46-7 | N.D. | 1 | 1 |
| 10335 | Dichlorodifluoromethane | 75-71-8 | N.D. | 2 | 1 |
| 10335 | 1,1-Dichloroethane | 75-34-3 | N.D. | 1 | 1 |
| 10335 | 1,2-Dichloroethane | 107-06-2 | N.D. | 0.5 | 1 |
| 10335 | 1,1-Dichloroethene | 75-35-4 | N.D. | 0.8 | 1 |
| 10335 | cis-1,2-Dichloroethene | 156-59-2 | 23 | 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-052313-NH-MW1 Grab Groundwater
MLK Tidewater Site
2800 Martin Luther King Jr Way - Seattle, WA

**LLI Sample #** WW 7071408
**LLI Group #** 1392664
**Account #** 13534

**Project Name: 301233 Tidewater Seattle**

Collected: 05/23/2013 10:30 by NH

Submitted: 05/25/2013 09:15
Reported: 06/12/2013 16:06

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

TSMW1

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | **ug/l** | **ug/l** | |
| 10335 | 1,1,2,2-Tetrachloroethane | 79-34-5 | N.D. | 1 | 1 |
| 10335 | Tetrachloroethene | 127-18-4 | 10 | 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 | 9 | 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 |
| **GC/MS Semivolatiles** | **SW-846 8270C SIM** | | **ug/l** | **ug/l** | |
| 08357 | Benzo(a)anthracene | 56-55-3 | N.D. | 0.012 | 1 |
| 08357 | Benzo(a)pyrene | 50-32-8 | N.D. | 0.012 | 1 |
| 08357 | Benzo(b)fluoranthene | 205-99-2 | N.D. | 0.012 | 1 |
| 08357 | Benzo(k)fluoranthene | 207-08-9 | N.D. | 0.012 | 1 |
| 08357 | Chrysene | 218-01-9 | N.D. | 0.012 | 1 |
| 08357 | Dibenz(a,h)anthracene | 53-70-3 | N.D. | 0.012 | 1 |
| 08357 | Indeno(1,2,3-cd)pyrene | 193-39-5 | N.D. | 0.012 | 1 |
| 08357 | 1-Methylnaphthalene | 90-12-0 | N.D. | 0.012 | 1 |
| 08357 | 2-Methylnaphthalene | 91-57-6 | N.D. | 0.012 | 1 |
| 08357 | Naphthalene | 91-20-3 | N.D. | 0.035 | 1 |
| **GC Volatiles** | **ECY 97-602 NWTPH-Gx** | | **ug/l** | **ug/l** | |
| 08273 | NWTPH-Gx water C7-C12 | n.a. | N.D. | 50 | 1 |
| **GC Petroleum Hydrocarbons w/Si** | **ECY 97-602 NWTPH-Dx modified** | | **ug/l** | **ug/l** | |
| 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 |
| **Metals** | **SW-846 6020** | | **ug/l** | **ug/l** | |
| 06035 | Lead | 7439-92-1 | 1.7 | 0.073 | 1 |

## General Sample Comments

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

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

**Sample Description:** GW-052313-NH-MW1 Grab Groundwater
MLK Tidewater Site
2800 Martin Luther King Jr Way - Seattle, WA

**LLI Sample #** WW 7071408
**LLI Group #** 1392664
**Account #** 13534

**Project Name: 301233 Tidewater Seattle**

Collected: 05/23/2013 10:30 by NH

Submitted: 05/25/2013 09:15
Reported: 06/12/2013 16:06

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

TSMW1

## 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 | Y131492AA | 05/30/2013 01:17 | Christopher G Torres | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | Y131492AA | 05/30/2013 01:17 | Christopher G Torres | 1 |
| 08357 | PAHs in waters by SIM | SW-846 8270C SIM | 1 | 13149WAB026 | 06/11/2013 02:50 | Holly Berry | 1 |
| 10470 | BNA Water Extraction (SIM) | SW-846 3510C | 1 | 13149WAB026 | 05/29/2013 16:00 | David S Schrum | 1 |
| 08273 | NWTPH-Gx water C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 13156C07A | 06/06/2013 21:19 | Catherine J Schwarz | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 13156C07A | 06/06/2013 21:19 | Catherine J Schwarz | 1 |
| 02211 | NWTPH-Dx water w/Si Gel | ECY 97-602 NWTPH-Dx modified | 1 | 131500021A | 06/07/2013 11:38 | Christine E Dolman | 1 |
| 02135 | Extraction - DRO Water Special | ECY 97-602 NWTPH-Dx 06/97 | 1 | 131500021A | 05/31/2013 09:00 | Olivia Arosemena | 1 |
| 06035 | Lead | SW-846 6020 | 1 | 131546050002A | 06/05/2013 04:23 | Choon Y Tian | 1 |
| 06050 | ICP/MS SW-846 Water Digest | SW-846 3020A | 1 | 131546050002 | 06/04/2013 12:00 | James L Mertz | 1 |

**Sample Description:** GW-052313-NH-MW8 Grab Groundwater
MLK Tidewater Site
2800 Martin Luther King Jr Way - Seattle, WA

**LLI Sample #** WW 7071409
**LLI Group #** 1392664
**Account #** 13534

**Project Name: 301233 Tidewater Seattle**

Collected: 05/23/2013 12:30 by NH

Submitted: 05/25/2013 09:15
Reported: 06/12/2013 16:06

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

TSMW8

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/l | ug/l | |
| 10335 | Acetone | 67-64-1 | N.D. | 6 | 1 |
| 10335 | Benzene | 71-43-2 | N.D. | 0.5 | 1 |
| 10335 | Bromobenzene | 108-86-1 | N.D. | 1 | 1 |
| 10335 | Bromochloromethane | 74-97-5 | N.D. | 1 | 1 |
| 10335 | Bromodichloromethane | 75-27-4 | N.D. | 1 | 1 |
| 10335 | Bromoform | 75-25-2 | N.D. | 1 | 1 |
| 10335 | Bromomethane | 74-83-9 | N.D. | 1 | 1 |
| 10335 | 2-Butanone | 78-93-3 | N.D. | 3 | 1 |
| 10335 | n-Butylbenzene | 104-51-8 | 15 | 1 | 1 |
| 10335 | sec-Butylbenzene | 135-98-8 | 10 | 1 | 1 |
| 10335 | tert-Butylbenzene | 98-06-6 | N.D. | 1 | 1 |
| 10335 | Carbon Disulfide | 75-15-0 | N.D. | 1 | 1 |
| 10335 | Carbon Tetrachloride | 56-23-5 | N.D. | 1 | 1 |
| 10335 | Chlorobenzene | 108-90-7 | N.D. | 0.8 | 1 |
| 10335 | Chloroethane | 75-00-3 | N.D. | 1 | 1 |
| 10335 | Chloroform | 67-66-3 | N.D. | 0.8 | 1 |
| 10335 | Chloromethane | 74-87-3 | N.D. | 1 | 1 |
| 10335 | 2-Chlorotoluene | 95-49-8 | N.D. | 1 | 1 |
| 10335 | 4-Chlorotoluene | 106-43-4 | N.D. | 1 | 1 |
| 10335 | 1,2-Dibromo-3-chloropropane | 96-12-8 | N.D. | 2 | 1 |
| 10335 | Dibromochloromethane | 124-48-1 | N.D. | 1 | 1 |
| 10335 | 1,2-Dibromoethane | 106-93-4 | N.D. | 0.5 | 1 |
| 10335 | Dibromomethane | 74-95-3 | N.D. | 1 | 1 |
| 10335 | 1,2-Dichlorobenzene | 95-50-1 | N.D. | 1 | 1 |
| 10335 | 1,3-Dichlorobenzene | 541-73-1 | N.D. | 1 | 1 |
| 10335 | 1,4-Dichlorobenzene | 106-46-7 | N.D. | 1 | 1 |
| 10335 | Dichlorodifluoromethane | 75-71-8 | N.D. | 2 | 1 |
| 10335 | 1,1-Dichloroethane | 75-34-3 | N.D. | 1 | 1 |
| 10335 | 1,2-Dichloroethane | 107-06-2 | N.D. | 0.5 | 1 |
| 10335 | 1,1-Dichloroethene | 75-35-4 | N.D. | 0.8 | 1 |
| 10335 | cis-1,2-Dichloroethene | 156-59-2 | 2 | 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 | 87 | 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 | 25 | 1 | 1 |
| 10335 | p-Isopropyltoluene | 99-87-6 | 7 | 1 | 1 |
| 10335 | Methyl Tertiary Butyl Ether | 1634-04-4 | N.D. | 0.5 | 1 |
| 10335 | 4-Methyl-2-pentanone | 108-10-1 | N.D. | 3 | 1 |
| 10335 | Methylene Chloride | 75-09-2 | N.D. | 2 | 1 |
| 10335 | Naphthalene | 91-20-3 | 86 | 1 | 1 |
| 10335 | n-Propylbenzene | 103-65-1 | 62 | 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-052313-NH-MW8 Grab Groundwater
MLK Tidewater Site
2800 Martin Luther King Jr Way - Seattle, WA

**LLI Sample #** WW 7071409
**LLI Group #** 1392664
**Account #** 13534

**Project Name: 301233 Tidewater Seattle**

Collected: 05/23/2013 12:30 by NH

Submitted: 05/25/2013 09:15
Reported: 06/12/2013 16:06

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

TSMW8

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | **ug/l** | **ug/l** | |
| 10335 | 1,1,2,2-Tetrachloroethane | 79-34-5 | N.D. | 1 | 1 |
| 10335 | Tetrachloroethene | 127-18-4 | N.D. | 0.8 | 1 |
| 10335 | Toluene | 108-88-3 | N.D. | 0.5 | 1 |
| 10335 | 1,2,3-Trichlorobenzene | 87-61-6 | N.D. | 1 | 1 |
| 10335 | 1,2,4-Trichlorobenzene | 120-82-1 | N.D. | 1 | 1 |
| 10335 | 1,1,1-Trichloroethane | 71-55-6 | N.D. | 0.8 | 1 |
| 10335 | 1,1,2-Trichloroethane | 79-00-5 | N.D. | 0.8 | 1 |
| 10335 | Trichloroethene | 79-01-6 | N.D. | 1 | 1 |
| 10335 | Trichlorofluoromethane | 75-69-4 | N.D. | 2 | 1 |
| 10335 | 1,2,3-Trichloropropane | 96-18-4 | N.D. | 1 | 1 |
| 10335 | 1,2,4-Trimethylbenzene | 95-63-6 | 1,200 | 10 | 10 |
| 10335 | 1,3,5-Trimethylbenzene | 108-67-8 | 190 | 1 | 1 |
| 10335 | Vinyl Chloride | 75-01-4 | N.D. | 1 | 1 |
| 10335 | m+p-Xylene | 179601-23-1 | 550 | 0.5 | 1 |
| 10335 | o-Xylene | 95-47-6 | 150 | 0.5 | 1 |
| 10335 | Xylene (Total) | 1330-20-7 | 700 | 0.5 | 1 |
| **GC/MS Semivolatiles** | **SW-846 8270C SIM** | | **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 | 18 | 0.21 | 20 |
| 08357 | 2-Methylnaphthalene | 91-57-6 | 26 | 0.21 | 20 |
| 08357 | Naphthalene | 91-20-3 | 55 | 0.64 | 20 |
| **GC Volatiles** | **ECY 97-602 NWTPH-Gx** | | **ug/l** | **ug/l** | |
| 08273 | NWTPH-Gx water C7-C12 | n.a. | 6,800 | 250 | 5 |
| **GC Petroleum Hydrocarbons w/Si** | **ECY 97-602 NWTPH-Dx modified** | | **ug/l** | **ug/l** | |
| 02211 | DRO C12-C24 w/Si Gel | n.a. | 380 | 29 | 1 |
| 02211 | HRO C24-C40 w/Si Gel | n.a. | N.D. | 68 | 1 |
| **Metals** | **SW-846 6020** | | **ug/l** | **ug/l** | |
| 06035 | Lead | 7439-92-1 | 4.0 | 0.073 | 1 |

## General Sample Comments

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

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

**Sample Description:** GW-052313-NH-MW8 Grab Groundwater
MLK Tidewater Site
2800 Martin Luther King Jr Way - Seattle, WA

**LLI Sample # WW 7071409**
**LLI Group # 1392664**
**Account # 13534**

**Project Name: 301233 Tidewater Seattle**

Collected: 05/23/2013 12:30 by NH

Submitted: 05/25/2013 09:15
Reported: 06/12/2013 16:06

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

TSMW8

## 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 | Y131492AA | 05/30/2013 01:38 | Christopher G Torres | 1 |
| 10335 | 8260 Solvent Compound - Water | SW-846 8260B | 1 | Y131492AA | 05/30/2013 01:59 | Christopher G Torres | 10 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | Y131492AA | 05/30/2013 01:38 | Christopher G Torres | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 2 | Y131492AA | 05/30/2013 01:59 | Christopher G Torres | 10 |
| 08357 | PAHs in waters by SIM | SW-846 8270C SIM | 1 | 13149WAB026 | 06/11/2013 03:18 | Holly Berry | 1 |
| 08357 | PAHs in waters by SIM | SW-846 8270C SIM | 1 | 13149WAB026 | 06/11/2013 14:14 | Chad A Moline | 20 |
| 10470 | BNA Water Extraction (SIM) | SW-846 3510C | 1 | 13149WAB026 | 05/29/2013 16:00 | David S Schrum | 1 |
| 08273 | NWTPH-Gx water C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 13156C07A | 06/06/2013 23:02 | Catherine J Schwarz | 5 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 13156C07A | 06/06/2013 23:02 | Catherine J Schwarz | 5 |
| 02211 | NWTPH-Dx water w/Si Gel | ECY 97-602 NWTPH-Dx modified | 1 | 131500021A | 06/07/2013 12:01 | Christine E Dolman | 1 |
| 02135 | Extraction - DRO Water Special | ECY 97-602 NWTPH-Dx 06/97 | 1 | 131500021A | 05/31/2013 09:00 | Olivia Arosemena | 1 |
| 06035 | Lead | SW-846 6020 | 1 | 131546050002A | 06/05/2013 04:25 | Choon Y Tian | 1 |
| 06050 | ICP/MS SW-846 Water Digest | SW-846 3020A | 1 | 131546050002 | 06/04/2013 12:00 | James L Mertz | 1 |

**Sample Description:** GW-052313-NH-FD1 Grab Groundwater
MLK Tidewater Site
2800 Martin Luther King Jr Way - Seattle, WA

**LLI Sample #** WW 7071410
**LLI Group #** 1392664
**Account #** 13534

**Project Name: 301233 Tidewater Seattle**

Collected: 05/23/2013 by NH

Submitted: 05/25/2013 09:15
Reported: 06/12/2013 16:06

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

TSFD1

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/l | ug/l | |
| 10335 | Acetone | 67-64-1 | N.D. | 6 | 1 |
| 10335 | Benzene | 71-43-2 | N.D. | 0.5 | 1 |
| 10335 | Bromobenzene | 108-86-1 | N.D. | 1 | 1 |
| 10335 | Bromochloromethane | 74-97-5 | N.D. | 1 | 1 |
| 10335 | Bromodichloromethane | 75-27-4 | N.D. | 1 | 1 |
| 10335 | Bromoform | 75-25-2 | N.D. | 1 | 1 |
| 10335 | Bromomethane | 74-83-9 | N.D. | 1 | 1 |
| 10335 | 2-Butanone | 78-93-3 | N.D. | 3 | 1 |
| 10335 | n-Butylbenzene | 104-51-8 | 17 | 1 | 1 |
| 10335 | sec-Butylbenzene | 135-98-8 | 11 | 1 | 1 |
| 10335 | tert-Butylbenzene | 98-06-6 | N.D. | 1 | 1 |
| 10335 | Carbon Disulfide | 75-15-0 | N.D. | 1 | 1 |
| 10335 | Carbon Tetrachloride | 56-23-5 | N.D. | 1 | 1 |
| 10335 | Chlorobenzene | 108-90-7 | N.D. | 0.8 | 1 |
| 10335 | Chloroethane | 75-00-3 | N.D. | 1 | 1 |
| 10335 | Chloroform | 67-66-3 | N.D. | 0.8 | 1 |
| 10335 | Chloromethane | 74-87-3 | N.D. | 1 | 1 |
| 10335 | 2-Chlorotoluene | 95-49-8 | N.D. | 1 | 1 |
| 10335 | 4-Chlorotoluene | 106-43-4 | N.D. | 1 | 1 |
| 10335 | 1,2-Dibromo-3-chloropropane | 96-12-8 | N.D. | 2 | 1 |
| 10335 | Dibromochloromethane | 124-48-1 | N.D. | 1 | 1 |
| 10335 | 1,2-Dibromoethane | 106-93-4 | N.D. | 0.5 | 1 |
| 10335 | Dibromomethane | 74-95-3 | N.D. | 1 | 1 |
| 10335 | 1,2-Dichlorobenzene | 95-50-1 | N.D. | 1 | 1 |
| 10335 | 1,3-Dichlorobenzene | 541-73-1 | N.D. | 1 | 1 |
| 10335 | 1,4-Dichlorobenzene | 106-46-7 | N.D. | 1 | 1 |
| 10335 | Dichlorodifluoromethane | 75-71-8 | N.D. | 2 | 1 |
| 10335 | 1,1-Dichloroethane | 75-34-3 | N.D. | 1 | 1 |
| 10335 | 1,2-Dichloroethane | 107-06-2 | N.D. | 0.5 | 1 |
| 10335 | 1,1-Dichloroethene | 75-35-4 | N.D. | 0.8 | 1 |
| 10335 | cis-1,2-Dichloroethene | 156-59-2 | 3 | 0.8 | 1 |
| 10335 | trans-1,2-Dichloroethene | 156-60-5 | N.D. | 0.8 | 1 |
| 10335 | 1,2-Dichloropropane | 78-87-5 | N.D. | 1 | 1 |
| 10335 | 1,3-Dichloropropane | 142-28-9 | N.D. | 1 | 1 |
| 10335 | 2,2-Dichloropropane | 594-20-7 | N.D. | 1 | 1 |
| 10335 | 1,1-Dichloropropene | 563-58-6 | N.D. | 1 | 1 |
| 10335 | cis-1,3-Dichloropropene | 10061-01-5 | N.D. | 1 | 1 |
| 10335 | trans-1,3-Dichloropropene | 10061-02-6 | N.D. | 1 | 1 |
| 10335 | Ethylbenzene | 100-41-4 | 100 | 0.5 | 1 |
| 10335 | Hexachlorobutadiene | 87-68-3 | N.D. | 2 | 1 |
| 10335 | 2-Hexanone | 591-78-6 | N.D. | 3 | 1 |
| 10335 | Isopropylbenzene | 98-82-8 | 29 | 1 | 1 |
| 10335 | p-Isopropyltoluene | 99-87-6 | 8 | 1 | 1 |
| 10335 | Methyl Tertiary Butyl Ether | 1634-04-4 | N.D. | 0.5 | 1 |
| 10335 | 4-Methyl-2-pentanone | 108-10-1 | N.D. | 3 | 1 |
| 10335 | Methylene Chloride | 75-09-2 | N.D. | 2 | 1 |
| 10335 | Naphthalene | 91-20-3 | 94 | 1 | 1 |
| 10335 | n-Propylbenzene | 103-65-1 | 73 | 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-052313-NH-FD1 Grab Groundwater
MLK Tidewater Site
2800 Martin Luther King Jr Way - Seattle, WA

**LLI Sample #** WW 7071410
**LLI Group #** 1392664
**Account #** 13534

**Project Name: 301233 Tidewater Seattle**

Collected: 05/23/2013 by NH

Submitted: 05/25/2013 09:15
Reported: 06/12/2013 16:06

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

TSFD1

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | **ug/l** | **ug/l** | |
| 10335 | 1,1,2,2-Tetrachloroethane | 79-34-5 | N.D. | 1 | 1 |
| 10335 | Tetrachloroethene | 127-18-4 | N.D. | 0.8 | 1 |
| 10335 | Toluene | 108-88-3 | 0.5 | 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 | 1,300 | 10 | 10 |
| 10335 | 1,3,5-Trimethylbenzene | 108-67-8 | 240 | 1 | 1 |
| 10335 | Vinyl Chloride | 75-01-4 | N.D. | 1 | 1 |
| 10335 | m+p-Xylene | 179601-23-1 | 650 | 5 | 10 |
| 10335 | o-Xylene | 95-47-6 | 170 | 0.5 | 1 |
| 10335 | Xylene (Total) | 1330-20-7 | 810 | 5 | 10 |
| **GC/MS Semivolatiles** | **SW-846 8270C SIM** | | **ug/l** | **ug/l** | |
| 08357 | Benzo(a)anthracene | 56-55-3 | N.D. | 0.010 | 1 |
| 08357 | Benzo(a)pyrene | 50-32-8 | N.D. | 0.010 | 1 |
| 08357 | Benzo(b)fluoranthene | 205-99-2 | N.D. | 0.010 | 1 |
| 08357 | Benzo(k)fluoranthene | 207-08-9 | N.D. | 0.010 | 1 |
| 08357 | Chrysene | 218-01-9 | N.D. | 0.010 | 1 |
| 08357 | Dibenz(a,h)anthracene | 53-70-3 | N.D. | 0.010 | 1 |
| 08357 | Indeno(1,2,3-cd)pyrene | 193-39-5 | N.D. | 0.010 | 1 |
| 08357 | 1-Methylnaphthalene | 90-12-0 | 16 | 0.20 | 20 |
| 08357 | 2-Methylnaphthalene | 91-57-6 | 23 | 0.20 | 20 |
| 08357 | Naphthalene | 91-20-3 | 48 | 0.61 | 20 |
| **GC Volatiles** | **ECY 97-602 NWTPH-Gx** | | **ug/l** | **ug/l** | |
| 08273 | NWTPH-Gx water C7-C12 | n.a. | 7,000 | 250 | 5 |
| **GC Petroleum Hydrocarbons w/Si** | **ECY 97-602 NWTPH-Dx modified** | | **ug/l** | **ug/l** | |
| 02211 | DRO C12-C24 w/Si Gel | n.a. | 380 | 29 | 1 |
| 02211 | HRO C24-C40 w/Si Gel | n.a. | N.D. | 68 | 1 |
| **Metals** | **SW-846 6020** | | **ug/l** | **ug/l** | |
| 06035 | Lead | 7439-92-1 | 3.5 | 0.073 | 1 |

## General Sample Comments

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

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

**Sample Description:** GW-052313-NH-FD1 Grab Groundwater
MLK Tidewater Site
2800 Martin Luther King Jr Way - Seattle, WA

**LLI Sample #** WW 7071410
**LLI Group #** 1392664
**Account #** 13534

**Project Name: 301233 Tidewater Seattle**

Collected: 05/23/2013 by NH

Submitted: 05/25/2013 09:15
Reported: 06/12/2013 16:06

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

TSFD1

## 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 | Y131492AA | 05/30/2013 02:20 | Christopher G Torres | 1 |
| 10335 | 8260 Solvent Compound - Water | SW-846 8260B | 1 | Y131492AA | 05/30/2013 02:41 | Christopher G Torres | 10 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | Y131492AA | 05/30/2013 02:20 | Christopher G Torres | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 2 | Y131492AA | 05/30/2013 02:41 | Christopher G Torres | 10 |
| 08357 | PAHs in waters by SIM | SW-846 8270C SIM | 1 | 13149WAB026 | 06/11/2013 03:45 | Holly Berry | 1 |
| 08357 | PAHs in waters by SIM | SW-846 8270C SIM | 1 | 13149WAB026 | 06/11/2013 14:41 | Chad A Moline | 20 |
| 10470 | BNA Water Extraction (SIM) | SW-846 3510C | 1 | 13149WAB026 | 05/29/2013 16:00 | David S Schrum | 1 |
| 08273 | NWTPH-Gx water C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 13156C07A | 06/06/2013 23:27 | Catherine J Schwarz | 5 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 13156C07A | 06/06/2013 23:27 | Catherine J Schwarz | 5 |
| 02211 | NWTPH-Dx water w/Si Gel | ECY 97-602 NWTPH-Dx modified | 1 | 131500021A | 06/07/2013 12:23 | Christine E Dolman | 1 |
| 02135 | Extraction - DRO Water Special | ECY 97-602 NWTPH-Dx 06/97 | 1 | 131500021A | 05/31/2013 09:00 | Olivia Arosemena | 1 |
| 06035 | Lead | SW-846 6020 | 1 | 131546050002A | 06/05/2013 04:26 | Choon Y Tian | 1 |
| 06050 | ICP/MS SW-846 Water Digest | SW-846 3020A | 1 | 131546050002 | 06/04/2013 12:00 | James L Mertz | 1 |

**Sample Description:** GW-052313-NH-MW2 Grab Groundwater
MLK Tidewater Site
2800 Martin Luther King Jr Way - Seattle, WA

**LLI Sample #** WW 7071411
**LLI Group #** 1392664
**Account #** 13534

**Project Name: 301233 Tidewater Seattle**

Collected: 05/23/2013 14:30 by NH

Submitted: 05/25/2013 09:15
Reported: 06/12/2013 16:06

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

TSMW2

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/l | ug/l | |
| 10335 | Acetone | 67-64-1 | N.D. | 6 | 1 |
| 10335 | Benzene | 71-43-2 | 0.7 | 0.5 | 1 |
| 10335 | Bromobenzene | 108-86-1 | N.D. | 1 | 1 |
| 10335 | Bromochloromethane | 74-97-5 | N.D. | 1 | 1 |
| 10335 | Bromodichloromethane | 75-27-4 | N.D. | 1 | 1 |
| 10335 | Bromoform | 75-25-2 | N.D. | 1 | 1 |
| 10335 | Bromomethane | 74-83-9 | N.D. | 1 | 1 |
| 10335 | 2-Butanone | 78-93-3 | N.D. | 3 | 1 |
| 10335 | n-Butylbenzene | 104-51-8 | 4 | 1 | 1 |
| 10335 | sec-Butylbenzene | 135-98-8 | 5 | 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 | 21 | 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 | 46 | 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-052313-NH-MW2 Grab Groundwater
MLK Tidewater Site
2800 Martin Luther King Jr Way - Seattle, WA

**LLI Sample # WW 7071411**
**LLI Group # 1392664**
**Account # 13534**

**Project Name: 301233 Tidewater Seattle**

Collected: 05/23/2013 14:30 by NH

Submitted: 05/25/2013 09:15
Reported: 06/12/2013 16:06

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

TSMW2

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | **ug/l** | **ug/l** | |
| 10335 | 1,1,2,2-Tetrachloroethane | 79-34-5 | N.D. | 1 | 1 |
| 10335 | Tetrachloroethene | 127-18-4 | N.D. | 0.8 | 1 |
| 10335 | Toluene | 108-88-3 | N.D. | 0.5 | 1 |
| 10335 | 1,2,3-Trichlorobenzene | 87-61-6 | N.D. | 1 | 1 |
| 10335 | 1,2,4-Trichlorobenzene | 120-82-1 | N.D. | 1 | 1 |
| 10335 | 1,1,1-Trichloroethane | 71-55-6 | N.D. | 0.8 | 1 |
| 10335 | 1,1,2-Trichloroethane | 79-00-5 | N.D. | 0.8 | 1 |
| 10335 | Trichloroethene | 79-01-6 | N.D. | 1 | 1 |
| 10335 | Trichlorofluoromethane | 75-69-4 | N.D. | 2 | 1 |
| 10335 | 1,2,3-Trichloropropane | 96-18-4 | N.D. | 1 | 1 |
| 10335 | 1,2,4-Trimethylbenzene | 95-63-6 | N.D. | 1 | 1 |
| 10335 | 1,3,5-Trimethylbenzene | 108-67-8 | N.D. | 1 | 1 |
| 10335 | Vinyl Chloride | 75-01-4 | N.D. | 1 | 1 |
| 10335 | m+p-Xylene | 179601-23-1 | 3 | 0.5 | 1 |
| 10335 | o-Xylene | 95-47-6 | 0.5 | 0.5 | 1 |
| 10335 | Xylene (Total) | 1330-20-7 | 3 | 0.5 | 1 |
| **GC/MS Semivolatiles** | **SW-846 8270C SIM** | | **ug/l** | **ug/l** | |
| 08357 | Benzo(a)anthracene | 56-55-3 | N.D. | 0.010 | 1 |
| 08357 | Benzo(a)pyrene | 50-32-8 | N.D. | 0.010 | 1 |
| 08357 | Benzo(b)fluoranthene | 205-99-2 | N.D. | 0.010 | 1 |
| 08357 | Benzo(k)fluoranthene | 207-08-9 | N.D. | 0.010 | 1 |
| 08357 | Chrysene | 218-01-9 | N.D. | 0.010 | 1 |
| 08357 | Dibenz(a,h)anthracene | 53-70-3 | N.D. | 0.010 | 1 |
| 08357 | Indeno(1,2,3-cd)pyrene | 193-39-5 | N.D. | 0.010 | 1 |
| 08357 | 1-Methylnaphthalene | 90-12-0 | 0.20 | 0.010 | 1 |
| 08357 | 2-Methylnaphthalene | 91-57-6 | N.D. | 0.010 | 1 |
| 08357 | Naphthalene | 91-20-3 | N.D. | 0.030 | 1 |
| **GC Volatiles** | **ECY 97-602 NWTPH-Gx** | | **ug/l** | **ug/l** | |
| 08273 | NWTPH-Gx water C7-C12 | n.a. | 470 | 50 | 1 |
| **GC Petroleum Hydrocarbons w/Si** | **ECY 97-602 NWTPH-Dx modified** | | **ug/l** | **ug/l** | |
| 02211 | DRO C12-C24 w/Si Gel | n.a. | 200 | 28 | 1 |
| 02211 | HRO C24-C40 w/Si Gel | n.a. | N.D. | 66 | 1 |
| **Metals** | **SW-846 6020** | | **ug/l** | **ug/l** | |
| 06035 | Lead | 7439-92-1 | 0.12 | 0.073 | 1 |

## General Sample Comments

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

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

**Sample Description:** GW-052313-NH-MW2 Grab Groundwater
MLK Tidewater Site
2800 Martin Luther King Jr Way - Seattle, WA

**LLI Sample #** WW 7071411
**LLI Group #** 1392664
**Account #** 13534

**Project Name: 301233 Tidewater Seattle**

Collected: 05/23/2013 14:30 by NH

Submitted: 05/25/2013 09:15
Reported: 06/12/2013 16:06

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

TSMW2

## 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 | Y131492AA | 05/30/2013 03:02 | Christopher G Torres | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | Y131492AA | 05/30/2013 03:02 | Christopher G Torres | 1 |
| 08357 | PAHs in waters by SIM | SW-846 8270C SIM | 1 | 13149WAB026 | 06/11/2013 04:13 | Holly Berry | 1 |
| 10470 | BNA Water Extraction (SIM) | SW-846 3510C | 1 | 13149WAB026 | 05/29/2013 16:00 | David S Schrum | 1 |
| 08273 | NWTPH-Gx water C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 13156C07A | 06/06/2013 21:45 | Catherine J Schwarz | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 13156C07A | 06/06/2013 21:45 | Catherine J Schwarz | 1 |
| 02211 | NWTPH-Dx water w/Si Gel | ECY 97-602 NWTPH-Dx modified | 1 | 131500021A | 06/07/2013 12:46 | Christine E Dolman | 1 |
| 02135 | Extraction - DRO Water Special | ECY 97-602 NWTPH-Dx 06/97 | 1 | 131500021A | 05/31/2013 09:00 | Olivia Arosemena | 1 |
| 06035 | Lead | SW-846 6020 | 1 | 131546050002A | 06/05/2013 04:28 | Choon Y Tian | 1 |
| 06050 | ICP/MS SW-846 Water Digest | SW-846 3020A | 1 | 131546050002 | 06/04/2013 12:00 | James L Mertz | 1 |

**Sample Description:** GW-052313-NH-MW5 Grab Groundwater
MLK Tidewater Site
2800 Martin Luther King Jr Way - Seattle, WA

**LLI Sample #** WW 7071412
**LLI Group #** 1392664
**Account #** 13534

**Project Name: 301233 Tidewater Seattle**

Collected: 05/23/2013 16:00 by NH

Submitted: 05/25/2013 09:15
Reported: 06/12/2013 16:06

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

TSMW5

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/l | ug/l | |
| 10335 | Acetone | 67-64-1 | N.D. | 6 | 1 |
| 10335 | Benzene | 71-43-2 | N.D. | 0.5 | 1 |
| 10335 | Bromobenzene | 108-86-1 | N.D. | 1 | 1 |
| 10335 | Bromochloromethane | 74-97-5 | N.D. | 1 | 1 |
| 10335 | Bromodichloromethane | 75-27-4 | N.D. | 1 | 1 |
| 10335 | Bromoform | 75-25-2 | N.D. | 1 | 1 |
| 10335 | Bromomethane | 74-83-9 | N.D. | 1 | 1 |
| 10335 | 2-Butanone | 78-93-3 | N.D. | 3 | 1 |
| 10335 | n-Butylbenzene | 104-51-8 | 2 | 1 | 1 |
| 10335 | sec-Butylbenzene | 135-98-8 | 2 | 1 | 1 |
| 10335 | tert-Butylbenzene | 98-06-6 | N.D. | 1 | 1 |
| 10335 | Carbon Disulfide | 75-15-0 | N.D. | 1 | 1 |
| 10335 | Carbon Tetrachloride | 56-23-5 | N.D. | 1 | 1 |
| 10335 | Chlorobenzene | 108-90-7 | N.D. | 0.8 | 1 |
| 10335 | Chloroethane | 75-00-3 | N.D. | 1 | 1 |
| 10335 | Chloroform | 67-66-3 | N.D. | 0.8 | 1 |
| 10335 | Chloromethane | 74-87-3 | N.D. | 1 | 1 |
| 10335 | 2-Chlorotoluene | 95-49-8 | N.D. | 1 | 1 |
| 10335 | 4-Chlorotoluene | 106-43-4 | N.D. | 1 | 1 |
| 10335 | 1,2-Dibromo-3-chloropropane | 96-12-8 | N.D. | 2 | 1 |
| 10335 | Dibromochloromethane | 124-48-1 | N.D. | 1 | 1 |
| 10335 | 1,2-Dibromoethane | 106-93-4 | N.D. | 0.5 | 1 |
| 10335 | Dibromomethane | 74-95-3 | N.D. | 1 | 1 |
| 10335 | 1,2-Dichlorobenzene | 95-50-1 | N.D. | 1 | 1 |
| 10335 | 1,3-Dichlorobenzene | 541-73-1 | N.D. | 1 | 1 |
| 10335 | 1,4-Dichlorobenzene | 106-46-7 | N.D. | 1 | 1 |
| 10335 | Dichlorodifluoromethane | 75-71-8 | N.D. | 2 | 1 |
| 10335 | 1,1-Dichloroethane | 75-34-3 | N.D. | 1 | 1 |
| 10335 | 1,2-Dichloroethane | 107-06-2 | N.D. | 0.5 | 1 |
| 10335 | 1,1-Dichloroethene | 75-35-4 | N.D. | 0.8 | 1 |
| 10335 | cis-1,2-Dichloroethene | 156-59-2 | N.D. | 0.8 | 1 |
| 10335 | trans-1,2-Dichloroethene | 156-60-5 | N.D. | 0.8 | 1 |
| 10335 | 1,2-Dichloropropane | 78-87-5 | N.D. | 1 | 1 |
| 10335 | 1,3-Dichloropropane | 142-28-9 | N.D. | 1 | 1 |
| 10335 | 2,2-Dichloropropane | 594-20-7 | N.D. | 1 | 1 |
| 10335 | 1,1-Dichloropropene | 563-58-6 | N.D. | 1 | 1 |
| 10335 | cis-1,3-Dichloropropene | 10061-01-5 | N.D. | 1 | 1 |
| 10335 | trans-1,3-Dichloropropene | 10061-02-6 | N.D. | 1 | 1 |
| 10335 | Ethylbenzene | 100-41-4 | 4 | 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 | 13 | 1 | 1 |
| 10335 | p-Isopropyltoluene | 99-87-6 | N.D. | 1 | 1 |
| 10335 | Methyl Tertiary Butyl Ether | 1634-04-4 | N.D. | 0.5 | 1 |
| 10335 | 4-Methyl-2-pentanone | 108-10-1 | N.D. | 3 | 1 |
| 10335 | Methylene Chloride | 75-09-2 | N.D. | 2 | 1 |
| 10335 | Naphthalene | 91-20-3 | 25 | 1 | 1 |
| 10335 | n-Propylbenzene | 103-65-1 | 34 | 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-052313-NH-MW5 Grab Groundwater
MLK Tidewater Site
2800 Martin Luther King Jr Way - Seattle, WA

**LLI Sample #** WW 7071412
**LLI Group #** 1392664
**Account #** 13534

**Project Name: 301233 Tidewater Seattle**

Collected: 05/23/2013 16:00 by NH

Submitted: 05/25/2013 09:15
Reported: 06/12/2013 16:06

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

TSMW5

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | **ug/l** | **ug/l** | |
| 10335 | 1,1,2,2-Tetrachloroethane | 79-34-5 | N.D. | 1 | 1 |
| 10335 | Tetrachloroethene | 127-18-4 | N.D. | 0.8 | 1 |
| 10335 | Toluene | 108-88-3 | N.D. | 0.5 | 1 |
| 10335 | 1,2,3-Trichlorobenzene | 87-61-6 | N.D. | 1 | 1 |
| 10335 | 1,2,4-Trichlorobenzene | 120-82-1 | N.D. | 1 | 1 |
| 10335 | 1,1,1-Trichloroethane | 71-55-6 | N.D. | 0.8 | 1 |
| 10335 | 1,1,2-Trichloroethane | 79-00-5 | N.D. | 0.8 | 1 |
| 10335 | Trichloroethene | 79-01-6 | N.D. | 1 | 1 |
| 10335 | Trichlorofluoromethane | 75-69-4 | N.D. | 2 | 1 |
| 10335 | 1,2,3-Trichloropropane | 96-18-4 | N.D. | 1 | 1 |
| 10335 | 1,2,4-Trimethylbenzene | 95-63-6 | 4 | 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 | 0.8 | 0.5 | 1 |
| 10335 | Xylene (Total) | 1330-20-7 | 6 | 0.5 | 1 |
| **GC/MS Semivolatiles** | **SW-846 8270C SIM** | | **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 | 3.7 | 0.011 | 1 |
| 08357 | 2-Methylnaphthalene | 91-57-6 | 2.3 | 0.011 | 1 |
| 08357 | Naphthalene | 91-20-3 | 20 | 0.32 | 10 |
| **GC Volatiles** | **ECY 97-602 NWTPH-Gx** | | **ug/l** | **ug/l** | |
| 08273 | NWTPH-Gx water C7-C12 | n.a. | 360 | 50 | 1 |
| **GC Petroleum Hydrocarbons w/Si** | **ECY 97-602 NWTPH-Dx modified** | | **ug/l** | **ug/l** | |
| 02211 | DRO C12-C24 w/Si Gel | n.a. | 64 | 29 | 1 |
| 02211 | HRO C24-C40 w/Si Gel | n.a. | N.D. | 67 | 1 |
| **Metals** | **SW-846 6020** | | **ug/l** | **ug/l** | |
| 06035 | Lead | 7439-92-1 | 0.80 | 0.073 | 1 |

## General Sample Comments

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

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

**Sample Description:** GW-052313-NH-MW5 Grab Groundwater
MLK Tidewater Site
2800 Martin Luther King Jr Way - Seattle, WA

**LLI Sample #** WW 7071412
**LLI Group #** 1392664
**Account #** 13534

**Project Name: 301233 Tidewater Seattle**

Collected: 05/23/2013 16:00 by NH

Submitted: 05/25/2013 09:15
Reported: 06/12/2013 16:06

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

TSMW5

## 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 | Y131492AA | 05/30/2013 03:22 | Christopher G Torres | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | Y131492AA | 05/30/2013 03:22 | Christopher G Torres | 1 |
| 08357 | PAHs in waters by SIM | SW-846 8270C SIM | 1 | 13149WAB026 | 06/11/2013 04:40 | Holly Berry | 1 |
| 08357 | PAHs in waters by SIM | SW-846 8270C SIM | 1 | 13149WAB026 | 06/11/2013 15:09 | Chad A Moline | 10 |
| 10470 | BNA Water Extraction (SIM) | SW-846 3510C | 1 | 13149WAB026 | 05/29/2013 16:00 | David S Schrum | 1 |
| 08273 | NWTPH-Gx water C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 13156C07A | 06/06/2013 22:11 | Catherine J Schwarz | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 13156C07A | 06/06/2013 22:11 | Catherine J Schwarz | 1 |
| 02211 | NWTPH-Dx water w/Si Gel | ECY 97-602 NWTPH-Dx modified | 1 | 131500021A | 06/07/2013 13:08 | Christine E Dolman | 1 |
| 02135 | Extraction - DRO Water Special | ECY 97-602 NWTPH-Dx 06/97 | 1 | 131500021A | 05/31/2013 09:00 | Olivia Arosemena | 1 |
| 06035 | Lead | SW-846 6020 | 1 | 131546050002A | 06/05/2013 04:30 | Choon Y Tian | 1 |
| 06050 | ICP/MS SW-846 Water Digest | SW-846 3020A | 1 | 131546050002 | 06/04/2013 12:00 | James L Mertz | 1 |

**Sample Description:** GW-052413-NH-MW9 Grab Groundwater
MLK Tidewater Site
2800 Martin Luther King Jr Way - Seattle, WA

**LLI Sample #** WW 7071413
**LLI Group #** 1392664
**Account #** 13534

**Project Name: 301233 Tidewater Seattle**

Collected: 05/24/2013 09:30 by NH

Submitted: 05/25/2013 09:15
Reported: 06/12/2013 16:06

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

TSMW9

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/l | ug/l | |
| 10335 | Acetone | 67-64-1 | N.D. | 6 | 1 |
| 10335 | Benzene | 71-43-2 | N.D. | 0.5 | 1 |
| 10335 | Bromobenzene | 108-86-1 | N.D. | 1 | 1 |
| 10335 | Bromochloromethane | 74-97-5 | N.D. | 1 | 1 |
| 10335 | Bromodichloromethane | 75-27-4 | N.D. | 1 | 1 |
| 10335 | Bromoform | 75-25-2 | N.D. | 1 | 1 |
| 10335 | Bromomethane | 74-83-9 | N.D. | 1 | 1 |
| 10335 | 2-Butanone | 78-93-3 | N.D. | 3 | 1 |
| 10335 | n-Butylbenzene | 104-51-8 | N.D. | 1 | 1 |
| 10335 | sec-Butylbenzene | 135-98-8 | N.D. | 1 | 1 |
| 10335 | tert-Butylbenzene | 98-06-6 | N.D. | 1 | 1 |
| 10335 | Carbon Disulfide | 75-15-0 | N.D. | 1 | 1 |
| 10335 | Carbon Tetrachloride | 56-23-5 | N.D. | 1 | 1 |
| 10335 | Chlorobenzene | 108-90-7 | N.D. | 0.8 | 1 |
| 10335 | Chloroethane | 75-00-3 | N.D. | 1 | 1 |
| 10335 | Chloroform | 67-66-3 | N.D. | 0.8 | 1 |
| 10335 | Chloromethane | 74-87-3 | N.D. | 1 | 1 |
| 10335 | 2-Chlorotoluene | 95-49-8 | N.D. | 1 | 1 |
| 10335 | 4-Chlorotoluene | 106-43-4 | N.D. | 1 | 1 |
| 10335 | 1,2-Dibromo-3-chloropropane | 96-12-8 | N.D. | 2 | 1 |
| 10335 | Dibromochloromethane | 124-48-1 | N.D. | 1 | 1 |
| 10335 | 1,2-Dibromoethane | 106-93-4 | N.D. | 0.5 | 1 |
| 10335 | Dibromomethane | 74-95-3 | N.D. | 1 | 1 |
| 10335 | 1,2-Dichlorobenzene | 95-50-1 | N.D. | 1 | 1 |
| 10335 | 1,3-Dichlorobenzene | 541-73-1 | N.D. | 1 | 1 |
| 10335 | 1,4-Dichlorobenzene | 106-46-7 | N.D. | 1 | 1 |
| 10335 | Dichlorodifluoromethane | 75-71-8 | N.D. | 2 | 1 |
| 10335 | 1,1-Dichloroethane | 75-34-3 | N.D. | 1 | 1 |
| 10335 | 1,2-Dichloroethane | 107-06-2 | N.D. | 0.5 | 1 |
| 10335 | 1,1-Dichloroethene | 75-35-4 | 1 | 0.8 | 1 |
| 10335 | cis-1,2-Dichloroethene | 156-59-2 | 140 | 0.8 | 1 |
| 10335 | trans-1,2-Dichloroethene | 156-60-5 | 1 | 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-052413-NH-MW9 Grab Groundwater
MLK Tidewater Site
2800 Martin Luther King Jr Way - Seattle, WA

**LLI Sample #** WW 7071413
**LLI Group #** 1392664
**Account #** 13534

**Project Name: 301233 Tidewater Seattle**

Collected: 05/24/2013 09:30 by NH

Submitted: 05/25/2013 09:15
Reported: 06/12/2013 16:06

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

TSMW9

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | **ug/l** | **ug/l** | |
| 10335 | 1,1,2,2-Tetrachloroethane | 79-34-5 | N.D. | 1 | 1 |
| 10335 | Tetrachloroethene | 127-18-4 | 180 | 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 | 120 | 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 |
| **GC/MS Semivolatiles** | **SW-846 8270C SIM** | | **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 | 0.012 | 0.011 | 1 |
| 08357 | 2-Methylnaphthalene | 91-57-6 | N.D. | 0.011 | 1 |
| 08357 | Naphthalene | 91-20-3 | N.D. | 0.032 | 1 |
| **GC Volatiles** | **ECY 97-602 NWTPH-Gx** | | **ug/l** | **ug/l** | |
| 08273 | NWTPH-Gx water C7-C12 | n.a. | 100 | 50 | 1 |
| **GC Petroleum Hydrocarbons w/Si** | **ECY 97-602 NWTPH-Dx modified** | | **ug/l** | **ug/l** | |
| 02211 | DRO C12-C24 w/Si Gel | n.a. | N.D. | 29 | 1 |
| 02211 | HRO C24-C40 w/Si Gel | n.a. | N.D. | 68 | 1 |
| **Metals** | **SW-846 6020** | | **ug/l** | **ug/l** | |
| 06035 | Lead | 7439-92-1 | 0.24 | 0.073 | 1 |

## General Sample Comments

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

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

**Sample Description:** GW-052413-NH-MW9 Grab Groundwater
MLK Tidewater Site
2800 Martin Luther King Jr Way - Seattle, WA

**LLI Sample #** WW 7071413
**LLI Group #** 1392664
**Account #** 13534

**Project Name: 301233 Tidewater Seattle**

Collected: 05/24/2013 09:30 by NH

Submitted: 05/25/2013 09:15
Reported: 06/12/2013 16:06

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

TSMW9

## 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 | Y131492AA | 05/30/2013 03:43 | Christopher G Torres | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | Y131492AA | 05/30/2013 03:43 | Christopher G Torres | 1 |
| 08357 | PAHs in waters by SIM | SW-846 8270C SIM | 1 | 13149WAB026 | 06/11/2013 05:08 | Holly Berry | 1 |
| 10470 | BNA Water Extraction (SIM) | SW-846 3510C | 1 | 13149WAB026 | 05/29/2013 16:00 | David S Schrum | 1 |
| 08273 | NWTPH-Gx water C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 13156C07A | 06/06/2013 17:54 | Catherine J Schwarz | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 13156C07A | 06/06/2013 17:54 | Catherine J Schwarz | 1 |
| 02211 | NWTPH-Dx water w/Si Gel | ECY 97-602 NWTPH-Dx modified | 1 | 131500021A | 06/07/2013 13:31 | Christine E Dolman | 1 |
| 02135 | Extraction - DRO Water Special | ECY 97-602 NWTPH-Dx 06/97 | 1 | 131500021A | 05/31/2013 09:00 | Olivia Arosemena | 1 |
| 06035 | Lead | SW-846 6020 | 1 | 131546050002A | 06/05/2013 04:06 | Choon Y Tian | 1 |
| 06050 | ICP/MS SW-846 Water Digest | SW-846 3020A | 1 | 131546050002 | 06/04/2013 12:00 | James L Mertz | 1 |

**Sample Description:** GW-052413-NH-MW9 MS Grab Groundwater
MLK Tidewater Site
2800 Martin Luther King Jr Way - Seattle, WA

**LLI Sample #** WW 7071414
**LLI Group #** 1392664
**Account #** 13534

**Project Name: 301233 Tidewater Seattle**

Collected: 05/24/2013 09:30 by NH

Submitted: 05/25/2013 09:15
Reported: 06/12/2013 16:06

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

TSMW9

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/l | ug/l | |
| 10335 | Acetone | 67-64-1 | 120 | 6 | 1 |
| 10335 | Benzene | 71-43-2 | 16 | 0.5 | 1 |
| 10335 | Bromobenzene | 108-86-1 | 16 | 1 | 1 |
| 10335 | Bromochloromethane | 74-97-5 | 17 | 1 | 1 |
| 10335 | Bromodichloromethane | 75-27-4 | 15 | 1 | 1 |
| 10335 | Bromoform | 75-25-2 | 12 | 1 | 1 |
| 10335 | Bromomethane | 74-83-9 | 16 | 1 | 1 |
| 10335 | 2-Butanone | 78-93-3 | 110 | 3 | 1 |
| 10335 | n-Butylbenzene | 104-51-8 | 18 | 1 | 1 |
| 10335 | sec-Butylbenzene | 135-98-8 | 17 | 1 | 1 |
| 10335 | tert-Butylbenzene | 98-06-6 | 16 | 1 | 1 |
| 10335 | Carbon Disulfide | 75-15-0 | 19 | 1 | 1 |
| 10335 | Carbon Tetrachloride | 56-23-5 | 15 | 1 | 1 |
| 10335 | Chlorobenzene | 108-90-7 | 15 | 0.8 | 1 |
| 10335 | Chloroethane | 75-00-3 | 17 | 1 | 1 |
| 10335 | Chloroform | 67-66-3 | 16 | 0.8 | 1 |
| 10335 | Chloromethane | 74-87-3 | 19 | 1 | 1 |
| 10335 | 2-Chlorotoluene | 95-49-8 | 16 | 1 | 1 |
| 10335 | 4-Chlorotoluene | 106-43-4 | 16 | 1 | 1 |
| 10335 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 15 | 2 | 1 |
| 10335 | Dibromochloromethane | 124-48-1 | 14 | 1 | 1 |
| 10335 | 1,2-Dibromoethane | 106-93-4 | 15 | 0.5 | 1 |
| 10335 | Dibromomethane | 74-95-3 | 15 | 1 | 1 |
| 10335 | 1,2-Dichlorobenzene | 95-50-1 | 16 | 1 | 1 |
| 10335 | 1,3-Dichlorobenzene | 541-73-1 | 16 | 1 | 1 |
| 10335 | 1,4-Dichlorobenzene | 106-46-7 | 16 | 1 | 1 |
| 10335 | Dichlorodifluoromethane | 75-71-8 | 17 | 2 | 1 |
| 10335 | 1,1-Dichloroethane | 75-34-3 | 16 | 1 | 1 |
| 10335 | 1,2-Dichloroethane | 107-06-2 | 16 | 0.5 | 1 |
| 10335 | 1,1-Dichloroethene | 75-35-4 | 19 | 0.8 | 1 |
| 10335 | cis-1,2-Dichloroethene | 156-59-2 | 150 | 0.8 | 1 |
| 10335 | trans-1,2-Dichloroethene | 156-60-5 | 18 | 0.8 | 1 |
| 10335 | 1,2-Dichloropropane | 78-87-5 | 16 | 1 | 1 |
| 10335 | 1,3-Dichloropropane | 142-28-9 | 15 | 1 | 1 |
| 10335 | 2,2-Dichloropropane | 594-20-7 | 16 | 1 | 1 |
| 10335 | 1,1-Dichloropropene | 563-58-6 | 16 | 1 | 1 |
| 10335 | cis-1,3-Dichloropropene | 10061-01-5 | 14 | 1 | 1 |
| 10335 | trans-1,3-Dichloropropene | 10061-02-6 | 13 | 1 | 1 |
| 10335 | Ethylbenzene | 100-41-4 | 15 | 0.5 | 1 |
| 10335 | Hexachlorobutadiene | 87-68-3 | 18 | 2 | 1 |
| 10335 | 2-Hexanone | 591-78-6 | 68 | 3 | 1 |
| 10335 | Isopropylbenzene | 98-82-8 | 15 | 1 | 1 |
| 10335 | p-Isopropyltoluene | 99-87-6 | 17 | 1 | 1 |
| 10335 | Methyl Tertiary Butyl Ether | 1634-04-4 | 15 | 0.5 | 1 |
| 10335 | 4-Methyl-2-pentanone | 108-10-1 | 68 | 3 | 1 |
| 10335 | Methylene Chloride | 75-09-2 | 17 | 2 | 1 |
| 10335 | Naphthalene | 91-20-3 | 17 | 1 | 1 |
| 10335 | n-Propylbenzene | 103-65-1 | 17 | 1 | 1 |
| 10335 | Styrene | 100-42-5 | 15 | 1 | 1 |
| 10335 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 15 | 1 | 1 |

**Sample Description:** GW-052413-NH-MW9 MS Grab Groundwater
MLK Tidewater Site
2800 Martin Luther King Jr Way - Seattle, WA

**LLI Sample # WW 7071414**
**LLI Group # 1392664**
**Account # 13534**

**Project Name: 301233 Tidewater Seattle**

Collected: 05/24/2013 09:30 by NH

Submitted: 05/25/2013 09:15
Reported: 06/12/2013 16:06

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

TSMW9

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | **ug/l** | **ug/l** | |
| 10335 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 16 | 1 | 1 |
| 10335 | Tetrachloroethene | 127-18-4 | 190 | 0.8 | 1 |
| 10335 | Toluene | 108-88-3 | 15 | 0.5 | 1 |
| 10335 | 1,2,3-Trichlorobenzene | 87-61-6 | 17 | 1 | 1 |
| 10335 | 1,2,4-Trichlorobenzene | 120-82-1 | 17 | 1 | 1 |
| 10335 | 1,1,1-Trichloroethane | 71-55-6 | 14 | 0.8 | 1 |
| 10335 | 1,1,2-Trichloroethane | 79-00-5 | 15 | 0.8 | 1 |
| 10335 | Trichloroethene | 79-01-6 | 130 | 1 | 1 |
| 10335 | Trichlorofluoromethane | 75-69-4 | 19 | 2 | 1 |
| 10335 | 1,2,3-Trichloropropane | 96-18-4 | 15 | 1 | 1 |
| 10335 | 1,2,4-Trimethylbenzene | 95-63-6 | 16 | 1 | 1 |
| 10335 | 1,3,5-Trimethylbenzene | 108-67-8 | 17 | 1 | 1 |
| 10335 | Vinyl Chloride | 75-01-4 | 28 | 1 | 1 |
| 10335 | m+p-Xylene | 179601-23-1 | 31 | 0.5 | 1 |
| 10335 | o-Xylene | 95-47-6 | 15 | 0.5 | 1 |
| 10335 | Xylene (Total) | 1330-20-7 | 46 | 0.5 | 1 |
| **GC Volatiles** | **ECY 97-602 NWTPH-Gx** | | **ug/l** | **ug/l** | |
| 08273 | NWTPH-Gx water C7-C12 | n.a. | 1,100 | 50 | 1 |
| **GC Petroleum Hydrocarbons w/Si** | **ECY 97-602 NWTPH-Dx modified** | | **ug/l** | **ug/l** | |
| 02211 | DRO C12-C24 w/Si Gel | n.a. | 1,300 | 31 | 1 |
| 02211 | HRO C24-C40 w/Si Gel | n.a. | N.D. | 72 | 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 | Y131492AA | 05/30/2013 04:04 | Christopher G Torres | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | Y131492AA | 05/30/2013 04:04 | Christopher G Torres | 1 |
| 08273 | NWTPH-Gx water C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 13156C07A | 06/06/2013 18:19 | Catherine J Schwarz | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 13156C07A | 06/06/2013 18:19 | Catherine J Schwarz | 1 |
| 02211 | NWTPH-Dx water w/Si Gel | ECY 97-602 NWTPH-Dx modified | 1 | 131500021A | 06/07/2013 07:28 | Christine E Dolman | 1 |

**Sample Description:** GW-052413-NH-MW9 MS Grab Groundwater
MLK Tidewater Site
2800 Martin Luther King Jr Way - Seattle, WA

**LLI Sample #** WW 7071414
**LLI Group #** 1392664
**Account #** 13534

**Project Name: 301233 Tidewater Seattle**

Collected: 05/24/2013 09:30 by NH

Submitted: 05/25/2013 09:15
Reported: 06/12/2013 16:06

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

TSMW9

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 02135 | Extraction - DRO Water Special | ECY 97-602 NWTPH-Dx 06/97 | 1 | 131500021A | 05/31/2013 09:00 | Olivia Arosemena | 1 |

**Sample Description:** GW-052413-NH-MW9 MSD Grab Groundwater
MLK Tidewater Site
2800 Martin Luther King Jr Way - Seattle, WA

**LLI Sample #** WW 7071415
**LLI Group #** 1392664
**Account #** 13534

**Project Name: 301233 Tidewater Seattle**

Collected: 05/24/2013 09:30 by NH

Submitted: 05/25/2013 09:15
Reported: 06/12/2013 16:06

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

TSMW9

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/l | ug/l | |
| 10335 | Acetone | 67-64-1 | 130 | 6 | 1 |
| 10335 | Benzene | 71-43-2 | 17 | 0.5 | 1 |
| 10335 | Bromobenzene | 108-86-1 | 17 | 1 | 1 |
| 10335 | Bromochloromethane | 74-97-5 | 17 | 1 | 1 |
| 10335 | Bromodichloromethane | 75-27-4 | 16 | 1 | 1 |
| 10335 | Bromoform | 75-25-2 | 14 | 1 | 1 |
| 10335 | Bromomethane | 74-83-9 | 18 | 1 | 1 |
| 10335 | 2-Butanone | 78-93-3 | 120 | 3 | 1 |
| 10335 | n-Butylbenzene | 104-51-8 | 19 | 1 | 1 |
| 10335 | sec-Butylbenzene | 135-98-8 | 19 | 1 | 1 |
| 10335 | tert-Butylbenzene | 98-06-6 | 18 | 1 | 1 |
| 10335 | Carbon Disulfide | 75-15-0 | 21 | 1 | 1 |
| 10335 | Carbon Tetrachloride | 56-23-5 | 17 | 1 | 1 |
| 10335 | Chlorobenzene | 108-90-7 | 17 | 0.8 | 1 |
| 10335 | Chloroethane | 75-00-3 | 19 | 1 | 1 |
| 10335 | Chloroform | 67-66-3 | 17 | 0.8 | 1 |
| 10335 | Chloromethane | 74-87-3 | 20 | 1 | 1 |
| 10335 | 2-Chlorotoluene | 95-49-8 | 17 | 1 | 1 |
| 10335 | 4-Chlorotoluene | 106-43-4 | 17 | 1 | 1 |
| 10335 | 1,2-Dibromo-3-chloropropane | 96-12-8 | 17 | 2 | 1 |
| 10335 | Dibromochloromethane | 124-48-1 | 15 | 1 | 1 |
| 10335 | 1,2-Dibromoethane | 106-93-4 | 16 | 0.5 | 1 |
| 10335 | Dibromomethane | 74-95-3 | 16 | 1 | 1 |
| 10335 | 1,2-Dichlorobenzene | 95-50-1 | 18 | 1 | 1 |
| 10335 | 1,3-Dichlorobenzene | 541-73-1 | 18 | 1 | 1 |
| 10335 | 1,4-Dichlorobenzene | 106-46-7 | 17 | 1 | 1 |
| 10335 | Dichlorodifluoromethane | 75-71-8 | 19 | 2 | 1 |
| 10335 | 1,1-Dichloroethane | 75-34-3 | 18 | 1 | 1 |
| 10335 | 1,2-Dichloroethane | 107-06-2 | 17 | 0.5 | 1 |
| 10335 | 1,1-Dichloroethene | 75-35-4 | 20 | 0.8 | 1 |
| 10335 | cis-1,2-Dichloroethene | 156-59-2 | 150 | 0.8 | 1 |
| 10335 | trans-1,2-Dichloroethene | 156-60-5 | 19 | 0.8 | 1 |
| 10335 | 1,2-Dichloropropane | 78-87-5 | 17 | 1 | 1 |
| 10335 | 1,3-Dichloropropane | 142-28-9 | 16 | 1 | 1 |
| 10335 | 2,2-Dichloropropane | 594-20-7 | 17 | 1 | 1 |
| 10335 | 1,1-Dichloropropene | 563-58-6 | 17 | 1 | 1 |
| 10335 | cis-1,3-Dichloropropene | 10061-01-5 | 15 | 1 | 1 |
| 10335 | trans-1,3-Dichloropropene | 10061-02-6 | 14 | 1 | 1 |
| 10335 | Ethylbenzene | 100-41-4 | 17 | 0.5 | 1 |
| 10335 | Hexachlorobutadiene | 87-68-3 | 19 | 2 | 1 |
| 10335 | 2-Hexanone | 591-78-6 | 74 | 3 | 1 |
| 10335 | Isopropylbenzene | 98-82-8 | 17 | 1 | 1 |
| 10335 | p-Isopropyltoluene | 99-87-6 | 18 | 1 | 1 |
| 10335 | Methyl Tertiary Butyl Ether | 1634-04-4 | 16 | 0.5 | 1 |
| 10335 | 4-Methyl-2-pentanone | 108-10-1 | 74 | 3 | 1 |
| 10335 | Methylene Chloride | 75-09-2 | 18 | 2 | 1 |
| 10335 | Naphthalene | 91-20-3 | 18 | 1 | 1 |
| 10335 | n-Propylbenzene | 103-65-1 | 19 | 1 | 1 |
| 10335 | Styrene | 100-42-5 | 16 | 1 | 1 |
| 10335 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 16 | 1 | 1 |

**Sample Description:** GW-052413-NH-MW9 MSD Grab Groundwater
MLK Tidewater Site
2800 Martin Luther King Jr Way - Seattle, WA

**LLI Sample #** WW 7071415
**LLI Group #** 1392664
**Account #** 13534

**Project Name: 301233 Tidewater Seattle**

Collected: 05/24/2013 09:30 by NH

Submitted: 05/25/2013 09:15
Reported: 06/12/2013 16:06

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

TSMW9

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | **ug/l** | **ug/l** | |
| 10335 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 17 | 1 | 1 |
| 10335 | Tetrachloroethene | 127-18-4 | 190 | 0.8 | 1 |
| 10335 | Toluene | 108-88-3 | 17 | 0.5 | 1 |
| 10335 | 1,2,3-Trichlorobenzene | 87-61-6 | 19 | 1 | 1 |
| 10335 | 1,2,4-Trichlorobenzene | 120-82-1 | 18 | 1 | 1 |
| 10335 | 1,1,1-Trichloroethane | 71-55-6 | 15 | 0.8 | 1 |
| 10335 | 1,1,2-Trichloroethane | 79-00-5 | 17 | 0.8 | 1 |
| 10335 | Trichloroethene | 79-01-6 | 130 | 1 | 1 |
| 10335 | Trichlorofluoromethane | 75-69-4 | 21 | 2 | 1 |
| 10335 | 1,2,3-Trichloropropane | 96-18-4 | 16 | 1 | 1 |
| 10335 | 1,2,4-Trimethylbenzene | 95-63-6 | 18 | 1 | 1 |
| 10335 | 1,3,5-Trimethylbenzene | 108-67-8 | 18 | 1 | 1 |
| 10335 | Vinyl Chloride | 75-01-4 | 30 | 1 | 1 |
| 10335 | m+p-Xylene | 179601-23-1 | 34 | 0.5 | 1 |
| 10335 | o-Xylene | 95-47-6 | 16 | 0.5 | 1 |
| 10335 | Xylene (Total) | 1330-20-7 | 50 | 0.5 | 1 |
| **GC Volatiles** | **ECY 97-602 NWTPH-Gx** | | **ug/l** | **ug/l** | |
| 08273 | NWTPH-Gx water C7-C12 | n.a. | 1,100 | 50 | 1 |
| **GC Petroleum Hydrocarbons w/Si** | **ECY 97-602 NWTPH-Dx modified** | | **ug/l** | **ug/l** | |
| 02211 | DRO C12-C24 w/Si Gel | n.a. | 1,300 | 30 | 1 |
| 02211 | HRO C24-C40 w/Si Gel | n.a. | N.D. | 69 | 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 | Y131492AA | 05/30/2013 04:25 | Christopher G Torres | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | Y131492AA | 05/30/2013 04:25 | Christopher G Torres | 1 |
| 08273 | NWTPH-Gx water C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 13156C07A | 06/06/2013 18:45 | Catherine J Schwarz | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 13156C07A | 06/06/2013 18:45 | Catherine J Schwarz | 1 |
| 02211 | NWTPH-Dx water w/Si Gel | ECY 97-602 NWTPH-Dx modified | 1 | 131500021A | 06/07/2013 07:53 | Christine E Dolman | 1 |

**Sample Description:** GW-052413-NH-MW9 MSD Grab Groundwater
MLK Tidewater Site
2800 Martin Luther King Jr Way - Seattle, WA

**LLI Sample # WW 7071415**
**LLI Group # 1392664**
**Account # 13534**

**Project Name: 301233 Tidewater Seattle**

Collected: 05/24/2013 09:30 by NH

Submitted: 05/25/2013 09:15
Reported: 06/12/2013 16:06

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

TSMW9

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 02135 | Extraction - DRO Water Special | ECY 97-602 NWTPH-Dx 06/97 | 1 | 131500021A | 05/31/2013 09:00 | Olivia Arosemena | 1 |

**Sample Description:** GW-052413-NH-MW10 Grab Groundwater
MLK Tidewater Site
2800 Martin Luther King Jr Way - Seattle, WA

**LLI Sample #** WW 7071417
**LLI Group #** 1392664
**Account #** 13534

**Project Name: 301233 Tidewater Seattle**

Collected: 05/24/2013 10:30 by NH

Submitted: 05/25/2013 09:15
Reported: 06/12/2013 16:06

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

TSM10

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/l | ug/l | |
| 10335 | Acetone | 67-64-1 | N.D. | 6 | 1 |
| 10335 | Benzene | 71-43-2 | N.D. | 0.5 | 1 |
| 10335 | Bromobenzene | 108-86-1 | N.D. | 1 | 1 |
| 10335 | Bromochloromethane | 74-97-5 | N.D. | 1 | 1 |
| 10335 | Bromodichloromethane | 75-27-4 | N.D. | 1 | 1 |
| 10335 | Bromoform | 75-25-2 | N.D. | 1 | 1 |
| 10335 | Bromomethane | 74-83-9 | N.D. | 1 | 1 |
| 10335 | 2-Butanone | 78-93-3 | N.D. | 3 | 1 |
| 10335 | n-Butylbenzene | 104-51-8 | N.D. | 1 | 1 |
| 10335 | sec-Butylbenzene | 135-98-8 | N.D. | 1 | 1 |
| 10335 | tert-Butylbenzene | 98-06-6 | N.D. | 1 | 1 |
| 10335 | Carbon Disulfide | 75-15-0 | N.D. | 1 | 1 |
| 10335 | Carbon Tetrachloride | 56-23-5 | N.D. | 1 | 1 |
| 10335 | Chlorobenzene | 108-90-7 | N.D. | 0.8 | 1 |
| 10335 | Chloroethane | 75-00-3 | N.D. | 1 | 1 |
| 10335 | Chloroform | 67-66-3 | N.D. | 0.8 | 1 |
| 10335 | Chloromethane | 74-87-3 | N.D. | 1 | 1 |
| 10335 | 2-Chlorotoluene | 95-49-8 | N.D. | 1 | 1 |
| 10335 | 4-Chlorotoluene | 106-43-4 | N.D. | 1 | 1 |
| 10335 | 1,2-Dibromo-3-chloropropane | 96-12-8 | N.D. | 2 | 1 |
| 10335 | Dibromochloromethane | 124-48-1 | N.D. | 1 | 1 |
| 10335 | 1,2-Dibromoethane | 106-93-4 | N.D. | 0.5 | 1 |
| 10335 | Dibromomethane | 74-95-3 | N.D. | 1 | 1 |
| 10335 | 1,2-Dichlorobenzene | 95-50-1 | N.D. | 1 | 1 |
| 10335 | 1,3-Dichlorobenzene | 541-73-1 | N.D. | 1 | 1 |
| 10335 | 1,4-Dichlorobenzene | 106-46-7 | N.D. | 1 | 1 |
| 10335 | Dichlorodifluoromethane | 75-71-8 | N.D. | 2 | 1 |
| 10335 | 1,1-Dichloroethane | 75-34-3 | N.D. | 1 | 1 |
| 10335 | 1,2-Dichloroethane | 107-06-2 | N.D. | 0.5 | 1 |
| 10335 | 1,1-Dichloroethene | 75-35-4 | N.D. | 0.8 | 1 |
| 10335 | cis-1,2-Dichloroethene | 156-59-2 | 10 | 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-052413-NH-MW10 Grab Groundwater
MLK Tidewater Site
2800 Martin Luther King Jr Way - Seattle, WA

**LLI Sample #** WW 7071417
**LLI Group #** 1392664
**Account #** 13534

**Project Name: 301233 Tidewater Seattle**

Collected: 05/24/2013 10:30 by NH

Submitted: 05/25/2013 09:15
Reported: 06/12/2013 16:06

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

TSM10

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | **ug/l** | **ug/l** | |
| 10335 | 1,1,2,2-Tetrachloroethane | 79-34-5 | N.D. | 1 | 1 |
| 10335 | Tetrachloroethene | 127-18-4 | N.D. | 0.8 | 1 |
| 10335 | Toluene | 108-88-3 | N.D. | 0.5 | 1 |
| 10335 | 1,2,3-Trichlorobenzene | 87-61-6 | N.D. | 1 | 1 |
| 10335 | 1,2,4-Trichlorobenzene | 120-82-1 | N.D. | 1 | 1 |
| 10335 | 1,1,1-Trichloroethane | 71-55-6 | N.D. | 0.8 | 1 |
| 10335 | 1,1,2-Trichloroethane | 79-00-5 | N.D. | 0.8 | 1 |
| 10335 | Trichloroethene | 79-01-6 | N.D. | 1 | 1 |
| 10335 | Trichlorofluoromethane | 75-69-4 | N.D. | 2 | 1 |
| 10335 | 1,2,3-Trichloropropane | 96-18-4 | N.D. | 1 | 1 |
| 10335 | 1,2,4-Trimethylbenzene | 95-63-6 | N.D. | 1 | 1 |
| 10335 | 1,3,5-Trimethylbenzene | 108-67-8 | N.D. | 1 | 1 |
| 10335 | Vinyl Chloride | 75-01-4 | 37 | 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 |
| **GC/MS Semivolatiles** | **SW-846 8270C SIM** | | **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 | 0.031 | 0.011 | 1 |
| 08357 | 2-Methylnaphthalene | 91-57-6 | 0.017 | 0.011 | 1 |
| 08357 | Naphthalene | 91-20-3 | N.D. | 0.032 | 1 |
| **GC Volatiles** | **ECY 97-602 NWTPH-Gx** | | **ug/l** | **ug/l** | |
| 08273 | NWTPH-Gx water C7-C12 | n.a. | N.D. | 50 | 1 |
| **GC Petroleum Hydrocarbons w/Si** | **ECY 97-602 NWTPH-Dx modified** | | **ug/l** | **ug/l** | |
| 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 |
| **Metals** | **SW-846 6020** | | **ug/l** | **ug/l** | |
| 06035 | Lead | 7439-92-1 | N.D. | 0.073 | 1 |

## General Sample Comments

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

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

**Sample Description:** GW-052413-NH-MW10 Grab Groundwater
MLK Tidewater Site
2800 Martin Luther King Jr Way - Seattle, WA

**LLI Sample #** WW 7071417
**LLI Group #** 1392664
**Account #** 13534

**Project Name: 301233 Tidewater Seattle**

Collected: 05/24/2013 10:30 by NH

Submitted: 05/25/2013 09:15
Reported: 06/12/2013 16:06

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

TSM10

## 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 | Y131492AA | 05/30/2013 04:46 | Christopher G Torres | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | Y131492AA | 05/30/2013 04:46 | Christopher G Torres | 1 |
| 08357 | PAHs in waters by SIM | SW-846 8270C SIM | 1 | 13149WAB026 | 06/11/2013 15:36 | Chad A Moline | 1 |
| 10470 | BNA Water Extraction (SIM) | SW-846 3510C | 1 | 13149WAB026 | 05/29/2013 16:00 | David S Schrum | 1 |
| 08273 | NWTPH-Gx water C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 13156C07A | 06/07/2013 00:19 | Catherine J Schwarz | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 13156C07A | 06/07/2013 00:19 | Catherine J Schwarz | 1 |
| 02211 | NWTPH-Dx water w/Si Gel | ECY 97-602 NWTPH-Dx modified | 1 | 131500021A | 06/07/2013 13:53 | Christine E Dolman | 1 |
| 02135 | Extraction - DRO Water Special | ECY 97-602 NWTPH-Dx 06/97 | 1 | 131500021A | 05/31/2013 09:00 | Olivia Arosemena | 1 |
| 06035 | Lead | SW-846 6020 | 1 | 131546050002A | 06/05/2013 04:31 | Choon Y Tian | 1 |
| 06050 | ICP/MS SW-846 Water Digest | SW-846 3020A | 1 | 131546050002 | 06/04/2013 12:00 | James L Mertz | 1 |

**Sample Description:** GW-052413-NH-MW7 Grab Groundwater
MLK Tidewater Site
2800 Martin Luther King Jr Way - Seattle, WA

**LLI Sample #** WW 7071418
**LLI Group #** 1392664
**Account #** 13534

**Project Name: 301233 Tidewater Seattle**

Collected: 05/24/2013 11:30 by NH

Submitted: 05/25/2013 09:15
Reported: 06/12/2013 16:06

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

TSMW7

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/l | ug/l | |
| 10335 | Acetone | 67-64-1 | N.D. | 6 | 1 |
| 10335 | Benzene | 71-43-2 | N.D. | 0.5 | 1 |
| 10335 | Bromobenzene | 108-86-1 | N.D. | 1 | 1 |
| 10335 | Bromochloromethane | 74-97-5 | N.D. | 1 | 1 |
| 10335 | Bromodichloromethane | 75-27-4 | N.D. | 1 | 1 |
| 10335 | Bromoform | 75-25-2 | N.D. | 1 | 1 |
| 10335 | Bromomethane | 74-83-9 | N.D. | 1 | 1 |
| 10335 | 2-Butanone | 78-93-3 | N.D. | 3 | 1 |
| 10335 | n-Butylbenzene | 104-51-8 | N.D. | 1 | 1 |
| 10335 | sec-Butylbenzene | 135-98-8 | N.D. | 1 | 1 |
| 10335 | tert-Butylbenzene | 98-06-6 | N.D. | 1 | 1 |
| 10335 | Carbon Disulfide | 75-15-0 | N.D. | 1 | 1 |
| 10335 | Carbon Tetrachloride | 56-23-5 | N.D. | 1 | 1 |
| 10335 | Chlorobenzene | 108-90-7 | N.D. | 0.8 | 1 |
| 10335 | Chloroethane | 75-00-3 | N.D. | 1 | 1 |
| 10335 | Chloroform | 67-66-3 | N.D. | 0.8 | 1 |
| 10335 | Chloromethane | 74-87-3 | N.D. | 1 | 1 |
| 10335 | 2-Chlorotoluene | 95-49-8 | N.D. | 1 | 1 |
| 10335 | 4-Chlorotoluene | 106-43-4 | N.D. | 1 | 1 |
| 10335 | 1,2-Dibromo-3-chloropropane | 96-12-8 | N.D. | 2 | 1 |
| 10335 | Dibromochloromethane | 124-48-1 | N.D. | 1 | 1 |
| 10335 | 1,2-Dibromoethane | 106-93-4 | N.D. | 0.5 | 1 |
| 10335 | Dibromomethane | 74-95-3 | N.D. | 1 | 1 |
| 10335 | 1,2-Dichlorobenzene | 95-50-1 | N.D. | 1 | 1 |
| 10335 | 1,3-Dichlorobenzene | 541-73-1 | N.D. | 1 | 1 |
| 10335 | 1,4-Dichlorobenzene | 106-46-7 | N.D. | 1 | 1 |
| 10335 | Dichlorodifluoromethane | 75-71-8 | N.D. | 2 | 1 |
| 10335 | 1,1-Dichloroethane | 75-34-3 | N.D. | 1 | 1 |
| 10335 | 1,2-Dichloroethane | 107-06-2 | N.D. | 0.5 | 1 |
| 10335 | 1,1-Dichloroethene | 75-35-4 | N.D. | 0.8 | 1 |
| 10335 | cis-1,2-Dichloroethene | 156-59-2 | 7 | 0.8 | 1 |
| 10335 | trans-1,2-Dichloroethene | 156-60-5 | N.D. | 0.8 | 1 |
| 10335 | 1,2-Dichloropropane | 78-87-5 | N.D. | 1 | 1 |
| 10335 | 1,3-Dichloropropane | 142-28-9 | N.D. | 1 | 1 |
| 10335 | 2,2-Dichloropropane | 594-20-7 | N.D. | 1 | 1 |
| 10335 | 1,1-Dichloropropene | 563-58-6 | N.D. | 1 | 1 |
| 10335 | cis-1,3-Dichloropropene | 10061-01-5 | N.D. | 1 | 1 |
| 10335 | trans-1,3-Dichloropropene | 10061-02-6 | N.D. | 1 | 1 |
| 10335 | Ethylbenzene | 100-41-4 | 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-052413-NH-MW7 Grab Groundwater
MLK Tidewater Site
2800 Martin Luther King Jr Way - Seattle, WA

**LLI Sample #** WW 7071418
**LLI Group #** 1392664
**Account #** 13534

**Project Name: 301233 Tidewater Seattle**

Collected: 05/24/2013 11:30 by NH

Submitted: 05/25/2013 09:15
Reported: 06/12/2013 16:06

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

TSMW7

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | **ug/l** | **ug/l** | |
| 10335 | 1,1,2,2-Tetrachloroethane | 79-34-5 | N.D. | 1 | 1 |
| 10335 | Tetrachloroethene | 127-18-4 | N.D. | 0.8 | 1 |
| 10335 | Toluene | 108-88-3 | N.D. | 0.5 | 1 |
| 10335 | 1,2,3-Trichlorobenzene | 87-61-6 | N.D. | 1 | 1 |
| 10335 | 1,2,4-Trichlorobenzene | 120-82-1 | N.D. | 1 | 1 |
| 10335 | 1,1,1-Trichloroethane | 71-55-6 | N.D. | 0.8 | 1 |
| 10335 | 1,1,2-Trichloroethane | 79-00-5 | N.D. | 0.8 | 1 |
| 10335 | Trichloroethene | 79-01-6 | 2 | 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 | 5 | 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 |
| **GC/MS Semivolatiles** | **SW-846 8270C SIM** | | **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. | 0.032 | 1 |
| **GC Volatiles** | **ECY 97-602 NWTPH-Gx** | | **ug/l** | **ug/l** | |
| 08273 | NWTPH-Gx water C7-C12 | n.a. | N.D. | 50 | 1 |
| **GC Petroleum Hydrocarbons w/Si** | **ECY 97-602 NWTPH-Dx modified** | | **ug/l** | **ug/l** | |
| 02211 | DRO C12-C24 w/Si Gel | n.a. | N.D. | 31 | 1 |
| 02211 | HRO C24-C40 w/Si Gel | n.a. | N.D. | 72 | 1 |
| **Metals** | **SW-846 6020** | | **ug/l** | **ug/l** | |
| 06035 | Lead | 7439-92-1 | 1.9 | 0.073 | 1 |

## General Sample Comments

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

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

**Sample Description:** GW-052413-NH-MW7 Grab Groundwater
MLK Tidewater Site
2800 Martin Luther King Jr Way - Seattle, WA

**LLI Sample #** WW 7071418
**LLI Group #** 1392664
**Account #** 13534

**Project Name: 301233 Tidewater Seattle**

Collected: 05/24/2013 11:30 by NH

Submitted: 05/25/2013 09:15
Reported: 06/12/2013 16:06

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

TSMW7

## 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 | Y131492AA | 05/30/2013 05:07 | Christopher G Torres | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | Y131492AA | 05/30/2013 05:07 | Christopher G Torres | 1 |
| 08357 | PAHs in waters by SIM | SW-846 8270C SIM | 1 | 13149WAB026 | 06/11/2013 16:04 | Chad A Moline | 1 |
| 10470 | BNA Water Extraction (SIM) | SW-846 3510C | 1 | 13149WAB026 | 05/29/2013 16:00 | David S Schrum | 1 |
| 08273 | NWTPH-Gx water C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 13156C07A | 06/07/2013 00:45 | Catherine J Schwarz | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 13156C07A | 06/07/2013 00:45 | Catherine J Schwarz | 1 |
| 02211 | NWTPH-Dx water w/Si Gel | ECY 97-602 NWTPH-Dx modified | 1 | 131510012A | 06/07/2013 01:06 | Christine E Dolman | 1 |
| 02135 | Extraction - DRO Water Special | ECY 97-602 NWTPH-Dx 06/97 | 1 | 131510012A | 06/01/2013 06:35 | Roman Kuropatkin | 1 |
| 06035 | Lead | SW-846 6020 | 1 | 131546050002A | 06/05/2013 04:33 | Choon Y Tian | 1 |
| 06050 | ICP/MS SW-846 Water Digest | SW-846 3020A | 1 | 131546050002 | 06/04/2013 12:00 | James L Mertz | 1 |

**Sample Description:** GW-052413-NH-MW6 Grab Groundwater
MLK Tidewater Site
2800 Martin Luther King Jr Way - Seattle, WA

**LLI Sample #** WW 7071419
**LLI Group #** 1392664
**Account #** 13534

**Project Name: 301233 Tidewater Seattle**

Collected: 05/24/2013 12:30 by NH

Submitted: 05/25/2013 09:15
Reported: 06/12/2013 16:06

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

TSMW6

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

**Sample Description:** GW-052413-NH-MW6 Grab Groundwater
MLK Tidewater Site
2800 Martin Luther King Jr Way - Seattle, WA

**LLI Sample #** WW 7071419
**LLI Group #** 1392664
**Account #** 13534

**Project Name: 301233 Tidewater Seattle**

Collected: 05/24/2013 12:30 by NH

Submitted: 05/25/2013 09:15
Reported: 06/12/2013 16:06

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

TSMW6

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | **ug/l** | **ug/l** | |
| 10335 | 1,1,2,2-Tetrachloroethane | 79-34-5 | N.D. | 1 | 1 |
| 10335 | Tetrachloroethene | 127-18-4 | N.D. | 0.8 | 1 |
| 10335 | Toluene | 108-88-3 | N.D. | 0.5 | 1 |
| 10335 | 1,2,3-Trichlorobenzene | 87-61-6 | N.D. | 1 | 1 |
| 10335 | 1,2,4-Trichlorobenzene | 120-82-1 | N.D. | 1 | 1 |
| 10335 | 1,1,1-Trichloroethane | 71-55-6 | N.D. | 0.8 | 1 |
| 10335 | 1,1,2-Trichloroethane | 79-00-5 | N.D. | 0.8 | 1 |
| 10335 | Trichloroethene | 79-01-6 | N.D. | 1 | 1 |
| 10335 | Trichlorofluoromethane | 75-69-4 | N.D. | 2 | 1 |
| 10335 | 1,2,3-Trichloropropane | 96-18-4 | N.D. | 1 | 1 |
| 10335 | 1,2,4-Trimethylbenzene | 95-63-6 | N.D. | 1 | 1 |
| 10335 | 1,3,5-Trimethylbenzene | 108-67-8 | N.D. | 1 | 1 |
| 10335 | Vinyl Chloride | 75-01-4 | N.D. | 1 | 1 |
| 10335 | m+p-Xylene | 179601-23-1 | N.D. | 0.5 | 1 |
| 10335 | o-Xylene | 95-47-6 | N.D. | 0.5 | 1 |
| 10335 | Xylene (Total) | 1330-20-7 | N.D. | 0.5 | 1 |
| **GC/MS Semivolatiles** | **SW-846 8270C SIM** | | **ug/l** | **ug/l** | |
| 08357 | Benzo(a)anthracene | 56-55-3 | N.D. | 0.010 | 1 |
| 08357 | Benzo(a)pyrene | 50-32-8 | N.D. | 0.010 | 1 |
| 08357 | Benzo(b)fluoranthene | 205-99-2 | N.D. | 0.010 | 1 |
| 08357 | Benzo(k)fluoranthene | 207-08-9 | N.D. | 0.010 | 1 |
| 08357 | Chrysene | 218-01-9 | N.D. | 0.010 | 1 |
| 08357 | Dibenz(a,h)anthracene | 53-70-3 | N.D. | 0.010 | 1 |
| 08357 | Indeno(1,2,3-cd)pyrene | 193-39-5 | N.D. | 0.010 | 1 |
| 08357 | 1-Methylnaphthalene | 90-12-0 | N.D. | 0.010 | 1 |
| 08357 | 2-Methylnaphthalene | 91-57-6 | N.D. | 0.010 | 1 |
| 08357 | Naphthalene | 91-20-3 | N.D. | 0.031 | 1 |
| **GC Volatiles** | **ECY 97-602 NWTPH-Gx** | | **ug/l** | **ug/l** | |
| 08273 | NWTPH-Gx water C7-C12 | n.a. | N.D. | 50 | 1 |
| **GC Petroleum Hydrocarbons w/Si** | **ECY 97-602 NWTPH-Dx modified** | | **ug/l** | **ug/l** | |
| 02211 | DRO C12-C24 w/Si Gel | n.a. | N.D. | 30 | 1 |
| 02211 | HRO C24-C40 w/Si Gel | n.a. | N.D. | 70 | 1 |
| **Metals** | **SW-846 6020** | | **ug/l** | **ug/l** | |
| 06035 | Lead | 7439-92-1 | 0.20 | 0.073 | 1 |

## General Sample Comments

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

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

**Sample Description:** GW-052413-NH-MW6 Grab Groundwater
MLK Tidewater Site
2800 Martin Luther King Jr Way - Seattle, WA

**LLI Sample #** WW 7071419
**LLI Group #** 1392664
**Account #** 13534

**Project Name: 301233 Tidewater Seattle**

Collected: 05/24/2013 12:30 by NH

Submitted: 05/25/2013 09:15
Reported: 06/12/2013 16:06

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

TSMW6

## 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 | Y131492AA | 05/30/2013 05:28 | Christopher G Torres | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | Y131492AA | 05/30/2013 05:28 | Christopher G Torres | 1 |
| 08357 | PAHs in waters by SIM | SW-846 8270C SIM | 1 | 13149WAB026 | 06/11/2013 16:31 | Chad A Moline | 1 |
| 10470 | BNA Water Extraction (SIM) | SW-846 3510C | 1 | 13149WAB026 | 05/29/2013 16:00 | David S Schrum | 1 |
| 08273 | NWTPH-Gx water C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 13158A20A | 06/07/2013 18:00 | Laura M Krieger | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 13158A20A | 06/07/2013 18:00 | Laura M Krieger | 1 |
| 02211 | NWTPH-Dx water w/Si Gel | ECY 97-602 NWTPH-Dx modified | 1 | 131510012A | 06/07/2013 01:28 | Christine E Dolman | 1 |
| 02135 | Extraction - DRO Water Special | ECY 97-602 NWTPH-Dx 06/97 | 1 | 131510012A | 06/01/2013 06:35 | Roman Kuropatkin | 1 |
| 06035 | Lead | SW-846 6020 | 1 | 131546050002A | 06/05/2013 04:35 | Choon Y Tian | 1 |
| 06050 | ICP/MS SW-846 Water Digest | SW-846 3020A | 1 | 131546050002 | 06/04/2013 12:00 | James L Mertz | 1 |

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

**LLI Sample #** WW 7071420
**LLI Group #** 1392664
**Account #** 13534

**Project Name: 301233 Tidewater Seattle**

Collected: 05/23/2013

Submitted: 05/25/2013 09:15
Reported: 06/12/2013 16:06

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

TSTB-

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received Method Detection Limit | Dilution Factor |
|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | ug/l | ug/l | |
| 10943 | Benzene | 71-43-2 | N.D. | 0.5 | 1 |
| 10943 | Ethylbenzene | 100-41-4 | N.D. | 0.5 | 1 |
| 10943 | Toluene | 108-88-3 | N.D. | 0.5 | 1 |
| 10943 | Xylene (Total) | 1330-20-7 | N.D. | 0.5 | 1 |
| **GC Volatiles** | **ECY 97-602 NWTPH-Gx** | | ug/l | ug/l | |
| 08273 | NWTPH-Gx water C7-C12 | n.a. | N.D. | 50 | 1 |

## General Sample Comments

State of Washington Lab Certification No. C259

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

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 10943 | BTEX 8260B Water | SW-846 8260B | 1 | F131552AA | 06/04/2013 12:33 | Anita M Dale | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030B | 1 | F131552AA | 06/04/2013 12:33 | Anita M Dale | 1 |
| 08273 | NWTPH-Gx water C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 13156C07A | 06/06/2013 19:36 | Catherine J Schwarz | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030B | 1 | 13156C07A | 06/06/2013 19:36 | Catherine J Schwarz | 1 |

# Quality Control Summary

Client Name: Conestoga-Rovers & Associates Group Number: 1392664
Reported: 06/12/13 at 04:06 PM

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

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

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|
| Batch number: F131552AA | Sample number(s): 7071420 | | | | | | | |
| Benzene | N.D. | 0.5 | ug/l | 90 | | 77-121 | | |
| Ethylbenzene | N.D. | 0.5 | ug/l | 91 | | 79-120 | | |
| Toluene | N.D. | 0.5 | ug/l | 91 | | 79-120 | | |
| Xylene (Total) | N.D. | 0.5 | ug/l | 93 | | 77-120 | | |
| Batch number: Y131492AA | Sample number(s): 7071406-7071415,7071417-7071419 | | | | | | | |
| Acetone | N.D. | 6. | ug/l | 101 | | 35-181 | | |
| Benzene | N.D. | 0.5 | ug/l | 100 | | 77-121 | | |
| Bromobenzene | N.D. | 1. | ug/l | 107 | | 80-120 | | |
| Bromochloromethane | N.D. | 1. | ug/l | 105 | | 80-121 | | |
| Bromodichloromethane | N.D. | 1. | ug/l | 102 | | 73-120 | | |
| Bromoform | N.D. | 1. | ug/l | 101 | | 61-120 | | |
| Bromomethane | N.D. | 1. | ug/l | 91 | | 51-120 | | |
| 2-Butanone | N.D. | 3. | ug/l | 101 | | 57-141 | | |
| n-Butylbenzene | N.D. | 1. | ug/l | 115 | | 73-130 | | |
| sec-Butylbenzene | N.D. | 1. | ug/l | 113 | | 74-124 | | |
| tert-Butylbenzene | N.D. | 1. | ug/l | 109 | | 80-120 | | |
| Carbon Disulfide | N.D. | 1. | ug/l | 83 | | 68-121 | | |
| Carbon Tetrachloride | N.D. | 1. | ug/l | 96 | | 65-137 | | |
| Chlorobenzene | N.D. | 0.8 | ug/l | 106 | | 80-120 | | |
| Chloroethane | N.D. | 1. | ug/l | 93 | | 60-120 | | |
| Chloroform | N.D. | 0.8 | ug/l | 103 | | 77-122 | | |
| Chloromethane | N.D. | 1. | ug/l | 91 | | 54-123 | | |
| 2-Chlorotoluene | N.D. | 1. | ug/l | 108 | | 80-120 | | |
| 4-Chlorotoluene | N.D. | 1. | ug/l | 110 | | 80-120 | | |
| 1,2-Dibromo-3-chloropropane | N.D. | 2. | ug/l | 115 | | 56-120 | | |
| Dibromochloromethane | N.D. | 1. | ug/l | 105 | | 72-120 | | |
| 1,2-Dibromoethane | N.D. | 0.5 | ug/l | 103 | | 76-120 | | |
| Dibromomethane | N.D. | 1. | ug/l | 103 | | 80-120 | | |
| 1,2-Dichlorobenzene | N.D. | 1. | ug/l | 115 | | 80-120 | | |
| 1,3-Dichlorobenzene | N.D. | 1. | ug/l | 112 | | 80-120 | | |
| 1,4-Dichlorobenzene | N.D. | 1. | ug/l | 114 | | 80-120 | | |
| Dichlorodifluoromethane | N.D. | 2. | ug/l | 71 | | 35-122 | | |
| 1,1-Dichloroethane | N.D. | 1. | ug/l | 101 | | 79-120 | | |
| 1,2-Dichloroethane | N.D. | 0.5 | ug/l | 109 | | 64-130 | | |
| 1,1-Dichloroethene | N.D. | 0.8 | ug/l | 102 | | 76-124 | | |
| cis-1,2-Dichloroethene | N.D. | 0.8 | ug/l | 101 | | 80-120 | | |
| trans-1,2-Dichloroethene | N.D. | 0.8 | ug/l | 104 | | 80-120 | | |
| 1,2-Dichloropropane | N.D. | 1. | ug/l | 104 | | 80-120 | | |
| 1,3-Dichloropropane | N.D. | 1. | ug/l | 104 | | 80-120 | | |
| 2,2-Dichloropropane | N.D. | 1. | ug/l | 97 | | 67-124 | | |
| 1,1-Dichloropropene | N.D. | 1. | ug/l | 96 | | 80-120 | | |
| cis-1,3-Dichloropropene | N.D. | 1. | ug/l | 97 | | 78-120 | | |

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

# Quality Control Summary

Client Name: Conestoga-Rovers & Associates Group Number: 1392664
Reported: 06/12/13 at 04:06 PM

| Analysis Name | Blank Result | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|
| trans-1,3-Dichloropropene | N.D. | 1. | ug/l | 90 | | 66-124 | | |
| Ethylbenzene | N.D. | 0.5 | ug/l | 102 | | 79-120 | | |
| Hexachlorobutadiene | N.D. | 2. | ug/l | 121* | | 58-120 | | |
| 2-Hexanone | N.D. | 3. | ug/l | 98 | | 59-125 | | |
| Isopropylbenzene | N.D. | 1. | ug/l | 103 | | 77-120 | | |
| p-Isopropyltoluene | N.D. | 1. | ug/l | 114 | | 77-121 | | |
| Methyl Tertiary Butyl Ether | N.D. | 0.5 | ug/l | 104 | | 68-121 | | |
| 4-Methyl-2-pentanone | N.D. | 3. | ug/l | 99 | | 65-122 | | |
| Methylene Chloride | N.D. | 2. | ug/l | 107 | | 84-118 | | |
| Naphthalene | N.D. | 1. | ug/l | 122 | | 47-126 | | |
| n-Propylbenzene | N.D. | 1. | ug/l | 112 | | 77-130 | | |
| Styrene | N.D. | 1. | ug/l | 105 | | 77-120 | | |
| 1,1,1,2-Tetrachloroethane | N.D. | 1. | ug/l | 103 | | 79-120 | | |
| 1,1,2,2-Tetrachloroethane | N.D. | 1. | ug/l | 116 | | 70-129 | | |
| Tetrachloroethene | N.D. | 0.8 | ug/l | 104 | | 79-120 | | |
| Toluene | N.D. | 0.5 | ug/l | 101 | | 79-120 | | |
| 1,2,3-Trichlorobenzene | N.D. | 1. | ug/l | 125* | | 67-120 | | |
| 1,2,4-Trichlorobenzene | N.D. | 1. | ug/l | 115 | | 65-120 | | |
| 1,1,1-Trichloroethane | N.D. | 0.8 | ug/l | 97 | | 66-126 | | |
| 1,1,2-Trichloroethane | N.D. | 0.8 | ug/l | 108 | | 80-120 | | |
| Trichloroethene | N.D. | 1. | ug/l | 101 | | 80-120 | | |
| Trichlorofluoromethane | N.D. | 2. | ug/l | 96 | | 65-130 | | |
| 1,2,3-Trichloropropane | N.D. | 1. | ug/l | 110 | | 76-120 | | |
| 1,2,4-Trimethylbenzene | N.D. | 1. | ug/l | 112 | | 69-122 | | |
| 1,3,5-Trimethylbenzene | N.D. | 1. | ug/l | 113 | | 68-124 | | |
| Vinyl Chloride | N.D. | 1. | ug/l | 94 | | 63-120 | | |
| m+p-Xylene | N.D. | 0.5 | ug/l | 104 | | 77-120 | | |
| o-Xylene | N.D. | 0.5 | ug/l | 102 | | 77-120 | | |
| Xylene (Total) | N.D. | 0.5 | ug/l | 104 | | 77-120 | | |
| | | | | | | | | |
| Batch number: 13149WAB026 | Sample number(s): 7071406-7071413,7071417-7071419 | | | | | | | |
| Benzo(a)anthracene | N.D. | 0.010 | ug/l | 98 | 99 | 75-115 | 2 | 30 |
| Benzo(a)pyrene | N.D. | 0.010 | ug/l | 97 | 98 | 72-120 | 1 | 30 |
| Benzo(b)fluoranthene | N.D. | 0.010 | ug/l | 105 | 103 | 74-130 | 2 | 30 |
| Benzo(k)fluoranthene | N.D. | 0.010 | ug/l | 102 | 106 | 74-118 | 4 | 30 |
| Chrysene | N.D. | 0.010 | ug/l | 101 | 99 | 75-112 | 2 | 30 |
| Dibenz(a,h)anthracene | N.D. | 0.010 | ug/l | 89 | 96 | 66-122 | 8 | 30 |
| Indeno(1,2,3-cd)pyrene | N.D. | 0.010 | ug/l | 88 | 96 | 66-122 | 9 | 30 |
| 1-Methylnaphthalene | N.D. | 0.010 | ug/l | 107 | 105 | 72-114 | 2 | 30 |
| 2-Methylnaphthalene | N.D. | 0.010 | ug/l | 103 | 101 | 74-119 | 2 | 30 |
| Naphthalene | N.D. | 0.030 | ug/l | 102 | 100 | 67-118 | 2 | 30 |
| | | | | | | | | |
| Batch number: 13156C07A | Sample number(s): 7071406-7071415,7071417-7071418,7071420 | | | | | | | |
| NWTPH-Gx water C7-C12 | N.D. | 50. | ug/l | 94 | | 75-135 | | |
| | | | | | | | | |
| Batch number: 13158A20A | Sample number(s): 7071419 | | | | | | | |
| NWTPH-Gx water C7-C12 | N.D. | 50. | ug/l | 93 | | 75-135 | | |
| | | | | | | | | |
| Batch number: 131500021A | Sample number(s): 7071406-7071415,7071417 | | | | | | | |
| DRO C12-C24 w/Si Gel | N.D. | 30. | ug/l | 74 | | 32-117 | | |
| HRO C24-C40 w/Si Gel | N.D. | 70. | ug/l | | | | | |
| | | | | | | | | |
| Batch number: 131510012A | Sample number(s): 7071418-7071419 | | | | | | | |
| DRO C12-C24 w/Si Gel | N.D. | 30. | ug/l | 80 | 75 | 32-117 | 6 | 20 |
| HRO C24-C40 w/Si Gel | N.D. | 70. | ug/l | | | | | |

*- 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 Group Number: 1392664
Reported: 06/12/13 at 04:06 PM

| Analysis Name | Blank Result | Blank MDL | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|
| Batch number: 131546050002A | Sample number(s): 7071406-7071413,7071417-7071419 | | | | | | | |
| Lead | N.D. | 0.073 | ug/l | 101 | | 90-115 | | |

## Sample Matrix Quality Control

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

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: F131552AA | Sample number(s): 7071420 UNSPK: P071552 | | | | | | | | |
| Benzene | 94 | 96 | 72-134 | 2 | 30 | | | | |
| Ethylbenzene | 98 | 100 | 71-134 | 2 | 30 | | | | |
| Toluene | 95 | 99 | 80-125 | 4 | 30 | | | | |
| Xylene (Total) | 98 | 101 | 79-125 | 3 | 30 | | | | |
| Batch number: Y131492AA | Sample number(s): 7071406-7071415,7071417-7071419 UNSPK: 7071413 | | | | | | | | |
| Acetone | 78 | 84 | 33-159 | 8 | 30 | | | | |
| Benzene | 79 | 85 | 72-134 | 7 | 30 | | | | |
| Bromobenzene | 78* | 83 | 82-115 | 6 | 30 | | | | |
| Bromochloromethane | 85 | 87 | 76-134 | 2 | 30 | | | | |
| Bromodichloromethane | 74* | 80 | 78-125 | 8 | 30 | | | | |
| Bromoform | 62 | 68 | 48-118 | 9 | 30 | | | | |
| Bromomethane | 80 | 88 | 47-129 | 10 | 30 | | | | |
| 2-Butanone | 73 | 79 | 57-138 | 9 | 30 | | | | |
| n-Butylbenzene | 89 | 95 | 59-156 | 7 | 30 | | | | |
| sec-Butylbenzene | 87 | 94 | 79-125 | 8 | 30 | | | | |
| tert-Butylbenzene | 82 | 89 | 81-121 | 8 | 30 | | | | |
| Carbon Disulfide | 97 | 103 | 67-135 | 6 | 30 | | | | |
| Carbon Tetrachloride | 77 | 83 | 72-135 | 8 | 30 | | | | |
| Chlorobenzene | 77* | 83* | 87-124 | 7 | 30 | | | | |
| Chloroethane | 87 | 96 | 51-145 | 10 | 30 | | | | |
| Chloroform | 78* | 85 | 81-134 | 8 | 30 | | | | |
| Chloromethane | 94 | 102 | 46-137 | 8 | 30 | | | | |
| 2-Chlorotoluene | 81* | 85 | 82-118 | 5 | 30 | | | | |
| 4-Chlorotoluene | 80* | 86 | 84-122 | 8 | 30 | | | | |
| 1,2-Dibromo-3-chloropropane | 77 | 86 | 54-134 | 10 | 30 | | | | |
| Dibromochloromethane | 70* | 76 | 74-116 | 7 | 30 | | | | |
| 1,2-Dibromoethane | 73* | 79 | 77-116 | 8 | 30 | | | | |
| Dibromomethane | 75* | 81* | 83-119 | 7 | 30 | | | | |
| 1,2-Dichlorobenzene | 81* | 88 | 84-119 | 8 | 30 | | | | |
| 1,3-Dichlorobenzene | 81* | 88 | 86-121 | 8 | 30 | | | | |
| 1,4-Dichlorobenzene | 81* | 87 | 85-121 | 7 | 30 | | | | |
| Dichlorodifluoromethane | 85 | 94 | 52-129 | 10 | 30 | | | | |
| 1,1-Dichloroethane | 81* | 88 | 84-129 | 8 | 30 | | | | |
| 1,2-Dichloroethane | 78 | 86 | 68-131 | 9 | 30 | | | | |
| 1,1-Dichloroethene | 92 | 98 | 75-155 | 6 | 30 | | | | |
| cis-1,2-Dichloroethene | 72 (2) | 74 (2) | 80-141 | 0 | 30 | | | | |
| trans-1,2-Dichloroethene | 83 | 91 | 81-142 | 8 | 30 | | | | |
| 1,2-Dichloropropane | 78* | 86 | 83-124 | 9 | 30 | | | | |
| 1,3-Dichloropropane | 76* | 82 | 81-120 | 8 | 30 | | | | |
| 2,2-Dichloropropane | 80 | 86 | 69-135 | 8 | 30 | | | | |
| 1,1-Dichloropropene | 80* | 86 | 86-137 | 8 | 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 Group Number: 1392664
Reported: 06/12/13 at 04:06 PM

## Sample Matrix Quality Control

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

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| cis-1,3-Dichloropropene | 68* | 74 | 70-116 | 9 | 30 | | | | |
| trans-1,3-Dichloropropene | 63* | 69* | 74-119 | 9 | 30 | | | | |
| Ethylbenzene | 76 | 83 | 71-134 | 8 | 30 | | | | |
| Hexachlorobutadiene | 88 | 97 | 56-134 | 9 | 30 | | | | |
| 2-Hexanone | 68 | 74 | 55-127 | 9 | 30 | | | | |
| Isopropylbenzene | 76 | 83 | 75-128 | 8 | 30 | | | | |
| p-Isopropyltoluene | 85 | 91 | 76-123 | 7 | 30 | | | | |
| Methyl Tertiary Butyl Ether | 77 | 82 | 72-126 | 7 | 30 | | | | |
| 4-Methyl-2-pentanone | 68 | 74 | 63-123 | 9 | 30 | | | | |
| Methylene Chloride | 85 | 91 | 78-133 | 7 | 30 | | | | |
| Naphthalene | 83 | 92 | 52-125 | 10 | 30 | | | | |
| n-Propylbenzene | 86 | 93 | 74-134 | 8 | 30 | | | | |
| Styrene | 74* | 80 | 78-125 | 7 | 30 | | | | |
| 1,1,1,2-Tetrachloroethane | 73* | 78 | 74-136 | 6 | 30 | | | | |
| 1,1,2,2-Tetrachloroethane | 78 | 86 | 72-128 | 9 | 30 | | | | |
| Tetrachloroethene | 67 (2) | 69 (2) | 80-128 | 0 | 30 | | | | |
| Toluene | 77* | 83 | 80-125 | 8 | 30 | | | | |
| 1,2,3-Trichlorobenzene | 87 | 94 | 69-119 | 8 | 30 | | | | |
| 1,2,4-Trichlorobenzene | 83 | 89 | 70-124 | 7 | 30 | | | | |
| 1,1,1-Trichloroethane | 68* | 74 | 69-140 | 8 | 30 | | | | |
| 1,1,2-Trichloroethane | 77 | 83 | 71-141 | 8 | 30 | | | | |
| Trichloroethene | 71 (2) | 72 (2) | 88-133 | 0 | 30 | | | | |
| Trichlorofluoromethane | 96 | 104 | 64-146 | 8 | 30 | | | | |
| 1,2,3-Trichloropropane | 74* | 79 | 76-118 | 6 | 30 | | | | |
| 1,2,4-Trimethylbenzene | 82 | 89 | 72-130 | 9 | 30 | | | | |
| 1,3,5-Trimethylbenzene | 83 | 90 | 65-132 | 8 | 30 | | | | |
| Vinyl Chloride | 89 | 98 | 66-133 | 6 | 30 | | | | |
| m+p-Xylene | 78* | 84 | 79-125 | 8 | 30 | | | | |
| o-Xylene | 74* | 80 | 79-125 | 8 | 30 | | | | |
| Xylene (Total) | 76* | 83 | 79-125 | 8 | 30 | | | | |
| Batch number: 13156C07A | Sample number(s): 7071406-7071415,7071417-7071418,7071420 UNSPK: 7071413 | | | | | | | | |
| NWTPH-Gx water C7-C12 | 90 | 91 | 75-135 | 2 | 30 | | | | |
| Batch number: 13158A20A | Sample number(s): 7071419 UNSPK: P076857 | | | | | | | | |
| NWTPH-Gx water C7-C12 | 110 | 102 | 75-135 | 6 | 30 | | | | |
| Batch number: 131500021A | Sample number(s): 7071406-7071415,7071417 UNSPK: 7071413 | | | | | | | | |
| DRO C12-C24 w/Si Gel | 79 | 83 | 60-120 | 0 | 20 | | | | |
| Batch number: 131546050002A | Sample number(s): 7071406-7071413,7071417-7071419 UNSPK: 7071413 BKG: 7071413 | | | | | | | | |
| Lead | 103 | 104 | 83-120 | 1 | 20 | 0.24 | 0.24 | 1 (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: UST VOCs by 8260B - Water

*- 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 Group Number: 1392664
Reported: 06/12/13 at 04:06 PM

## Surrogate Quality Control

Batch number: F131552AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---|---|---|---|---|
| 7071420 | 99 | 100 | 98 | 92 |
| Blank | 94 | 98 | 100 | 93 |
| LCS | 96 | 99 | 101 | 95 |
| MS | 98 | 102 | 99 | 93 |
| MSD | 97 | 100 | 101 | 93 |
| Limits: | 80-116 | 77-113 | 80-113 | 78-113 |

Analysis Name: 8260 Ext. Water Master w/GRO
Batch number: Y131492AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---|---|---|---|---|
| 7071406 | 103 | 103 | 96 | 88 |
| 7071407 | 100 | 101 | 98 | 98 |
| 7071408 | 100 | 101 | 99 | 89 |
| 7071409 | 96 | 98 | 97 | 98 |
| 7071410 | 99 | 101 | 99 | 100 |
| 7071411 | 96 | 99 | 98 | 97 |
| 7071412 | 97 | 99 | 100 | 98 |
| 7071413 | 100 | 102 | 98 | 91 |
| 7071414 | 99 | 102 | 101 | 99 |
| 7071415 | 98 | 102 | 101 | 98 |
| 7071417 | 98 | 103 | 99 | 92 |
| 7071418 | 100 | 101 | 98 | 90 |
| 7071419 | 101 | 101 | 97 | 91 |
| Blank | 100 | 100 | 99 | 88 |
| LCS | 98 | 104 | 101 | 99 |
| MS | 99 | 102 | 101 | 99 |
| MSD | 98 | 102 | 101 | 98 |
| Limits: | 80-116 | 77-113 | 80-113 | 78-113 |

Analysis Name: PAHs in waters by SIM
Batch number: 13149WAB026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---|---|---|---|
| 7071406 | 101 | 95 | 99 |
| 7071407 | 101 | 101 | 99 |
| 7071408 | 100 | 95 | 101 |
| 7071409 | 96 | 95 | 98 |
| 7071410 | 100 | 98 | 99 |
| 7071411 | 97 | 95 | 95 |
| 7071412 | 98 | 91 | 98 |
| 7071413 | 100 | 97 | 104 |
| 7071417 | 98 | 97 | 99 |
| 7071418 | 100 | 100 | 99 |
| 7071419 | 100 | 96 | 100 |
| Blank | 95 | 92 | 100 |
| LCS | 97 | 94 | 104 |
| LCSD | 96 | 95 | 102 |
| Limits: | 64-120 | 62-141 | 58-134 |

*- 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 Group Number: 1392664
Reported: 06/12/13 at 04:06 PM

## Surrogate Quality Control

Analysis Name: NWTPH-Gx water C7-C12
Batch number: 13156C07A

| | Trifluorotoluene-F |
|---|---|
| 7071406 | 90 |
| 7071407 | 97 |
| 7071408 | 92 |
| 7071409 | 100 |
| 7071410 | 97 |
| 7071411 | 99 |
| 7071412 | 99 |
| 7071413 | 104 |
| 7071414 | 115 |
| 7071415 | 113 |
| 7071417 | 92 |
| 7071418 | 94 |
| 7071420 | 100 |
| Blank | 92 |
| LCS | 107 |
| MS | 115 |
| MSD | 113 |
| Limits: | 63-135 |

Analysis Name: NWTPH-Gx water C7-C12
Batch number: 13158A20A

| | Trifluorotoluene-F |
|---|---|
| 7071419 | 80 |
| Blank | 81 |
| LCS | 106 |
| MS | 114 |
| MSD | 111 |
| Limits: | 63-135 |

Analysis Name: NWTPH-Dx water w/Si Gel
Batch number: 131500021A

| | Orthoterphenyl |
|---|---|
| 7071406 | 99 |
| 7071407 | 100 |
| 7071408 | 108 |
| 7071409 | 99 |
| 7071410 | 97 |
| 7071411 | 95 |
| 7071412 | 99 |
| 7071413 | 89 |
| 7071414 | 106 |
| 7071415 | 112 |
| 7071417 | 102 |
| Blank | 107 |
| LCS | 109 |
| MS | 106 |
| MSD | 112 |

*- 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 Group Number: 1392664
Reported: 06/12/13 at 04:06 PM

## Surrogate Quality Control

Limits: 50-150

Analysis Name: NWTPH-Dx water w/Si Gel
Batch number: 131510012A

| | Orthoterphenyl |
|---|---|
| 7071418 | 103 |
| 7071419 | 105 |
| Blank | 96 |
| LCS | 105 |
| LCSD | 101 |

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.

Acct# 13534
Grp# 1392664

Sample# 7071406-20

# CHAIN OF CUSTODY RECORD

COC NO.: 37484

PAGE 1 OF 1

(See Reverse Side for Instructions)


CONESTOGA-ROVERS & ASSOCIATES

Address: 1117 TACOMA AVE. S. TACOMA, WA. 98402

Phone: 253.573.1218 Fax: 253.573.1663


| | | | |
|---|---|---|---|
| **Project No/ Phase/Task Code:** 061992-2013.1 | **Laboratory Name:** LANCASTER | **Lab Location:** LANCASTER, PA | **SSOW ID:** |
| **Project Name:** TIDEWATER - MLK SEATTLE | **Lab Contact:** | **Lab Quote No:** | **Cooler No:** |
| **Project Location:** SEATTLE, WA. | | | **Carrier:** |
| **Chemistry Contact:** J. CLOUD / M. DAVIS | | | **Airbill No:** |
| **Sampler(s):** N. HINSPERGER | | | **Date Shipped:** |

| Item | Sample Identification (Containers for each sample may be combined on one line) | Date (mm/dd/yy) | Time (hh:mm) | Matrix Code (see back of COC) | Grab (G) or Comp (C) | Unpreserved | Hydrochloric Acid (HCl) | Nitric Acid ($HNO_3$) | Sulfuric Acid ($H_2SO_4$) | Sodium Hydroxide (NaOH) | Methanol/Water (Soil VOC) | EnCores 3x5-g, 1x25-g | Other: | Total Containers/Sample | TPH D | TPH g | SVOC's | VOC's | TOTAL LEAD | MS/MSD Request | Comments/ Special Instructions: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | GW-052313-NH-MW4 | 05/23/13 | 11:45 | WG | G | | | | | | | | | 11 | X | X | X | X | X | | |
| 2 | GW-052313-NH-MW3 | 05/23/13 | 15:20 | WG | G | | | | | | | | | 11 | X | X | X | X | X | | |
| 3 | GW-052313-NH-MW1 | 05/23/13 | 10:30 | WG | G | | | | | | | | | 11 | X | X | X | X | X | | |
| 4 | GW-052313-NH-MW8 | 05/23/13 | 12:30 | WG | G | | | | | | | | | 11 | X | X | X | X | X | | |
| 5 | GW-052313-NH-FD1 | 05/23/13 | | WG | G | | | | | | | | | 11 | X | X | X | X | X | | *entered as MW9 per sample labels. jmp 5/28/13 |
| 6 | GW-052313-NH-MW2 | 05/23/13 | 14:30 | WG | G | | | | | | | | | 11 | X | X | X | X | X | | |
| 7 | GW-052313-NH-MW5 | 05/23/13 | 16:00 | WG | G | | | | | | | | | 11 | X | X | X | X | X | | |
| 8 | GW-052413-NH-MW4* | 05/24/13 | 9:30 | WG | G | | | | | | | | | 22 | X | X | X | X | X | X | MS/MSD |
| 9 | GW-052413-NH-MW10 | 05/24/13 | 10:30 | WG | G | | | | | | | | | 10 | X | X | X | X | X | | MS/MSD for VOCs, Gx & Dx only. Trip Blank for Gx & BTEX per M. Davis. jmp 5/28/13 |
| 10 | GW-052413-NH-MW7 | 05/24/13 | 11:30 | WG | G | | | | | | | | | 10 | X | X | X | X | X | | |
| 11 | GW-052413-NH-MW6 | 05/24/13 | 12:30 | WG | G | | | | | | | | | 10 | X | X | X | X | X | | |
| 12 | TRIP BLANKS | | | | | | | | | | | | | 4 | | | X | | | | |
| 13 | | | | | | | | | | | | | | | | | | | | | |
| 14 | | | | | | | | | | | | | | | | | | | | | |
| 15 | | | | | | | | | | | | | | | | | | | | | |

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

☐ 1 Day ☐ 2 Days ☐ 3 Days ☐ 1 Week ☐ 2 Week ☒ Other: STANDARD

**Total Number of Containers:** 133

**All Samples in Cooler must be on COC**

**Notes/ Special Requirements:**

| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |
|---|---|---|---|---|---|---|---|
| 1. | CRA | 05/24/13 | 16:00 | 1. | | | |
| 2. | | | | 2. | | | |
| 3. | | | | 3. | LLI | 5/25/13 | 0915 |

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



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# Explanation of Symbols and Abbreviations

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

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

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

**>** greater than

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

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

**ppb** parts per billion

**Dry weight basis** Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

*U.S. EPA CLP Data Qualifiers:*

**Organic Qualifiers**

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

**Inorganic Qualifiers**

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

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

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

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

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

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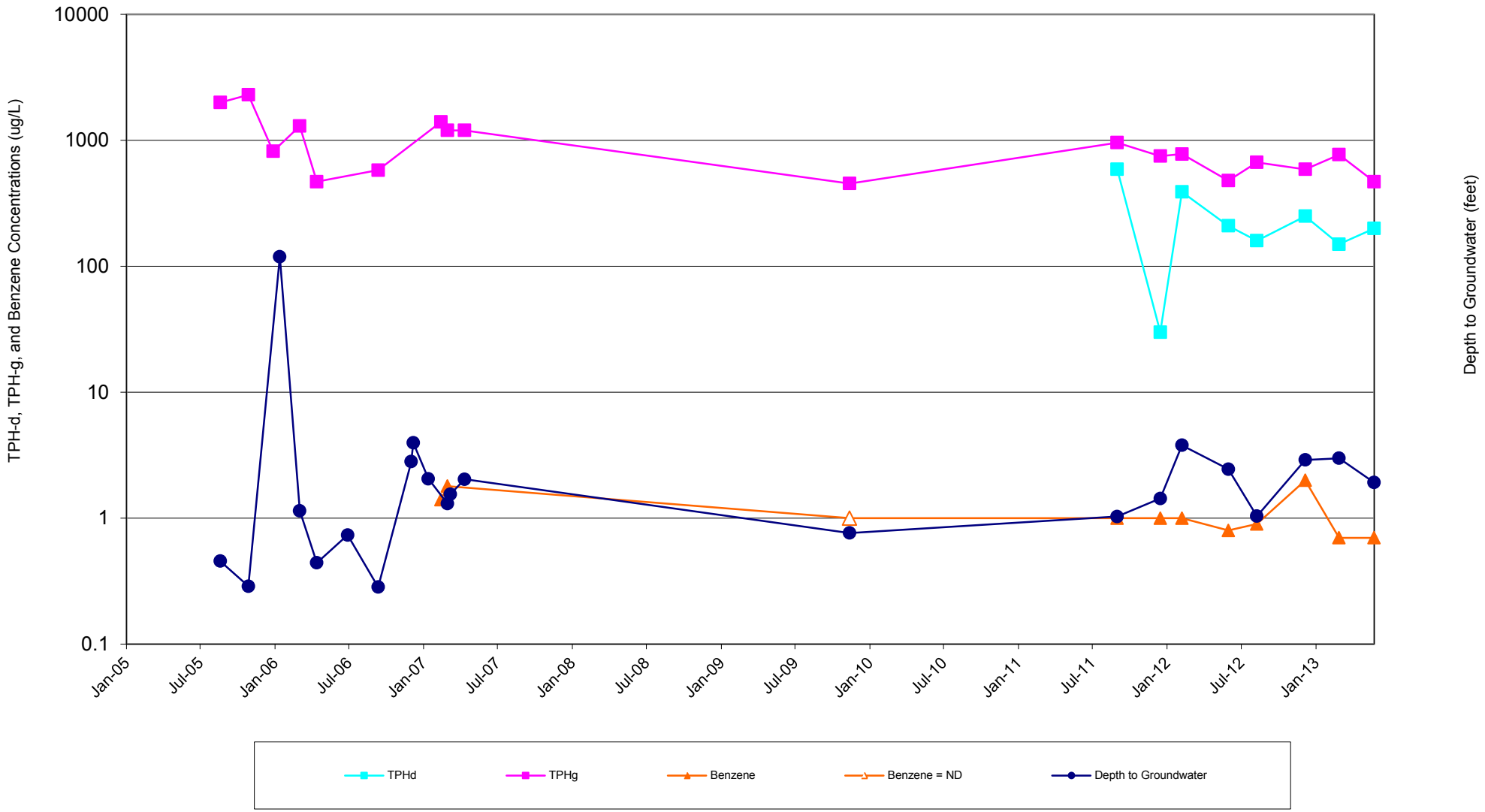
ATTACHMENT C

CONCENTRATION TREND GRAPHS

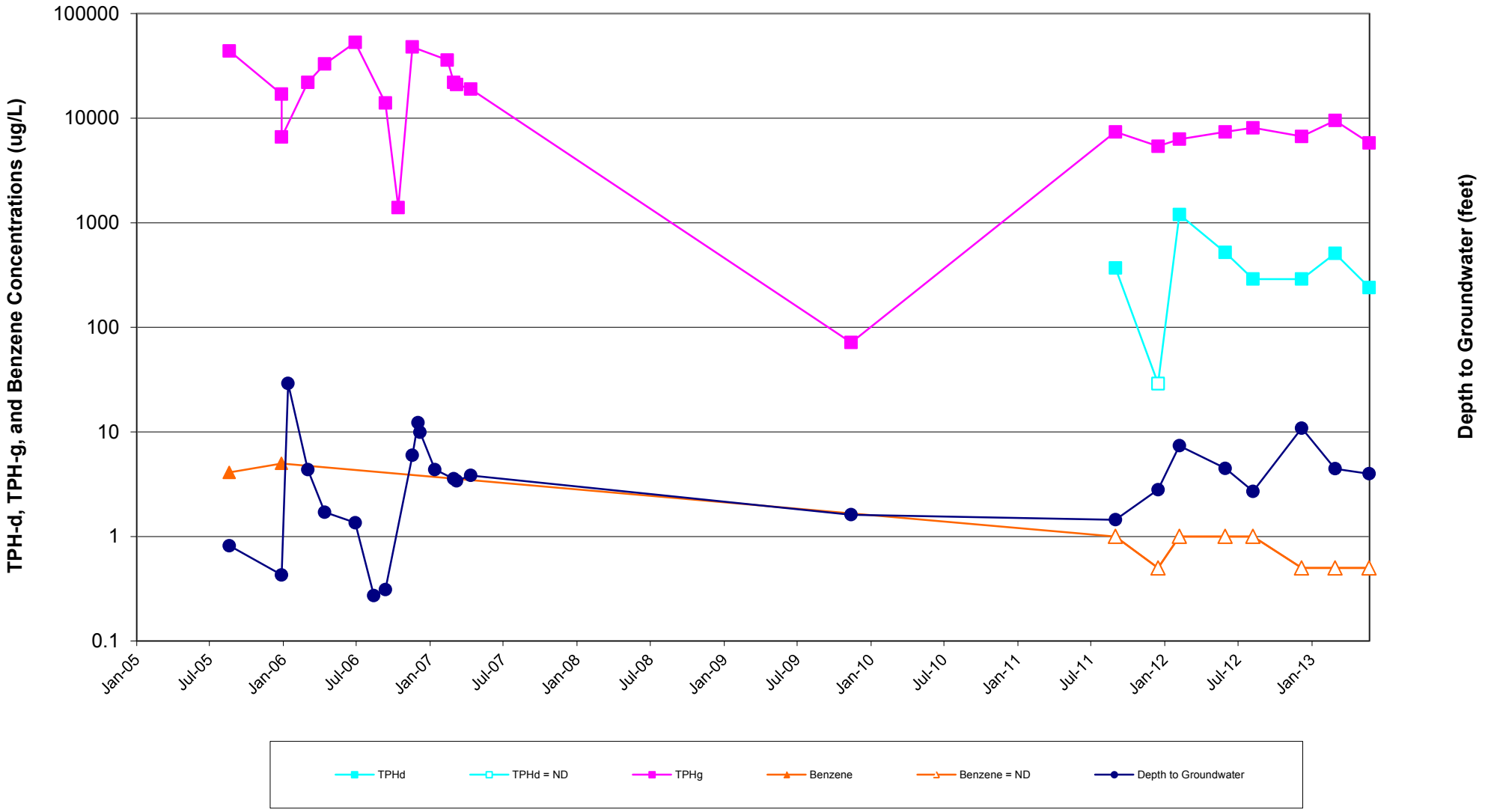
**GRAPH 1**

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



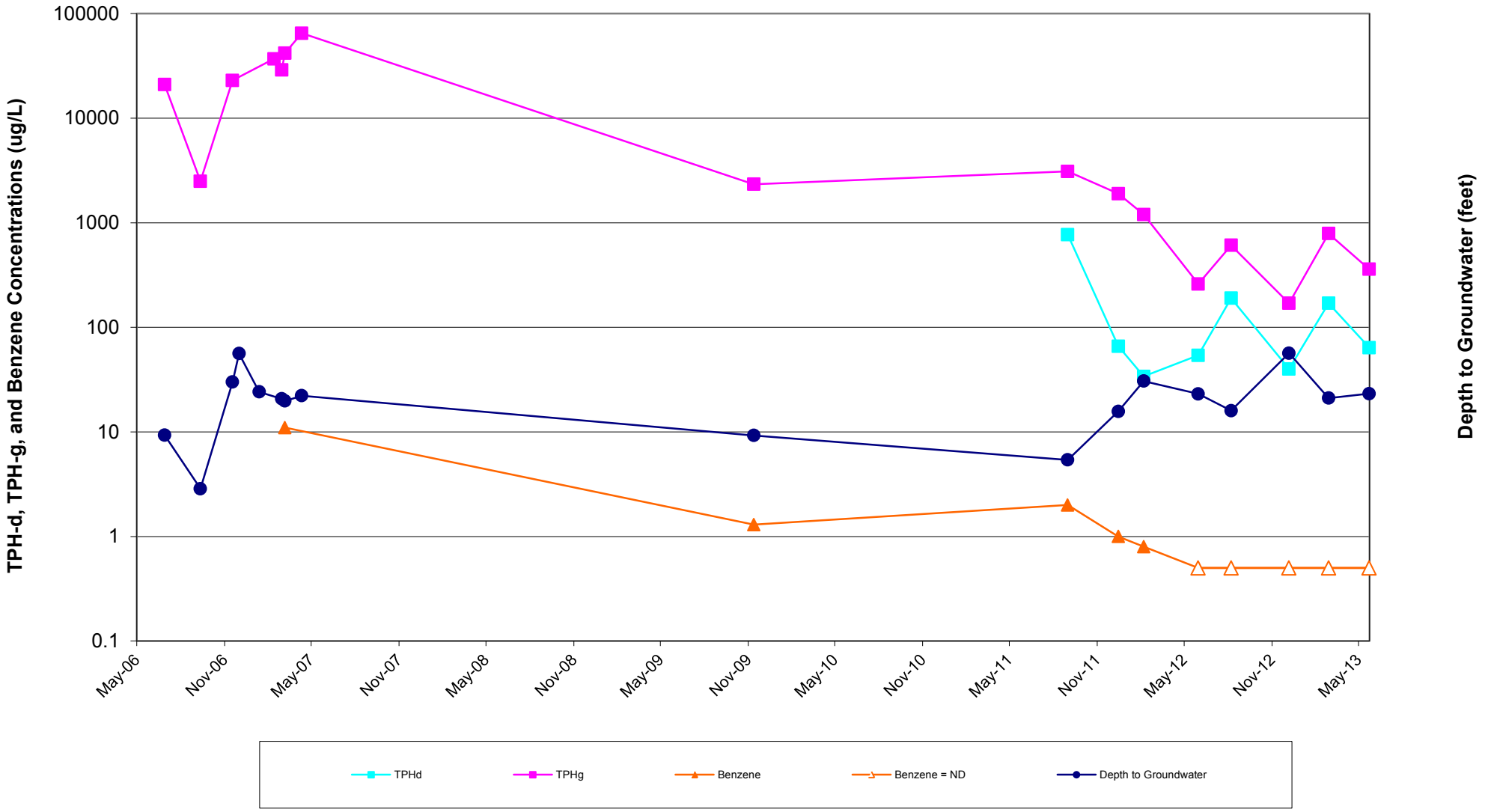
**GRAPH 2**

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



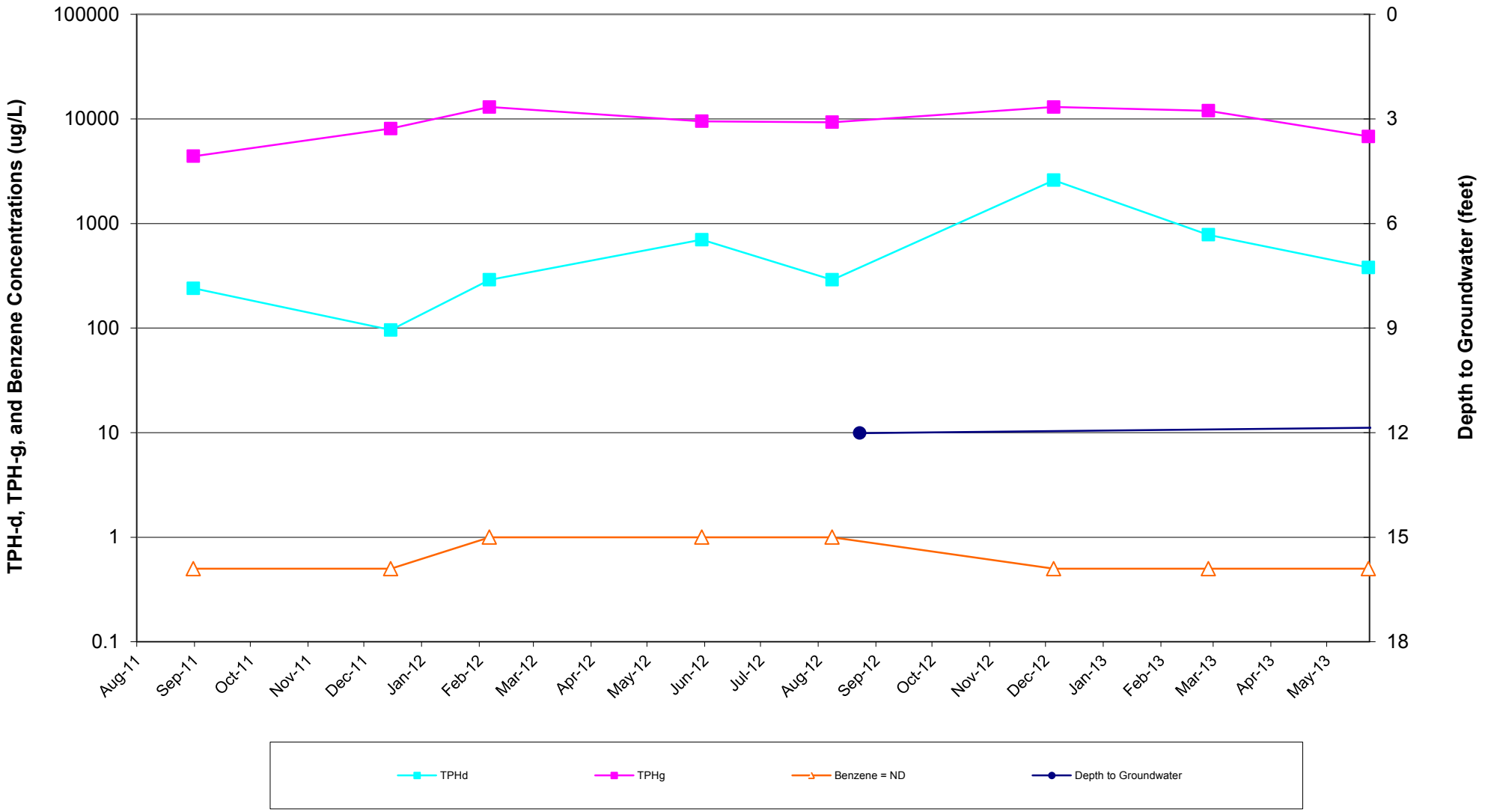
**GRAPH 3**

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



**GRAPH 4**

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



ATTACHMENT D

SUMMARY OF PREVIOUS INVESTIGATIONS

# SUMMARY OF PREVIOUS INVESTIGATIONS AND REMEDIATION

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

***1989***

Soil and groundwater investigations at the Site began with the UST removals in 1989. All soil samples collected from the UST excavation, in the northwest corner of the Property, were documented below the Model Toxics Control Act (MTCA) Method A Cleanup Levels for constituents of concern (COC). (Stantec, 2012).

***February 2005***

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