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December 22, 2014

Mr. Scott Rose  
Washington State Department of Ecology  
Southwest Regional Office  
PO Box 47775  
Olympia, Washington 98504

**RECEIVED**  
**DEC 24 2014**  
**WA State Department  
of Ecology (SWRO)**

**BY MAIL AND E-MAIL**

**RE: ARSENIC AND LEAD CHARACTERIZATION  
LAKEVIEW FACILITY  
2800 104<sup>TH</sup> STREET COURT SOUTH, LAKEWOOD, WASHINGTON  
VCP IDENTIFICATION NO: SW1012  
FARALLON PN: 188-002**

Dear Mr. Rose:

Farallon Consulting, L.L.C. (Farallon) has prepared this letter on behalf of Woodworth Capital, Inc. to provide a summary of the results of the recent subsurface investigation conducted in Area of Concern 5 at the northeastern portion of the Lakeview Facility at 2800 104th Street South in Lakewood, Washington (herein referred to as the Site) (Figures 1 and 2). The Washington State Department of Ecology (Ecology) noted in the March 7, 2014 e-mail to Farallon that sufficient characterization of arsenic and lead in groundwater in the northeastern portion of the Site was necessary to comply with the requirements for a Remedial Investigation in accordance with Washington State Model Toxics Control Act cleanup regulations (MTCA) as established in Chapter 173-340 of the Washington Administrative Code (WAC 173-340).

The purpose of the subsurface investigation was to evaluate the nature and extent of arsenic and lead in shallow groundwater in the northeastern portion of the Site. Farallon requests a meeting with you to discuss the results of the investigation and to determine the path forward to meet the requirements for a No Further Action determination.

**SCOPE OF WORK**

The investigation was conducted in September and October 2014 and included installation of three monitoring wells up-, cross-, and down-gradient of monitoring well MW-12 and collection of groundwater samples for laboratory analysis to evaluate the nature and extent of arsenic and lead in shallow groundwater and to investigate whether a source of arsenic and lead exists off-Site and up-gradient of the Site (Figure 3). Arsenic and lead have been detected at concentrations exceeding the MTCA Method A cleanup levels in groundwater samples collected from monitoring well MW-12 (Table 1).

Monitoring well MW-30 was installed west-southwest and down-gradient of monitoring well MW-12; monitoring well NW-31 was installed northwest and cross-gradient of monitoring well MW-12; and monitoring well MW-32 was installed east-northeast and up-gradient of monitoring



well MW-12 and is proximate to the eastern property boundary of the Site (Figure 3). These monitoring wells were installed using a limited access Sonic drilling rig operated by Holt Services, Inc. and were developed soon after their installation was completed. The boring logs are included in Attachment A.

Soil samples were collected continuously from the ground surface to the final drilling depth of each boring. Three soil samples from each boring were submitted for laboratory analysis for arsenic and lead by U.S. Environmental Protection Agency (EPA) Methods 6020/6010C.

The top-of-casing elevations were surveyed by a professional surveyor and the depth-to-water measurements were collected on more than one occasion during September and October 2014 (Table 2). Groundwater samples were collected using EPA low-flow sampling protocols and submitted for laboratory analysis for total and dissolved arsenic and lead.

#### **GROUNDWATER GRADIENT**

The top of the uppermost shallow water-bearing zone was encountered at depths ranging from approximately 36 to 48 feet below ground surface (bgs) at monitoring wells MW-12, MW-31, and MW-32 (Table 2). The horizontal gradient for the shallow groundwater is flat in the area between the eastern property boundary of the Site and monitoring wells MW-12 and MW-31 (Figure 3). The flow direction for the shallow groundwater in the northeastern portion of the Site is estimated to the west-southwest toward monitoring well MW-30.

Shallow groundwater was not encountered in monitoring well MW-30, indicating that the shallow groundwater-bearing zone is discontinuous. Silt and silty sand layers encountered at boring and monitoring well MW-30 at depths ranging from 24 to 44 feet bgs create a low-permeability barrier for shallow groundwater to further migrate to the west-southwest (Attachment A).

#### **ANALYTICAL RESULTS**

Arsenic was not detected at concentrations at or above the laboratory reporting limits in any of the soil samples analyzed for this investigation (Table 3; Attachment B). Lead was detected in several soil samples collected for this investigation at concentrations ranging from 9.4 to 49 milligrams per kilogram, which is less than the MTCA Method A cleanup level of 250 milligrams per kilogram for lead.

Existing monitoring well MW-12 and new monitoring wells MW-31 and MW-32 were sampled on September 12, 2014. Monitoring well MW-31 was redeveloped and resampled on October 30, 2014. The results for groundwater samples collected in September and October 2014 are as follows (Table 1):

- Total arsenic was detected at concentrations exceeding the current MTCA Method A cleanup level of 5 micrograms per liter ( $\mu\text{g/l}$ ) in the groundwater samples collected from monitoring wells MW-12, MW-31, and MW-32.





- Total lead was detected at concentrations exceeding the MTCA Method A cleanup level of 15 µg/l in the groundwater samples collected from monitoring wells MW-12 and MW-31.
- Dissolved arsenic was detected at concentrations exceeding the MTCA Method A cleanup level in the groundwater samples collected from monitoring wells MW-12 and MW-31.
- Dissolved lead was detected at concentrations less than the MTCA Method A cleanup level in the groundwater samples collected from monitoring wells MW-12, MW-31, and MW-32.

### CONCEPTUAL SITE MODEL

The groundwater samples submitted for total arsenic and total lead analysis were turbid and are likely not representative of metal concentrations in groundwater, as suspended solids in groundwater often yield erroneous results for total metals. A significant difference in concentrations detected between the total and dissolved metals results are reported. Therefore, the filtered samples submitted for dissolved arsenic and lead are considered representative of groundwater conditions for the Site.

The up-gradient easterly to northeasterly extent of dissolved arsenic and lead in shallow groundwater is defined by the analytical results for the groundwater sample collected from monitoring well MW-32. The down-gradient westerly to southwesterly extent of dissolved arsenic and lead in shallow groundwater is defined by the lack of water in monitoring well MW-30 and the discontinuity of the shallow groundwater-bearing zone.

Dissolved arsenic and lead were not detected at concentrations at or above the laboratory reporting limits in the groundwater sample collected in 2008 from monitoring well MW-9 farther down-gradient during the Remedial Investigation (Table 1). The analytical results for groundwater samples collected during the Remedial Investigation and during this investigation suggest that the source of arsenic and lead is more likely than not located within the Site property boundaries.

If an interconnection exists between the shallow groundwater-bearing zone and a deeper groundwater-bearing zone in the area west of monitoring wells MW-12 and MW-31, the vertical and down-gradient extent of arsenic and lead in groundwater is defined by the non-detect analytical results for a groundwater sample collected from monitoring well MW-12B that is screened in the deeper groundwater-bearing zone. The groundwater flow direction for the deep groundwater-bearing zone is northeast in this portion of the Site.

Based on the results of the investigation conducted in September and October 2014, Farallon concludes that the nature and extent of arsenic and lead in groundwater is sufficiently characterized to develop and recommend a final cleanup alternative to address residual contamination at the Site.



The results of this investigation will be included in the Focused Feasibility and Disproportionate Cost Analysis (FFS/DCA) Report for the Site that Farallon is currently preparing. The FFS/DCA Report will address the residual concentrations of constituents of concern throughout the Site and will provide a basis for the selection of an Environmental Covenant as the final cleanup action for the Site under WAC 173-340-360 through WAC 173-340-390.

### CLOSING

Farallon respectfully requests to meet with you at the Ecology Southwest Regional Office to discuss the adequacy of the arsenic and lead characterization and to define the path toward obtaining a No Further Action determination from Ecology for the Site. Farallon trusts that the information provided herein provides sufficient information for Ecology needs at this time.

If you have questions or require additional information, please contact either of the undersigned at (425) 295-0800. Thank you in advance for your assistance with this project.

Sincerely,

**Farallon Consulting, L.L.C.**

Brani Jurista, L.G.  
Senior Geologist

Peter Jewett, L.G., L.E.G.  
Principal Engineering Geologist

Attachments: Figure 1, *Site Vicinity Map*  
Figure 2, *Site Plan*  
Figure 3, *Groundwater Elevation Contours for Shallow Water-Bearing Zone*  
(October 2014)  
Table 1, *Groundwater Analytical Results for AOC 5*  
Table 2, *Shallow Well Elevation Data*  
Table 3, *Soil Analytical Results for AOC 5*  
Attachment A, Boring Logs  
Attachment B, Laboratory Analytical Results

cc: Jeff Woodworth, Woodworth Capital, Inc. (by e-mail)

BJ/PJ:tlc



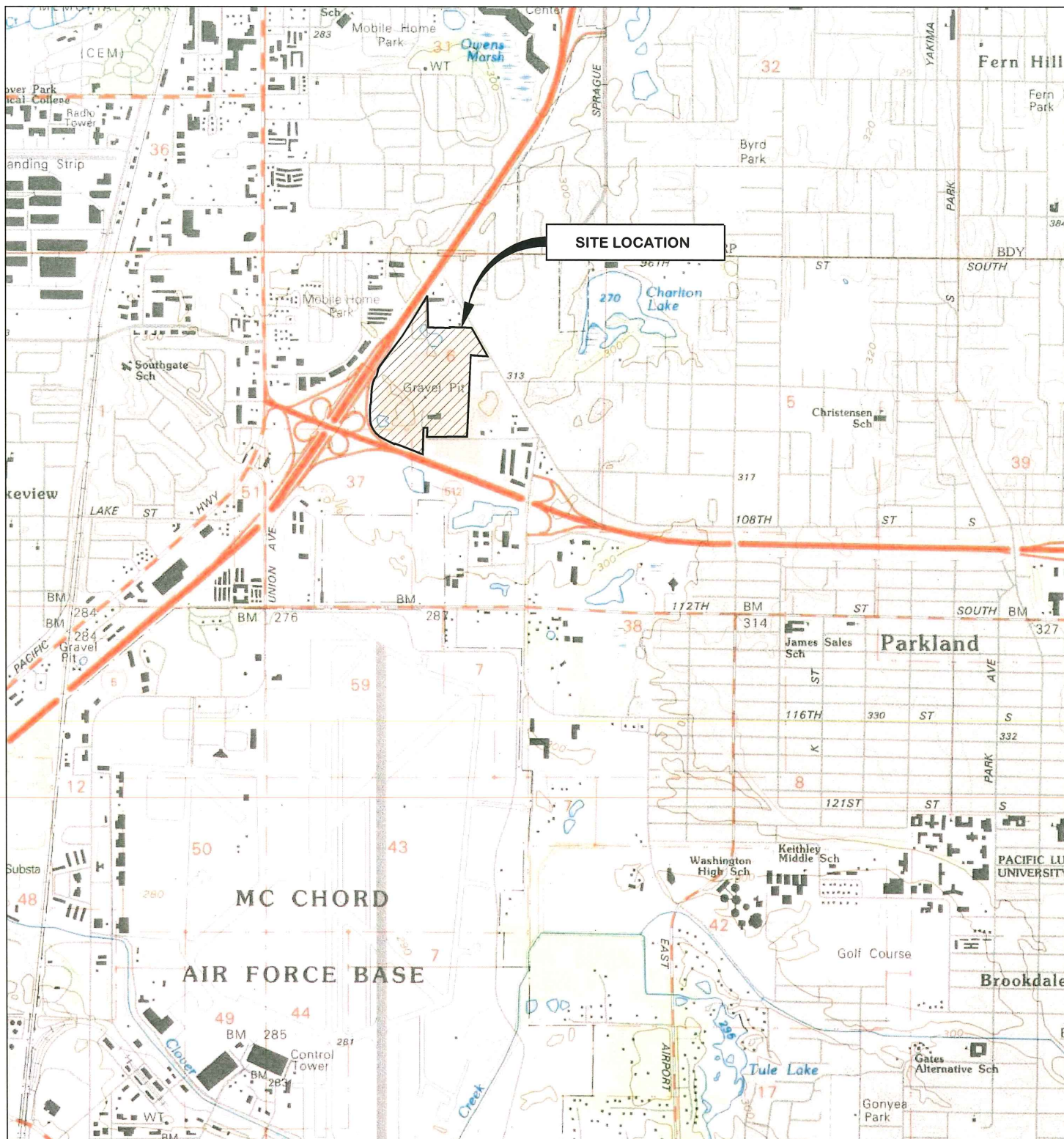
## **FIGURES**

### **ARSENIC AND LEAD CHARACTERIZATION**

Lakeview Facility  
2800 104<sup>th</sup> Street Court South  
Lakewood, Washington

Farallon PN: 188-002





REFERENCE: 7.5 MINUTE USGS QUADRANGLE TACOMA SOUTH, WASHINGTON. DATED 1991





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**FIGURE 1**  
SITE VICINITY MAP  
LAKEVIEW FACILITY  
2800 104th STREET COURT SOUTH  
LAKEWOOD, WASHINGTON

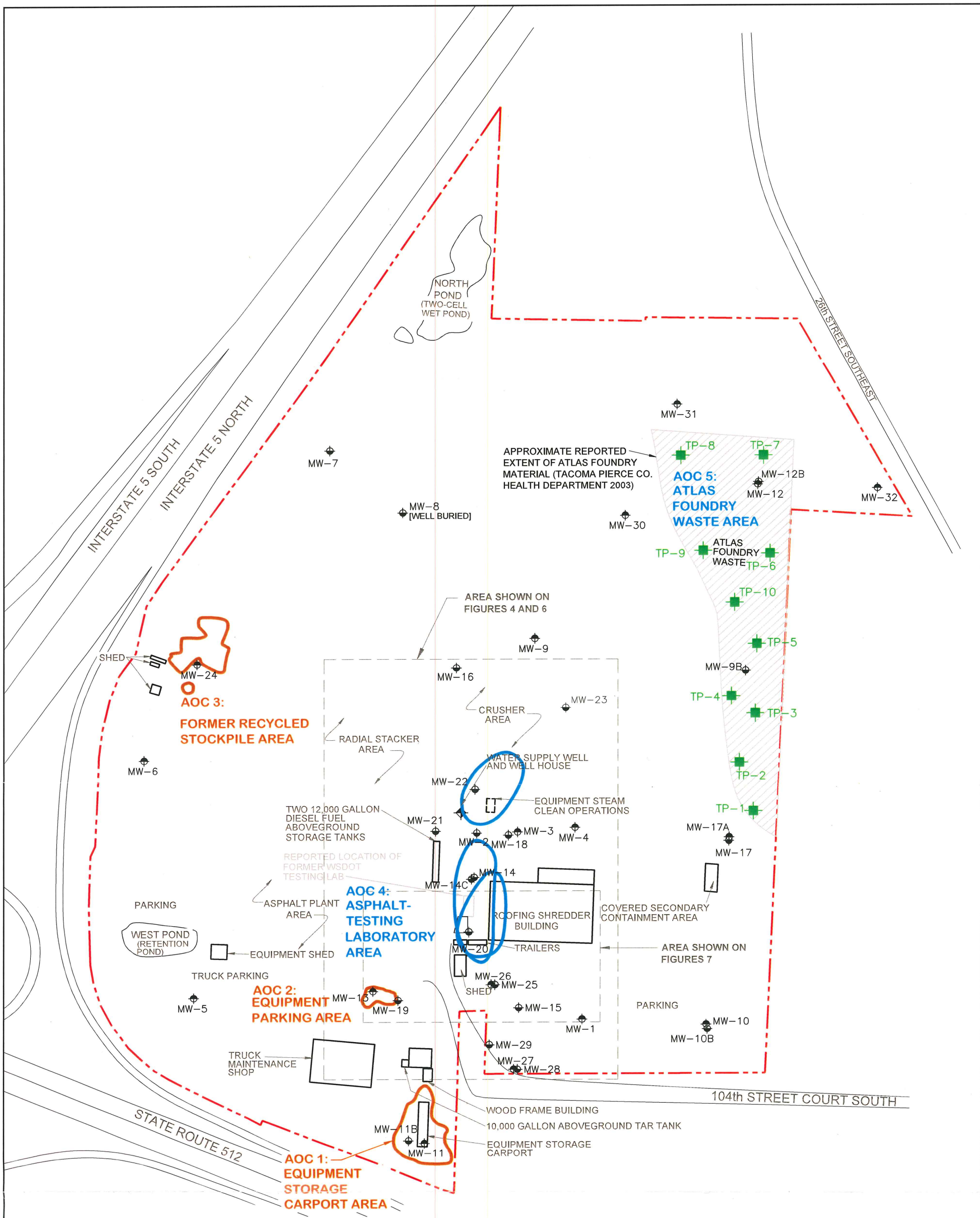
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**LEGEND**

A — A' LINE OF CROSS-SECTION

— PROPERTY BOUNDARY

— APPROXIMATE AREA OF COMPLETED SOIL CLEANUP ACTION

— APPROXIMATE AREA OF GROUNDWATER CLEANUP ACTION

MW-11 MONITORING WELL SCREENED IN SHALLOW WATER-BEARING ZONE


MW-15 MONITORING WELL SCREENED IN DEEP WATER-BEARING ZONE

TEST PIT

WSDOT WASHINGTON STATE DEPARTMENT OF TRANSPORTATION

**NOTE:**

- AIR SPARGE AND SOIL VAPOR EXTRACTION WELLS BORING B2 THROUGH B7, AND B9 NOT SHOWN ON THIS FIGURE.
- ALL LOCATIONS OF SITE FEATURES ARE APPROXIMATE.



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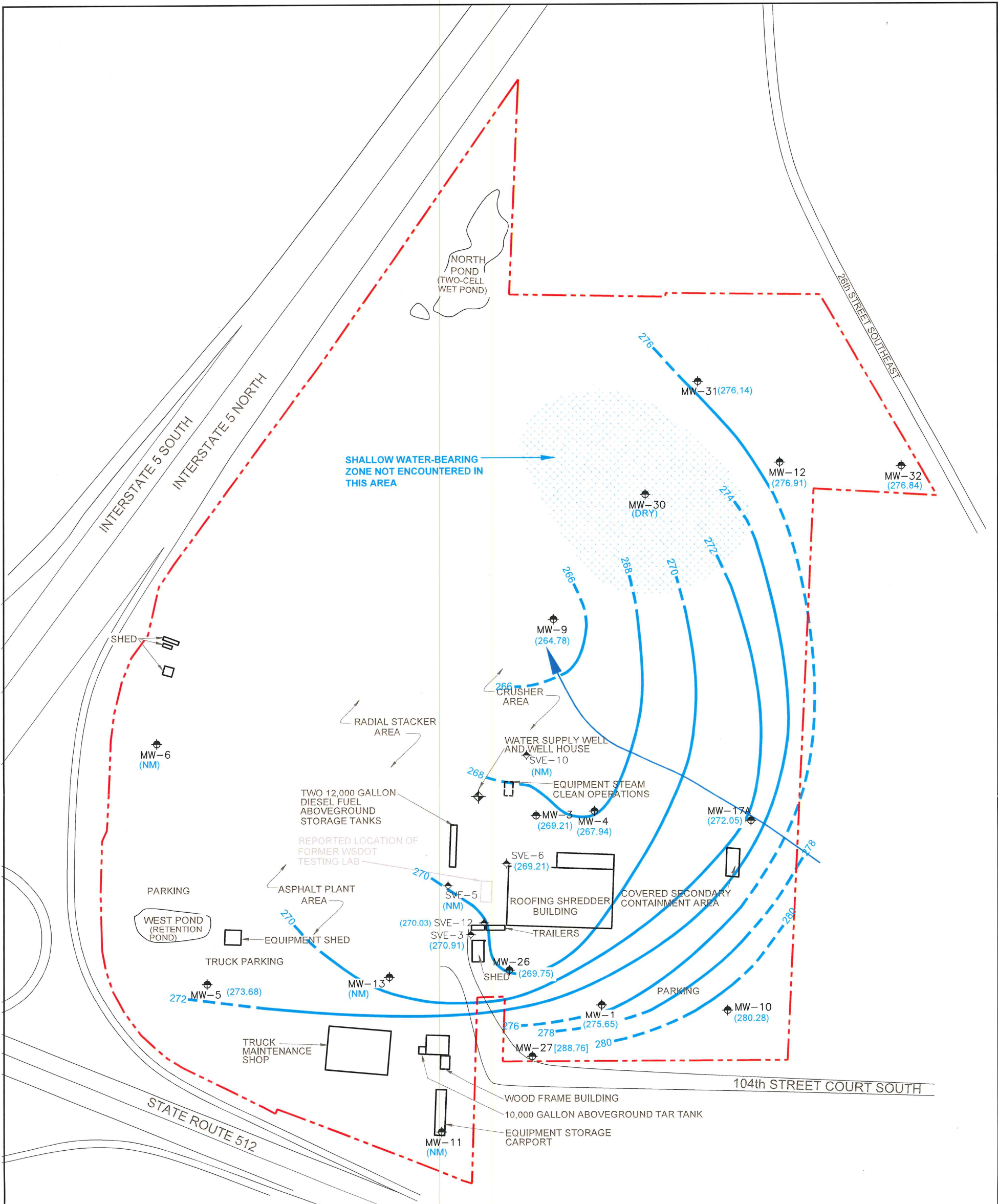
**FIGURE 2**

**SITE PLAN**  
**LAKEVIEW FACILITY**  
2800 104th STREET COURT SOUTH  
LAKEWOOD, WASHINGTON

FARALLON PN: 188-002

Drawn By: DEW
Checked By: BJ
Date: 12/19/2014 Disk Reference: 188002s





**LEGEND**

- PROPERTY BOUNDARY
- MW-6 MONITORING WELL SCREENED IN SHALLOW WATER-BEARING ZONE
- EXTRACTION WELL
- (269.88) GROUNDWATER ELEVATION AT WELL SCREENED IN SHALLOW WATER-BEARING ZONE (OCTOBER 2014)
- [269.37] GROUNDWATER ELEVATION NOT USED IN CONTOURING
- (NM) NOT MEASURED
- 270 — GROUNDWATER ELEVATION CONTOUR, DASHED WHERE INFERRED
- APPROXIMATE DIRECTION OF GROUNDWATER FLOW
- WSDOT WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
- ALL LOCATIONS OF SITE FEATURES ARE APPROXIMATE.

0 200  
APPROXIMATE SCALE IN FEET



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**FIGURE 3**

GROUNDWATER ELEVATION CONTOURS FOR  
SHALLOW WATER-BEARING ZONE  
(OCTOBER 2014)  
LAKEVIEW FACILITY  
2800 104th ST CT S, LAKEWOOD, WA  
FARALLON PN: 188-002



## **TABLES**

### **ARSENIC AND LEAD CHARACTERIZATION**

Lakeview Facility  
2800 104<sup>th</sup> Street Court South  
Lakewood, Washington

Farallon PN: 188-002



**Table 1**  
**Groundwater Analytical Results for AOC 5**  
**Lakeview Facility**  
**Lakewood, Washington**  
**Farallon PN: 188-002**

Well Identification	Water-Bearing Zone	Sample Identification	Sample Date	Analytical Results (micrograms per liter) <sup>1</sup>			
				Arsenic		Lead	
				Total	Dissolved	Total	Dissolved
MW-30	Shallow	—	9/12/2014	Dry -- No Groundwater Sample Collected			
		—	10/30/2014	Dry -- No Groundwater Sample Collected			
MW-31	Shallow	MW-31-091214	9/12/2014	<b>39</b>	<b>20</b>	<b>350</b>	9.6
		MW-31-103014	10/30/2014	—	<b>19</b>	—	5.5
MW-32	Shallow	MW-32-091214	9/12/2014	<b>9.1</b>	<3.0	<b>7.9</b>	<1.0
MW-12	Shallow	MW12-101408	10/14/2008	<b>11</b>	<b>8.2</b>	<b>50</b>	<b>29</b>
		MW12-020609	2/6/2009	<b>15</b>	<b>18</b>	<b>22</b>	6.1
		MW12-011310	1/13/2010	<b>9.2</b>	<b>9.3</b>	6.8	7.1
		MW12-041310	4/13/2010	<b>9.1</b>	<b>9.1</b>	4.5	3.5
		MW12-111910	11/19/2010	<b>7.7</b>	—	14	—
		MW12-020111	2/1/2011	<b>11</b>	—	6	—
		MW12-050311	5/3/2011	<b>16</b>	<b>12</b>	11	—
		MW12-080211	8/2/2011	<b>8.6</b>	<b>6.5</b>	<b>35</b>	<b>25</b>
		MW-12-1110211	11/10/2011	<b>9.5</b>	—	<b>22</b>	—
		MW-12-061313	6/13/2013	<b>8.4</b>	<b>8.4</b>	<b>17</b>	13
		MW-12-091214	9/12/2014	<b>16</b>	<b>7.1</b>	<b>59</b>	12
MW-12B	Deep	MW12B-021209	1/12/2009	<3.3	—	<1.1	—
MW-9	Shallow	MW9-082008	8/20/2008	—	<3.0	—	<1.0
<b>MTCA Method A Cleanup Levels<sup>2</sup></b>				<b>5</b>		<b>15</b>	

**NOTES:**

Results in **bold** denote concentrations above applicable cleanup levels.

— denotes sample not analyzed

<sup>1</sup>Analyzed by U.S. Environmental Protection Agency Method 200.8.

<sup>2</sup>Washington State Model Toxics Control Act Cleanup Regulation (MTCA) Cleanup Levels for Groundwater, Table 720-1 of Section 900 of Chapter 173-340 of the Washington Administrative Code, as revised 2013.

AOC = Area of Concern



**Table 2**  
**Shallow Well Elevation Data**  
**Lakeview Facility**  
**Lakewood, Washington**  
**Farallon PN: 188-002**

Well Identification	Measurement Date	Casing Elevation (feet msl) <sup>1</sup>	Monument Rim Elevation (feet msl) <sup>1</sup>	Ground Elevation (feet msl) <sup>1</sup>	Total Depth of Well (feet below top of casing)	Screen Interval		Depth to Groundwater (feet below top of casing)	Groundwater Elevation (feet msl) <sup>1</sup>
						(feet below ground)	(feet msl) <sup>1</sup>		
Shallow Monitoring Wells									
MW-1	8/19/2008	313.65	NA	309.57	52.95	48.87 to 33.87	260.70 to 275.70	39.70	273.95
	9/17/2008							40.30	273.35
	10/17/2008							40.71	272.94
	2/2/2009							35.89	277.76
	9/30/2009							39.56	274.09
	4/12/2010							35.65	278.00
	11/19/2010							NM	
	2/1/2011							NM	
	5/4/2011							NM	
	8/2/2011							34.76	278.89
	11/8/2011							38.05	275.60
	11/30/2012							36.43	277.22
	6/12/2013							NM	
	10/23/2014							38.00	275.65
MW-3	8/19/2008	279.31	279.78	278.20	22.00	20.89 to 7.62	257.31 to 271.69	11.54	267.77
	9/17/2008							12.37	266.94
	10/13/2008							12.26	267.05
	2/2/2009							9.72	269.59
	9/30/2009							10.74	268.57
	4/12/2010							9.67	269.64
	11/19/2010							NM	
	2/1/2011							NM	
	5/4/2011							NM	
	8/2/2011							10.02	269.29
	11/8/2011							10.10	269.21
	6/12/2013							NM	
	10/23/2014							10.18	269.13
	MW-4							8/19/2008	280.77
9/17/2008		14.21	266.56						
10/13/2008		14.30	266.47						
2/2/2009		11.73	269.04						
9/30/2009		13.25	267.52						
4/12/2010		11.35	269.42						
11/19/2010		NM							
2/1/2011		NM							
5/4/2011		NM							
8/2/2011		11.95	268.82						
11/8/2011		NM							
6/12/2013		NM							
10/23/2014		12.83	267.94						



**Table 2**  
**Shallow Well Elevation Data**  
**Lakeview Facility**  
**Lakewood, Washington**  
**Farallon PN: 188-002**

Well Identification	Measurement Date	Casing Elevation (feet msl) <sup>1</sup>	Monument Rim Elevation (feet msl) <sup>1</sup>	Ground Elevation (feet msl) <sup>1</sup>	Total Depth of Well (feet below top of casing)	Screen Interval		Depth to Groundwater (feet below top of casing)	Groundwater Elevation (feet msl) <sup>1</sup>
						(feet below ground)	(feet msl) <sup>1</sup>		
MW-5	8/19/2008	282.99	283.26	283.26	16.68	16.95 to 9.95	266.31 to 273.31	11.40	271.59
	9/17/2008							11.23	271.76
	10/13/2008							11.24	271.75
	2/2/2009							8.69	274.30
	9/30/2009							10.47	272.52
	4/12/2010							8.38	274.61
	11/19/2010							NM	
	2/1/2011							NM	
	5/4/2011							NM	
	8/2/2011							9.84	273.15
	11/8/2011							10.22	272.77
	6/12/2013							NM	
	10/23/2014							9.31	273.68
MW-6	8/19/2008	274.38	274.96	274.96	10.88	11.46 to 4.46	263.50 to 270.50	9.72	264.66
	9/17/2008							8.96	265.42
	10/13/2008							8.98	265.40
	2/2/2009							4.96	269.42
	9/30/2009							8.29	266.09
	4/12/2010							4.50	269.88
	11/19/2010							NM	
	2/1/2011							NM	
	5/4/2011							NM	
	8/2/2011							6.90	267.48
	11/8/2011							7.55	266.83
	6/12/2013							NM	
	10/23/2014							NM	
MW-9	8/19/2008	278.15	278.67	277.17	25.00	24.02 to 17.02	253.15 to 260.15	14.48	263.67
	9/17/2008							14.94	263.21
	10/13/2008							14.79	263.36
	2/2/2009							11.37	266.78
	9/30/2009							13.75	264.40
	4/12/2010							11.00	267.15
	11/19/2010							NM	
	2/1/2011							NM	
	5/4/2011							NM	
	8/2/2011							12.18	265.97
	11/8/2011							12.32	265.83
	6/12/2013							NM	
	10/23/2014	278.06	278.60	277.10			253.06 to 260.06	13.28	264.78



**Table 2**  
**Shallow Well Elevation Data**  
**Lakeview Facility**  
**Lakewood, Washington**  
**Farallon PN: 188-002**

Well Identification	Measurement Date	Casing Elevation (feet msl) <sup>1</sup>	Monument Rim Elevation (feet msl) <sup>1</sup>	Ground Elevation (feet msl) <sup>1</sup>	Total Depth of Well (feet below top of casing)	Screen Interval		Depth to Groundwater (feet below top of casing)	Groundwater Elevation (feet msl) <sup>1</sup>
						(feet below ground)	(feet msl) <sup>1</sup>		
MW-10	8/19/2008	313.18	NA	311.18	41.81	39.81 to 32.81	271.37 to 278.37	36.99	276.19
	9/17/2008							39.42	273.76
	10/13/2008							38.56	274.62
	2/2/2009							33.05	280.13
	9/30/2009							38.60	274.58
	4/12/2010							32.99	280.19
	11/19/2010							NM	
	2/1/2011							NM	
	5/4/2011							NM	
	8/2/2011							36.70	276.48
	11/8/2011							36.93	276.25
	6/12/2013							NM	
	10/23/2014							32.90	280.28
MW-11 <sup>2</sup>	8/19/2008	286.70	287.53	287.53	14.46	15.29 to 8.29	272.24 to 279.24	10.38	276.32
	9/17/2008							10.92	275.78
	10/13/2008							11.27	275.43
	2/2/2009							6.20	280.50
	9/30/2009							10.30	276.40
	4/12/2010							6.22	280.48
	11/19/2010	NM							
	2/1/2011	287.13	287.74	287.74	12.11	15.50 to 8.50		6.58	280.55
	5/4/2011							6.40	280.73
	8/2/2011							8.08	279.05
	11/8/2011							9.60	277.53
	11/30/2012							7.30	279.83
	6/12/2013							NM	
	10/23/2014							NM	
	MW-12							10/13/2008	313.32
2/2/2009		34.05	279.27						
9/30/2009		37.00	276.32						
1/13/2010		33.60	279.72						
4/12/2010		33.40	279.92						
11/19/2010		35.30	278.02						
2/1/2011		33.24	280.08						
5/4/2011		33.01	280.31						
8/2/2011		35.25	278.07						
11/8/2011		36.63	276.69						
6/12/2013		34.82	278.50						
10/23/2014		36.41	276.91						



**Table 2**  
**Shallow Well Elevation Data**  
**Lakeview Facility**  
**Lakewood, Washington**  
**Farallon PN: 188-002**

Well Identification	Measurement Date	Casing Elevation (feet msl) <sup>1</sup>	Monument Rim Elevation (feet msl) <sup>1</sup>	Ground Elevation (feet msl) <sup>1</sup>	Total Depth of Well (feet below top of casing)	Screen Interval		Depth to Groundwater (feet below top of casing)	Groundwater Elevation (feet msl) <sup>1</sup>
						(feet below ground)	(feet msl) <sup>1</sup>		
MW-13	10/13/2008	284.73	284.97	284.97	24.14	24.38 to 19.38	260.59 to 265.59	33.40	251.33
	2/2/2009							16.80	267.93
	9/30/2009							17.44	267.29
	4/12/2010							15.36	269.37
	11/19/2010							NM	
	2/1/2011							14.90	269.83
	5/4/2011							13.80	270.93
	8/2/2011							13.20	271.53
	11/8/2011							14.59	270.14
	11/30/2012							14.84	269.89
	6/12/2013							NM	
	10/23/2014							NM	
MW-17A	2/2/2009	281.72	282.23	282.23	34.70	35.21 to 25.21	247.02 to 257.02	7.69	274.03
	9/30/2009							10.80	270.92
	4/12/2010							6.66	275.06
	11/19/2010							NM	
	2/1/2011							NM	
	5/4/2011							5.58	276.14
	8/2/2011							7.94	273.78
	11/8/2011							9.46	272.26
	6/12/2013							NM	
	10/23/2014							9.67	272.05
MW-24 <sup>2</sup>	10/6/2010	NA	NA	NA	3.55	~ 4 to ~ 2	NA to NA	0.38	
	11/19/2010							NM	
	2/1/2011	277.59	277.92	277.92	7.37	7.70 to 5.70	270.22 to 272.22	3.70	274.22
	5/4/2011							4.03	273.89
	8/2/2011							5.30	272.62
	11/8/2011							4.30	273.62
	6/12/2013							NM	
	10/23/2014							NM	
MW-26	8/6/2012	279.30	279.70	279.70	9.88	10.28 to 2.78	269.42 to 276.97	Dry	
	8/9/2012							Dry	
	9/24/2012							Dry	
	11/30/2012							8.24	271.06
	12/12/2012							7.11	272.19
	12/21/2012							5.52	273.78
	6/12/2013							NM	
	10/23/2014							9.55	269.75
MW-27	1/15/2013	311.97	312.37	312.37	41.75	42.2 to 27.2	270.2 to 285.2	32.21	279.8
	6/12/2013							NM	
	10/23/2014							23.21	288.76
MW-30	9/10/2014	303.66	304.20	304.20	37.65	38.2 to 28.2	266.0 to 276.0	Dry	
	9/12/2014							Dry	
	10/23/2014							Dry	
	10/30/2014							Dry	



**Table 2**  
**Shallow Well Elevation Data**  
**Lakeview Facility**  
**Lakewood, Washington**  
**Farallon PN: 188-002**

Well Identification	Measurement Date	Casing Elevation (feet msl) <sup>1</sup>	Monument Rim Elevation (feet msl) <sup>1</sup>	Ground Elevation (feet msl) <sup>1</sup>	Total Depth of Well (feet below top of casing)	Screen Interval		Depth to Groundwater (feet below top of casing)	Groundwater Elevation (feet msl) <sup>1</sup>
						(feet below ground)	(feet msl) <sup>1</sup>		
MW-31	9/10/2014	324.89	325.19	325.19	55.86	56.2 to 46.2	269.0 to 279.0	48.33	276.56
	9/12/2014							48.33	276.56
	10/23/2014				55.90			48.75	276.14
	10/30/2014							48.81	276.08
MW-32	9/10/2014	312.99	313.34	313.34	44.62	45.0 to 35.0	268.4 to 278.4	36.19	276.80
	9/12/2014							36.11	276.88
	10/23/2014							36.15	276.84
Shallow Soil Vapor Extraction Wells									
SVE-3	4/13/2010	284.25	284.71	284.71	33.03	33.49 to 8.49	251.22 to 276.22	12.60	271.65
	5/11/2012							12.75	271.50
	6/13/2012							12.78	271.47
	8/9/2012							13.40	270.85
	11/9/2010							13.01	271.24
	10/23/2014							13.34	270.91
SVE-5	4/13/2010	281.29	281.70	281.70	37.74	38.15 to 10.15	243.55 to 271.55	10.58	270.71
	11/19/2010							10.90	270.39
	10/23/2014							NM	
SVE-6	4/13/2010	280.91	281.33	281.33	34.62	35.04 to 10.04	246.29 to 271.29	12.55	268.36
	11/9/2010							13.35	267.56
	1/10/2012							11.49	269.42
	2/13/2012							11.15	269.76
	10/23/2014							11.70	269.21
SVE-10	4/13/2010	279.11	279.64	279.64	38.45	38.98 to 5.98	240.66 to 273.66	11.50	267.61
	11/9/2010							12.56	266.55
	10/23/2014							NM	
SVE-12	4/13/2010	281.99	282.51	282.51	19.35	19.87 to 4.87	262.64 to 277.64	11.24	270.75
	11/9/2010							11.64	270.35
	11/8/2011							11.66	270.33
	8/9/2012							12.01	269.98
	11/30/2012							11.55	270.44
	10/23/2014							11.96	270.03

**NOTES:**

<sup>1</sup> Feet above mean sea level (msl); Vertical datum NGVD 29.

<sup>2</sup> Monitoring well casing shortened or extended. The new top of casing elevation was resurveyed by Farallon.

NA = not available

NM = not measured



**Table 3**  
**Soil Analytical Results for AOC 5**  
**Lakeview Facility**  
**Lakewood, Washington**  
**Farallon PN: 188-002**

Boring/Monitoring Well Identification	Sample Identification	Sample Date	Depth (feet bgs) <sup>1</sup>	Analytical Results (milligrams per kilogram) <sup>2</sup>	
				Arsenic	Lead
Borings					
MW-30	MW-30-3.0	9/9/2014	3	<15	20
	MW-30-29.0	9/9/2014	29	<11	31
	MW-30-37.0	9/9/2014	37	<12	<5.8
MW-31	MW-31-3.0	9/8/2014	3	<11	<5.5
	MW-31-45.0	9/8/2014	45	<11	49
	MW-31-55.0	9/8/2014	55	<12	11
MW-32	MW-32-3.0	9/8/2014	3	<12	9.4
	MW-32-37.0	9/8/2014	37	<11	<5.3
	MW-32-45.0	9/8/2014	45	<12	<6.2
SS-9 (MW-12)	SS9-28-100208	10/2/2008	28	<11	28
MW-12B	MW12B-012109-33	1/21/2009	33	<12	46
SS-7	SS7-15-100108	10/1/2008	15	<12	10
Test Pits					
TP-1	TP1-020309-6	2/3/2009	6	<12	14
TP-2	TP2-020309-6	2/3/2009	6	<13	98
TP-3	TP3-020309-3	2/3/2009	3	<11	18
TP-4	TP4-020309-7	2/3/2009	7	<13	15
TP-5	TP5-020309-7	2/3/2009	7	<11	13
TP-6	TP6-020309-14	2/3/2009	14	15	51
TP-7	TP7-020309-10	2/3/2009	10	<11	<5.7
TP-8	TP8-020309-4	2/3/2009	4	<11	10
TP-9	TP9-020309-5	2/3/2009	5	<11	21
TP-10	TP10-020309-6	2/3/2009	6	<11	<5.3
MTCA Method A Cleanup Levels <sup>3</sup>				20	250

**NOTES:**

< denotes analyte not detected at or above the reporting limit listed.

<sup>1</sup> Depth in feet below ground surface (bgs).

<sup>2</sup> Analyzed by U.S. Environmental Protection Agency (EPA) Method 6020/6010C.

<sup>3</sup> Washington State Model Toxics Control Act Cleanup Regulation (MTCA) Method A Soil Cleanup Levels for Unrestricted Land Uses, Table 740-1 of Section 900 of Chapter 173-340 of the Washington Administrative Code, as revised 2013.



**ATTACHMENT A  
BORING LOGS**

**ARSENIC AND LEAD CHARACTERIZATION**
























Lakeview Facility  
2800 104<sup>th</sup> Street Court South  
Lakewood, Washington

Farallon PN: 188-002



# USCS Classification and Graphic Legend

Major Divisions	USCS Graphic Symbol	USCS Letter Symbol	Lithologic Description
-----------------	---------------------	--------------------	------------------------

Coarse-Grained Soil (More than 50% of material is larger than No. 200 sieve size)	GRAVEL AND GRAVELLY SOIL (More than 50% of coarse fraction retained on No. 4 sieve)	CLEAN GRAVEL (Little or no fines)		GW	Well graded GRAVEL, well graded GRAVEL with sand
				GP	Poorly graded GRAVEL, GRAVEL with sand
		GRAVEL WITH FINES (Appreciable amount of fines)		GP-GM	Poorly graded GRAVEL - GRAVEL with sand and silt
				GM	Silty GRAVEL
				GC	Clayey GRAVEL
	SAND AND SANDY SOIL (More than 50% of coarse fraction passed through No. 4 sieve)	CLEAN SAND (Little or no fines)		SW	Well graded SAND
				SP	Poorly graded SAND
		SAND WITH FINES (Appreciable amount of fines)		SP-SM	Poorly graded SAND - silty SAND
				SM	Silty SAND
				SC	Clayey SAND
	SM-ML	SILT - Silty SAND			
Fine-Grained Soil (More than 50% of material is smaller than No. 200 sieve size)	SILT AND CLAY (Liquid limit less than 50)			ML	SILT
				CL	CLAY
				OL	Organic SILT
	SILT AND CLAY (Liquid limit greater than 50)			MH	Inorganic SILT
				CH	Inorganic CLAY
				OH	Organic CLAY
		Highly Organic Soil		PT	Peat
	OTHER MATERIALS	PAVEMENT			AC
				CO	Concrete
OTHER				RK	Bedrock
				WD	Wood Debris
				DB	Debris (Miscellaneous)
				PC	Portland cement



Sample Interval

Grab Sample Interval

Water level at time of drilling

Water level at time of sampling

Blank Casing

Screened Casing

## Legend



Cement Grout



Bentonite



Sand Pack



Well Cap

——— Solid line indicates sharp contact between units well defined.

- - - - - Dashed line indicates gradational contact between units.

feet bgs = feet below ground surface

NE = Not Encountered

NA = Not Applicable

PID = Photoionization Detector

PN = Project Number

\*ppm = parts per million total organic vapors in

isobutylene equivalents using a 10.6 electron volt lamp

USCS = Unified Soil Classification System



## Log of Boring: MW-30

Page 1 of 3

**Client:** Woodworth Capital, Inc.

**Project:** Lakeview Facility

**Location:** Lakewood, WA

**Farallon PN:** 188-002

**Logged By:** Ken Scott

**Date/Time Started:** 9/9/14 @ 1030

**Date/Time Completed:** 9/9/14 @ 1415

**Equipment:** Terra Sonic

**Drilling Company:** Holt Drilling

**Drilling Foreman:** Brian Owen

**Drilling Method:** Sonic

**Sampler Type:** 2.5' Poly Sac

**Drive Hammer (lbs.):** NA

**Depth of Water ATD (ft bgs):** Dry

**Total Boring Depth (ft bgs):** 70.0

**Total Well Depth (ft bgs):** 38.0

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USGS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Boring/Well Construction Details
0		0.0-1.1' bgs: Silty SAND with gravel Fill (65% sand, 20% silt, 15% gravel). fine to coarse sand, fine to coarse gravel, light-brown, moist, no odor, no sheen. Subangular gravel.	SM							Monument
		1.1-4.9' bgs: SILT with gravel (60% silt, 35% gravel, 5% sand). fine to coarse gravel, fine sand, black, moist, organic odor, no sheen.	ML		100	NA	0.0			Concrete
					100	NA	0.2	MW-30-3.0	X	
5		4.9-6.8' bgs: Silty SAND with gravel (65% sand, 20% silt, 15% gravel). fine to coarse sand, fine to coarse gravel, light-grey, moist, no odor, no sheen. Subrounded to subangular grey gravel.	SM							
		6.8-10.5' bgs: Silty SAND with gravel (60% sand, 25% silt, 15% gravel). fine to coarse sand, fine to coarse gravel, light-brown, moist, no odor, no sheen. Subrounded grey gravel.	SM		100	NA	0.0			
10		10.5-11.8' bgs: Silty SAND with gravel (55% sand, 30% silt, 15% gravel). fine to coarse sand, fine to coarse gravel, dark-grey, moist, no odor, no sheen. Subrounded grey gravel.	SM		100	NA	0.0			
		11.8-21.2' bgs: Silty SAND with gravel (60% sand, 20% silt, 20% gravel). fine to medium sand, fine to coarse gravel, brown, moist, no odor, no sheen. Subrounded grey gravel, 3 to 4-inch cobbles 15 to 20-feet bgs.	SM		100	NA	0.1	MW-30-13.0		
15					100	NA	0.0			Casing
					100	NA	0.0			Bentonite Seal
20					100	NA	0.0			
		21.2-24.1' bgs: Silty SAND with gravel (50% sand, 35% silt, 15% gravel). fine to medium sand, fine to coarse gravel, dark-grey, moist, no odor, no sheen. Subrounded grey gravel.	SM		100	NA	0.0			
					100	NA	0.0	MW-30-23.0		

**Monument Type:** Flush Mount

**Casing Diameter (inches):** 2"

**Screen Slot Size (inches):** 0.010

**Screened Interval (ft bgs):** 28.0-38.0

### Well Construction Information

**Filter Pack:** 2/12 sand

**Surface Seal:** Cement

**Annular Seal:** Bentonite

**Boring Abandonment:** NA

**Ground Surface Elevation (ft):** 304.20'

**Top of Casing Elevation (ft):** 303.66'

**Surveyed Location:** X: NA

Y: NA

## Log of Boring: MW-30

Page 2 of 3

**Client:** Woodworth Capital, Inc.

**Project:** Lakeview Facility

**Location:** Lakewood, WA

**Farallon PN:** 188-002

**Logged By:** Ken Scott

**Date/Time Started:** 9/9/14 @ 1030

**Date/Time Completed:** 9/9/14 @ 1415

**Equipment:** Terra Sonic

**Drilling Company:** Holt Drilling

**Drilling Foreman:** Brian Owen

**Drilling Method:** Sonic

**Sampler Type:** 2.5' Poly Sac

**Drive Hammer (lbs.):** NA

**Depth of Water ATD (ft bgs):** Dry

**Total Boring Depth (ft bgs):** 70.0

**Total Well Depth (ft bgs):** 38.0

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USGS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Boring/Well Construction Details
25		24.1-27.5' bgs: SILT with gravel (75% silt, 10% sand, 15% gravel). fine to coarse gravel. fine sand. greyish-brown. moist. no odor. no sheen.	ML		100	NA	0.2			Bentonite Seal
										Sand
		27.5-28.5' bgs: Poorly graded SAND (90% sand, 5% silt, 5% gravel). fine to medium sand. fine to coarse gravel. brown. moist. no odor. no sheen. Subangular grey gravel.	SP		100	NA	0.0			
			ML				0.0	MW-30-29.0	X	
30		28.5-29.8' bgs: Sandy SILT (60% silt, 35% sand, 5% gravel). fine to medium sand. fine to coarse gravel. brown. moist. slight odor. no sheen. Subrounded grey and black gravel.	ML		100	NA	0.0			Screen
		29.8-34.5' bgs: Sandy SILT (60% silt, 35% sand, 5% gravel). fine to medium sand. fine to coarse gravel. brown. moist. no odor. no sheen. Subrounded grey and black gravel. and 6-inch round grey cobble at 32-feet bgs.			100	NA	0.0			
35		34.5-35.4' bgs: Sandy SILT (65% silt, 25% sand, 10% gravel). fine sand. fine to coarse gravel. yellowish-brown. moist. no odor. no sheen.	ML		100	NA	0.1			
			SM							
		35.4-37.5' bgs: Silty SAND (55% sand, 40% silt, 5% gravel). fine to medium sand. fine to coarse gravel. brown. moist. no odor. no sheen.					0.3	MW-30-37.0	X	
			ML							End cap
		37.5-44.3' bgs: SILT with gravel (80% silt, 5% sand, 15% gravel). fine to coarse gravel. fine sand. dark-grey. moist. no odor. no sheen. Subrounded gravel.			100	NA	0.0			
40										
					100	NA	0.0			
					100	NA	0.0			
45		44.3-54.7' bgs: Well-graded GRAVEL with silt and sand (55% gravel, 25% silt, 20% sand). fine to coarse gravel. fine to coarse sand. light-brown. moist. no odor. no sheen. Black and grey subrounded gravel.	GW		100	NA	0.0	MW-30-45.0		

**Monument Type:** Flush Mount

**Casing Diameter (inches):** 2"

**Screen Slot Size (inches):** 0.010

**Screened Interval (ft bgs):** 28.0-38.0

### Well Construction Information

**Filter Pack:** 2/12 sand

**Surface Seal:** Cement

**Annular Seal:** Bentonite

**Boring Abandonment:** NA

**Ground Surface Elevation (ft):** 304.20'

**Top of Casing Elevation (ft):** 303.66'

**Surveyed Location:** X: NA

Y: NA



## Log of Boring: MW-30

Page 3 of 3

**Client:** Woodworth Capital, Inc.

**Project:** Lakeview Facility

**Location:** Lakewood, WA

**Farallon PN:** 188-002

**Logged By:** Ken Scott

**Date/Time Started:** 9/9/14 @ 1030

**Date/Time Completed:** 9/9/14 @ 1415

**Equipment:** Terra Sonic

**Drilling Company:** Holt Drilling

**Drilling Foreman:** Brian Owen

**Drilling Method:** Sonic

**Sampler Type:** 2.5' Poly Sac

**Drive Hammer (lbs.):** NA

**Depth of Water ATD (ft bgs):** Dry

**Total Boring Depth (ft bgs):** 70.0

**Total Well Depth (ft bgs):** 38.0

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USGS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Boring/Well Construction Details
50						100	NA	0.0		
						100	NA	0.0		
						100	NA	0.0		
55		54.7-64.5' bgs: Silty SAND with gravel (55% sand, 25% silt, 20% gravel). fine to coarse sand. fine to coarse gravel. brown. moist. no odor. no sheen. Black and grey subrounded to subangular gravel.	SM			100	NA	0.1	MW-30-55.0	
						100	NA	0.0		
						100	NA	0.0		
						100	NA	0.0		
60						100	NA	0.0		
						100	NA	0.0		
						100	NA	0.0		
65		64.5-66.5' bgs: SILT with gravel (60% silt, 30% gravel, 10% sand). fine to coarse gravel. fine to coarse sand. brown. wet (driller added water). no odor. no sheen.	ML			100	NA	0.0		
		66.5-70.0' bgs: Well-graded GRAVEL with silt and sand (70% gravel, 20% sand, 10% silt). fine to coarse gravel. fine to coarse sand. brown. wet (driller added water). no odor. no sheen.	GW-GM			100	NA	0.0		
						100	NA	0.0		
70										

**Monument Type:** Flush Mount

**Casing Diameter (inches):** 2"

**Screen Slot Size (inches):** 0.010

**Screened Interval (ft bgs):** 28.0-38.0

### Well Construction Information

**Filter Pack:** 2/12 sand

**Surface Seal:** Cement

**Annular Seal:** Bentonite

**Boring Abandonment:** NA

**Ground Surface Elevation (ft):** 304.20'

**Top of Casing Elevation (ft):** 303.66'

**Surveyed Location:** X: NA

Y: NA

## Log of Boring: MW-31

Page 1 of 2

**Client:** Woodworth Capital. Inc.  
**Project:** Lakeview Facility  
**Location:** Lakewood. WA

**Farallon PN:** 188-002

**Logged By:** Ken Scott

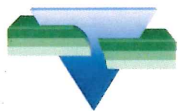
**Date/Time Started:** 9/8/14 @ 1435  
**Date/Time Completed:** 9/8/14 @ 1615  
**Equipment:** Terra Sonic  
**Drilling Company:** Holt Drilling  
**Drilling Foreman:** Brian Owen  
**Drilling Method:** Sonic

**Sampler Type:** 2.5' Poly Sac  
**Drive Hammer (lbs.):** NA  
**Depth of Water ATD (ft bgs):** 48'  
**Total Boring Depth (ft bgs):** 60.0  
**Total Well Depth (ft bgs):** 56.0

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USGS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Boring/Well Construction Details
0		0.0-1.6' bgs: Silty SAND with gravel Fill (65% sand. 20% silt. 15% gravel). fine to coarse sand. fine to coarse gravel. light-brown. moist. no odor. no sheen. Subangular gravel.	SM							Monument Concrete
		1.6-3.8' bgs: Silty SAND with gravel Fill (60% sand. 25% silt. 15% gravel). fine to coarse sand. fine to coarse gravel. brown. moist. no odor. no sheen.	SM		100	NA	0.0	MW-31-3.0	X	
		3.8-8.4' bgs: Silty SAND with gravel Fill (45% sand. 40% silt. 15% gravel). fine to medium sand. fine to coarse gravel. grey. moist. no odor. no sheen.	SM		100	NA	0.0			
5		8.4-12.5' bgs: Silty SAND with gravel (50% sand. 30% silt. 20% gravel). fine to medium sand. fine to coarse gravel. blackish-brown. moist. slight organic odor. no sheen. Wood debris.	SM		100	NA	0.0	MW-31-10.0		Casing
		12.5-16.5' bgs: SILT with gravel (65% silt. 20% gravel. 15% sand). fine to coarse gravel. fine to medium sand. grey. hard. moist. no odor. no sheen.	ML		100	NA	0.0			
		16.5-19.2' bgs: Silty SAND (60% sand. 30% silt. 10% gravel). fine to coarse sand. fine to coarse gravel. brown. moist. no odor. no sheen.	SM		100	NA	0.0			
15		19.2-21.5' bgs: Sandy SILT with gravel (50% silt. 30% sand. 20% gravel). fine sand. fine to coarse gravel. grey. moist. no odor. no sheen.	ML		100	NA	0.0			Bentonite Seal
		21.5-22.5' bgs: Silty SAND (70% sand. 25% silt. 5% gravel). fine to coarse sand. fine to coarse gravel. light-brown. moist. no odor. no sheen.	SM		100	NA	0.0			
		22.5-26.5' bgs: SILT with gravel (65% silt. 20% gravel. 15% sand). fine to coarse gravel. fine sand. grey. moist. no odor. no sheen. Observe subround grey gravel. and 4-inch round cobbles 23 to 25 feet bgs.	ML		100	NA	0.4	MW-31-23.0		
20		26.5-32.1' bgs: SILT (90% silt. 5% sand. 5% gravel). fine to medium sand. fine to coarse gravel. grey. moist. no odor. no sheen.	ML		100	NA	0.1			Bentonite Seal
25					100	NA	0.0			
30										

Well Construction Information				Ground Surface Elevation (ft):	
<b>Monument Type:</b> Flush Mount	<b>Filter Pack:</b> 2/12 sand	<b>Surface Seal:</b> Cement	<b>Annular Seal:</b> Bentonite	<b>Top of Casing Elevation (ft):</b>	325.19'
<b>Casing Diameter (inches):</b> 2"	<b>Boring Abandonment:</b> NA			<b>Surveyed Location:</b> X: NA	324.89'
<b>Screen Slot Size (inches):</b> 0.010				Y: NA	
<b>Screened Interval (ft bgs):</b> 46.0-56.0					





**FARALLON**  
consulting  
975 5th Avenue Northwest  
Issaquah, Washington 98027

## Log of Boring: MW-31

Page 2 of 2

**Client:** Woodworth Capital. Inc.

**Project:** Lakeview Facility

**Location:** Lakewood. WA

**Farallon PN:** 188-002

**Logged By:** Ken Scott

**Date/Time Started:** 9/8/14 @ 1435

**Date/Time Completed:** 9/8/14 @ 1615

**Equipment:** Terra Sonic

**Drilling Company:** Holt Drilling

**Drilling Foreman:** Brian Owen

**Drilling Method:** Sonic

**Sampler Type:** 2.5' Poly Sac

**Drive Hammer (lbs.):** NA

**Depth of Water ATD (ft bgs):** 48'

**Total Boring Depth (ft bgs):** 60.0

**Total Well Depth (ft bgs):** 56.0

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USGS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Boring/Well Construction Details
32.1-34.3'		SILT (95% silt. 5% gravel). fine to coarse gravel. grey. moist. no odor. no sheen.	ML		100	NA	0.0			
34.3-38.5'		Silty SAND with gravel (65% sand. 20% silt. 15% gravel). fine to medium sand. fine to coarse gravel. dark-grey. moist. no odor. no sheen. 4 to 6-inch subrounded grey cobbles 35 to 38 feet bgs.	SM		100	NA	0.0	MW-31-35.0		
38.5-39.2'		Silty SAND (65% sand. 30% silt. 5% gravel). fine to medium sand. fine to coarse gravel. dark-grey. moist. no odor. no sheen.	SM		100	NA	0.0			
39.2-40.5'		Rock (95% rock. 5% silt). grey. moist. no odor. no sheen. 4 to 6-inch subrounded grey cobbles.	RK		100	NA	0.0			
40.5-44.5'		Silty SAND with gravel (60% sand. 25% silt. 15% gravel). fine to coarse sand. fine to coarse gravel. tan. moist. no odor. no sheen.	SM		100	NA	0.0	MW-31-45.0	X	
44.5-45.5'		Silty SAND with gravel (60% sand. 25% silt. 15% gravel). fine to medium sand. fine to coarse gravel. black. moist. odor. no sheen. Yellow-brick debris.	ML		100	NA	0.0			Sand
45.5-47.5'		SILT with gravel (80% silt. 15% gravel. 5% sand). fine to coarse gravel. fine sand. reddish-tan. moist to slightly wet. no odor. no sheen.	ML		100	NA	0.0	MW-31-48.0		Screen
47.5-50.0'		SILT (95% silt. 5% gravel). white. dry to moist. no odor. no sheen. 4 to 6 inch subrounded to rounded cobbles.	SM		100	NA	0.0			Stabilized Water Level
50.0-56.5'		Silty SAND (70% sand. 25% silt. 5% gravel). fine to coarse sand. fine to coarse gravel. brown. wet. no odor. no sheen.			100	NA	0.0	MW-31-55.0	X	Initial Water Level
56.5-60.0'		SILT (100% silt). grey. wet. no odor. no sheen.	ML		100	NA	0.1			End cap
					100	NA	0.0			Bentonite Seal

**Monument Type:** Flush Mount

**Casing Diameter (inches):** 2"

**Screen Slot Size (inches):** 0.010

**Screened Interval (ft bgs):** 46.0-56.0

### Well Construction Information

**Filter Pack:** 2/12 sand

**Surface Seal:** Cement

**Annular Seal:** Bentonite

**Boring Abandonment:** NA

**Ground Surface Elevation (ft):** 325.19'

**Top of Casing Elevation (ft):** 324.89'

**Surveyed Location:** X: NA

Y: NA

## Log of Boring: MW-32

Page 1 of 2

**Client:** Woodworth Capital. Inc.

**Project:** Lakeview Facility

**Location:** Lakewood. WA

**Farallon PN:** 188-002

**Logged By:** Ken Scott

**Date/Time Started:** 9/8/14 @ 0940

**Date/Time Completed:** 9/8/14 @ 1125

**Equipment:** Terra Sonic

**Drilling Company:** Holt Drilling

**Drilling Foreman:** Brian Owen

**Drilling Method:** Sonic

**Sampler Type:** 2.5' Poly Sac

**Drive Hammer (lbs.):** NA

**Depth of Water ATD (ft bgs):** 38'

**Total Boring Depth (ft bgs):** 50.0

**Total Well Depth (ft bgs):** 45.0

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USGS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Boring/Well Construction Details
0		0.0-1.2' bgs: Silty GRAVEL with sand Fill (60% gravel. 20% silt. 20% sand). fine to coarse gravel. fine to medium sand. brown. moist. no odor. no sheen. Subangular gravel.	GM							Monument
			SM		100	NA	0.0			Concrete
		1.2-2.3' bgs: Silty SAND with gravel Fill (65% sand. 20% gravel. 15% silt). fine to coarse sand. fine to coarse gravel. dark-brown. moist. no odor. no sheen. Subangular gravel.	SM		100	NA	0.0	MW-32-3.0	X	
			SM							
5		2.3-3.1' bgs: Silty SAND (75% sand. 20% silt. 5% gravel). fine to medium sand. fine to coarse gravel. tan. moist. no odor. no sheen. Subrounded gravel.								
		3.1-6.5' bgs: Silty SAND with gravel Fill (65% sand. 20% silt. 15% gravel). fine to coarse sand. fine to coarse gravel. brown. moist. no odor. no sheen. Subrounded to subangular black and grey gravel.	ML		100	NA	0.0			
			ML		100	NA	0.0			Bentonite Seal
10		6.5-7.5' bgs: SILT (100% silt). brown. moist. no odor. no sheen.								
		7.5-11.0' bgs: SILT (100% silt). grey. moist. no odor. no sheen. Medium plasticity.	SM		100	NA	0.0			
		11.0-12.8' bgs: Silty SAND with gravel (65% sand. 20% silt. 15% gravel). fine to coarse sand. fine to coarse gravel. dark-brown. moist. no odor. no sheen.	ML		100	NA	0.0	MW-32-13.5		
15		12.8-13.2' bgs: SILT (100% silt). tan. moist. no odor. no sheen.	SP-SM							
		13.2-13.6' bgs: Poorly graded SAND with silt (90% sand. 10% silt). fine to medium sand. tan. moist. no odor. no sheen.	ML		100	NA	0.0			Casing
		13.6-14.6' bgs: Sandy SILT (60% silt. 40% sand). fine sand. greenish-grey. moist. no odor. no sheen.	ML		100	NA	0.0			
20		14.6-21.0' bgs: SILT (100% silt). tan. very moist. no odor. no sheen.								
		21.0-33.0' bgs: Well-graded GRAVEL (90% gravel. 5% silt. 5% sand). fine to coarse gravel. fine to coarse sand. brown. moist. no odor. no sheen. Subrounded gravel. and 4 to 6-inch subrounded grey cobbles.	GW		100	NA	0.0	MW-32-23.0		
25					100	NA	0.0			
					100	NA	0.0			

**Monument Type:** Flush Mount

**Casing Diameter (inches):** 2"

**Screen Slot Size (inches):** 0.010

**Screened Interval (ft bgs):** 35.0-45.0'

### Well Construction Information

**Filter Pack:** 2/12 sand

**Surface Seal:** Cement

**Annular Seal:** Bentonite

**Boring Abandonment:** NA

**Ground Surface Elevation (ft):** 313.14'

**Top of Casing Elevation (ft):** 312.99'

**Surveyed Location:** X: NA

Y: NA



## Log of Boring: MW-32

Page 2 of 2

**Client:** Woodworth Capital. Inc.  
**Project:** Lakeview Facility  
**Location:** Lakewood. WA

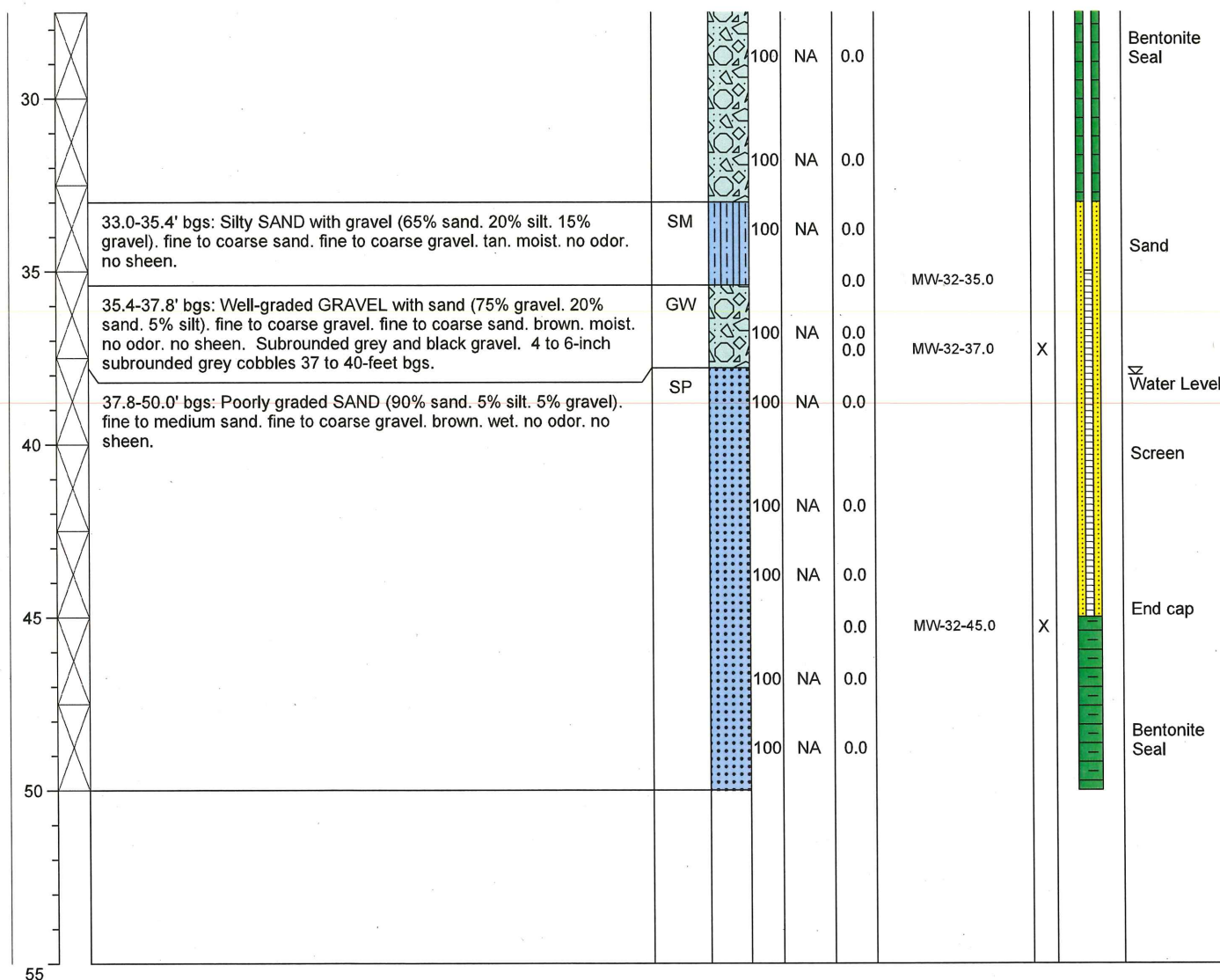
**Farallon PN:** 188-002

**Logged By:** Ken Scott

**Date/Time Started:** 9/8/14 @ 0940  
**Date/Time Completed:** 9/8/14 @ 1125  
**Equipment:** Terra Sonic  
**Drilling Company:** Holt Drilling  
**Drilling Foreman:** Brian Owen  
**Drilling Method:** Sonic

**Sampler Type:** 2.5' Poly Sac  
**Drive Hammer (lbs.):** NA  
**Depth of Water ATD (ft bgs):** 38'  
**Total Boring Depth (ft bgs):** 50.0  
**Total Well Depth (ft bgs):** 45.0

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USGS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Boring/Well Construction Details
-------------------	-----------------	------------------------	------	--------------	------------	-------------------	-----------	-----------	-----------------	----------------------------------



**Monument Type:** Flush Mount  
**Casing Diameter (inches):** 2"  
**Screen Slot Size (inches):** 0.010  
**Screened Interval (ft bgs):** 35.0-45.0'

### Well Construction Information

**Filter Pack:** 2/12 sand  
**Surface Seal:** Cement  
**Annular Seal:** Bentonite  
**Boring Abandonment:** NA

**Ground Surface Elevation (ft):** 313.14'  
**Top of Casing Elevation (ft):** 312.99'  
**Surveyed Location:** X: NA  
Y: NA

## Log of Boring: MW12 / SS9

Page 1 of 1

**Client:** Woodworth & Company, Inc.  
**Project:** Woodworth Lakeview Facility  
**Location:** Lakewood, WA

**Farallon PN:** 188-001

**Logged By:** John Schmitt

**Date/Time Started:** 10/02/08 0730  
**Date/Time Completed:** 10/02/08 1225  
**Equipment:** Sonic LAR  
**Drilling Company:** Boart-Longyear  
**Drilling Foreman:** Jeremy Thompson  
**Drilling Method:** Sonic

**Sampler Type:** Sonic core bag  
**Drive Hammer (lbs.):** NA  
**Depth of Water ATD (ft bgs):** 42  
**Total Boring Depth (ft bgs):** 50  
**Total Well Depth (ft bgs):** 50

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USGS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm*)	Sample ID	Sample Analyzed	Boring/Well Construction Details
0		Poorly graded sand with silt and gravel (sand 50%, gravel 40%, silt 10%), fine to medium sand, fine to coarse gravel, dark brown, moist, no odor.	SP-SM							Concrete
5		Silty sand with gravel (sand 60%, gravel 20%, silt 20%), fine to medium sand, fine to coarse gravel, dark brown, moist, no odor.	SM							2" diam PVC casing
		Poorly graded gravel with silt and sand (gravel 60%, sand 30%, silt 10%), fine to coarse gravel, fine to coarse sand, brown, moist, no odor.	GP-GM					SS9-10-100208 @ 0825		Bentonite seal
10		Poorly graded gravel with silt and sand (gravel 60%, sand 30%, silt 10%), fine to coarse gravel, fine to coarse sand, grey, moist, no odor.	GP-GM							
15		Poorly graded gravel with silt and sand (gravel 60%, sand 30%, silt 10%), fine to coarse gravel, fine to coarse sand, brown, moist, no odor.	GP-GM							
20		Poorly graded sand with gravel (sand 70%, gravel 30%), fine to medium sand, fine to coarse gravel, grey-brown, moist, no odor, pieces of brick and white chalky substance present.	SP					SS9-19-100208 @ 0850		
25										
30								SS9-28-100208 @ 0915		
35										
40		Poorly graded gravel with sand (gravel 70%, sand 30%, silt 5%), fine to coarse gravel, moist, no odor.	GP					SS9-40-100208 @ 0955		
45		Poorly graded gravel with sand (gravel 70%, sand 30%, silt 5%), fine to coarse gravel, wet, no odor.	GP							10/20 sand pack
50		Silty gravel (gravel 70%, silt 20%, sand 10%), fine to coarse gravel, wet, no odor.	GM							0.010 slot PVC well screen

**Monument Type:** Flush  
**Casing Diameter (inches):** 2  
**Screen Slot Size (inches):** 0.010  
**Screened Interval (ft bgs):** 40-50

### Well Construction Information

**Filter Pack:** 10/20 sand  
**Surface Seal:** Concrete  
**Annular Seal:** Bentonite

**Ground Surface Elevation (ft):** 313.88  
**Top of Casing Elevation (ft):** 313.32  
**Boring Abandonment:** NA  
**Surveyed Location:** X: Y:



**ATTACHMENT B**  
**LABORATORY ANALYTICAL RESULTS**

**ARSENIC AND LEAD CHARACTERIZATION**

Lakeview Facility  
2800 104<sup>th</sup> Street Court South  
Lakewood, Washington

Farallon PN: 188-002





14648 NE 95<sup>th</sup> Street, Redmond, WA 98052 • (425) 883-3881

September 19, 2014

Brani Jurista  
Farallon Consulting, LLC  
975 5<sup>th</sup> Avenue NW  
Issaquah, WA 98027

Re: Analytical Data for Project 188-002  
Laboratory Reference No. 1409-114

Dear Brani:

Enclosed are the analytical results and associated quality control data for samples submitted on September 11, 2014.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DB", followed by a long horizontal flourish.

David Baumeister  
Project Manager

Enclosures



Date of Report: September 19, 2014  
Samples Submitted: September 11, 2014  
Laboratory Reference: 1409-114  
Project: 188-002

#### **Case Narrative**

Samples were collected on September 8 and 9, 2014 and received by the laboratory on September 11, 2014. They were maintained at the laboratory at a temperature of 2°C to 6°C.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Date of Report: September 19, 2014  
 Samples Submitted: September 11, 2014  
 Laboratory Reference: 1409-114  
 Project: 188-002

**TOTAL METALS  
 EPA 6010C**

Matrix: Soil  
 Units: mg/kg (ppm)

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>EPA Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
<hr/>						
Lab ID:	09-114-01					
Client ID:	MW-32-3.0					
<hr/>						
Arsenic	ND	12	6010C	9-15-14	9-15-14	
Lead	9.4	6.1	6010C	9-15-14	9-15-14	
<hr/>						
<hr/>						
Lab ID:	09-114-05					
Client ID:	MW-32-37.0					
<hr/>						
Arsenic	ND	11	6010C	9-15-14	9-15-14	
Lead	ND	5.3	6010C	9-15-14	9-15-14	
<hr/>						
<hr/>						
Lab ID:	09-114-06					
Client ID:	MW-32-45.0					
<hr/>						
Arsenic	ND	12	6010C	9-15-14	9-15-14	
Lead	ND	6.2	6010C	9-15-14	9-15-14	
<hr/>						
<hr/>						
Lab ID:	09-114-07					
Client ID:	MW-31-3.0					
<hr/>						
Arsenic	ND	11	6010C	9-15-14	9-15-14	
Lead	ND	5.5	6010C	9-15-14	9-15-14	
<hr/>						
<hr/>						
Lab ID:	09-114-11					
Client ID:	MW-31-45.0					
<hr/>						
Arsenic	ND	11	6010C	9-15-14	9-15-14	
Lead	49	5.7	6010C	9-15-14	9-15-14	
<hr/>						
<hr/>						
Lab ID:	09-114-13					
Client ID:	MW-31-55.0					
<hr/>						
Arsenic	ND	12	6010C	9-15-14	9-15-14	
Lead	11	6.1	6010C	9-15-14	9-15-14	
<hr/>						

OnSite Environmental, Inc. 14648 NE 95<sup>th</sup> Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody,  
 and is intended only for the use of the individual or company to whom it is addressed.



Date of Report: September 19, 2014  
Samples Submitted: September 11, 2014  
Laboratory Reference: 1409-114  
Project: 188-002

**TOTAL METALS**  
**EPA 6010C**

Matrix: Soil  
Units: mg/kg (ppm)

				Date	Date	
Analyte	Result	PQL	EPA Method	Prepared	Analyzed	Flags
Lab ID:	09-114-14					
Client ID:	MW-30-3.0					
Arsenic	ND	15	6010C	9-15-14	9-15-14	
Lead	20	7.3	6010C	9-15-14	9-15-14	
Lab ID:	09-114-17					
Client ID:	MW-30-29.0					
Arsenic	ND	11	6010C	9-15-14	9-15-14	
Lead	31	5.4	6010C	9-15-14	9-15-14	
Lab ID:	09-114-18					
Client ID:	MW-30-37.0					
Arsenic	ND	12	6010C	9-15-14	9-15-14	
Lead	ND	5.8	6010C	9-15-14	9-15-14	

Date of Report: September 19, 2014  
Samples Submitted: September 11, 2014  
Laboratory Reference: 1409-114  
Project: 188-002

**TOTAL METALS  
EPA 6010C  
METHOD BLANK QUALITY CONTROL**

Date Extracted: 9-15-14  
Date Analyzed: 9-15-14  
  
Matrix: Soil  
Units: mg/kg (ppm)  
  
Lab ID: MB0915SM1

Analyte	Method	Result	PQL
Arsenic	6010C	ND	10
Lead	6010C	ND	5.0



Date of Report: September 19, 2014  
Samples Submitted: September 11, 2014  
Laboratory Reference: 1409-114  
Project: 188-002

**TOTAL METALS  
EPA 6010C  
DUPLICATE QUALITY CONTROL**

Date Extracted: 9-15-14

Date Analyzed: 9-15-14

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: 09-114-05

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	ND	ND	NA	10	
Lead	ND	ND	NA	5.0	

Date of Report: September 19, 2014  
Samples Submitted: September 11, 2014  
Laboratory Reference: 1409-114  
Project: 188-002

**TOTAL METALS  
EPA 6010C  
MS/MSD QUALITY CONTROL**

Date Extracted: 9-15-14

Date Analyzed: 9-15-14

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: 09-114-05

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	95.6	96	96.4	96	1	
Lead	250	240	96	239	96	0	



Date of Report: September 19, 2014  
Samples Submitted: September 11, 2014  
Laboratory Reference: 1409-114  
Project: 188-002

### % MOISTURE

Date Analyzed: 9-12-14

Client ID	Lab ID	% Moisture
MW-32-3.0	09-114-01	19
MW-32-37.0	09-114-05	5
MW-32-45.0	09-114-06	19
MW-31-3.0	09-114-07	9
MW-31-45.0	09-114-11	12
MW-31-55.0	09-114-13	18
MW-30-3.0	09-114-14	32
MW-30-29.0	09-114-17	8
MW-30-37.0	09-114-18	14



### Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B - The analyte indicated was also found in the blank sample.
- C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E - The value reported exceeds the quantitation range and is an estimate.
- F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.
- N - Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 - Hydrocarbons in diesel range are impacting lube oil range results.
- O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P - The RPD of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical \_\_\_\_\_.
- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 - The practical quantitation limit is elevated due to interferences present in the sample.
- V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X - Sample extract treated with a mercury cleanup procedure.
- X1- Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.
- Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
- Z -
- ND - Not Detected at PQL
- PQL - Practical Quantitation Limit
- RPD - Relative Percent Difference





# OnSite Environmental Inc.

Analytical Laboratory Testing Services  
14648 NE 95th Street • Redmond, WA 98052  
Phone: (425) 883-3881 • www.onsite-env.com

## Chain of Custody

Page 1 of 2

Company: FARALLON  
Project Number: 188-002  
Project Name: LAKEVIEW FACILITY  
Project Manager: BRANI JURISTA  
Sampled by: Ken Smith

Turnaround Request (in working days)						Laboratory Number: <u>09-114</u>																			
(Check One)						NWTPH-HClD	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260B	Halogenated Volatiles 8260B	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8062	Organochlorine Pesticides 8081A	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664	Arsenic & Lead	% Moisture		
<input type="checkbox"/> Same Day <input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Days <input type="checkbox"/> 3 Days <input checked="" type="checkbox"/> Standard (7 Days) (TPH analysis 5 Days) <input type="checkbox"/> _____ (other)																									
Lab ID	Sample Identification					Date Sampled	Time Sampled	Matrix	No. of Cont.																
1	MW-32-3.0					9/8/14	0950	S	1															X	
2	MW-32-13.5						1000	S	1																
3	MW-32-23.0						1020	S	1																
4	MW-32-35.0						1055	S	1																
5	MW-32-37.0						1105	S	1													X		X	
6	MW-32-45.0						1115	S	1													X		X	
7	MW-31-3.0						1435	S	1													X		X	
8	MW-31-10.0						1440	S	1																
9	MW-31-23.0						1505	S	1																
10	MW-31-35.0					✓	1520	S	1																

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished	<u>Ken Smith</u>	<u>FARALLON</u>	<u>9/10/14</u>	<u>1330</u>	
Received	<u>[Signature]</u>	<u>OnSite Env</u>	<u>9/11/14</u>	<u>1200</u>	
Relinquished					
Received					
Relinquished					
Received					
Reviewed/Date		Reviewed/Date		Chromatograms with final report <input type="checkbox"/>	

# Chain of Custody

Company: FARALLON  
Project Number: 188-002  
Project Name: LAKEVIEW FACILITY  
Project Manager: BRANI JURISTA  
Sampled by: Ken Smith

Turnaround Request (in working days)						Laboratory Number: <b>09-114</b>																	
(Check One)																							
<input type="checkbox"/> Same Day <input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Days <input type="checkbox"/> 3 Days <input checked="" type="checkbox"/> Standard (7 Days) (TPH analysis 5 Days) <input type="checkbox"/> _____ (other)						NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260B	Halogenated Volatiles 8260B	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082	Organochlorine Pesticides 8081A	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total PCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664	Arsenic + LEAD	% Moisture
Lab ID	Sample Identification		Date Sampled	Time Sampled	Matrix	No. of Cont.																	
11	MW-31-45.0		9/8/14	1540	S	1															X	X	
12	MW-31-48.0			1555	S	1															X		
13	MW-31-55.0		✓	1605	S	1															X	X	
14	MW-30-3.0		9/9/14	1045	S	1															X	X	
15	MW-30-13.0			1055	S	1															X	NO	
16	MW-30-23.0			1120	S	1															X		
17	MW-30-29.0			1130	S	1															X	X	
18	MW-30-37.0			1155	S	1															X	X	
19	MW-30-45.0			1215	S	1																	
20	MW-30-55.0		✓	1255	S	1																	

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished	<u>Ken Smith</u>	<u>FARALLON</u>	<u>9/10/14</u>	<u>1330</u>	
Received	<u>[Signature]</u>	<u>OF 2nd EN</u>	<u>9/11/14</u>	<u>1200</u>	
Relinquished					
Received					
Relinquished					
Received					
Reviewed/Date		Reviewed/Date			Chromatograms with final report <input type="checkbox"/>





14648 NE 95<sup>th</sup> Street, Redmond, WA 98052 • (425) 883-3881

September 24, 2014

Brani Jurista  
Farallon Consulting, LLC  
975 5<sup>th</sup> Avenue NW  
Issaquah, WA 98027

Re: Analytical Data for Project 188-002  
Laboratory Reference No. 1409-135

Dear Brani:

Enclosed are the analytical results and associated quality control data for samples submitted on September 12, 2014.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DB", with a long horizontal line extending to the right.

David Baumeister  
Project Manager

Enclosures

Date of Report: September 24, 2014  
Samples Submitted: September 12, 2014  
Laboratory Reference: 1409-135  
Project: 188-002

#### **Case Narrative**

Samples were collected on September 12, 2014 and received by the laboratory on September 12, 2014. They were maintained at the laboratory at a temperature of 2°C to 6°C.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.



Date of Report: September 24, 2014  
Samples Submitted: September 12, 2014  
Laboratory Reference: 1409-135  
Project: 188-002

**TOTAL METALS**  
**EPA 200.8**

Matrix: Water  
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date	Date	Flags
				Prepared	Analyzed	
Lab ID:	09-135-01					
Client ID:	MW-32-091214					
Arsenic	9.1	3.3	200.8	9-22-14	9-22-14	
Lead	7.9	1.1	200.8	9-22-14	9-22-14	
Lab ID:	09-135-02					
Client ID:	MW-31-091214					
Arsenic	39	3.3	200.8	9-22-14	9-22-14	
Lead	350	1.1	200.8	9-22-14	9-22-14	
Lab ID:	09-135-03					
Client ID:	MW-12-091214					
Arsenic	16	3.3	200.8	9-22-14	9-22-14	
Lead	59	1.1	200.8	9-22-14	9-22-14	

Date of Report: September 24, 2014  
Samples Submitted: September 12, 2014  
Laboratory Reference: 1409-135  
Project: 188-002

**TOTAL METALS  
EPA 200.8  
METHOD BLANK QUALITY CONTROL**

Date Extracted: 9-22-14  
Date Analyzed: 9-22-14  
  
Matrix: Water  
Units: ug/L (ppb)  
  
Lab ID: MB0922WM1

Analyte	Method	Result	PQL
Arsenic	200.8	ND	3.3
Lead	200.8	ND	1.1



Date of Report: September 24, 2014  
Samples Submitted: September 12, 2014  
Laboratory Reference: 1409-135  
Project: 188-002

**TOTAL METALS  
EPA 200.8  
DUPLICATE QUALITY CONTROL**

Date Extracted: 9-22-14  
Date Analyzed: 9-22-14  
  
Matrix: Water  
Units: ug/L (ppb)  
  
Lab ID: 09-180-01

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	ND	ND	NA	3.3	
Lead	3.08	3.69	18	1.1	

Date of Report: September 24, 2014  
Samples Submitted: September 12, 2014  
Laboratory Reference: 1409-135  
Project: 188-002

**TOTAL METALS  
EPA 200.8  
MS/MSD QUALITY CONTROL**

Date Extracted: 9-22-14  
Date Analyzed: 9-22-14

Matrix: Water  
Units: ug/L (ppb)

Lab ID: 09-180-01

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	111	105	95	111	100	6	
Lead	111	104	91	113	99	8	



Date of Report: September 24, 2014  
Samples Submitted: September 12, 2014  
Laboratory Reference: 1409-135  
Project: 188-002

**DISSOLVED METALS**  
**EPA 200.8**

Matrix: Water  
Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	EPA Method	Prepared	Analyzed	Flags
Lab ID:	09-135-01					
Client ID:	MW-32-091214					
Arsenic	ND	3.0	200.8		9-22-14	
Lead	ND	1.0	200.8		9-22-14	
Lab ID:	09-135-02					
Client ID:	MW-31-091214					
Arsenic	20	3.0	200.8		9-22-14	
Lead	9.6	1.0	200.8		9-22-14	
Lab ID:	09-135-03					
Client ID:	MW-12-091214					
Arsenic	7.1	3.0	200.8		9-22-14	
Lead	12	1.0	200.8		9-22-14	

Date of Report: September 24, 2014  
Samples Submitted: September 12, 2014  
Laboratory Reference: 1409-135  
Project: 188-002

**DISSOLVED METALS  
EPA 200.8  
METHOD BLANK QUALITY CONTROL**

Date Analyzed: 9-22-14

Matrix: Water

Units: ug/L (ppb)

Lab ID: MB0922D1

Analyte	Method	Result	PQL
Arsenic	200.8	ND	3.0
Lead	200.8	ND	1.0



Date of Report: September 24, 2014  
Samples Submitted: September 12, 2014  
Laboratory Reference: 1409-135  
Project: 188-002

**DISSOLVED METALS  
EPA 200.8  
DUPLICATE QUALITY CONTROL**

Date Analyzed: 9-22-14  
  
Matrix: Water  
Units: ug/L (ppb)  
  
Lab ID: 09-149-01

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	ND	ND	NA	3.0	
Lead	ND	ND	NA	1.0	

Date of Report: September 24, 2014  
Samples Submitted: September 12, 2014  
Laboratory Reference: 1409-135  
Project: 188-002

**DISSOLVED METALS  
EPA 200.8  
MS/MSD QUALITY CONTROL**

Date Analyzed: 9-22-14

Matrix: Water

Units: ug/L (ppb)

Lab ID: 09-149-01

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	200	<b>216</b>	108	<b>216</b>	108	0	
Lead	200	<b>198</b>	99	<b>204</b>	102	3	





### Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B - The analyte indicated was also found in the blank sample.
- C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E - The value reported exceeds the quantitation range and is an estimate.
- F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N - Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 - Hydrocarbons in diesel range are impacting lube oil range results.
- O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P - The RPD of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical \_\_\_\_\_.
- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 - The practical quantitation limit is elevated due to interferences present in the sample.
- V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X - Sample extract treated with a mercury cleanup procedure.
- X1 - Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.
- Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
- Z -
- ND - Not Detected at PQL
- PQL - Practical Quantitation Limit
- RPD - Relative Percent Difference



Analytical Laboratory Testing Services  
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Page 1 of 1

09-135

Company:	FARALLON
Project Number:	188-002
Project Name:	LAKEVIEW FACILITY
Project Manager:	BRAVI JURISTA
Sampled by:	Ken Smith

[illegible]



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November 4, 2014

Brani Jurista  
Farallon Consulting, LLC  
975 5<sup>th</sup> Avenue NW  
Issaquah, WA 98027

Re: Analytical Data for Project 188-002  
Laboratory Reference No. 1410-372

Dear Brani:

Enclosed are the analytical results and associated quality control data for samples submitted on October 31, 2014.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read 'DB', with a long horizontal stroke extending to the right.

David Baumeister  
Project Manager

Enclosures



Date of Report: November 4, 2014  
Samples Submitted: October 31, 2014  
Laboratory Reference: 1410-372  
Project: 188-002

### Case Narrative

Samples were collected on October 30, 2014 and received by the laboratory on October 31, 2014. They were maintained at the laboratory at a temperature of 2°C to 6°C.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Date of Report: November 4, 2014  
Samples Submitted: October 31, 2014  
Laboratory Reference: 1410-372  
Project: 188-002

**DISSOLVED METALS**  
**EPA 200.8**

Matrix: Water  
Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	EPA Method	Prepared	Analyzed	Flags
Lab ID:	10-372-01					
Client ID:	MW-31-103014					
Arsenic	19	3.0	200.8	10-31-14	10-31-14	
Lead	5.5	1.0	200.8	10-31-14	10-31-14	

Date of Report: November 4, 2014  
Samples Submitted: October 31, 2014  
Laboratory Reference: 1410-372  
Project: 188-002

**DISSOLVED METALS**  
**EPA 200.8**  
**METHOD BLANK QUALITY CONTROL**

Date Filtered: 10-31-14

Date Analyzed: 10-31-14

Matrix: Water

Units: ug/L (ppb)

Lab ID: MB1031F1

Analyte	Method	Result	PQL
Arsenic	200.8	ND	3.0
Lead	200.8	ND	1.0



Date of Report: November 4, 2014  
Samples Submitted: October 31, 2014  
Laboratory Reference: 1410-372  
Project: 188-002

**DISSOLVED METALS  
EPA 200.8  
DUPLICATE QUALITY CONTROL**

Date Filtered:  
Date Analyzed: 10-31-14

Matrix: Water  
Units: ug/L (ppb)

Lab ID: 10-337-04

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	ND	ND	NA	3.0	
Lead	ND	ND	NA	1.0	

Date of Report: November 4, 2014  
Samples Submitted: October 31, 2014  
Laboratory Reference: 1410-372  
Project: 188-002

**DISSOLVED METALS  
EPA 200.8  
MS/MSD QUALITY CONTROL**

Date Filtered:  
Date Analyzed: 10-31-14

Matrix: Water  
Units: ug/L (ppb)

Lab ID: 10-337-04

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	200	<b>203</b>	101	<b>212</b>	106	4	
Lead	200	<b>185</b>	93	<b>194</b>	97	5	



### Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B - The analyte indicated was also found in the blank sample.
- C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E - The value reported exceeds the quantitation range and is an estimate.
- F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N - Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 - Hydrocarbons in diesel range are impacting lube oil range results.
- O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P - The RPD of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical \_\_\_\_\_.
- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 - The practical quantitation limit is elevated due to interferences present in the sample.
- V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X - Sample extract treated with a mercury cleanup procedure.
- X1- Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.
- Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
- Z -
- ND - Not Detected at PQL
- PQL - Practical Quantitation Limit
- RPD - Relative Percent Difference





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## Page 1 of 1

10-372

Company: FARALLON		(Check One)		Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8062A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	Dissolved Arsenic + LEAD	% Moisture	
Project Number: 188-002		<input type="checkbox"/> Same Day <input type="checkbox"/> 1 Day																					
Project Name: LAKEVIEW FACILITY		<input type="checkbox"/> 2 Days <input type="checkbox"/> 3 Days																					
Project Manager: BRANI JURISTA		<input checked="" type="checkbox"/> Standard (7 Days) (TPH analysis 5 Days)																					
Sampled by: Ken Smith		<input type="checkbox"/> (other)																					
Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix																			
1	MW-31-103014	10/30/14	1140	W 2																			
<div>KS</div>																							
Signature		Company		Date	Time	Comments/Special Instructions																	
Relinquished		FARALLON		10/30/14	1430	The 500 ML Pdy @ nitric WAS field filtered.																	
Received		ORE		10/31/14	1300																		
Relinquished																							
Received																							
Relinquished																							
Received																							
Reviewed/Date		Reviewed/Date		Chromatograms with final report <input type="checkbox"/>																			