



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

Draft – Issued for Regulatory Review

December 1, 2017

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

SUBJECT: THIRD 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 Third Quarter cleanup activities for the SKS Shell Station Site (SKS Site), (Figure 1). The cleanup for the SKS Site is being implemented under the Prospective Purchaser Consent Decree #13-2-27556-2, entered on July 29, 2013 (PPCD). The remediation of petroleum-contaminated soil and groundwater is being performed in accordance with the PPCD and Chapter 173-340 of the Washington Administrative Code and concurrently with the development of a five-story, mixed-use building with two-levels of underground parking. Cleanup and development activities at the SKS Site included dewatering, extensive soil excavation, and the installation of a vapor barrier to eliminate potential vapor intrusion exposure pathway. 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 (VCP; NW2716).

THIRD QUARTER 2017 SUMMARY

Groundwater sampling was conducted in September 2017 for the on-property and off-property compliance wells, including MW108 through MW110, in the building parking garage, and MW101 through MW105 and RW03 through RW05, located within the Fautleroy Way Southwest right-of-way (ROW). This groundwater sampling event is the seventh since cleanup was completed. SoundEarth has uploaded Environmental Information Management (EIM) analytical and location data for the Third Quarter data.

Data from the September 2017 sampling event is tabulated and summarized below:

Well ID	Sample Date	Analytical Results (micrograms per liter)			
		GRPH	Benzene	DRPH	DRPH with Silica Gel
MW101	09/13/17	<100	<1	<60	--
MW102	09/13/17	<100	<1	<50	--
MW103	09/13/17	<100	<1	140 ^x	--
MW104	09/14/17	460	<1	2,200	230 ^x
MW105	09/13/17	<100	<1	<60	--
MW108	09/14/17	<100	<1	160 ^x	--
MW109	09/14/17	<100	<1	140 ^x	--
MW110	09/14/17	<100	<1	150 ^x	--
RW03	09/14/17	560	2.8	690^x	140 ^x
RW04	09/14/17	400	6.4	330 ^x	--
RW05	09/14/17	280	<1	300 ^x	--
MTCA Method A Cleanup Level		1,000/800	5	500	500

NOTES:

Red denotes concentration exceeds the MTCA cleanup level.

Laboratory Note:

^xThe sample chromatographic pattern does not resemble the fuel standard used for quantitation

< = not detected above the laboratory reporting limit

-- = not analyzed

DRPH = diesel-range petroleum hydrocarbons

GRPH = gasoline-range petroleum hydrocarbons

MTCA = Washington State Model Toxics Control Act

Remediation well RW04 had a benzene concentration of 6.4 micrograms per liter (µg/L), which is slightly above the Washington State Model Toxics Control Act (MTCA) Method A cleanup level of 5 µg/L. Otherwise, the analytical data indicates that gasoline-range petroleum hydrocarbons and benzene, toluene, ethylbenzene, and total xylenes (GRPH and BTEX, respectively) do not exceed MTCA cleanup levels in any of the monitoring wells, MW108 through MW110 (located on-Property), as well as MW101, MW102, MW103, MW104, MW105, and RW05 (all located within the Fautleroy Way Southwest ROW).

Diesel-range petroleum hydrocarbons were also below cleanup levels for all wells except for MW104 and RW03 when sampled without silica gel cleanup. With use of silica gel cleanup, both samples were below the MTCA Method A cleanup level of 500 µg/L.

Groundwater levels continued to be approximately 1 to 3 feet lower than previously observed during sampling conducted from 2013 to 2016. Groundwater elevations, contours, and a rose diagram are shown on Figure 2. SoundEarth is currently evaluating the cause of these lower groundwater levels, including transducer studies. Preliminary indications suggest that the causes of the shift in groundwater elevations and flow direction are the on-site footing drains and foundation drainage system that are a component of the Whittaker development located on the SKS Site and adjacent Huling Bros. site.

Please see the Third Quarter 2017 Groundwater Monitoring Report for a more detailed discussion of the September 2017 groundwater sampling results (see Figures 3 and 4; Charts 1 through 4).

On September 12, 2017, SoundEarth met with Ecology staff as well as representatives of the Attorney General’s office. The purpose of the meeting was to review the status of the cleanup action and to establish the additional activities for 2017 and beyond necessary to bring the SKS Site to closure. A letter from Mr. Dale Myers dated November 16, 2017, confirmed and summarized the list of action items arising out of the meeting.

PLANNED FOURTH QUARTER 2017 ACTIVITIES

SoundEarth plans to conduct Fourth Quarter 2017 groundwater sampling in December 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 deliver the documents described above in the September 12 meeting summary.

Pending Ecology’s approval of the work plan, SoundEarth plans to move forward with efforts to decommission the four remediation wells located on Alaska Street (RW06 through RW09) and monitoring well MW107. We look forward to discussing this issue in further detail with Ecology during Fourth 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:

Cleanup Plan Task	Date
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
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
Groundwater Elevation Study	In Progress: 2017–2018
Decommission Alaska sidewalk wells	Planned: 4Q 2017–1Q 2018
Revised Agency-Review Cleanup Action Report	Planned: 4Q 2017
Alaska Street Sidewalk Well Decommissioning	Planned: 4Q 2017–1Q 2018
Compliance/Injection Well Installation	Planned: 1Q–2Q 2018

ChemOx Injection
Groundwater Monitoring (Quarterly)

Planned: 2018
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.

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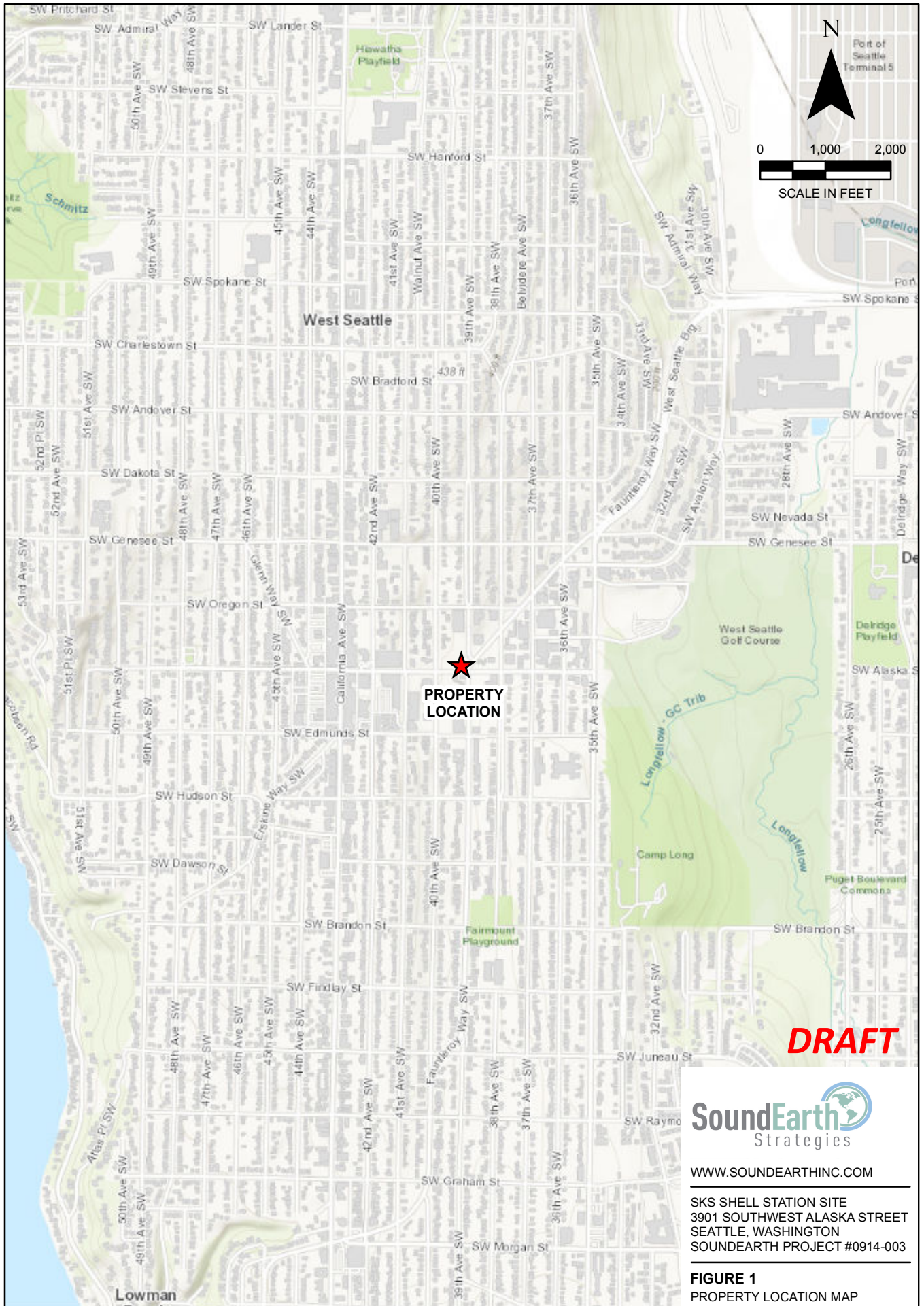
Rob Roberts
Senior Scientist

Attachments: Figure 1, Property Location Map
Figure 2, Groundwater Elevation Contour Map September 13, 2017
Figure 3, 2017 Q3 Groundwater Analytical Data
Figure 4, GRPH and Benzene Concentration Trends in Groundwater
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:slf

FIGURES



**PROPERTY
LOCATION**

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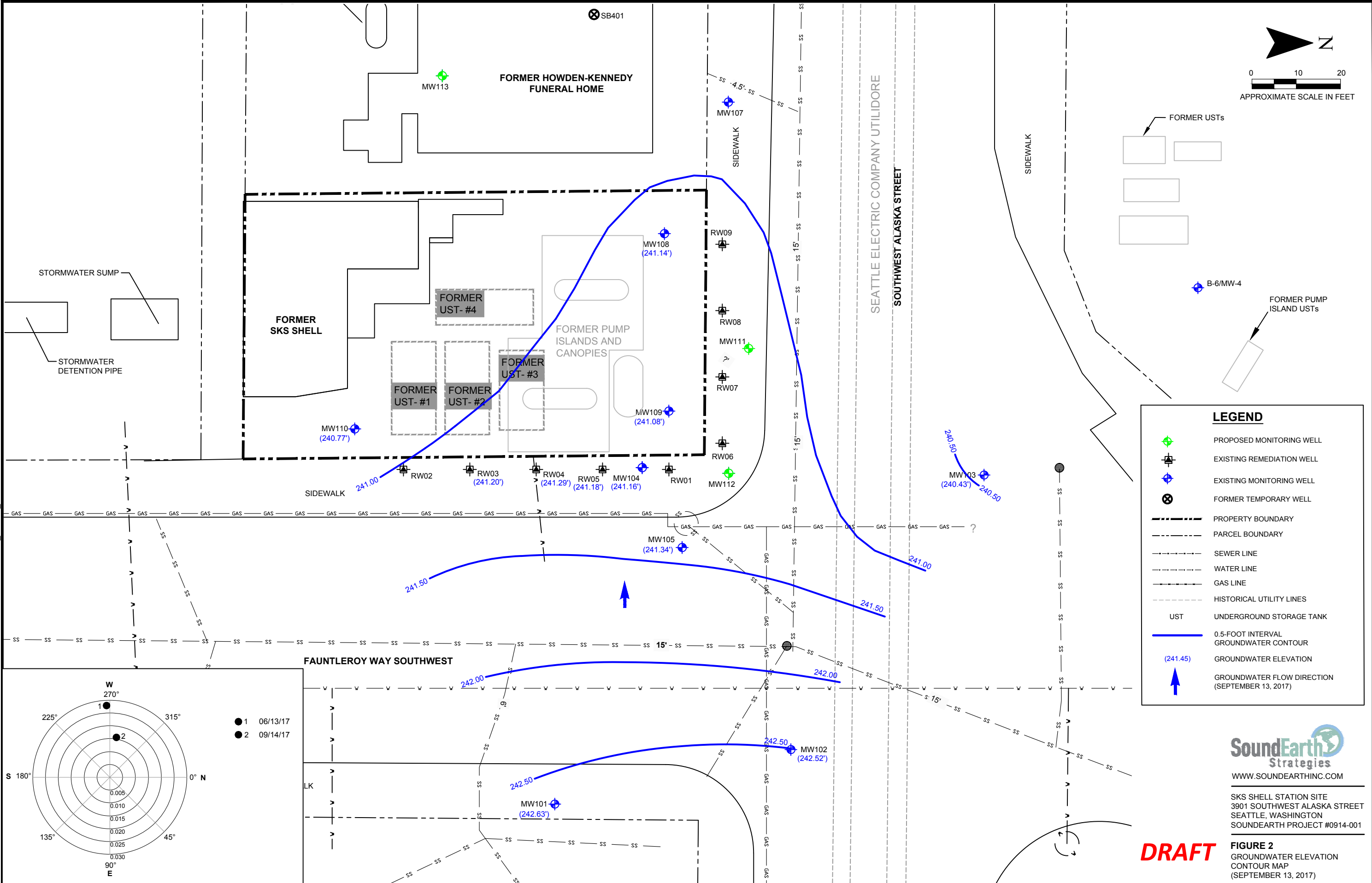
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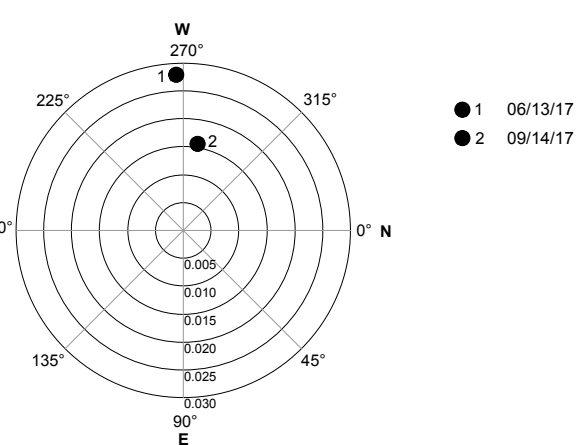
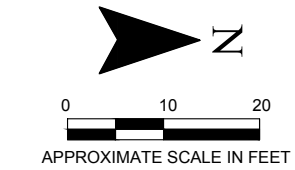
FIGURE 1
PROPERTY LOCATION MAP

11/14/2017
P:\0914 LENNAR SHELLO\0914-001 SKS SHELL ROW\TECHNICAL\CAD\2017\2017 Q3\0914-004_2017Q3_CM.DWG



LEGEND

- PROPOSED MONITORING WELL
- EXISTING REMEDIATION WELL
- EXISTING MONITORING WELL
- FORMER TEMPORARY WELL
- PROPERTY BOUNDARY
- PARCEL BOUNDARY
- SEWER LINE
- WATER LINE
- GAS LINE
- HISTORICAL UTILITY LINES
- UST UNDERGROUND STORAGE TANK
- 0.5-FOOT INTERVAL GROUNDWATER CONTOUR
- GROUNDWATER ELEVATION
- GROUNDWATER FLOW DIRECTION (SEPTEMBER 13, 2017)

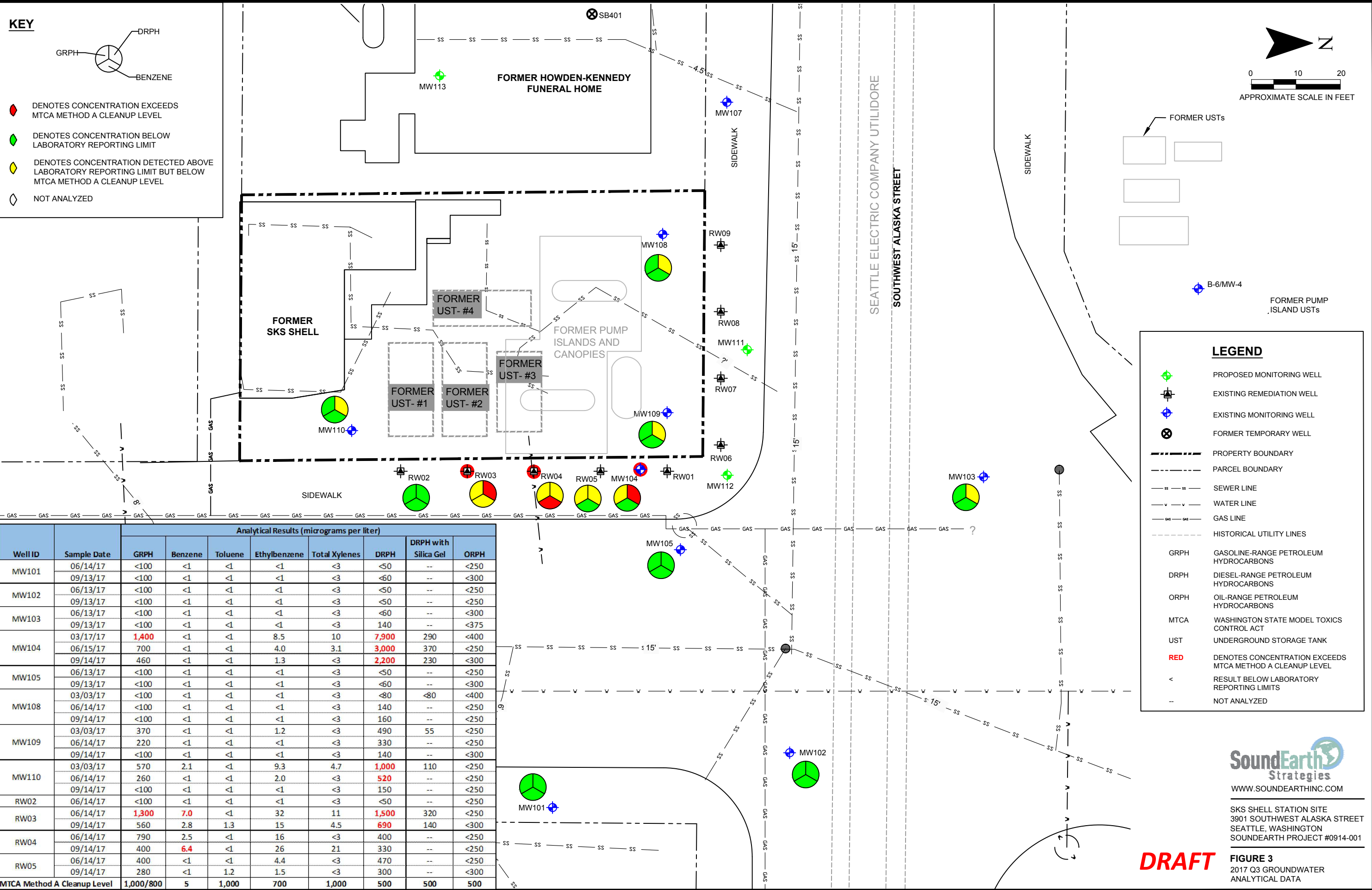


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DRAFT **FIGURE 2**
GROUNDWATER ELEVATION
CONTOUR MAP
(SEPTEMBER 13, 2017)

11/13/2017
P:0914 LENNAR-SHELL0914-001 SKS SHELL ROWWTECHNICAL/CAD/2017/2017 Q3/0914-004_2017Q3_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
	09/13/17	<100	<1	<1	<1	<3	<60	--	<300
MW102	06/13/17	<100	<1	<1	<1	<3	<50	--	<250
	09/13/17	<100	<1	<1	<1	<3	<50	--	<250
MW103	06/13/17	<100	<1	<1	<1	<3	<60	--	<300
	09/13/17	<100	<1	<1	<1	<3	140	--	<375
MW104	03/17/17	1,400	<1	<1	8.5	10	7,900	290	<400
	06/15/17	700	<1	<1	4.0	3.1	3,000	370	<250
	09/14/17	460	<1	<1	1.3	<3	2,200	230	<300
MW105	06/13/17	<100	<1	<1	<1	<3	<50	--	<250
	09/13/17	<100	<1	<1	<1	<3	<60	--	<300
MW108	03/03/17	<100	<1	<1	<1	<3	<80	<80	<400
	06/14/17	<100	<1	<1	<1	<3	140	--	<250
	09/14/17	<100	<1	<1	<1	<3	160	--	<250
MW109	03/03/17	370	<1	<1	1.2	<3	490	55	<250
	06/14/17	220	<1	<1	<1	<3	330	--	<250
	09/14/17	<100	<1	<1	<1	<3	140	--	<300
MW110	03/03/17	570	2.1	<1	9.3	4.7	1,000	110	<250
	06/14/17	260	<1	<1	2.0	<3	520	--	<250
	09/14/17	<100	<1	<1	<1	<3	150	--	<250
RW02	06/14/17	<100	<1	<1	<1	<3	<50	--	<250
	09/14/17	560	2.8	1.3	15	4.5	690	140	<300
RW03	06/14/17	1,300	7.0	<1	32	11	1,500	320	<250
	09/14/17	790	2.5	<1	16	<3	400	--	<250
RW04	06/14/17	400	6.4	<1	26	21	330	--	<250
	09/14/17	400	<1	<1	4.4	<3	470	--	<250
RW05	06/14/17	280	<1	1.2	1.5	<3	300	--	<300
	09/14/17	280	<1	1.2	1.5	<3	300	--	<300
MTCA Method A Cleanup Level		1,000/800	5	1,000	700	1,000	500	500	500

DRAFT **FIGURE 3**
2017 Q3 GROUNDWATER ANALYTICAL DATA

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CHART 1: MW104 – GRPH AND BENZENE

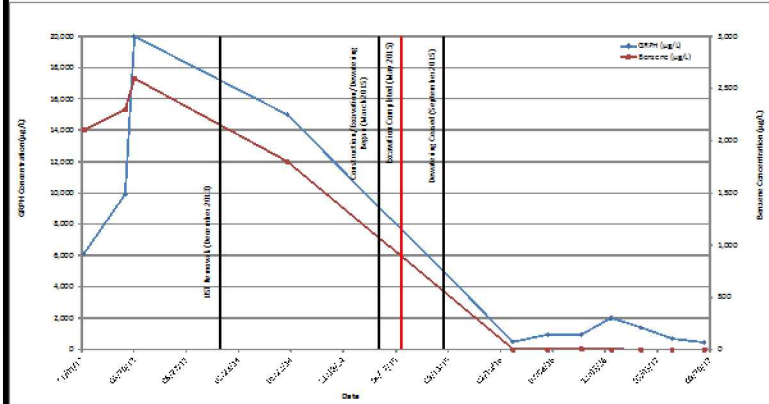


CHART 2: GLMW01 / MW109 – GRPH AND BENZENE

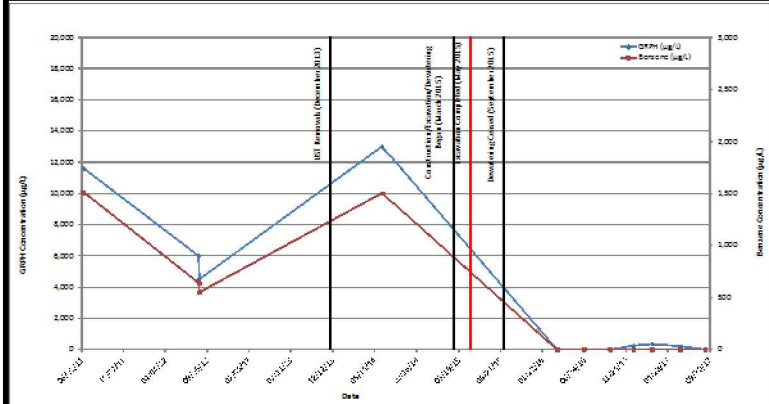


CHART 3: MW-2 / MW110 – GRPH AND BENZENE

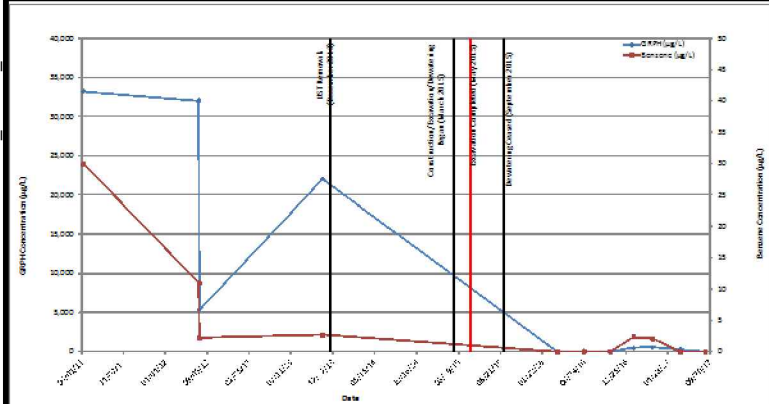
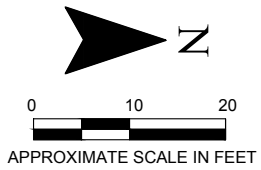
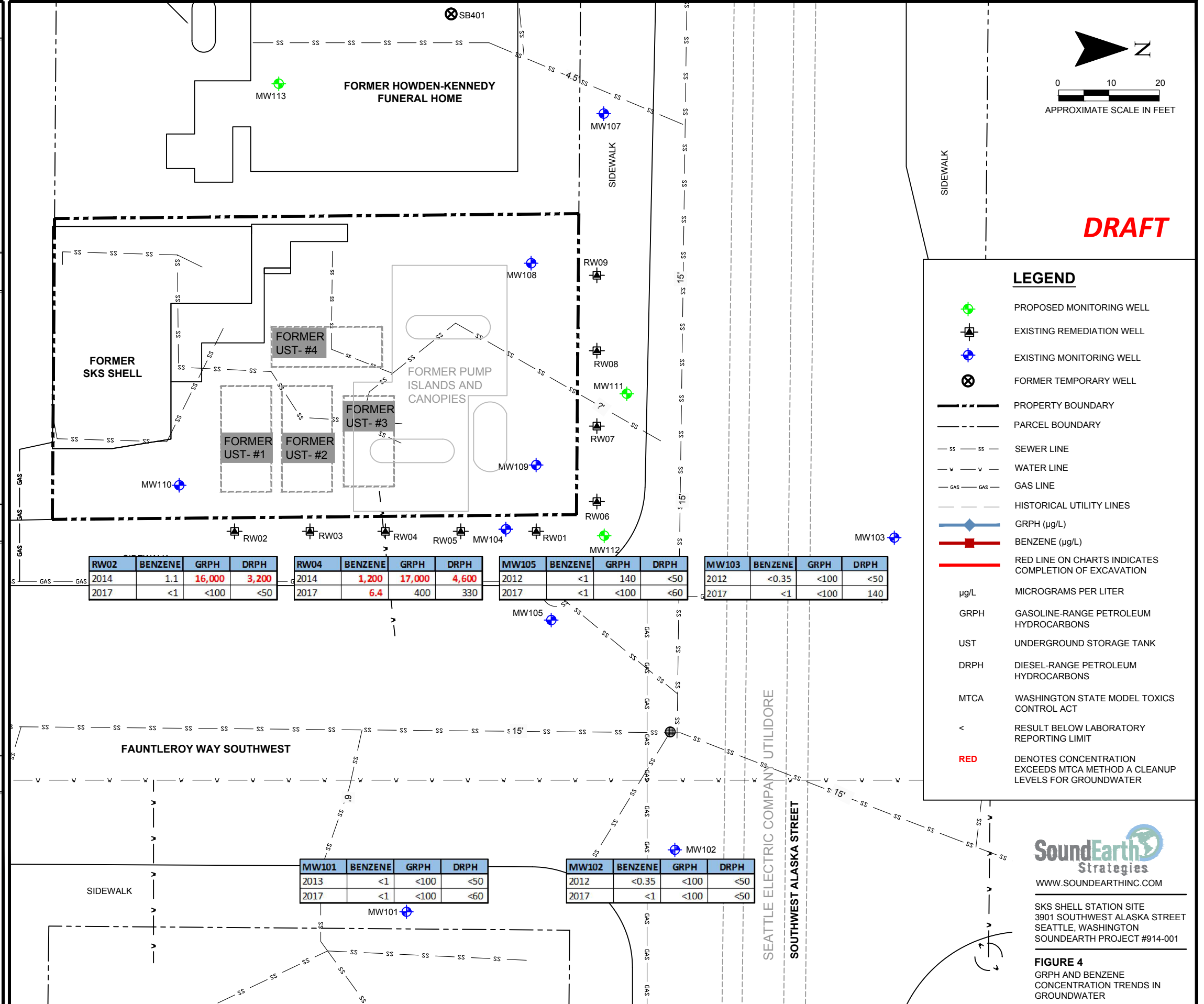
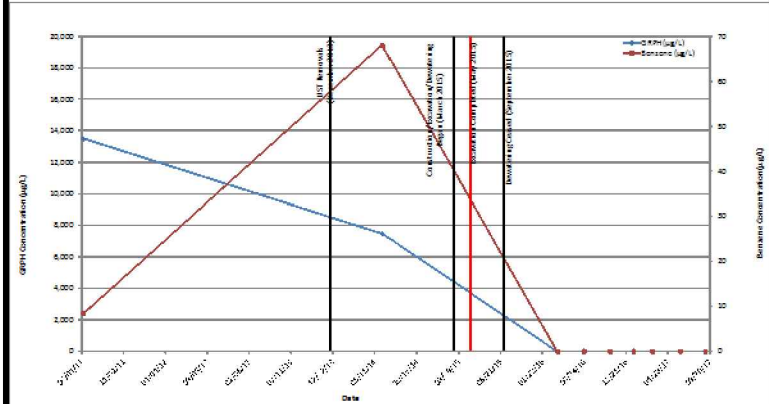


CHART 4: MW-3 / MW108 – GRPH AND BENZENE



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LEGEND

- PROPOSED MONITORING WELL
- EXISTING REMEDIATION WELL
- EXISTING MONITORING WELL
- FORMER TEMPORARY WELL
- PROPERTY BOUNDARY
- PARCEL BOUNDARY
- SEWER LINE
- WATER LINE
- GAS LINE
- HISTORICAL UTILITY LINES
- GRPH (µg/L)
- BENZENE (µg/L)
- RED LINE ON CHARTS INDICATES COMPLETION OF EXCAVATION
- MICROGRAMS PER LITER
- GASOLINE-RANGE PETROLEUM HYDROCARBONS
- UNDERGROUND STORAGE TANK
- DIESEL-RANGE PETROLEUM HYDROCARBONS
- WASHINGTON STATE MODEL TOXICS CONTROL ACT
- < symbol"/> RESULT BELOW LABORATORY REPORTING LIMIT
- DENOTES CONCENTRATION EXCEEDS MTCA METHOD A CLEANUP LEVELS FOR GROUNDWATER

RW02	BENZENE	GRPH	DRPH
2014	1.1	16,000	3,200
2017	<1	<100	<50

RW04	BENZENE	GRPH	DRPH
2014	1,200	17,000	4,600
2017	6.4	400	330

MW105	BENZENE	GRPH	DRPH
2012	<1	140	<50
2017	<1	<100	<60

MW103	BENZENE	GRPH	DRPH
2012	<0.35	<100	<50
2017	<1	<100	140

MW101	BENZENE	GRPH	DRPH
2013	<1	<100	<50
2017	<1	<100	<60

MW102	BENZENE	GRPH	DRPH
2012	<0.35	<100	<50
2017	<1	<100	<50



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FIGURE 4
 GRPH AND BENZENE
 CONCENTRATION TRENDS IN
 GROUNDWATER

TABLE



Table 1
Summary of Groundwater Data
SKS Shell Station Site
3901 Southwest Alaska Street
Seattle, Washington

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Well ID	Sample Date	Sampled By	Depth to Groundwater (feet below TOC)	Relative Groundwater Elevation ⁽¹⁾	Analytical Results (µg/L)												
					GRPH ⁽²⁾	Benzene ⁽³⁾	Toluene ⁽³⁾	Ethylbenzene ⁽³⁾	Total Xylenes ⁽³⁾	MTBE ⁽³⁾	EDC ⁽³⁾	EDB ⁽³⁾	DRPH ⁽²⁾	DRPH with Silica Gel ⁽⁴⁾	ORPH ⁽²⁾	ORPH with Silica Gel ⁽⁴⁾	
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	--
	09/13/17	SoundEarth	26.91	242.63	<100	<1	<1	<1	<3	--	--	--	<60	--	--	<300	--
MW102	11/07/12	SoundEarth	25.41	243.65	<100	<0.35	<1	<1	<3	<1	<1	<1	<50 ⁽⁶⁾	--	--	<250 ⁽⁶⁾	--
	06/13/17	SoundEarth	25.42	243.64	<100	<1	<1	<1	<3	--	--	--	<50	--	--	<250	--
	09/13/17	SoundEarth	26.54	242.52	<100	<1	<1	<1	<3	--	--	--	<50	--	--	<250	--
	11/07/12	SoundEarth	27.80	241.75	<100	<0.35	<1	<1	<3	<1	<1	<1	<50 ⁽⁶⁾	--	--	<250 ⁽⁶⁾	--
MW103	06/13/17	SoundEarth	28.56	240.99	<100	<1	<1	<1	<3	--	--	--	<60	--	--	<300	--
	09/13/17	SoundEarth	29.12	240.43	<100	<1	<1	<1	<3	--	--	--	140 ⁽⁷⁾	--	--	<375	--
	11/07/12	SoundEarth	24.41	244.94	6,100	2,100	10	120	418	<1	<1	<1	4,000	--	--	<250	--
MW104	03/06/13	SoundEarth	23.24	246.11	9,900	2,300	110	470	870	--	--	--	1,900 ⁽⁷⁾	--	--	<250	--
	04/01/13	SoundEarth	23.37	245.98	20,000	2,600	140	640	1,300	--	--	--	540 ⁽⁷⁾	--	--	<250	--
	06/12/14	SoundEarth	25.50	243.85	15,000	1,800	120	480	1,330	--	--	<0.01	14,000 ⁽⁷⁾	--	--	250 ⁽⁷⁾	--
	03/17/16	SoundEarth	26.41	242.94	480	1.2	1.8	2.2	5.7	--	--	--	1,200 ⁽⁷⁾	--	--	<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 ⁽⁷⁾	--	--	340 ⁽⁷⁾	--
	12/23/16	SoundEarth	27.28	242.07	2,000	2.1	2.1	17	27	--	--	--	16,000	180 ⁽⁷⁾	380 ⁽⁷⁾	<250	--
	03/17/17	SoundEarth	27.55	241.80	1,400	<1	<1	8.5	10	--	--	--	7,900	290 ⁽⁷⁾	<400	<400	--
	06/15/17	SoundEarth	27.92	241.45	700	<1	<1	4.0	3.1	--	--	--	3,000	370 ⁽⁷⁾	<250	<250	--
	09/14/17	SoundEarth	28.21	241.16	460	<1	<1	1.3	<3	--	--	--	2,200	230 ⁽⁷⁾	<300	<250	--
	12/13/12	SoundEarth	24.25	245.05	140	<1	<1	<1	<3	--	--	--	<50 ⁽⁶⁾	--	--	<250 ⁽⁶⁾	--
	03/06/13	SoundEarth	23.33	245.97	<100	<0.35	<1	<1	<3	--	--	--	61 ⁽⁷⁾	--	--	<250	--
	06/13/17	SoundEarth	27.36	241.94	<100	<1	<1	<1	<3	--	--	--	<50	--	--	<250	--
09/13/17	SoundEarth	27.96	241.34	<100	<1	<1	<1	<3	--	--	--	<60	--	--	<300	--	
GLMW-1	06/08/11	G-Logics	22.76	246.68	11,600	1,510	41.8	349	884	--	--	--	4,590	--	--	--	--
	08/06/12	SoundEarth	--	--	6,000	640	15	190	233	<10	<10	<10	--	--	--	--	--
	08/07/12	SoundEarth	23.52	245.92	4,500	550 ⁽⁸⁾	16	150 ⁽⁸⁾	242	<1	<1	<1	4,100 ⁽⁸⁾	--	--	--	--
	06/12/14	SoundEarth	25.50	243.94	13,000	1,500	23	180	312	--	--	<0.01	8,500 ⁽⁸⁾	--	--	<250	--
Decommissioned in 2015																	
GLMW-2	06/08/11	G-Logics	22.72	246.80	22,500	2,410	467	825	3,340	--	--	--	961	--	--	--	--
	08/06/12	SoundEarth	23.34	246.18	SPH	--	--	--	--	--	--	--	6,000 ⁽⁷⁾	--	--	--	--
	06/25/14	SoundEarth	25.00	244.52	350,000	800	870	3,400	16,000	--	--	--	29,000 ⁽⁷⁾	--	--	<50,000	--
Decommissioned in 2015																	
GLMW-3	06/08/11	G-Logics	23.32	247.05	10,500	8.03	46.6	998	2,787	--	--	--	250	--	--	--	--
	08/06/12	SoundEarth	23.42	246.95	--	--	--	--	--	--	--	--	--	--	--	--	--
	06/25/14	SoundEarth	25.00	245.37	2,200	2.4	3.5	98	280	--	--	--	600 ⁽⁷⁾	--	--	<250	--
Decommissioned in 2015																	
MW-2	07/14/95	EA ⁽¹⁷⁾	--	--	25,000	2,500	48	100	240	--	--	--	9,500	--	--	--	--
	06/18/97	Alisto ⁽⁷⁾	--	--	280,000	4,000	44,000	5,500	28,000	--	--	--	--	--	--	--	--
	11/10/98	Alisto ⁽⁷⁾	--	--	161,000	4,000	42,100	5,710	29,400	--	--	--	--	--	--	--	--
	12/17/99	Alisto ⁽⁷⁾	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	07/11/00	Alisto ⁽⁷⁾	--	--	ND	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--
	03/26/01	Alisto ⁽⁷⁾	--	--	ND	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--
	12/17/01	Alisto ⁽⁷⁾	--	--	390 ⁽⁷⁾	85	10	2.7	13	ND	ND	ND	--	--	--	--	--
	06/28/02	Alisto ⁽⁷⁾	--	--	3,500	58	6.5	160	300	ND	ND	ND	--	--	--	--	--
	03/01/03	Alisto ⁽⁷⁾	--	--	140	1	ND	3.50	3	ND	ND	ND	--	--	--	--	--
	08/08/03	Alisto ⁽⁷⁾	--	--	7,500	100	490	1,400	350	--	--	--	--	--	--	--	--
	03/21/04	AEQ ⁽¹⁾	--	--	25,200	403	1,100	1,540	4,040	ND	ND	ND	--	--	--	80,000	--
	10/23/08	RG ⁽¹⁷⁾	--	--	20,000	62	ND	530	1,640	--	--	--	--	--	--	ND	ND
	05/09/11	G-Logics	--	--	67,000	64.3	56.4	3,670	21,890	<1.00	<1.00	<0.0100	1,950	--	--	--	--
	06/08/11	G-logics	22.35	247.44	33,200	29.9	27.7	2,720	9,970	<10	<10	<10	411	--	--	--	--
	08/06/12	SoundEarth	--	--	32,000	11	23	1,900	10,100	<1	<1	<1	--	--	--	--	--
	08/07/12	SoundEarth	23.24	246.55	5,300	2.2	4.0	400 ⁽⁸⁾	1,710	<1	<1	<1	2,800	--	--	--	--
	11/05/13	SoundEarth	24.8	244.99	22,000	2.7	9.2	1,500	7,500	--	--	--	3,900 ⁽⁸⁾	--	--	630 ⁽⁸⁾	--
Decommissioned in 2015																	
MTCA Method A Cleanup Levels for Groundwater ⁽⁸⁾					1,000/800 ⁽⁹⁾	5	1,000	700	1,000	20	5	0.01	500			500	



Table 1
Summary of Groundwater Data
SKS Shell Station Site
3901 Southwest Alaska Street
Seattle, Washington

DRAFT

Well ID	Sample Date	Sampled By	Depth to Groundwater (feet below TOC)	Relative Groundwater Elevation ⁽¹⁾	Analytical Results (µg/L)											
					GRPH ⁽²⁾	Benzene ⁽³⁾	Toluene ⁽³⁾	Ethylbenzene ⁽³⁾	Total Xylenes ⁽³⁾	MTBE ⁽³⁾	EDC ⁽³⁾	EDB ⁽³⁾	DRPH ⁽²⁾	DRPH with Silica Gel ⁽⁴⁾	ORPH ⁽²⁾	ORPH with Silica Gel ⁽⁴⁾
MW-3	07/14/95	EAI ⁽⁷⁾	--	--	2,400	140	7.4	13	14	--	--	--	ND	--	--	--
	06/18/97	Alisto ⁽⁷⁾	--	--	3,000	48	10	18	19	--	--	--	--	--	--	--
	11/10/98	Alisto ⁽⁷⁾	--	--	2,270	30.1	3.93	5.62	ND ^c	--	--	--	--	--	--	--
	12/17/99	Alisto ⁽⁷⁾	--	--	1,850	ND ^c	ND ^c	ND ^c	13.6 ^c	--	--	--	--	--	--	--
	07/11/00	Alisto ⁽⁷⁾	--	--	1,700	54.8	10	9.61	16.8	ND	--	--	--	--	--	--
	03/26/01	Alisto ⁽⁷⁾	--	--	1,030	8.02	3.15	ND	ND	2.50	--	--	--	--	--	--
	12/17/01	Alisto ⁽⁷⁾	--	--	1,200	11	3.5	1.7	1.4	ND	--	--	--	--	--	--
	06/28/02	Alisto ⁽⁷⁾	--	--	3,000	33	11	2.7	5	ND	--	--	--	--	--	--
	03/01/03	Alisto ⁽⁷⁾	--	--	3,900	28	7.5	4.6	4	ND	--	--	--	--	--	--
	08/08/03	Alisto ⁽⁷⁾	--	--	3,200	20	8.4	2.2	0.9	--	--	--	--	--	--	--
	03/21/04	Alisto ⁽⁷⁾	--	--	780	43	15	9.2	57	ND	--	--	ND	--	--	--
	10/23/08	RGI ⁽⁷⁾	--	--	1,300	6.5	2.5	3.6	8.4	--	--	--	ND	--	--	ND
	05/09/11	G-Logics	--	--	160,000	<1.00	11	690	2,886	<1.00	<1.00	<0.0100	13,300	--	--	--
	06/08/11	G-Logics	23.25	247.00	13,500	8.46	12.5	362	1,501	--	--	--	910	--	--	--
	08/06/12	SoundEarth	24.11	246.14	trace SPH	--	--	--	--	--	--	--	--	--	--	--
06/12/14	SoundEarth	26.00	244.25	7,500	68	9.4	180	419	--	--	--	4,100 ^d	--	--	--	
Decommissioned in 2015																
SMW03	08/31/12	SoundEarth	24.30	246.96	<100	<0.35	<1	<1	<3	--	--	--	280 ^d	--	<250	--
	10/16/14	SoundEarth	24.83	246.43	<100	<0.25	<1	<1	<3	<1	<1	<1	<50	--	<250	--
Decommissioned in 2015																
SMW04	08/31/12	SoundEarth	26.03	246.27	1,000	<0.35	3	43	63	--	<1	--	320 ^d	--	<250	--
	04/01/13	SoundEarth	25.57	246.73	4,900	5.4	13	220	380	--	--	--	150 ⁽⁶⁾	--	<250 ⁽⁶⁾	--
Decommissioned in 2015																
MW106	12/13/12	SoundEarth	26.97	246.36	<100	<1	<1	<1	<3	--	--	--	110 ^d	--	<250	--
	04/01/13	SoundEarth	25.92	247.41	130	<1	<1	<1	<3	--	--	--	--	<55	--	<280
Decommissioned in 2015																
MW107	12/09/14	SoundEarth	--	--	490	<1	<1	2.2	<3	--	--	--	620	--	<250	--
RW02	07/16/14	SoundEarth	--	--	16,000	1.1	2.5	380	1,400	--	--	--	3,200 ^d	--	<250	--
	04/13/15	SoundEarth	--	--	4,400	<1	2.7	120	520	--	--	--	2,800 ^d	--	440 ^d	--
	06/14/17	SoundEarth	27.22	241.38	<100	<1	<1	<1	<3	--	--	--	<50	--	<250	--
RW03	03/17/16	SoundEarth	26.23	--	2,300	41	6.9	51	260	--	--	--	1,400 ^d	--	<250	--
	06/24/16	SoundEarth	25.40	--	1,600	27	4.4	27	59	--	--	--	3,600 ^d	--	<250	--
	09/28/16	SoundEarth	25.71	--	1,100	6.7	<1	20	45	--	--	--	2,400 ^d	--	<300	--
	12/23/16	SoundEarth	26.77	--	9,000	470	16	380	750	--	--	--	11,000 ^d	720 ^d	<300	<300
	03/02/17	SoundEarth	27.22	--	4,900	150	<10	220	190	--	--	--	11,000 ^d	880 ^d	<250	<250
	06/14/17	SoundEarth	27.91	241.59	1,300	7.0	<1	32	11	--	--	--	1,500	320 ^d	<250	<250
	09/14/17	SoundEarth	28.30	241.20	560	2.8	1.3	15	4.5	--	--	--	690 ^d	140 ^d	<300	<300
RW04	07/16/14	SoundEarth	--	--	17,000	1,200	270	360	1,700	--	--	--	4,600 ^d	--	270 ^d	--
	04/13/15	SoundEarth	--	--	7,100	120	23	400	890	--	--	--	2,200 ^d	--	370 ^d	--
	06/14/17	SoundEarth	27.62	241.60	790	2.5	<1	16	<3	--	--	--	400	--	<250	--
RW05	09/14/17	SoundEarth	27.93	241.29	400	6.4	<1	26	21	--	--	--	330 ^d	--	<250	--
	06/14/17	SoundEarth	27.64	241.45	400	<1	<1	4.4	<3	--	--	--	470	--	<250	--
RW07	09/14/17	SoundEarth	27.91	241.18	280	<1	1.2	1.5	<3	--	--	--	300 ^d	--	<300	--
	07/16/14	SoundEarth	--	--	1,600	110	8.3	8.3	17	--	--	--	1,100 ^d	--	<250	--
RW09	04/13/15	SoundEarth	--	--	4,900	1,200	16	8.3	58	--	--	--	6,800 ^d	--	1,200	--
	07/16/14	SoundEarth	--	--	2,600	10	18	70	34	--	--	--	700 ^d	--	<250	--
	04/13/15	SoundEarth	--	--	4,800	13	25	150	56	--	--	--	2,200 ^d	--	440 ^d	--
MTCMA Method A Cleanup Levels for Groundwater ⁽⁵⁾					1,000/800 ⁽⁶⁾	5	1,000	700	1,000	20	5	0.01	500	500	500	500



Table 1
Summary of Groundwater Data
SKS Shell Station Site
3901 Southwest Alaska Street
Seattle, Washington

DRAFT

Well ID	Sample Date	Sampled By	Depth to Groundwater (feet below TOC)	Relative Groundwater Elevation ⁽¹⁾	Analytical Results (µg/L)												
					GRPH ⁽²⁾	Benzene ⁽³⁾	Toluene ⁽³⁾	Ethylbenzene ⁽³⁾	Total Xylenes ⁽³⁾	MTBE ⁽³⁾	EDC ⁽³⁾	EDB ⁽³⁾	DRPH ⁽²⁾	DRPH with Silica Gel ⁽⁴⁾	ORPH ⁽²⁾	ORPH with Silica Gel ⁽⁴⁾	
MW108	03/17/16	SoundEarth	5.52	--	<100	<1	<1	<1	<1	<3	--	--	--	93 [†]	--	<300	--
	06/24/16	SoundEarth	3.33	--	<100	<1	<1	<1	<1	<3	--	--	--	<50	--	<250	--
	09/28/16	SoundEarth	3.85	--	<100	<1	<1	<1	<1	<3	--	--	--	<60	--	<300	--
	12/23/16	SoundEarth	6.56	--	<100	<1	<1	<1	<1	<3	--	--	--	94 [†]	<70	<350	<350
	03/03/17	SoundEarth	6.64	--	<100	<1	<1	<1	<1	<3	--	--	--	<80	<80	<400	<400
	06/14/17	SoundEarth	7.06	240.77	<100	<1	<1	<1	<1	<3	--	--	--	140 [†]	--	<250	--
MW109	09/14/17	SoundEarth	6.69	241.14	<100	<1	<1	<1	<1	<3	--	--	--	160 [†]	--	<250	--
	03/17/16	SoundEarth	5.42	--	<100	<1	<1	<1	<1	<3	--	--	--	97 [†]	--	<250	--
	06/24/16	SoundEarth	3.35	--	<100	<1	<1	<1	<1	<3	--	--	--	160 [†]	--	<250	--
	09/28/16	SoundEarth	3.96	--	<100	<1	<1	<1	<1	<3	--	--	--	260 [†]	--	<250	--
	12/23/16	SoundEarth	6.59	--	250	<1	<1	<1	<1	<3	--	--	--	430 [†]	<50	<250	<250
	03/03/17	SoundEarth	6.70	--	370	<1	<1	<1	1.2	<3	--	--	--	490 [†]	55 [†]	<250	<250
MW110	06/14/17	SoundEarth	6.87	241.05	220	<1	<1	<1	<1	<3	--	--	--	330	--	<250	--
	09/14/17	SoundEarth	6.84	241.08	<100	<1	<1	<1	<1	<3	--	--	--	140 [†]	--	<300	--
	03/17/16	SoundEarth	5.70	--	<100	<1	<1	<1	<1	<3	--	--	--	<50	--	<250	--
	06/24/16	SoundEarth	3.56	--	<100	<1	<1	<1	<1	<3	--	--	--	100 [†]	--	<250	--
	09/28/16	SoundEarth	4.19	--	<100	<1	<1	<1	<1	<3	--	--	--	590 [†]	--	440 [†]	--
	12/23/16	SoundEarth	6.96	--	500	2.3	<1	9.7	18	18	--	--	--	1,200 [†]	68 [†]	<300	<300
MW110	03/03/17	SoundEarth	7.57	--	570	2.1	<1	9.3	4.7	--	--	--	1,000 [†]	110 [†]	<250	<250	
	06/14/17	SoundEarth	7.78	240.43	260	<1	<1	2.0	<3	--	--	--	520	--	<250	--	
	09/14/17	SoundEarth	7.44	240.77	<100	<1	<1	<1	<3	--	--	--	150 [†]	--	<250	--	
MTCA Method A Cleanup Levels for Groundwater⁽⁵⁾					1,000/800⁽⁶⁾	5	1,000	700	1,000	20	5	0.01	500	500	500	500	500

NOTES:

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

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

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

⁽²⁾Analyzed by Method NWTPH-Gx (gasoline) and NWTPH-Dx (diesel and oil).

⁽³⁾Analyzed by EPA Method 8260B, 8260C, or 8021B.

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

⁽⁵⁾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.

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

Laboratory Note:

[†]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

Draft - Issued for Regulatory Review

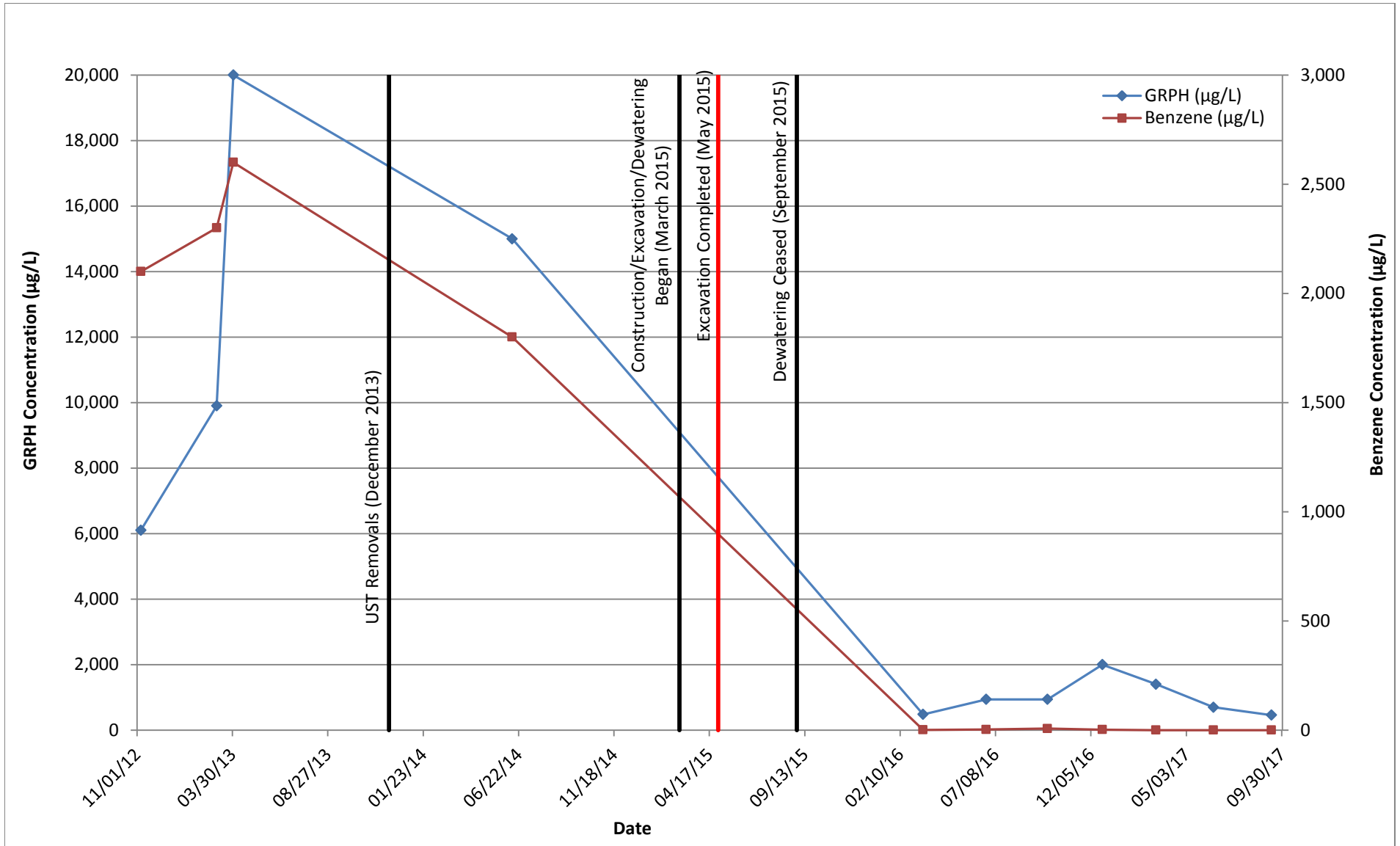


Chart 2
GRPH and Benzene Concentrations - GLMW01/MW109
SKS Shell Station Site
3901 Southwest Alaska Street
Seattle, Washington

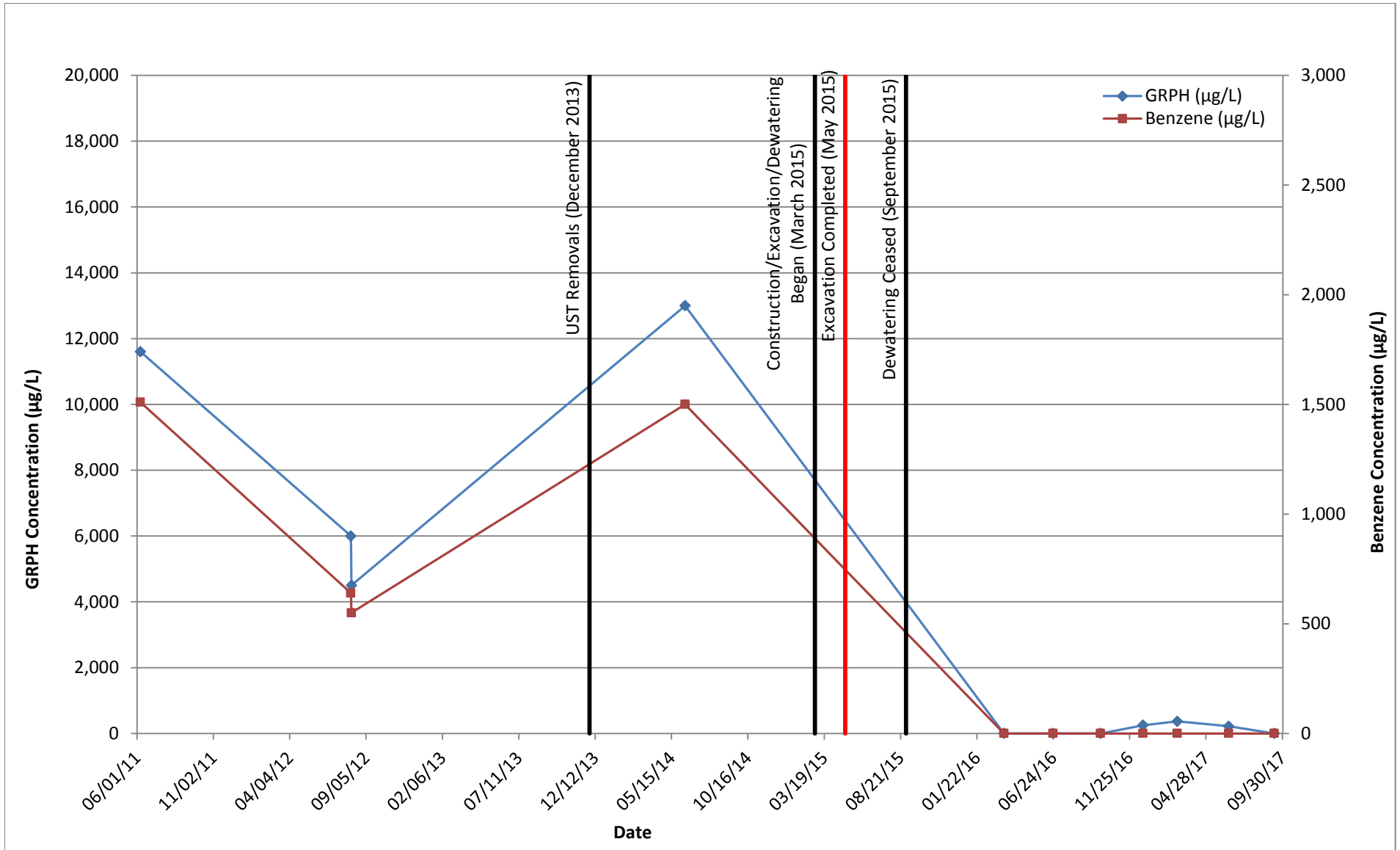


Chart 3
GRPH and Benzene Concentrations - MW110/MW-2
SKS Shell Station Site
3901 Southwest Alaska Street
Seattle, Washington

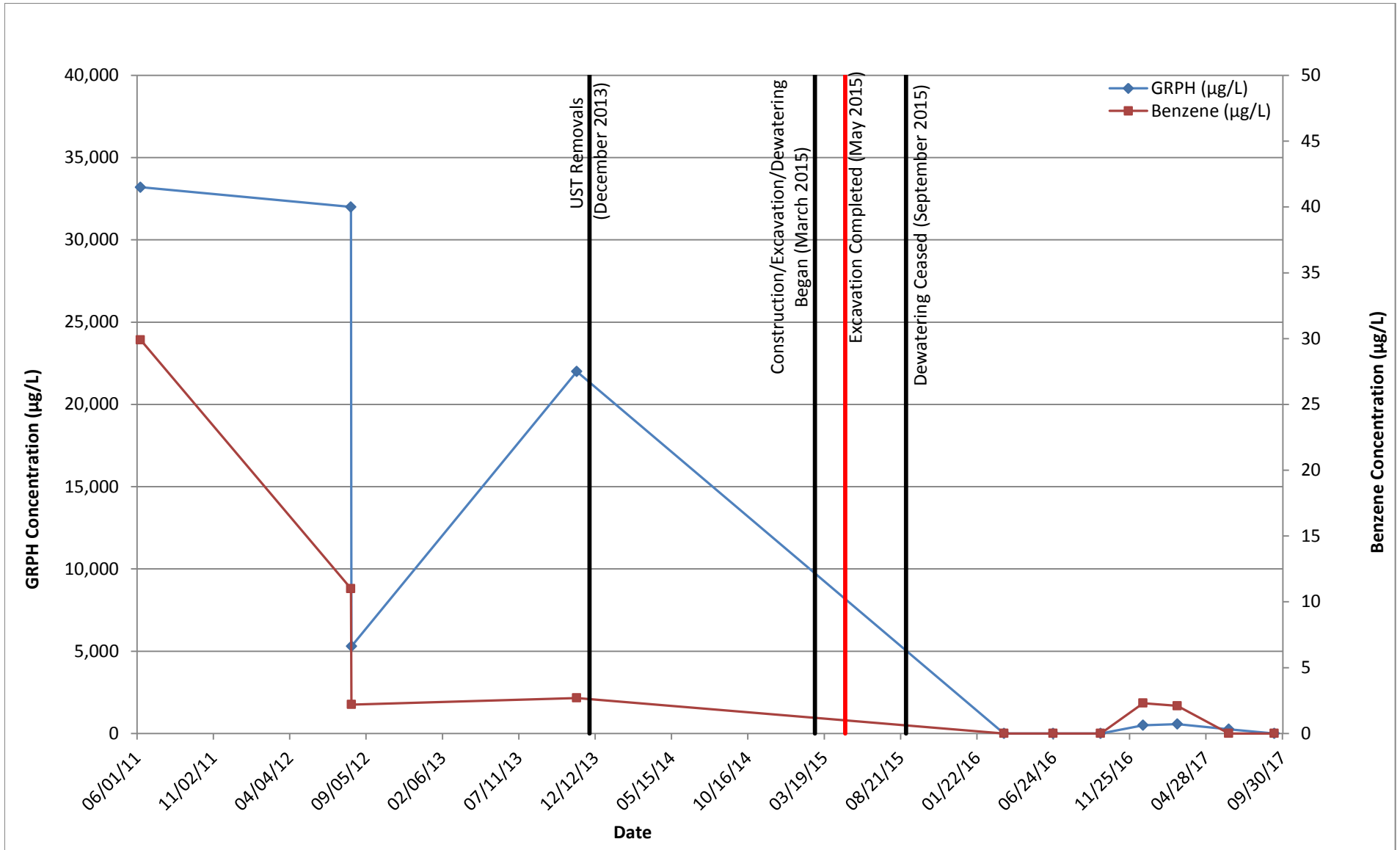


Chart 4
GRPH and Benzene Concentrations - MW-3/MW108
SKS Shell Station Site
3901 Southwest Alaska Street
Seattle, Washington

Draft - Issued for Client Review

