



SoundEarth Strategies, Inc.  
2811 Fairview Avenue East, Suite 2000  
Seattle, Washington 98102

August 3, 2017

Mr. Dale Myers  
Washington State Department of Ecology  
3190 160th Avenue Southeast  
Bellevue, Washington 98008

**SUBJECT: SECOND QUARTER 2017 SUMMARY REPORT  
SKS Shell Station Site  
3901 Southwest Alaska Street  
Seattle, Washington  
Project Number: 0914-001**

Dear Mr. Myers:

SoundEarth Strategies, Inc. (SoundEarth) is pleased to present the Washington State Department of Ecology (Ecology) with a status report for the Second Quarter activities for cleanup at the SKS Shell Station Site (SKS Site). The SKS Site is being cleaned up under the Prospective Purchaser Consent Decree #13-2-27556-2, entered on July 29, 2013 (PPCD). The remediation of petroleum-contaminated soil and groundwater associated with the SKS Site in compliance with the PPCD and Chapter 173-340 of the Washington Administrative Code is being performed concurrently with the development of a five-story, mixed-use building with two-levels of underground parking. Cleanup activities and development activities at the SKS Site have included the installation of a vapor barrier to minimize or eliminate potential vapor intrusion concerns. Cleanup of the SKS Site has been coordinated with remedial activities conducted at the adjacent Huling Brothers Property and Kennedy Family Limited Partnership Property, which are being managed separately under the Voluntary Cleanup Program (NW2716).

#### **SECOND QUARTER SUMMARY**

Groundwater sampling was conducted in June 2017 for the on-property and off-property compliance wells (all wells associated with the SKS Site were sampled). Analytical data indicates that gasoline-range petroleum hydrocarbons and benzene, toluene, ethylbenzene, and total xylenes (GRPH and BTEX, respectively) do not exceed Washington State Model Toxics Control Act (MTCA) cleanup levels in the three on-property compliance wells (MW108, MW109, and MW110). Well MW110 contained a concentration of 520 micrograms per liter ( $\mu\text{g/L}$ ) diesel-range petroleum hydrocarbons, slightly exceeding the MTCA Method A cleanup level of 500  $\mu\text{g/L}$ .

Samples collected from off-property right-of-way (ROW) wells MW101, MW102, MW103, and MW105 contained no detectable petroleum hydrocarbons.

Samples collected from off-property wells MW104 and RW03 on the Fauntleroy Way sidewalk contained lower concentrations of GRPH and BTEX than what was detected in Fourth Quarter 2016 and First Quarter 2017. Concentrations in MW104 are significantly lower than samples collected in 2013 and

2014 prior to remediation. Most significantly, GRPH and BTEX concentrations in MW104 were below MTCA cleanup levels for the Second Quarter 2017 samples. Please see the attached Figure 1 for a summary of the Second Quarter results and Table 1 for a summary of the analytical results since 2012. Trends for GRPH and benzene concentrations for key monitoring points are also summarized in the attached Charts 1 through 4.

Groundwater levels continued to be approximately 1 to 3 feet lower than previously observed during sampling conducted from 2013 to 2016. SoundEarth is currently evaluating the cause of these lower groundwater levels, including transducer studies and analysis of construction dewatering activities on adjacent properties. On June 13 and 14, transducers were installed in wells MW105, MW110, and RW04. Data will be collected from the transducers during Third Quarter and Fourth Quarter 2017.

SoundEarth has uploaded Environmental Information Management (EIM) analytical and location data for the SKS Site and has also uploaded groundwater elevation data and aquifer test data to EIM. Furthermore, SoundEarth provided Ecology with field notes, monitoring data, and disposal documentation collected in 2015 during dewatering activities for the ROW.

#### **PLANNED THIRD QUARTER 2017 ACTIVITIES**

SoundEarth plans to conduct Third Quarter 2017 groundwater sampling in August 2017. Groundwater levels and analytical data trends will also be evaluated with regard to the sampling results obtained during the most recent four sampling events. We also intend to install a new monitoring well in the Alaska Street ROW (MW111), as indicated in the proposed and revised March 2017 Work Plan submitted to Ecology on April 17, 2017, after we receive Ecology's input on the location of this well.

Additionally, per Ecology's request, SoundEarth plans to move forward with efforts to decommission the four remediation wells located on Alaska Street (RW06 through RW09) based on Ecology's determination that modifications to the top of the well casings have rendered the wells non-compliant, such that remedial injections would not be allowed by Ecology in those reconfigured wells. A Notice of Intent for decommissioning was submitted to Ecology on May 22, 2017. SoundEarth is currently preparing a decommissioning work plan that will be submitted to Ecology for approval. We look forward to discussing this issue in further detail with Ecology during Third Quarter 2017.

#### **Project Schedule**

The following summarizes the work conducted to date and the current schedule for anticipated reporting and monitoring work at the SKS Site:

<u>Cleanup Plan Task</u>	<u>Date</u>
UST Fuel Removal and Station Shutdown	Conducted: July 2013
Installation of Shoring for UST removal	Conducted: November 2013
UST System Cleaning and Removal	Conducted: December 2013
Submit UST Removal Report	Conducted: January 2014
Permitting for Wells	Conducted: May 2014
Master Use Permit	Conducted: June 2014
Install Dewatering Wells (8 Wells)	Conducted: July 2014
Install West Bounding Well MW107 (post demolition)	Conducted: October 2014
SKS Site Demolition and Hoist Removal	Conducted: October–November 2014
Construct Dewatering System in ROW Wells	Conducted: March 2015

Cleanup Plan Task	Date
Operate Dewatering System	Conducted: March–June 2015
Contaminated Soil Excavation and Confirmation Sampling	Conducted: March–May 2015
Removal of Three Previously Unknown USTs	Conducted: March 2015
Backfill Excavation and Install Membrane Barrier	Conducted: August–September 2015
Install Compliance Wells MW108, MW109, and MW110	Conducted: September 2015
Prepare Interim Cleanup Action Report	Conducted: December–February 2016
First Quarter Post Cleanup Groundwater Monitoring	Conducted: March 2016
Submit Cleanup Action Report	Conducted: October 2016
Notice of Intent to Decommission Wells	Conducted: May 2017
ROW Sampling	Conducted: May 2017
Groundwater Elevation Study	In Progress: June–October 2017
ChemOx Injection	Planned: 2017
Alaska Street Sidewalk Well Decommissioning	Planned: 3rd Quarter 2017
Groundwater Monitoring & Contingent ChemOx Injection	Planned: 2017–2018
Groundwater Monitoring (as necessary)	Planned: 2017–2021

**NOTES:**

ChemOx = Chemical Oxidant  
ROW = right-of-way  
SKS Site = SKS Shell Station Site  
UST = underground storage tank

**CLOSING**

Please let me know if you would like to meet on site or at your office to discuss any of the specific remedial activities. If you have any questions about the schedule and the cleanup activities, please contact me at 206-306-1900.

Respectfully,

SoundEarth Strategies, Inc.



Rob Roberts  
Senior Scientist

Attachments: Figure 1, 2017 Q2 Groundwater Analytical Data  
Table 1, Summary of Groundwater Data  
Chart 1, GRPH and Benzene Concentrations—MW104  
Chart 2, GRPH and Benzene Concentrations—GLMW01/MW109  
Chart 3, GRPH and Benzene Concentrations—MW110/MW-2  
Chart 4, GRPH and Benzene Concentrations—MW-3/MW108

cc: Mr. Brad Reisinger, Lennar Multifamily  
Mr. Kelley Kohout, Lennar Multifamily  
Mr. Ken Lederman, Foster Pepper PLLC  
Mr. Phil Carmody, GID  
Mr. Jason Sweatt, GID

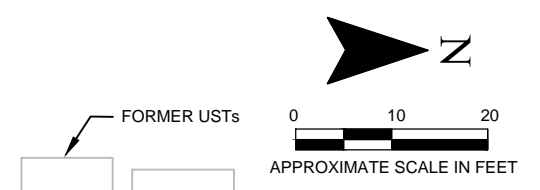
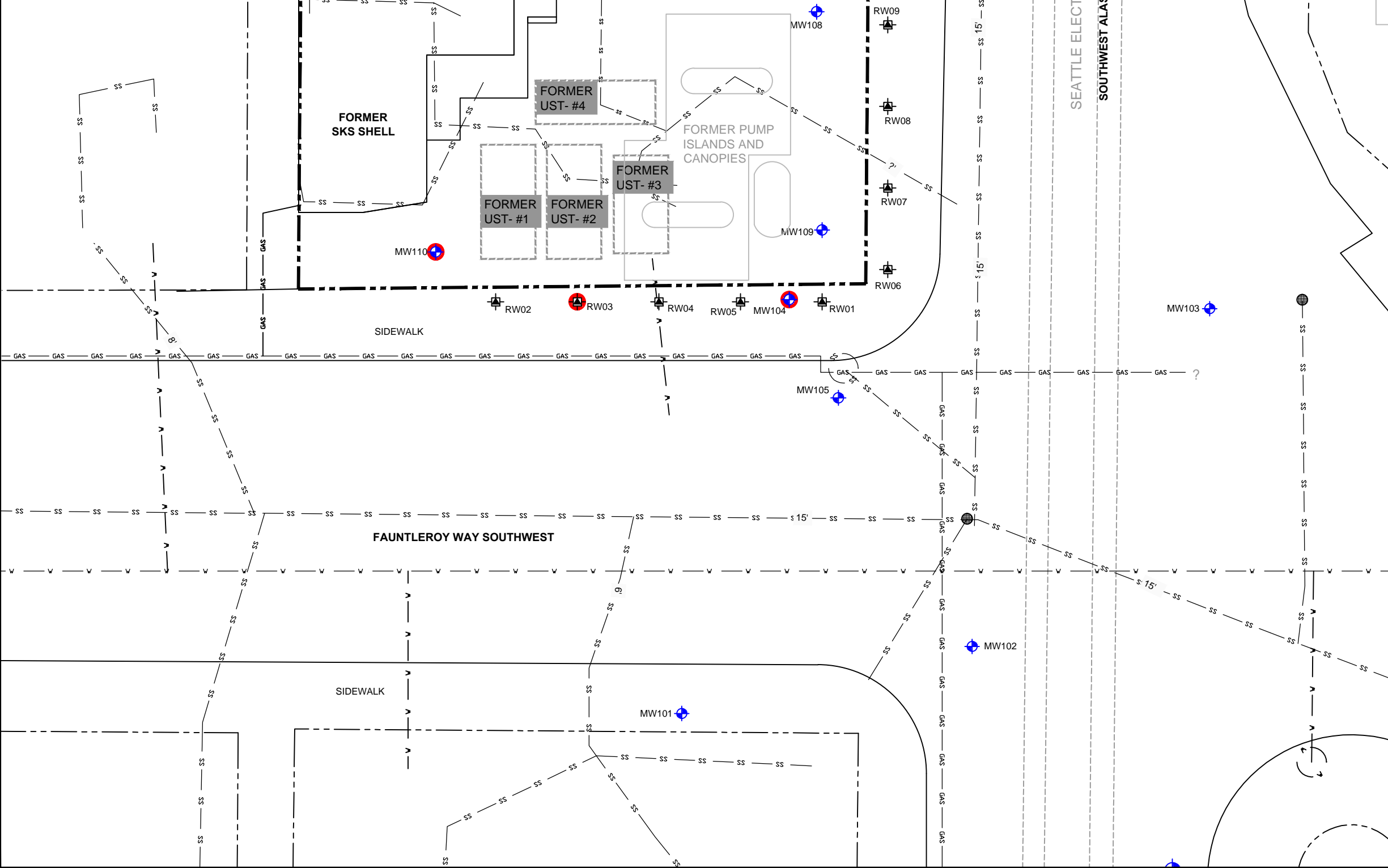
Mr. Ian Sutton, Joyce Ziker Parkinson, PLLC  
Mr. Dave Cook, Aspect Consulting

CER:rt/hsb

## FIGURE

6/28/2017 P:\0914 LENNAR SHELL\0914-001\_SKS SHELL\_ROW\TECHNICAL\CAD\2017\Q2\0914-004\_2017Q2\_GD.DWG

Well ID	Sample Date	Analytical Results (micrograms per liter)								
		GRPH	Benzene	Toluene	Ethylbenzene	Total Xylenes	DRPH	DRPH with Silica Gel	ORPH	
MW101	06/14/17	<100	<1	<1	<1	<3	<50	-	<250	
MW102	06/13/17	<100	<1	<1	<1	<3	<50	-	<250	
MW103	06/13/17	<100	<1	<1	<1	<3	<60	-	<300	
MW104	06/15/17	700	<1	<1	4.0	3.1	3,000	370	<250	
MW105	06/13/17	<100	<1	<1	<1	<3	<50	-	<250	
MW108	06/14/17	<100	<1	<1	<1	<3	140	-	<250	
MW109	06/14/17	220	<1	<1	<1	<3	330	-	<250	
MW110	06/14/17	260	<1	<1	2.0	<3	520	-	<250	
RW02	06/14/17	<100	<1	<1	<1	<3	<50	-	<250	
RW03	06/14/17	1,300	7.0	<1	32	11	1,500	320	<250	
RW04	06/14/17	790	2.5	<1	16	<3	400	-	<250	
RW05	06/14/17	400	<1	<1	4.4	<3	470	-	<250	
<b>MTCA Method A Cleanup Level</b>		<b>1,000/800</b>	<b>5</b>	<b>1,000</b>	<b>700</b>	<b>1,000</b>	<b>500</b>	<b>500</b>	<b>500</b>	



**LEGEND**

- EXISTING REMEDIATION WELL
- EXISTING MONITORING WELL
- PROPERTY BOUNDARY
- PARCEL BOUNDARY
- SEWER LINE
- WATER LINE
- GAS LINE
- HISTORICAL UTILITY LINES
- GRPH GASOLINE-RANGE PETROLEUM HYDROCARBONS
- DRPH DIESEL-RANGE PETROLEUM HYDROCARBONS
- ORPH OIL-RANGE PETROLEUM HYDROCARBONS
- MTCA WASHINGTON STATE MODEL TOXICS CONTROL ACT
- UST UNDERGROUND STORAGE TANK
- RED** DENOTES CONCENTRATION EXCEEDS MTCA METHOD A CLEANUP LEVEL
- < RESULT BELOW LABORATORY REPORTING LIMITS
- NOT ANALYZED

**SoundEarth Strategies**  
 WWW.SOUNDEARTHINC.COM

SKS SHELL STATION SITE  
 3901 SOUTHWEST ALASKA STREET  
 SEATTLE, WASHINGTON  
 SOUNDEARTH PROJECT #914-001

**FIGURE 1**  
 2017 Q2 GROUNDWATER ANALYTICAL DATA

## TABLE



**Table 1**  
**Summary of Groundwater Data**  
**SKS Shell Property**  
**3901 Southwest Alaska Street**  
**Seattle, Washington**

Well ID	Sample Date	Sampled By	Depth to Groundwater (feet below TOC)	Relative Groundwater Elevation <sup>(1)</sup>	Analytical Results (µg/L)												
					GRPH <sup>(2)</sup>	Benzene <sup>(3)</sup>	Toluene <sup>(3)</sup>	Ethylbenzene <sup>(3)</sup>	Total Xylenes <sup>(3)</sup>	MTBE <sup>(3)</sup>	EDC <sup>(3)</sup>	EDB <sup>(3)</sup>	DRPH <sup>(2)</sup>	DRPH with Silica Gel <sup>(4)</sup>	ORPH <sup>(2)</sup>	ORPH with Silica Gel <sup>(4)</sup>	
MW101	08/06/12	SoundEarth	24.39	245.15	<100	<0.35	<1	<1	<1	<3	<1	<1	<1	--	--	--	--
	04/01/13	SoundEarth	24.67	244.87	<100	<1	<1	<1	<3	--	--	--	<50	--	<250	--	--
	06/14/17	SoundEarth	25.80	243.74	<100	<1	<1	<1	<3	--	--	--	<50	--	<250	--	--
MW102	11/07/12	SoundEarth	25.41	243.65	<100	<0.35	<1	<1	<3	<1	<1	<1	<50 <sup>(6)</sup>	--	<250 <sup>(6)</sup>	--	--
	06/13/17	SoundEarth	25.42	243.64	<100	<1	<1	<1	<3	--	--	--	<50	--	<250	--	--
MW103	11/07/12	SoundEarth	27.80	241.75	<100	<0.35	<1	<1	<3	<1	<1	<1	<50 <sup>(6)</sup>	--	<250 <sup>(6)</sup>	--	--
	06/13/17	SoundEarth	28.56	240.99	<100	<1	<1	<1	<3	--	--	--	<60	--	<300	--	--
MW104	11/07/12	SoundEarth	24.41	244.94	6,100	2,100	10	120	418	<1	<1	<1	4,000	--	<250	--	--
	03/06/13	SoundEarth	23.24	246.11	9,900	2,300	110	470	870	--	--	--	1,900 <sup>x</sup>	--	<250	--	--
	04/01/13	SoundEarth	23.37	245.98	20,000	2,600	140	640	1,300	--	--	--	--	540 <sup>x</sup>	--	<250	--
	06/12/14	SoundEarth	25.50	243.85	15,000	1,800	120	480	1,330	--	--	<0.01	14,000 <sup>x</sup>	--	250 <sup>x</sup>	--	--
	03/17/16	SoundEarth	26.41	242.94	480	1.2	1.8	2.2	5.7	--	--	--	1,200 <sup>x</sup>	--	<300	--	--
	06/24/16	SoundEarth	25.16	244.19	940	2.5	2.0	3.0	9.5	--	--	--	3,200	--	<250	--	--
	09/28/16	SoundEarth	25.55	243.80	940	7.2	<1	3.7	7.4	--	--	--	4,000 <sup>x</sup>	--	340 <sup>t</sup>	--	--
	12/23/16	SoundEarth	27.28	242.07	2,000	2.1	2.1	17	27	--	--	--	16,000	180 <sup>x</sup>	380 <sup>x</sup>	<250	--
MW105	03/17/17	SoundEarth	27.55	241.80	1,400	<1	<1	8.5	10	--	--	--	7,900	290 <sup>x</sup>	<400	<400	--
	06/15/17	SoundEarth	27.92	241.45	700	<1	<1	4.0	3.1	--	--	--	3,000	370 <sup>x</sup>	<250	<250	--
	12/13/12	SoundEarth	24.25	245.05	140	<1	<1	<1	<3	--	--	--	<50 <sup>(6)</sup>	--	<250 <sup>(6)</sup>	--	--
RW02	03/06/13	SoundEarth	23.33	245.97	<100	<0.35	<1	<1	<3	--	--	--	61 <sup>x</sup>	--	<250	--	--
	06/13/17	SoundEarth	27.36	241.94	<100	<1	<1	<1	<3	--	--	--	<50	--	<250	--	--
RW03	07/16/14	SoundEarth	--	--	16,000	1.1	2.5	380	1,400	--	--	--	3,200 <sup>x</sup>	--	<250	--	--
	06/14/17	SoundEarth	27.22	241.38	<100	<1	<1	<1	<3	--	--	--	<50	--	<250	--	--
	03/17/16	SoundEarth	26.23	--	2,300	41	6.9	51	260	--	--	--	1,400 <sup>x</sup>	--	<250	--	--
	06/24/16	SoundEarth	25.40	--	1,600	27	4.4	27	59	--	--	--	3,600	--	<250	--	--
	09/28/16	SoundEarth	25.71	--	1,100	6.7	<1	20	45	--	--	--	2,400 <sup>x</sup>	--	<300	--	--
	12/23/16	SoundEarth	26.77	--	9,000	470	16	380	750	--	--	--	11,000	720 <sup>x</sup>	<300	<300	--
RW04	03/02/17	SoundEarth	27.22	--	4,900	150	<10	220	190	--	--	--	11,000 <sup>x</sup>	880 <sup>t</sup>	<250	<250	--
	06/14/17	SoundEarth	27.91	241.59	1,300	7.0	<1	32	11	--	--	--	1,500	320 <sup>x</sup>	<250	<250	--
RW05	07/16/14	SoundEarth	--	--	17,000	1,200	270	360	1,700	--	--	--	4,600 <sup>x</sup>	--	270 <sup>x</sup>	--	--
	06/14/17	SoundEarth	27.62	241.60	790	2.5	<1	16	<3	--	--	--	400	--	<250	--	--
RW07	06/14/17	SoundEarth	27.64	241.45	400	<1	<1	4.4	<3	--	--	--	470	--	<250	--	--
RW09	07/16/14	SoundEarth	--	--	1,600	110	8.3	8.3	17	--	--	--	1,100 <sup>x</sup>	--	<250	--	--
MTCA Method A Cleanup Levels for Groundwater <sup>(5)</sup>					1,000/800 <sup>(6)</sup>	5	1,000	700	1,000	20	5	0.01	500	500	500	500	500





**Table 1**  
**Summary of Groundwater Data**  
**SKS Shell Property**  
**3901 Southwest Alaska Street**  
**Seattle, Washington**

Well ID	Sample Date	Sampled By	Depth to Groundwater (feet below TOC)	Relative Groundwater Elevation <sup>(1)</sup>	Analytical Results (µg/L)											
					GRPH <sup>(2)</sup>	Benzene <sup>(3)</sup>	Toluene <sup>(3)</sup>	Ethylbenzene <sup>(3)</sup>	Total Xylenes <sup>(3)</sup>	MTBE <sup>(3)</sup>	EDC <sup>(3)</sup>	EDB <sup>(3)</sup>	DRPH <sup>(2)</sup>	DRPH with Silica Gel <sup>(4)</sup>	ORPH <sup>(2)</sup>	ORPH with Silica Gel <sup>(4)</sup>
MW108	03/17/16	SoundEarth	5.52	--	<100	<1	<1	<1	<3	--	--	--	93 <sup>x</sup>	--	<300	--
	06/24/16	SoundEarth	3.33	--	<100	<1	<1	<1	<3	--	--	--	<50	--	<250	--
	09/28/16	SoundEarth	3.85	--	<100	<1	<1	<1	<3	--	--	--	<60	--	<300	--
	12/23/16	SoundEarth	6.56	--	<100	<1	<1	<1	<3	--	--	--	94 <sup>x</sup>	<70	<350	<350
	03/03/17	SoundEarth	6.64	--	<100	<1	<1	<1	<3	--	--	--	<80	<80	<400	<400
	06/14/17	SoundEarth	7.06	240.77	<100	<1	<1	<1	<3	--	--	--	140 <sup>x</sup>	--	<250	--
MW109	03/17/16	SoundEarth	5.42	--	<100	<1	<1	<1	<3	--	--	--	97 <sup>x</sup>	--	<250	--
	06/24/16	SoundEarth	3.35	--	<100	<1	<1	<1	<3	--	--	--	160 <sup>x</sup>	--	<250	--
	09/28/16	SoundEarth	3.96	--	<100	<1	<1	<1	<3	--	--	--	260 <sup>x</sup>	--	<250	--
	12/23/16	SoundEarth	6.59	--	250	<1	<1	<1	<3	--	--	--	430 <sup>x</sup>	<50	<250	<250
	03/03/17	SoundEarth	6.70	--	370	<1	<1	1.2	<3	--	--	--	490 <sup>x</sup>	55 <sup>x</sup>	<250	<250
	06/14/17	SoundEarth	6.87	241.05	220	<1	<1	<1	<3	--	--	--	330	--	<250	--
MW110	03/17/16	SoundEarth	5.70	--	<100	<1	<1	<1	<3	--	--	--	<50	--	<250	--
	06/24/16	SoundEarth	3.56	--	<100	<1	<1	<1	<3	--	--	--	100 <sup>x</sup>	--	<250	--
	09/28/16	SoundEarth	4.19	--	<100	<1	<1	<1	<3	--	--	--	590 <sup>x</sup>	--	440 <sup>x</sup>	--
	12/23/16	SoundEarth	6.96	--	500	2.3	<1	9.7	18	--	--	--	1,200	68 <sup>x</sup>	<300	<300
	03/03/17	SoundEarth	7.57	--	570	2.1	<1	9.3	4.7	--	--	--	1,000 <sup>x</sup>	110 <sup>x</sup>	<250	<250
	06/14/17	SoundEarth	7.78	240.43	260	<1	<1	2.0	<3	--	--	--	520	--	<250	--
<b>MTCA Method A Cleanup Levels for Groundwater<sup>(5)</sup></b>					<b>1,000/800<sup>(6)</sup></b>	<b>5</b>	<b>1,000</b>	<b>700</b>	<b>1,000</b>	<b>20</b>	<b>5</b>	<b>0.01</b>	<b>500</b>	<b>500</b>	<b>500</b>	<b>500</b>

**NOTES:**

Red indicates concentrations exceeding MTCA Method A cleanup levels for groundwater.

Samples analyzed by Friedman & Bruya, Inc. of Seattle, Washington.

<sup>(1)</sup>Elevation reference datum North American Vertical Datum of 1988 (Dowl HKM November 2012).

<sup>(2)</sup>Analyzed by Method NWTPH-Gx (gasoline) and NWTPH-Dx (diesel and oil).

<sup>(3)</sup>Analyzed by EPA Method 8260B, 8260C, or 8021B.

<sup>(4)</sup>Analyzed by Method NWTPH-Dx; sample extracts passed through a silica gel column prior to analysis.

<sup>(5)</sup>MTCA Cleanup Regulation, Method A Cleanup Levels, Table 720-1 of Section 900 of Chapter 173-340 of the Washington Administrative Code, revised November 2007.

<sup>(6)</sup>1,000 µg/L when benzene is not present and 800 µg/L when benzene is present.

Laboratory Note:

<sup>x</sup>The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

-- = not analyzed, not measured

< = not detected above the laboratory reporting limit

µg/L = micrograms per liter

DRPH = diesel-range petroleum hydrocarbons

EDB = 1,2 dibromoethane

EDC = 1,2 dichloroethane

EPA = U.S. Environmental Protection Agency

GRPH = gasoline-range petroleum hydrocarbons

MTBE = methyl tertiary-butyl ether

MTCA = Washington State Model Toxics Control Act

NWTPH = Northwest Total Petroleum Hydrocarbon

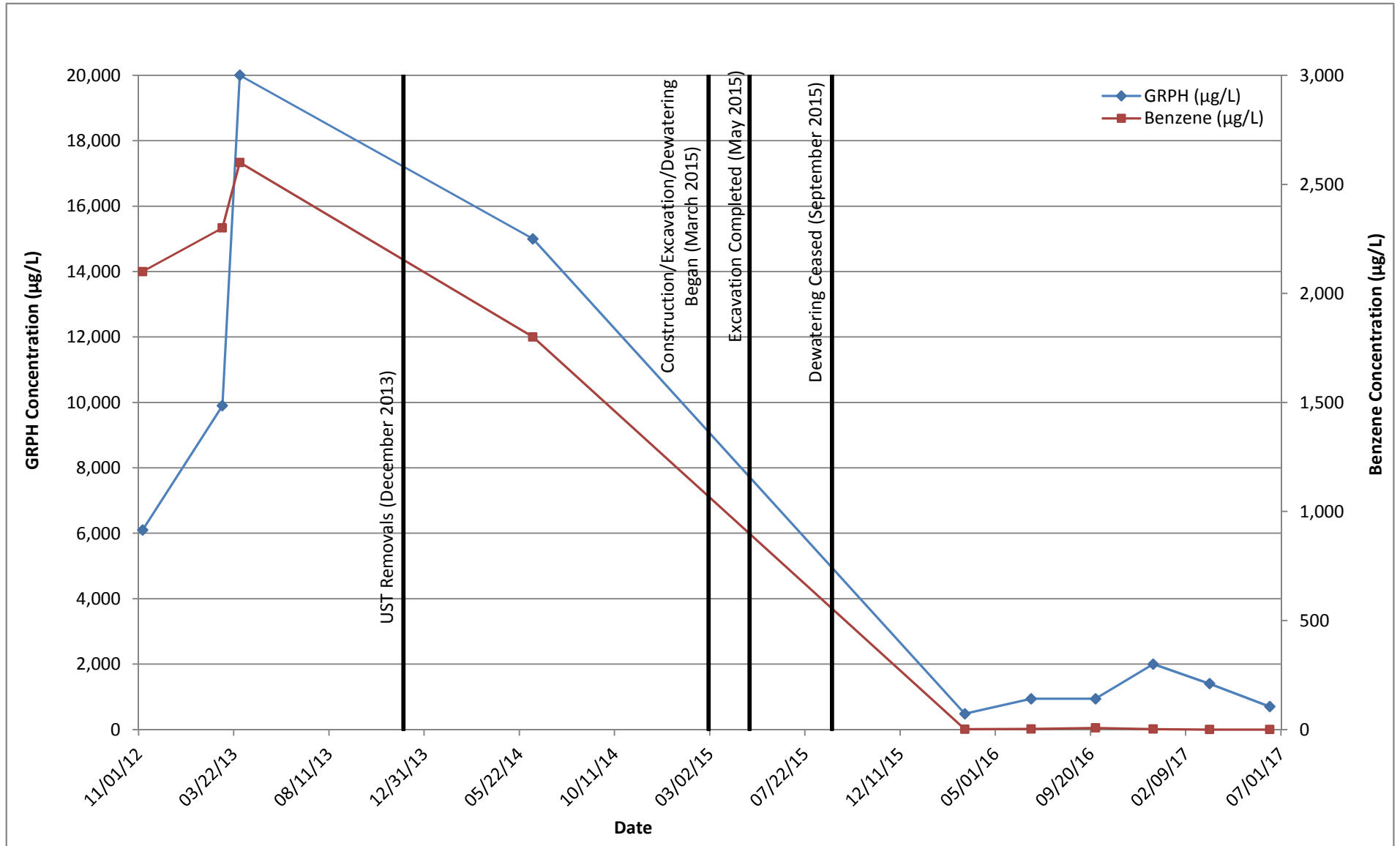
ORPH = oil-range petroleum hydrocarbons

SoundEarth = SoundEarth Strategies, Inc.

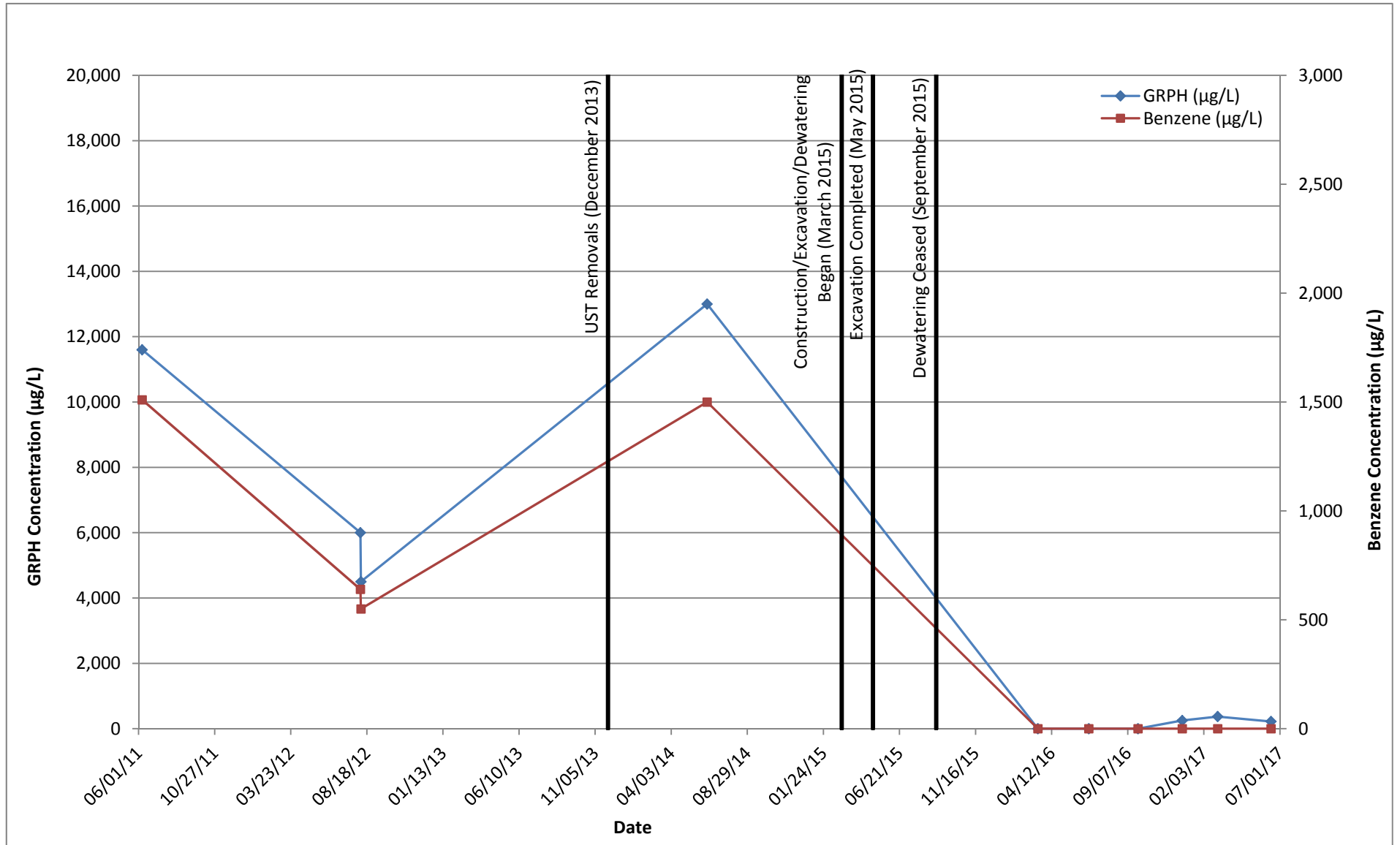
TOC = top of casing elevation

## CHARTS

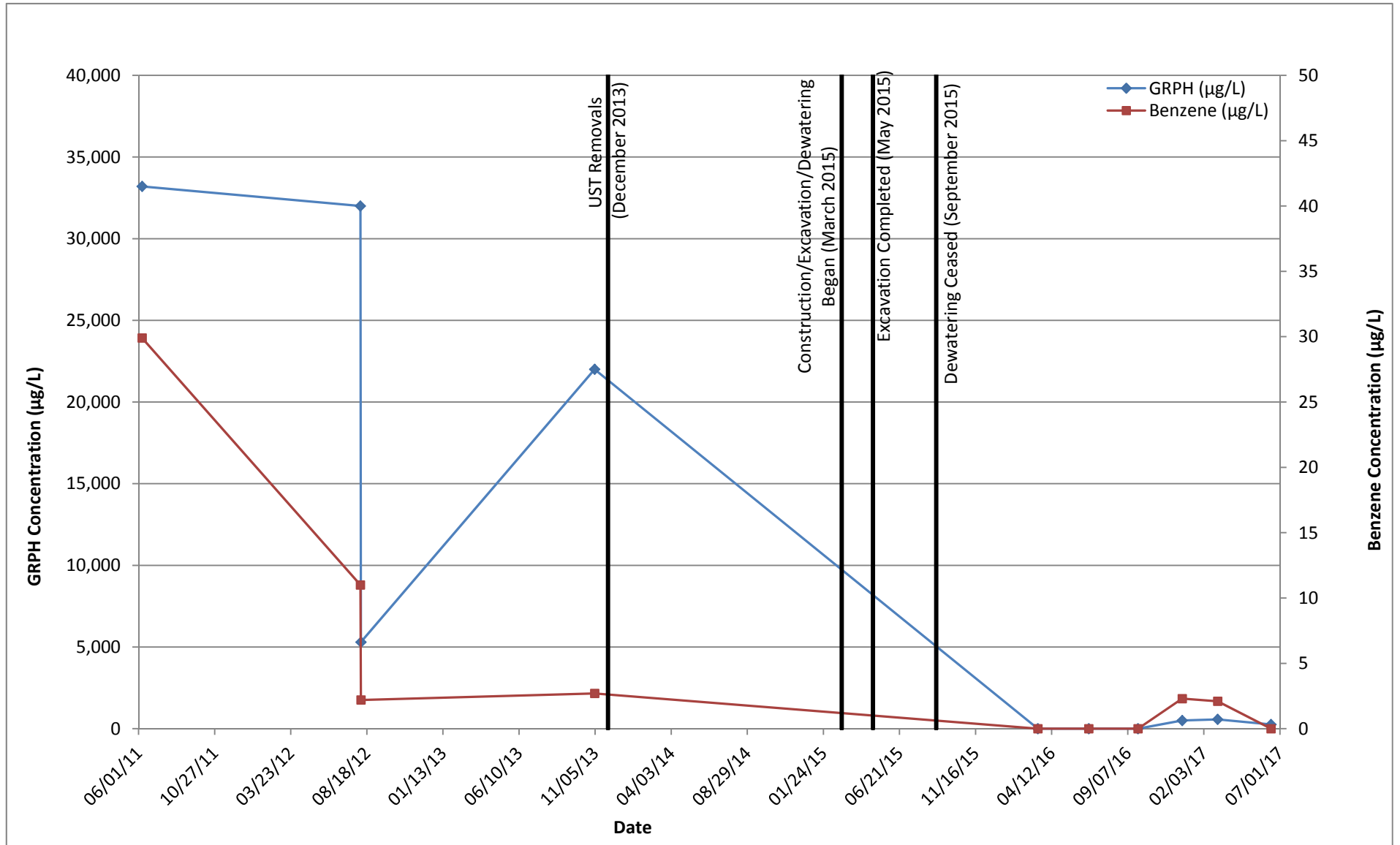
**Chart 1**  
**GRPH and Benzene Concentrations - MW104**  
**SKS Shell Station Site**  
**3901 Southwest Alaska Street**  
**Seattle, Washington**



**Chart 2**  
**GRPH and Benzene Concentrations - GLMW01/MW109**  
**SKS Shell Station Site**  
**3901 Southwest Alaska Street**  
**Seattle, Washington**



**Chart 3**  
**GRPH and Benzene Concentrations - MW110/MW-2**  
**SKS Shell Station Site**  
**3901 Southwest Alaska Street**  
**Seattle, Washington**



**Chart 4**  
**GRPH and Benzene Concentrations - MW-3/MW108**  
**SKS Shell Station Site**  
**3901 Southwest Alaska Street**  
**Seattle, Washington**

