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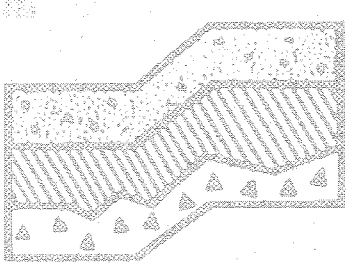
Groundwater Summary

5221 Ballard Avenue NW
Seattle, Washington
VCP NW 2496

Project No. T-6552



Terra Associates, Inc.

Prepared for:

HALCO Properties, LLC
c/o Mr. Livingston Wernecke
Seattle, Washington

October 21, 2015

TERRA ASSOCIATES, Inc.

Consultants in Geotechnical Engineering, Geology
and
Environmental Earth Sciences

October 21, 2015
Project No. T-6552

HALCO Properties, LLC
Mr. Brett Cowman
c/o Mr. Livingston Wernecke
Betts, Patterson & Mines, P.S.
701 Pike Street, Suite 1400
Seattle, Washington 98101-3927

Subject: Groundwater Summary
5221 Ballard Avenue NW
Seattle, Washington
VCP NW 2496

Dear Mr. Cowman:

This report summarizes past and current groundwater conditions on and immediately adjacent to 5221 Ballard Avenue NW.

The results of the groundwater monitoring that has been done to date show that the groundwater beneath the 5221 Ballard Avenue NW site meets the current cleanup levels. The data further indicates that no migration of contamination from the former UST cluster at 5232 Shilshole Avenue NW has impacted the 5221 Ballard Avenue site.

The attached report discusses our site observations, the results of analytical testing, and our conclusions in more detail.

We trust the information presented is sufficient for your current needs. If you have any questions or require additional information, please call.

Respectfully submitted,
TERRA ASSOCIATES, INC.

Charles R. Lie, L.H.G.
Project Manager

cc: Mr. Livingston Wernecke, Betts, Patterson & Mines, P.S.
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1.0 EXECUTIVE SUMMARY

The following report presents the cumulative sampling of groundwater wells at the subject site. The 5221 Ballard Avenue NW (5221) property is part of a larger complex that was formerly known as C&C Paints. The site covered by VCP NW 2496 consists of the extent of contamination attributed to the former UST cluster in the parking lot at 5221 Ballard Avenue NW, a portion of the adjacent parcel immediately west of 5221 with an address of 5227 Ballard Avenue NW, and a portion of the parcel immediately south of 5221 known as 5246 Shilshole Avenue NW. This report includes groundwater data for the overall 5221 site as well as for an adjacent site not covered by VCP NW 2496, 5232 Shilshole Avenue NW (5232).

As discussed in this report, the groundwater beneath the 5221 property meets current cleanup levels. Additional groundwater assessments are needed at the 5232 property that will be subject to a separate remedial action under a separate VCP file.

The results of our study are discussed in more detail later in this report.

2.0 SCOPE OF WORK

Our scope of work for this supplemental report consisted of the following:

- Measuring static water level in the existing wellfield on and adjacent to 5221.
- Sampling groundwater from the existing wellfield and the new wells built for this study.
- Subcontracting analytical testing of selected soil and groundwater samples.
- Appropriate analysis of the data.
- Preparation of this report.

3.0 SITE CONDITIONS

3.1 Surface

The site is located at 5221 Ballard Avenue NW in Seattle, Washington. The site location is shown on Figures 1 and 2. The site layout is shown on Figure 3.

The monitoring well locations and former UST locations on the 5221 and 5232 parcels are shown on Figure 3.

The elevation of the parking lot where the UST cluster at 5221 is approximately Elev. 37. The elevation of the 5232 parcel is approximately Elev. 28. The grade change is supported by basement walls in the buildings on the two sites.

3.2 Subsurface

We observed explorations at the 5221 site and 5232 property consisting of Direct Push Technology probes and borings. We also referred to prior work done by others. Locations of the explorations are shown on Figure 3.

In general, native subsurface conditions beneath the site consist of silty sands that are dense till soils. Overlying the dense till soil are fills. These fills represent soils that were reworked incidental to the construction of the existing building and adjacent building as well as UST backfill soils. All soils encountered in the borings are granular soils.

A generalized geologic profile is presented on Figure 4 to illustrate the subsurface conditions on and adjacent to the 5221 site.

Logs of the individual explorations conducted for this study are presented in Appendix A of this report.

3.3 Groundwater

Measurements show that groundwater gradients were towards the south-southwest prior to 2012. The groundwater levels measured in June of 2011 and in 2015 are schematically shown on the generalized geologic section Figure 4. Figure 5 shows the groundwater prior to 2011. Figures 6 and 7 show groundwater conditions flowing the dewatering associated with the new building north of 5221. Table 1 attached to this report summarizes the static water levels measured during 2011 through 2015. The groundwater flow gradient was consistent with prior data until the construction of the new building north of 5221 Ballard Avenue NW. Construction of the new building included a deep parking garage that is dewatered on a continuous basis. As seen in the data, the groundwater levels on-site have decreased. The change in static water levels is illustrated on Table 2 and Chart 1 on Figure 7 for MW-6 at 5232. Monitoring Well MW-6 is the only original well that still has groundwater within the screen zone. As can be seen, the static water elevation trended from Elev. 21 to 23 from 1995 through 2011. Subsequent to 2011, the static water level has trended from Elev. 19.5 to 18. The variation is more dramatic for the wells at 5221 where the initial static water elevation was at about Elev. 25 in the spring through fall of 2011. The decline in static water levels started in November of 2011 and resulted in the screened segments of MW-101 through 103 being left dry. MW-205, a new well was established at the north end of the UST cluster at 5221 in 2014. The static water elevation in that well has been about Elev. 13.

The mapped gradient subsequent to the end of 2011 has been towards the north. MW-6 is an anomaly in the groundwater gradient and is not shown in the gradient mapping on Figures 5 and 6. There is no as built for MW-6. Based on our current interpretation, MW-6 has influences from seepage that follows a storm/sewer easement that extends along the western margin of 5232 and/or from a stormwater catch basin that is located in the parking lot of 5232 immediately west of the monitoring well.

4.0 FIELD SAMPLING

Standard sampling procedures were used in the field. The procedures are discussed in Appendix B. Appendix B contains a summary of past and current groundwater parameter measurements.

5.0 LABORATORY TESTING

5.1 General

The constituents of concern (COCs) are paint thinners, petroleum hydrocarbons including Diesel No. 2 (Heating oil), and volatile organic compounds. The COCs are based on the past use of the land, the contents of former USTs on-site, and previous sampling by others.

Groundwater samples were analyzed for the following analytes:

- Total petroleum hydrocarbons (TPH) in the gasoline through heavy oil range.
- Volatile organic compounds (BETX) and halogenated compounds.
- Lead.
- Ethylene Glycol.

The test results are summarized in the following sections of this report.

The laboratory reports for testing groundwater done for this study are attached as Appendix C.

5.2 Groundwater

The following tables are cumulative and show the results reported by prior testing by others. All testing prior to 2011 was done by other firms. As documented by groundwater sampling, the contaminants of concern are TPH in the gasoline through diesel range and gasoline constituents of benzene, ethyl benzene, toluene, and xylenes (BETX). The benzene and ethyl benzene appear to have been incidental contaminates in the paint thinner used on-site. None of the former USTs were reported to be used to store gasoline.

6.0 DISCUSSION

6.1 General

There is no indication from the current work nor from prior work that shows that the plume from 5221 extended onto 5232. There was a UST cluster at 5232 that was removed in the early 1990s. There are impacted soils and groundwater at the 5232 site however; none, of the prior nor the current data suggests that the impacts from 5232 have co-mingled with the impacts from 5221. A separate VCP application will be submitted for the proposed remedial action at 5232. This report includes data from both the 5232 site as well as the 5221 site to allow an understanding of the changes in the groundwater flow regime that have occurred over the past 5 years.

To date, no remedial measures have been undertaken at 5232 subsequent to the UST closures and removal of accessible contaminated soils in the mid-1990s. Remedial measures have been undertaken at 5221 Ballard Avenue NW that consisted of enhanced bio remediation with initial injection of a calcium peroxide. As documented in prior reports and in this report, dewatering associated with a new building located north of the 5221 property resulted in dramatic decreases in groundwater levels at 5221. Subsequent to the dewatering effort, a Soil Vapor Extraction System (SVE) was placed adjacent to the UST cluster at 5221.

To address concerns about groundwater quality, the former monitoring wells along the north margin of Shilshole Avenue NW were abandoned and replaced with wells that have deeper screens. The decreased groundwater level had left the prior wells either dry or with so little water that representative samples could not be obtained. In addition, a new well was placed along the north margin of the UST cluster at 5221 to document the groundwater flow and quality beneath the former UST cluster at 5221.

The cleanup levels for this project are summarized below. All units are µg/liter.

Benzene	Method B	0.795
Ethyl benzene	Method B	800
Toluene	Method B	640
Xylenes	Method B	1,600
TPH Gasoline	Method B	250 (based on MTCATPH11 calculations)
cPAHs	Method A	0.1
Lead	Method A	15
Ethylene Glycol	Method B	16,000

As shown in the data, the only two monitoring wells that have levels of hydrocarbons that exceed the project cleanup levels are MW-201 and MW-107 both associated with 5232. None of the monitoring wells associated with 5221 exceed the project cleanup levels.

6.2 Recommendations

We recommend that 2 new monitoring wells be established at 5232 Shilshole Avenue NW to document the groundwater conditions and elevations. The locations of these two proposed wells are shown on Figure 8. This will assist in interpretations of the anomalous nature static water levels of MW-6. In addition, we recommend that a video be used to create an as built of the well screen in MW-6.

8.0 LIMITATIONS

This report is the copyrighted property of Terra Associates, Inc. and was prepared in accordance with generally accepted local geo-environmental engineering practices and within the limitations of time and budget. Analytical testing of samples was based on our understanding of past land uses documented in reports by others and the tax records. In the event additional information regarding site history or current site uses is found, the information should be brought to our attention, as it may affect our conclusions.

This report is intended for specific application to the 5221 Ballard Avenue NW project, and is for the exclusive use of HALCO Properties, LLC and their authorized representatives. No other warranty, expressed or implied, is made.

The analyses and recommendations presented in this report are based on information prepared by others together with data obtained from explorations advanced on the site, and analyses of groundwater samples for this study. The conclusions reached in this report are our opinions based on the previous and current explorations and analytical test data summarized and discussed in this report. Subsurface conditions may vary and seasonal variations in groundwater may occur.

Table 1
Groundwater Measurements

Monitoring Well	Surface Elev.	MP Elev.	4-29-2011		5-6-2011		5-10-2011		6-29-2011	
			Depth	Elev.	Depth	Elev.	Depth	Elev.	Depth	Elev.
MW-1	26.44	26.11	4.6	21.51	NM	NM	NM	NM	4.78	21.33
MW-2	25.98	25.98	NM	NM	NM	NM	NM	NM	5.75	20.23
MW-3	26.05	26.05	NM	NM	NM	NM	NM	NM	NM	NM
MW-4	26.21	25.90	4.89	21.01	NM	NM	NM	NM	5.26	20.64
MW-5	26.32	26.32	4.92	21.40	NM	NM	NM	NM	NM	NM
MW-6	26.8	26.34	4.63	21.71	NM	NM	NM	NM	4.71	21.63
MW-7	26.89	26.60	3.38	23.22	NM	NM	NM	NM	3.09	23.51
MW-8	27.97	27.51	3.52	23.99	NM	NM	NM	NM	3.72	23.79
MW-9	30.24	29.99	4.77	25.22	NM	NM	NM	NM	4.99	25.00
MW-10	26.48	26.16	5.8	20.36	NM	NM	NM	NM	6	20.16
MW-101	36.77	36.37	NM	NM	10.3	26.07	10.45	25.92	10.78	25.59
MW-102	36.35	35.93	NM	NM	10.25	25.68	9.81	26.12	10.08	25.85
MW-103	36.13	35.79	NM	NM	10.25	25.54	9.38	26.41	9.74	26.05
MW-104	28.23	27.98	NM	NM	NM	NM	NM	NM	2.76	25.22

Table 1 (continued)
Groundwater Measurements

Monitoring Well	Surface Elev.	MP Elev.	9-29-2011		10-17-2011		11-18-2011		11-29-2011	
			Depth	Elev.	Depth	Elev.	Depth	Elev.	Depth	Elev.
MW-1	26.44	26.11	NM	NM	NM	NM	NM	NM	NM	NM
MW-2	25.98	25.98	NM	NM	NM	NM	NM	NM	NM	NM
MW-3	26.05	26.05	NM	NM	NM	NM	NM	NM	NM	NM
MW-4	26.21	25.90	NM	NM	NM	NM	NM	NM	NM	NM
MW-5	26.32	26.32	NM	NM	NM	NM	NM	NM	NM	NM
MW-6	26.8	26.34	NM	NM	NM	NM	NM	NM	NM	NM
MW-7	26.89	26.60	NM	NM	NM	NM	NM	NM	NM	NM
MW-8	27.97	27.51	NM	NM	NM	NM	5.22	22.29	NM	NM
MW-9	30.24	29.99	NM	NM	NM	NM	7.39	22.60	NM	NM
MW-10	26.48	26.16	NM	NM	NM	NM	NM	NM	NM	NM
MW-101	36.77	36.37	11.63	24.74	11.50	24.87	15.68	20.69	17.19	19.18
MW-102	36.35	35.93	11	24.93	10.86	25.07	15.78	20.15	17.32	18.61
MW-103	36.13	35.79	10.86	24.93	10.54	25.25	16.83	18.96	18.54	17.25
MW-104	28.23	27.98	3.55	24.43	NM	NM	6.83	21.15	NM	NM

Table 1 (continued)
Groundwater Measurements

Monitoring Well	Surface Elev.	MP Elev.	5-2-2012		8-14-2012		7-11-2013		9-27-13	
			Depth	Elev.	Depth	Elev.	Depth	Elev.	Depth	Elev.
MW-1	26.44	26.11	NM	NM	7.52	18.59	7.3	18.81		
MW-2	25.98	25.98	NM	NM	6.88	19.10			19.73	19.73
MW-3	26.05	26.05	NM	NM	7.07	18.98	6.89	19.16		
MW-4	26.21	25.90	NM	NM	NM	NM	6.95	18.95	18.12	18.12
MW-5	26.32	26.32	NM	NM	NM	NM				
MW-6	26.8	26.34	NM	NM	5.87	20.47	6.91	19.43	18.69	18.69
MW-7	26.89	26.60	NM	NM	>8	<18.60	>8	<18.60		
MW-8	27.97	27.51	>8	<18.60	NM	NM	NM	NM		
MW-9	30.24	29.99	>8	<19.51	NM	NM	NM	NM		
MW-10	26.48	26.16	NM	NM	NM	NM	7.7	18.46		
MW-101	36.77	36.37	>20	<16.37	NM	NM	NM	NM		
MW-102	36.35	35.93	>20	<15.93	NM	NM	NM	NM		
MW-103	36.13	35.79	>20	<15.79	NM	NM	NM	NM		
MW-104	28.23	27.98	>15	<12.98	NM	NM	>15	<12.98		
MW-107	26+/-	25.7+/-					7.53	18.17	18.08	18.08

Table 1 (continued)
Groundwater Measurements

Monitoring Well	Surface Elev.	MP Elev.	2-26-14		9-24-14		11-7-14	
			Depth	Elev.				
MW-1	26.44	26.11	Dry		Closed		Closed	
MW-2	25.98	25.98	6.25	19.73	Closed		Closed	
MW-3	26.05	26.05	Dry		Closed		Closed	
MW-4	26.21	25.90	7.78	18.12	Closed		Closed	
MW-5	26.32	26.32	dry		Closed		Closed	
MW-6	26.8	26.34	7.65	18.69	NM		NM	
MW-7	26.89	26.60	Dry		Dry		NM	
MW-8	27.97	27.51	Dry		Dry		NM	
MW-9	30.24	29.99	Dry		Dry		NM	
MW-10	26.48	26.16	Dry		Closed		Closed	
MW-101	36.77	36.37	NM		Dry		Dry	
MW-102	36.35	35.93	NM		Dry		Dry	
MW-103	36.13	35.79	NM		Dry		Dry	
MW-104	28.23	27.98	NM		Dry		Dry	
MW-105			NM		Dry		Dry	
MW-106			NM		Dry		Dry	
MW-107	26+/-	25.7+/-	7.62	18.08	NM	NM	8.03	18.17
MW-201					15.36	12.52	13.29	14.59
MW-202					9.57	17.1	9.37	17.3
MW-203					8.62	17.55	8.93	17.24
MW-204					8.47	17.77	8.52	17.72
MW-205								

Table 1 (continued)
Groundwater Measurements

Monitoring Well	Surface Elev.	MP Elev.	2/20/2015		5/27/2015		6/17/2015	
			Depth	Elev.				
MW-6	26.8	26.34	NM	NM	7.43	18.91		
MW-7	26.89	26.60	Dry		Dry			
MW-8	27.97	27.51	Dry		Dry			
MW-9	30.24	29.99	Dry		Dry			
MW-101	36.77	36.37	Dry		Dry			
MW-102	36.35	35.93	Dry		Dry			
MW-103	36.13	35.79	Dry		Dry			
MW-104	28.23	27.98	Dry		Dry			
MW-105			Dry		Dry			
MW-106			Dry		Dry			
MW-107	26+/-	25.7+/-	7.56	18.64	7.45	18.75		
MW-201		27.88+/-	13.24	14.64	12.7	15.18		
MW-202		26.67+/-	8.63	18.04	8.76	17.91		
MW-203		26.17+/-	8.19	17.98	8.6	17.57		
MW-204		26.24+/-	7.95	18.29	8.96	17.28		
MW-205		35.88+/-	22.77	13.11	22.9	12.98		

Table 1 (continued)
Groundwater Measurements

Monitoring Well	Surface Elev.	MP Elev.	5/27/15		6/17/15		7/14/2015	
			Depth	Elev.	Depth	Elev.	Depth	Elev.
MW-6	26.8	26.34	7.43	18.91	7.74	18.60	8.2	18.14
MW-7	26.89	26.60			Dry	< 18.41		
MW-8	27.97	27.51			Dry	<20.56		
MW-9	30.24	29.99			Dry	<21.74		
MW-101	36.77	36.37						
MW-102	36.35	35.93						
MW-103	36.13	35.79						
MW-104	28.23	27.98						
MW-105								
MW-106								
MW-107	26+/-	25.7+/-	7.45	18.75			8.2	18
MW-201		27.88+/-	12.7	15.18			12.47	15.41
MW-202		26.67+/-	8.76	17.91			9.39	17.28
MW-203		26.17+/-	8.6	17.57			8.72	17.45
MW-204		26.24+/-	8.96	17.28			8.73	17.51
MW-205		35.88+/-	22.9	12.98			23.06	12.82

Notes: MP is the north side of the top of the PVC casing within the surface monument.
Ground surface elevations are from a survey by Jim Hart and Associates.
NM indicates that the well was not measured or was inaccessible on the day of the field work.
MW-107, MW-201 through MW-205 have not been surveyed for horizontal or vertical control.
Closed indicates wells that have been permanently abandoned in accordance with state regulations.

Table 2
Static Water Elevation for MW-6 from all data

	Date	01/30/96	09/11/96	10/10/98	09/25/02	11/14/03	04/29/11	06/29/11	08/14/12
MW-6	SWL Elev.	21.77	22.86	23.03	21.48	22.72	21.71	21.63	20.47
	Date	07/11/13	09/27/13	02/26/14	05/27/15	06/17/15	07/14/15		
	SWL Elev.	19.43	18.69	19.36	18.91	18.60	18.14		

Notes: Measurements prior to 2011 are by others. Chart 1 is a graphical presentation of this data.

Table 3
Total Petroleum Hydrocarbons
Groundwater

Well Number	Date	TPH Diesel Range	TPH Oil Range	TPH Gas Range	Benzene	Ethyl Benzene	Toluene	m,p Xylene	o Xylene
Units		mg/liter	mg/liter	mg/liter	µg/liter	µg/liter	µg/liter	µg/liter	µg/liter
MW-1	11/27/95	NT	NT	24,000	930	550	41,000	855,000	
	6/20/96	NT	NT	210	8.5	14,000	300	14,000	
	9/11/96	NT	NT	190	ND	13,000	ND	58,000	
	12/10/96	NT	NT	190	7.0	14,000	270	64,000	
	4/3/97	NT	NT	190	7.6	13,000	260	51,000	NT
	1/31/98	NT	NT	310	ND	15,000	230	70,000	
	10/10/00	1.1	0.95	410	1.0U	16,000	120	70,100	
	9/25/02	0.91	0.5U	34	10U	11,000	26	19,000	3,900

Table 3 (continued)
Total Petroleum Hydrocarbons
Groundwater

Well Number	Date	TPH Diesel Range	TPH Oil Range	TPH Gas Range	Benzene	Ethyl Benzene	Toluene	m,p Xylene	o Xylene
MW-1	11/14/03	11		18	5.0U	1,700	80	5,500	
	6/21/06	0.5U	0.5U	NR	ND	240	1	280	
	12/15/06	ND	ND	ND	ND	2,900	29	11,000	
	1/18/07	ND	ND	ND	ND	150	ND	440	
	6/12/07	ND	ND	5.8	10U	800	10U	2,500	
	10/22/07	NR	ND	2.4	10U	825	10U	2,700	
	3/19/08	ND	ND	2.7	10U	700	10U	1,900	
	6/20/08	NT	NT	0.5U	1.0U	40	1.0U	130	
	12/30/08	NT	NT	312	0.56	27	2.0U	47	2.6
	6/09	NT	NT	8.7	1.0U	460	1.0U	1,800	120
	10/09	NT	NT	11.3	10U	825	10U	2,700	
	2/2010	NT	NT	10.0	10U	700	10U	1,900	
	7/27/10	0.5U	0.5U	1.2	1.0U	40	1.0U	130	
	4/29/11	0.3U	0.41U	1.1	0.56	27	2.0U	47	2.6
	8/14/12	0.38U	0.41U	4.9	1.0U	460	1.0U	1,800	120
	7/11/13	1.4	0.41U	2.3	0.53	32	1.0U	210	1.3
	MW-1 abandoned due to lower groundwater levels September 2014, see replacement MW-204								

Table 3 (continued)
Total Petroleum Hydrocarbons
Groundwater

Well Number	Date	TPH Diesel Range	TPH Oil Range	TPH Gas Range	Benzene	Ethyl Benzene	Toluene	m,p Xylene	o Xylene
MW-2	11/27/95	NT	NT	ND	ND	6.6	ND	27	
	6/20/96	NT	NT	1.1	NT	NT	NT	NT	NT
	9/11/96	NT	NT	0.9	ND	79	23	379	
	12/10/96	NT	NT	0.9	ND	1.1	ND	2.3	
	4/3/97	NT	NT	0.1U	ND	ND	3.2	ND	
	1/31/98	NT	NT	ND	ND	ND	ND	ND	
	10/10/00	NT	NT	0.13	1.0U	1.0U	36	1.0U	NT
	9/25/02	NT	NT	0.5U	5.0U	5.0U	5.0U	5.0U	
	11/14/03	NT	NT	0.25U	5.0U	5.0U	5.0U	15U	
	6/21/06	0.5U	X	0.25U	NT	NT	NT	NT	NT
	12/15/06	ND	ND	ND	NT	NT	NT	NT	NT
	1/18/07	ND	NR	ND	NT	NT	NT	NT	NT
	6/12/07	ND	NR	ND	NT	NT	NT	NT	NT
	10/22/07	NR	NR	ND	NT	NT	NT	NT	NT
	3/19/08	ND	ND	ND	NT	NT	NT	NT	NT
	6/20/08	NT	NT	0.05U	NT	NT	NT	NT	NT
	12/30/08	NT	NT	ND	ND	ND	ND	ND	
	7/27/10	0.47	1.2	0.2U	NT	NT	NT	NT	NT
	2/26/14	5.1U	16	0.1U	1.0U	1.0U	1.0U	1.0U	1.0U
	MW-2 abandoned due to lower groundwater levels September 2014-see replacement well MW-203								

Table 3 (continued)
Total Petroleum Hydrocarbons
Groundwater

Well Number	Date	TPH Diesel Range	TPH Oil Range	TPH Gas Range	Benzene	Ethyl Benzene	Toluene	m,p Xylene	o Xylene
MW-3	11/27/95	NT	NT	ND	ND	ND	ND	ND	ND
	1/31/98	NT	NT	ND	ND	ND	ND	ND	ND
	10/10/00	NT	NT	ND	1.0U	1.0U	1.0U	1.0U	1.6
	9/25/02	NT	NT	0.05U	1.0U	1.0U	1.0U	1.0U	1.0U
	11/14/03	NT	NT	0.05U	1.0U	1.0U	1.0U	1.0U	3.0U
	6/26/06	0.5U	0.5U	0.25U	NT	NT	NT	NT	NT
	12/15/06	0.65	ND	ND	NT	NT	NT	NT	NT
	1/18/07	ND	NR	ND	NT	NT	NT	NT	NT
	6/12/07	ND	ND	ND	NT	NT	NT	NT	NT
	10/22/07	ND	ND	ND	NT	NT	NT	NT	NT
	3/19/08	ND	ND	ND	NT	NT	NT	NT	NT
	6/20/08	NT	NT	0.052	NT	NT	NT	NT	NT
	12/30/08	NT	NT	ND	NT	NT	NT	NT	NT
	7/27/10	0.5U	0.5U	0.2U	NT	NT	NT	NT	NT
	8/14/12	0.26U	0.41U	0.1U	1.0U	1.0U	1.0U	3.2	1.0U
	7/11/13			0.1U	0.5U	1.0U	1.0U	1.0U	1.0U
	MW-3 abandoned due to lower groundwater levels September 2014								

Table 3 (continued)
Total Petroleum Hydrocarbons
Groundwater

Well Number	Date	TPH Diesel Range	TPH Oil Range	TPH Gas Range	Benzene	Ethyl Benzene	Toluene	m,p Xylene	o Xylene
MW-4	11/27/95	NT	NT	78	4.0	4,600	40	20,800	
	1/31/98	NT	NT	14	ND	1,300	3.0	3,075	
	10/10/00	NT	NT	0.68	1.0U	37	1.0U	30	NT
	9/25/02	NT	NT	0.11	1.0U	3.0	1.0U	16	
	11/14/03	NT	NT	0.05U	1.0U	1.0U	1.0U	3.0U	
	6/21/06	0.5U	0.5U	0.25U	NT	NT	NT	NT	NT
	12/15/06	ND	ND	ND	NT	NT	NT	NT	NT
	1/18/07	ND	ND	ND	NT	NT	NT	NT	NT
	6/12/07	ND	ND	0.11	ND	1.0	ND	6	
	10/22/07	NR	ND	ND	NT	NT	NT	NT	NT
	3/19/08	ND	ND	ND	NT	NT	NT	NT	NT
	6/20/08	NT	NT	1.57	NT	NT	NT	NT	NT
	12/30/08	NT	NT	ND	NT	NT	NT	NT	NT
	7/27/10	0.5U	0.5U	0.2U	NT	NT	NT	NT	NT
	7/11/13	0.38	0.41U	0.19	0.5U	1.3	1.0	12	1.0U
	9/27/13	0.32	0.41U	0.16	0.5U	1.0U	1.0U	1.1	1.0U
	MW-4 abandoned due to lower groundwater levels September 2014								

Table 3 (continued)
Total Petroleum Hydrocarbons
Groundwater

Well Number	Date	TPH Diesel Range	TPH Oil Range	TPH Gas Range	Benzene	Ethyl Benzene	Toluene	m,p Xylene	o Xylene
MW-5	11/27/95	NT	NT	28	4.0	1,500	11	7,400	
	1/31/98	NT	NT	1.1	ND	38	5.1	211	
	10/10/00	NT	NT	0.2	1.1	1	1.0U	4.9	NT
	9/25/02	NT	NT	0.25U	5.0U	5.0U	5.0U	7.0	
	11/14/03	NT	NT	0.05U	1.0U	1.0U	1.0U	3.0U	
	12/15/06	ND	ND	ND	NT	NT	NT	NT	NT
	1/18/07	ND	ND	ND	NT	NT	NT	NT	NT
	6/12/07	ND	ND	ND	NT	NT	NT	NT	NT
	10/22/07	NR	NR	ND	NT	NT	NT	NT	NT
	3/19/08	ND	ND	ND	NT	NT	NT	NT	NT
	6/20/08	NT	NT	0.05U	NT	NT	NT	NT	NT
	12/30/08	NT	NT	ND	NT	NT	NT	NT	NT
	7/27/10	0.5U	0.5U	0.2U	NT	NT	NT	NT	NT
	MW-5 abandoned due to lower groundwater levels September 2014								

Table 3 (continued)
Total Petroleum Hydrocarbons
Groundwater

Well Number	Date	TPH Diesel Range	TPH Oil Range	TPH Gas Range	Benzene	Ethyl Benzene	Toluene	m,p Xylene	o Xylene
MW-6	1/29/96	NT	NT	0.68	3.5	2.5	ND	112	
	1/31/98	NT	NT	NT	3.7	ND	ND	1.7	
	10/10/00	NT	NT	0.84	1.9	1.0U	1.0U	1.7	NT
	9/25/02	NT	NT	0.25U	5.0U	5.0U	5.0U	8.0	
	11/14/03	NT	NT	0.05U	1.0U	1.0U	1.0U	3.0U	
	6/26/06	0.5U	0.5U	0.25U	NT	NT	NT	NT	NT
	12/15/06	ND	ND	ND	NT	NT	NT	NT	NT
	1/18/07	ND	ND	0.29	16	ND	69	16	
	6/12/07	NR	ND	0.32	ND	ND	ND	ND	
	10/22/07	NR	NR	ND	NT	NT	NT	NT	NT
	3/19/08	ND	ND	ND	NT	NT	NT	NT	NT
	6/20/08	NT	NT	0.147	NT	NT	NT	NT	NT
	12/30/08	NT	NT	0.12	NT	NT	NT	NT	NT
	7/27/10	0.5U	0.5U	0.11	1.0U	1.0U	1.0U	3.0U	
	4/28/11	0.26U	0.41U	0.16	0.2U	0.2U	1.0U	0.4U	0.2U
	8/14/12	0.26U	0.41U	0.1U	1.0U	1.0U	1.0U	1.0U	1.0U
	7/11/13	0.37	0.41U	0.16	0.5U	2.3	1.0U	21	1.0U
	9/27/13	0.29	0.41U	0.1U	0.5U	1.0U	1.0U	1.0U	1.0U
	2/26/14	0.26U	0.41U	0.1U	1.0U	1.0U	1.0U	1.0U	1.0U
	5/27/15	0.27	0.41U	0.1U	0.5U	1.0U	1.0U	1.0U	1.0U

Table 3 (continued)
Total Petroleum Hydrocarbons
Groundwater

Well Number	Date	TPH Diesel Range	TPH Oil Range	TPH Gas Range	Benzene	Ethyl Benzene	Toluene	m,p Xylene	o Xylene
MW-7	1/29/96	NT	NT	61	2.0	**3,500**	340	**3,200**	
	6/20/96	NT	NT	16	NT	NT	NT	NT	NT
	9/11/96	NT	NT	9.0	NT	NT	NT	NT	NT
	12/10/96	NT	NT	15	NT	NT	NT	NT	NT
	4/3/97	NT	NT	17	NT	NT	NT	NT	NT
	1/31/98	NT	NT	31	1,600	1.6	486	**1,600**	
	10/10/00	NT	NT	4.3	190	1.0U	360	190	
	9/25/02	NT	NT	0.89	140	5.0U	130	140	
	11/14/03	NT	NT	0.72	130	5.0U	210		130
	6/21/06	0.5U	0.5U	0.25U	NT	NT	NT	NT	NT
	1/18/07	ND	ND	0.077	ND	4.0	ND	69	
	6/12/07	ND	ND	ND	ND	ND	ND	ND	
	10/22/07	NR	ND	2.4	NT	NT	NT	NT	NT
	3/19/08	ND	ND	0.3	ND	ND	ND	ND	
	6/20/08	NT	NT	0.13	NT	NT	NT	NT	NT
	12/30/08	NT	NT	ND	NT	NT	NT	NT	NT
	7/27/10	0.5U	0.5U	0.2U	NT	NT	NT	NT	NT
	4/28/11	0.26U	0.41U	0.1U	0.2U	0.32	1.0U	0.4U	0.2U

Table 3 (continued)
Total Petroleum Hydrocarbons
Groundwater

Well Number	Date	TPH Diesel Range	TPH Oil Range	TPH Gas Range	Benzene	Ethyl Benzene	Toluene	m,p Xylene	o Xylene
Units		mg/liter	mg/liter	mg/liter	µg/liter	µg/liter	µg/liter	µg/liter	µg/liter
MW-8	1/29/96	NT	NT	ND	ND	ND	ND	1.0	
	6/20/96	NT	NT	0.1U	NT	NT	NT	NT	NT
	9/11/96	NT	NT	0.1U	ND	ND	ND	ND	
	12/10/96	NT	NT	0.1U	NT	NT	NT	NT	NT
	4/3/97	NT	NT	0.1U	NT	NT	NT	NT	NT
	1/31/98	NT	NT	ND	ND	ND	ND	ND	
	10/10/00	NT	NT	0.1U	1.0U	1.0U	1.0U	1.0U	NT
	9/25/02	NT	NT	0.05U	1.0U	1.0U	1.0U	3.0	
	11/14/03	NT	NT	0.05U	1.0U	1.0U	1.0U	3.0U	
	6/21/06	0.5U	0.5U	0.25U	NT	NT	NT	NT	NT
	12/15/06	ND	ND	ND	NT	NT	NT	NT	NT
	1/18/07	ND	ND	ND	NT	NT	NT	NT	NT
	6/12/07	ND	ND	ND	ND	ND	ND	ND	
	10/22/07	ND	ND	ND	NT	NT	NT	NT	NT
	3/19/08	ND	ND	ND	NT	NT	NT	NT	NT
	6/20/08	NT	NT	0.05U	NT	NT	NT	NT	NT
	12/30/08	NT	NT	ND	NT	NT	NT	NT	NT
	7/27/10	0.5U	0.5U	0.2U	NT	NT	NT	NT	NT

Table 3 (continued)
Total Petroleum Hydrocarbons
Groundwater

Well Number	Date	TPH Diesel Range	TPH Oil Range	TPH Gas Range	Benzene	Ethyl Benzene	Toluene	m,p Xylene	o Xylene
MW-9	1/29/96	NT	NT	ND	ND	ND	ND	1.0	
	6/20/96	NT	NT	0.1U	NT	NT	NT	NT	NT
	9/11/96	NT	NT	0.1U	ND	ND	ND	ND	
	12/10/96	NT	NT	0.1U	NT	NT	NT	NT	NT
	4/3/97	NT	NT	0.1U	ND	ND	ND	ND	ND
	1/31/98	NT	NT	ND	ND	ND	ND	ND	ND
	10/10/00	NT	NT	0.1U	1.0U	1.0U	1.0U	1.0U	1.0U
	9/25/02	NT	NT	0.05U	1.0U	1.0U	1.0U	2.0	
	11/14/03	NT	NT	0.05U	1.0U	1.0U	1.0U	3.0U	
	1/18/07	ND	ND	ND	NT	NT	NT	NT	NT
	6/12/07	ND	ND	ND	NT	NT	NT	NT	NT
	10/22/07	ND	ND	ND	NT	NT	NT	NT	NT
	3/19/08	ND	ND	ND	NT	NT	NT	NT	NT
	6/20/08	NT	NT	0.05	NT	NT	NT	NT	NT
	12/30/08	NT	NT	ND	NT	NT	NT	NT	NT
	7/27/10	0.5U	0.5U	0.2U	NT	NT	NT	NT	NT

Table 3 (continued)
Total Petroleum Hydrocarbons
Groundwater

Well Number	Date	TPH Diesel Range	TPH Oil Range	TPH Gas Range	Benzene	Ethyl Benzene	Toluene	m,p Xylene	o Xylene
MW-10	1/29/96	NT	NT	0.93	ND	62	ND	39.7	
	6/20/96	NT	NT	1.1	NT	NT	NT	NT	NT
	9/11/96	NT	NT	0.58	ND	43	ND	171	
	12/10/96	NT	NT	0.1U	ND	ND	ND	1.2	
	4/3/97	NT	NT	0.1U	ND	2.1	ND	5.2	
	1/31/98	NT	NT	ND	ND	ND	ND	ND	
	10/10/00	NT	NT	ND	1.0U	1.0U	1.0U	1.0U	NT
	9/25/02	NT	NT	0.05U	1.0U	1.0U	1.0U	2.0	
	11/14/03	NT	NT	0.05U	1.0U	1.0U	1.0U	3.0U	
	12/15/06	ND	ND	ND	NT	NT	NT	NT	NT
	6/12/07	ND	ND	ND	NT	NT	NT	NT	NT
	10/22/07	ND	ND	ND	NT	NT	NT	NT	NT
	3/19/08	ND	ND	ND	NT	NT	NT	NT	NT
	6/20/08	NT	NT	0.05U	NT	NT	NT	NT	NT
	12/30/08	NT	NT	ND	NT	NT	NT	NT	NT
	7/27/10	0.5U	0.5U	0.2U	NT	NT	NT	NT	NT
	7/11/13	NT	NT	0.1U	0.5U	1.8	1.0U	16	1.0U
MW-10 abandoned due to lower groundwater levels September 2014									
MW-101	5/10/11	0.26U	0.41U	0.16	1.3	0.95	1.0U	1.5	0.2U
	9/29/11	0.26U	0.42U	0.29	2.8	1.2	1.0U	0.4U	0.2U
MW-102	5/10/11	0.27U	0.41U	0.5U	0.2U	0.2U	1.0U	0.4U	0.2U
	9/29/11	0.26U	0.41U	0.59	0.2U	0.2U	1.0U	0.4U	0.2U
MW-103	5/10/11	0.7U	0.42U	0.94	0.2U	0.2U	1.0U	0.4U	0.2U
	9/29/11	0.26U	0.41U	0.27	0.2U	0.2U	1.0U	0.4U	0.2U

Table 3 (continued)
Total Petroleum Hydrocarbons
Groundwater

Well Number	Date	TPH Diesel Range	TPH Oil Range	TPH Gas Range	Benzene	Ethyl Benzene	Toluene	m,p Xylene	o Xylene
MW-104	6/29/11	0.41U	0.26U	0.1U	0.27	0.2U	1.0U	0.4U	0.2U
	9/29/11	0.26U	0.41U	0.1U	0.21	0.2U	1.0U	0.4U	0.2U
MW-107	4/12/13	0.59U	6.900	6.9	1.0U	1,100	4.5	4,000	1,100
	7/11/13	0.27	0.1U	0.1U	0.5U	1.0U	1.0U	3.4	1.0U
	10/1/13	0.69	6.8	6.8	0.5U	1500	4.3	5300	6800
	2/28/14	0.28U	0.84	0.32	1.0U	84	1.0U	150	39
	2/20/15	0.35	0.46U	0.1U	1.0U	1.0U	1.0U	1.0U	1.0U
	5/27/15	0.31	0.41U	0.1U	0.5U	1.0U	1.0U	1.0U	1.0U
MW-201	9/24/14	NT	NT	0.1U	0.5U	1.0U	1.0U	1.0U	1.0U
	2/20/15	0.26U	0.41U	0.1U	0.5U	1.0U	1.0U	1.0U	1.0U
	5/27/15	NT	NT	0.1U	0.5U	1.0U	1.0U	1.0U	1.0U
MW-202	9/24/14	NT	NT	0.38	0.05U	51	6.3	46	44
	2/20/15	0.7	0.44U	42	4.6	3,900	31	9,200	1,900
	5/27/15	0.39	0.41U	7.8	1.4	1,600	3.8	3,400	570
MW-203	9/24/14	0.26U	0.42U	0.1U	0.5U	3.8	1.0U	1.7	1.0
	2/20/15	0.29U	0.47U	0.15	0.5U	18	1.0U	20	1.4
	5/27/15	0.26U	0.41U	0.1U	0.5U	21	1.0U	1.0U	1.0U
MW-204	9/24/14	0.47	0.41U	0.16	0.5U	1.0U	1.0U	1.0U	1.0U
	2/20/15	0.43	0.45U	0.17	0.5U	3.2	1.0U	8.5	1.5
	5/27/15	0.26U	0.41U	0.1U	0.5U	1.0U	1.0U	1.0U	1.0U
MW-205	11/25/14	NT	NT	0.1U	0.5U	1.0U	1.0U	1.0U	1.0U
	2/20/15	0.28U	0.44U	0.1U	0.5U	1.0U	1.0U	1.0U	1.0U
	5/27/15	NT	NT	0.1U	0.5U	1.0U	1.0U	1.0U	1.0U
MTCA Method A		0.5	0.5	0.8 (1.0)	5.0	700	1,000	1,000	

Table 3 (continued)
Total Petroleum Hydrocarbons
Groundwater

Well Number	Date	TPH Diesel Range	TPH Oil Range	TPH Gas Range	Benzene	Ethyl Benzene	Toluene	m,p Xylene	o Xylene
Project Remediation Levels		0.5	0.5	0.20	0.795	800	640	1,600	

Notes: TPH values are reported in mg/liter, BETX values are reported in µg/liter.
U modifier indicates that the analyte was not present at the stated practical quantitation limit (PQL).
NT indicates that the sample was not tested for the individual analyte.

Table 4
Volatile Organic Compounds
Groundwater

Well Number	Date	Vinyl Chloride	1,1-Dichlroethane	(cis) 1,2-Dichloroehtene	Trichloroethylene	Tetrachloroethylene
MW-1	9/23/02	10U	10U	10U	10U	10U
	4/29/11	0.4U	0.4U	0.4U	0.4U	0.4U
MW-6	4/29/11	0.2U	0.20	0.2U	0.2U	0.22
MW-7	4/29/11	0.2U	0.2U	0.39	0.22	0.27
MW-101	5/10/11	0.2U	0.49	0.39	0.2U	0.2U
MW-102	5/10/11	0.2U	0.2U	0.2U	0.2U	0.2U
MW-103	5/10/11	0.2U	0.2U	0.2U	0.2U	0.2U
MW-104	6/29/11	0.2U	0.23	0.2U	0.2U	0.2U
MTCA		0.2			5.0	5.0

Notes: All units are µg/liter.

Table 5
PAHs-MW-205

Well Number	Date	Benzo[a]pyrene	Benzo[a]anthracene	Benzo[b]fluoranthene	Benzo[k]fluoranthene	Chrysene	Dibenz[a,h]anthracene	Indeno[1,2,3-cd]pyrene	Total cPAHs
MW-205	1/12/15	0.094U	0.094U	0.094U	0.094U	0.094U	0.094U	0.094U	0.066U
MTCA	0.1 for sum of cPAHs								

Notes: All units are µg/liter.
Note total cPAH shown does not take 708-2 TEF into account and is a conservative number.
Non-carcinogenic PAHs are not shown for brevity, all PAHs in the analysis were below the PQL.

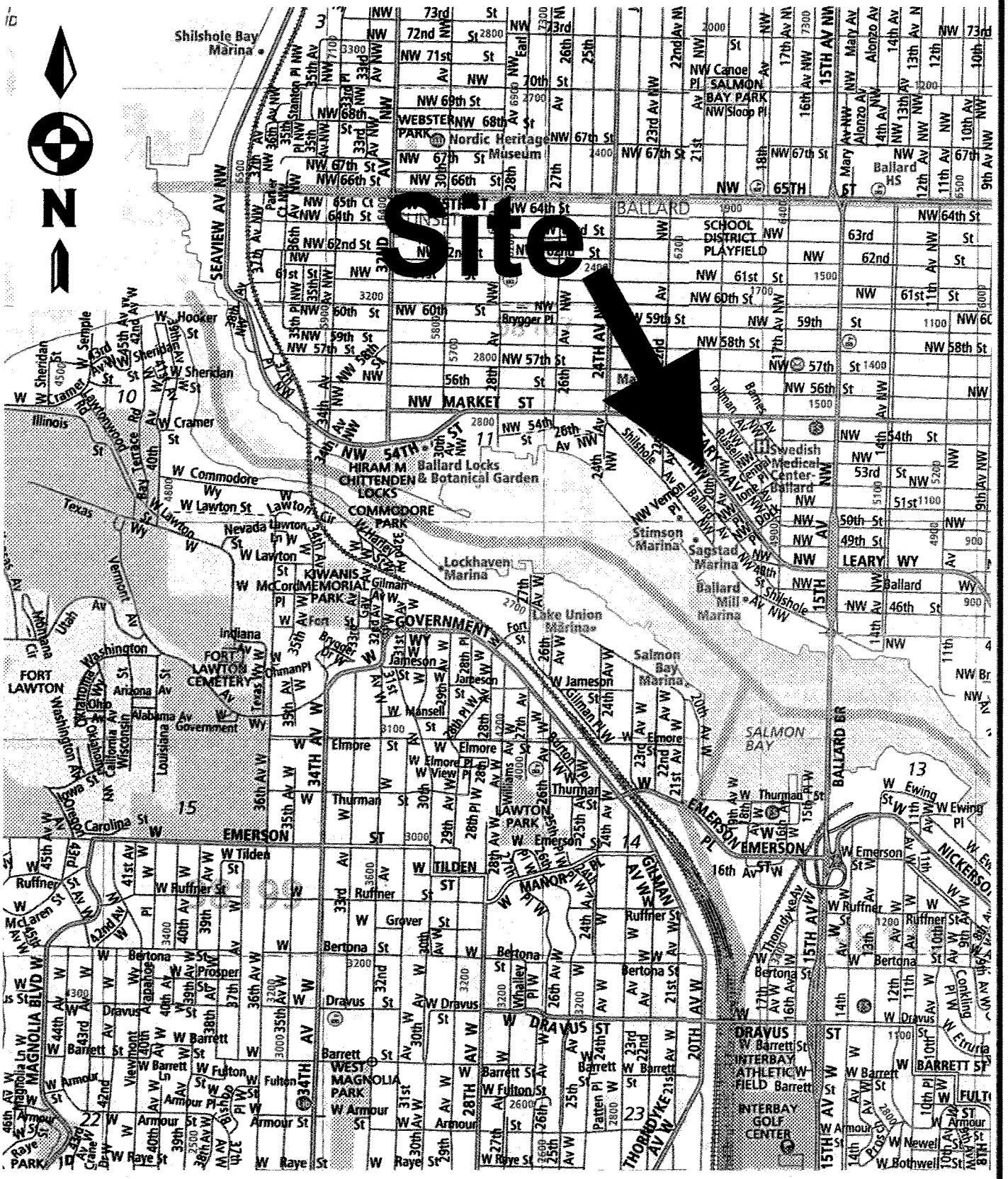
Table 6
Lead

Well ID	Date	Total lead	Dissolved Lead
MW-107	2/20/15	13	1.0U
MW-201	2/20/15	1.1U	1.0U
MW-202	2/20/15	2.5	1.0U
MW-203	2/20/15	1.1U	1.0U
MW-204	2/20/15	1.1U	1.0U
MTCA Method A		15	15

Notes: All units are µg/liter.
Samples for dissolved lead analysis were field filtered through a 0.45 micron filter.

Table 7
Ethylene Glycol

Well ID	Date	Ethylene Glycol
MW-107	2/20/15	10U
MW-201	2/20/15	10U
MW-202	2/20/15	10U
MW-203	2/20/15	10U
MTCA Method B		16



Reference: Thomas Bros King County Road Atlas. NOT TO SCALE

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Vicinity Map
5221 Ballard Ave NW
Seattle, Washington

Proj. No T-6552	Date Oct 2015	Figure 1

Reference: Seattle North and Shilshole Bay USGS Quadrangles

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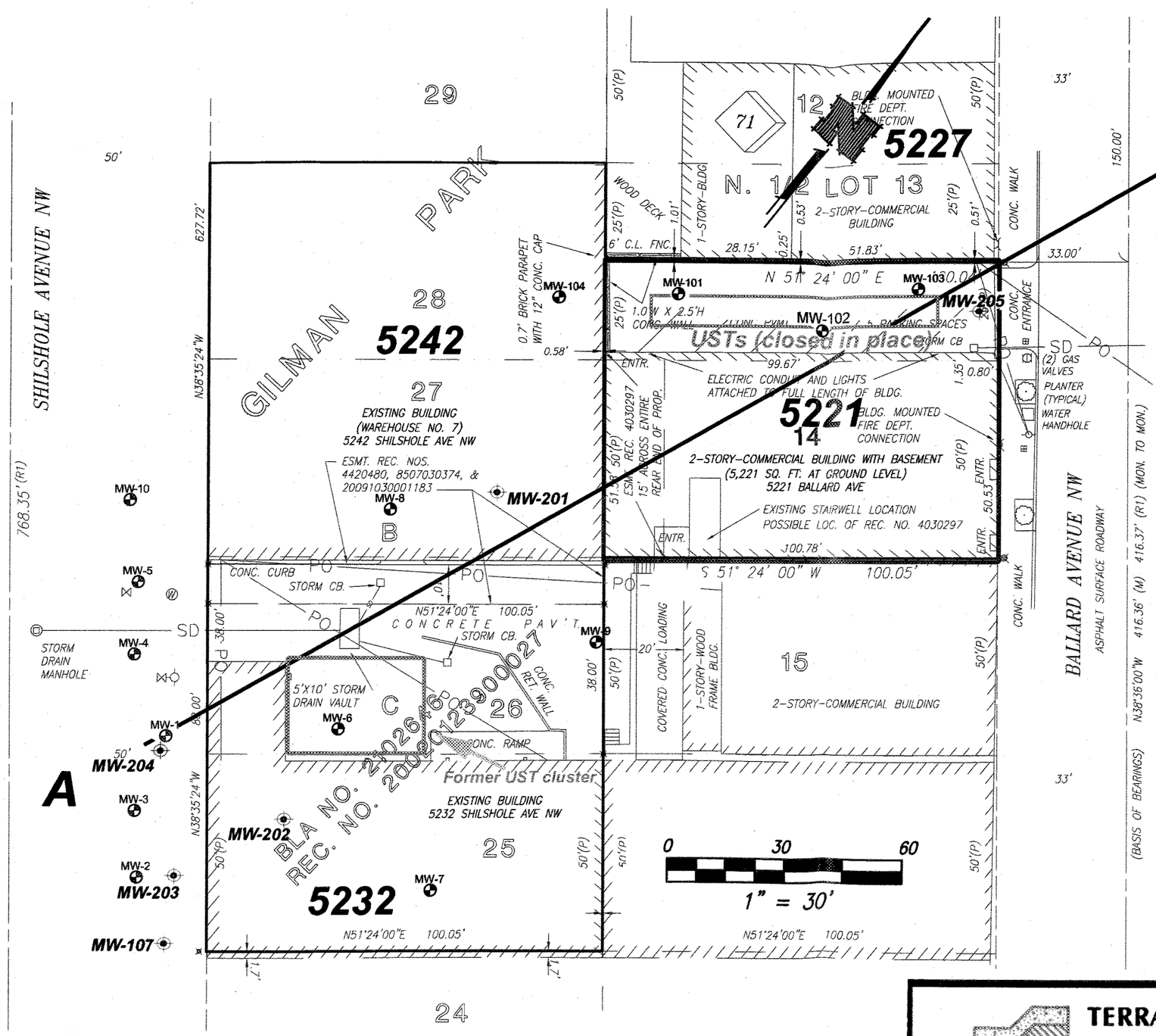
Topographic Vicinity Map
5221 Ballard Ave NW
Seattle, Washington

Proj. No T-6552	Date Oct 2015	Figure 2



B-4 **A'**

Site of Building Built in 2011/2012 With Basement De-watering (borings shown are geotech borings by others)

B-2

B-3

B-1

Legend

Boring Location

MW prefix indicates that the boring was completed as a monitoring well. Monitoring wells shown in red have been abandoned.

5221 Street Address

Reference: Survey by Jim Hart and Associates

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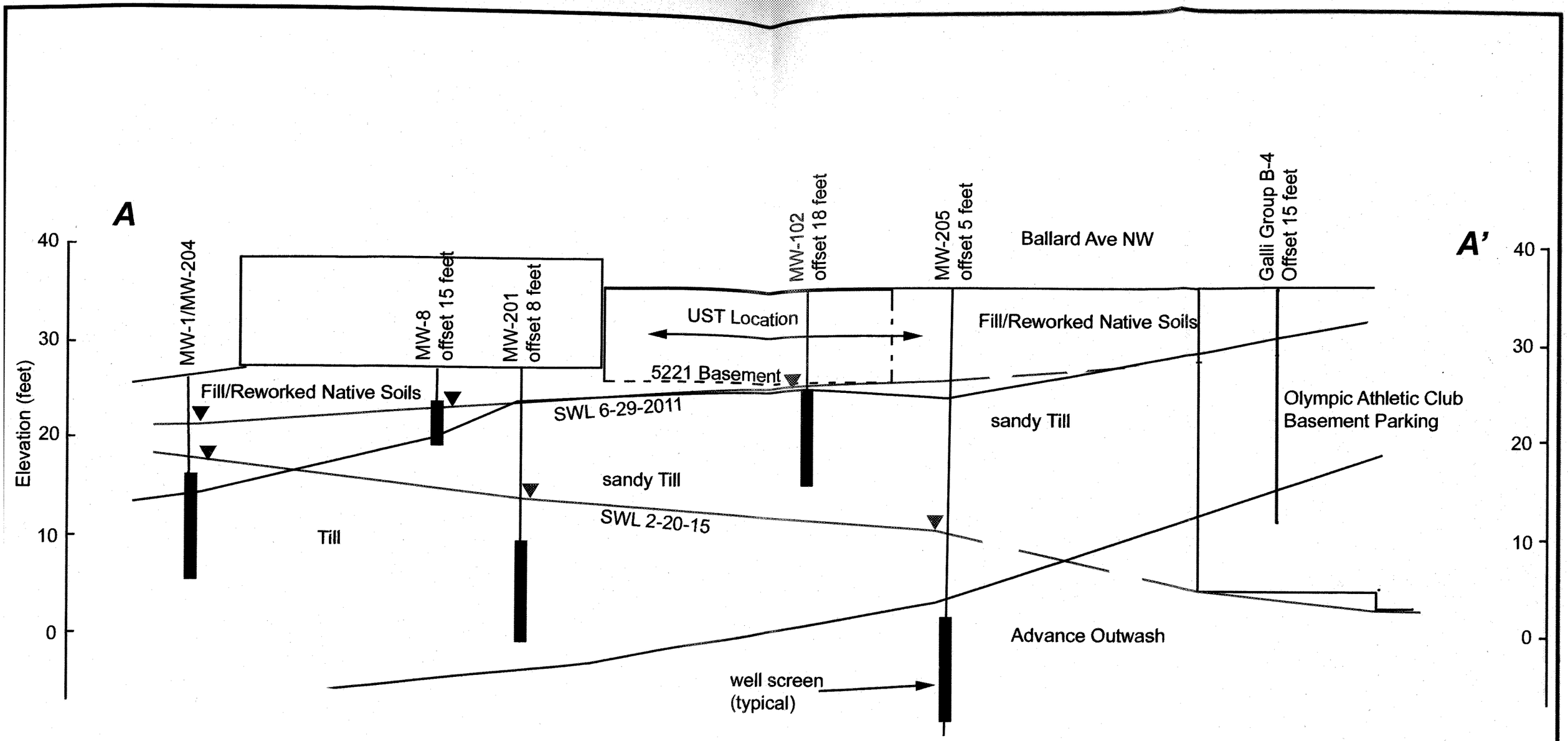
Monitoring Well Location Plan
5221 Ballard Ave NW
Seattle, Washington

Proj. No. T-6552	Date Oct 2015	Figure 3



Scale 1"=30' Horizontal, 1'=10' Vertical

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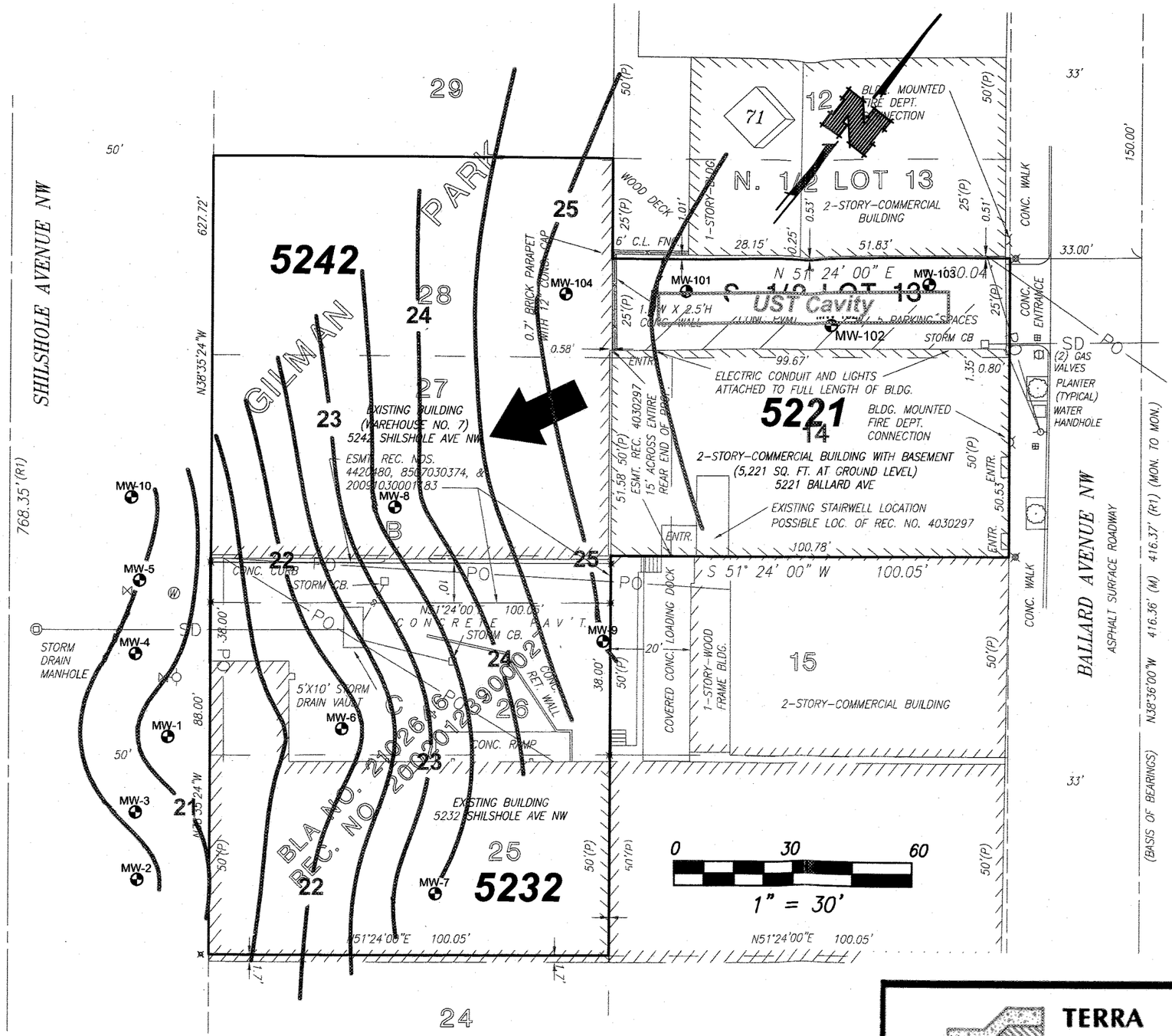
Generalized Geologic Section
5221 Ballard Ave NW
Seattle, Washington

Proj. No. T-6552	Date Oct 2015	Figure 4



B-4

B-2

Site of New Building

B-3

B-1

Groundwater contours on this drawing are an interpretion of the groundwater data for June 29, 2011

Reference: Survey by Jim Hart and Associates

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General Groundwater Conditions
5221 Ballard Ave NW
Seattle, Washington

Proj. No. T-6552	Date Oct 2015	Figure 5

B-4

Site of Building Built in 2011/2012 With Basement De-watering (borings shown are geotech borings by others)

B-2

B-1

Legend

Boring Location

MW prefix indicates that the boring was completed as a monitoring well. Monitoring wells shown in red have been abandoned.

Groundwater contours on this drawing are an interpretion of the groundwater data for Sept 24, 2014.
This map excludes data from MW-6

Reference: Survey by Jim Hart and Associates

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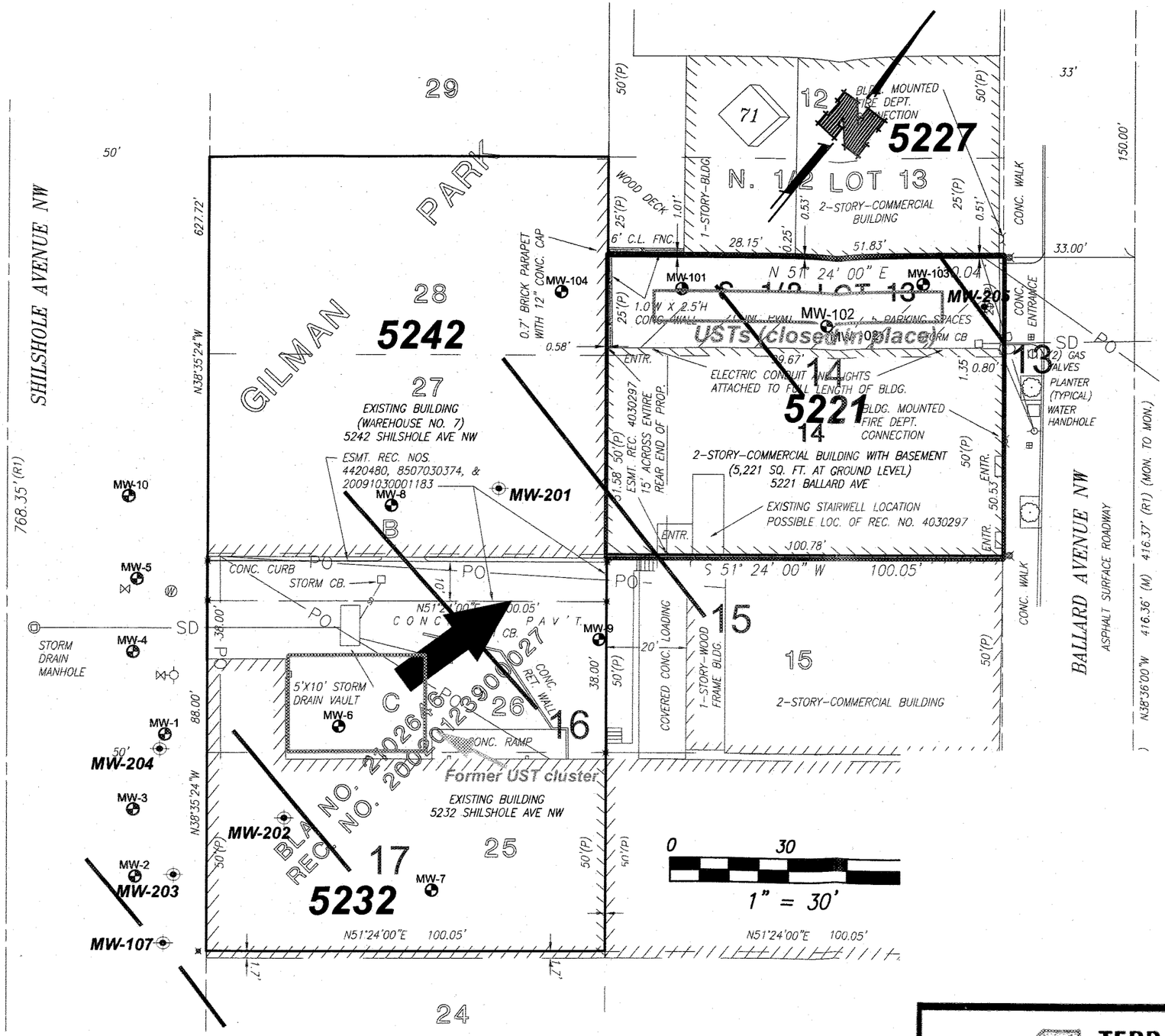
General Groundwater Conditions
5221 Ballard Ave NW
Seattle, Washington

Proj. No. T-6552	Date Oct 2015	Figure 6



B-4

Site of Building Built in 2011/2012 With Basement De-watering (borings shown are geotech borings by others)

B-2

B-1

Legend

Boring Location

MW prefix indicates that the boring was completed as a monitoring well. Monitoring wells shown in red have been abandoned.

Groundwater contours on this drawing are an interpretation of the groundwater data for July 14, 2015
These contours do not include MW-6 data

Reference: Survey by Jim Hart and Associates

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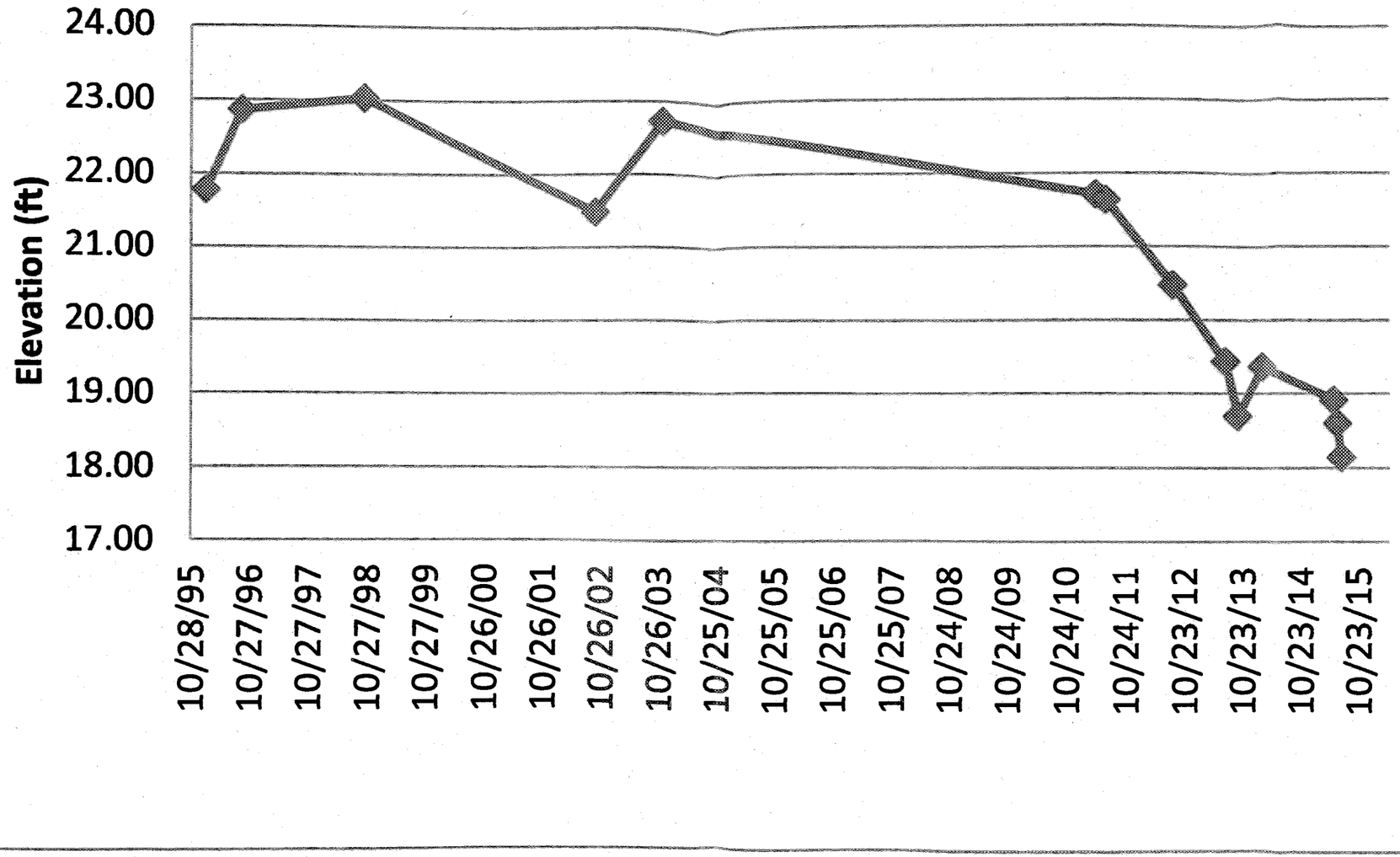
General Groundwater Conditions
5221 Ballard Ave NW
Seattle, Washington

Proj. No. T-6552	Date Oct 2015	Figure 7

Static Water Elevation MW-6



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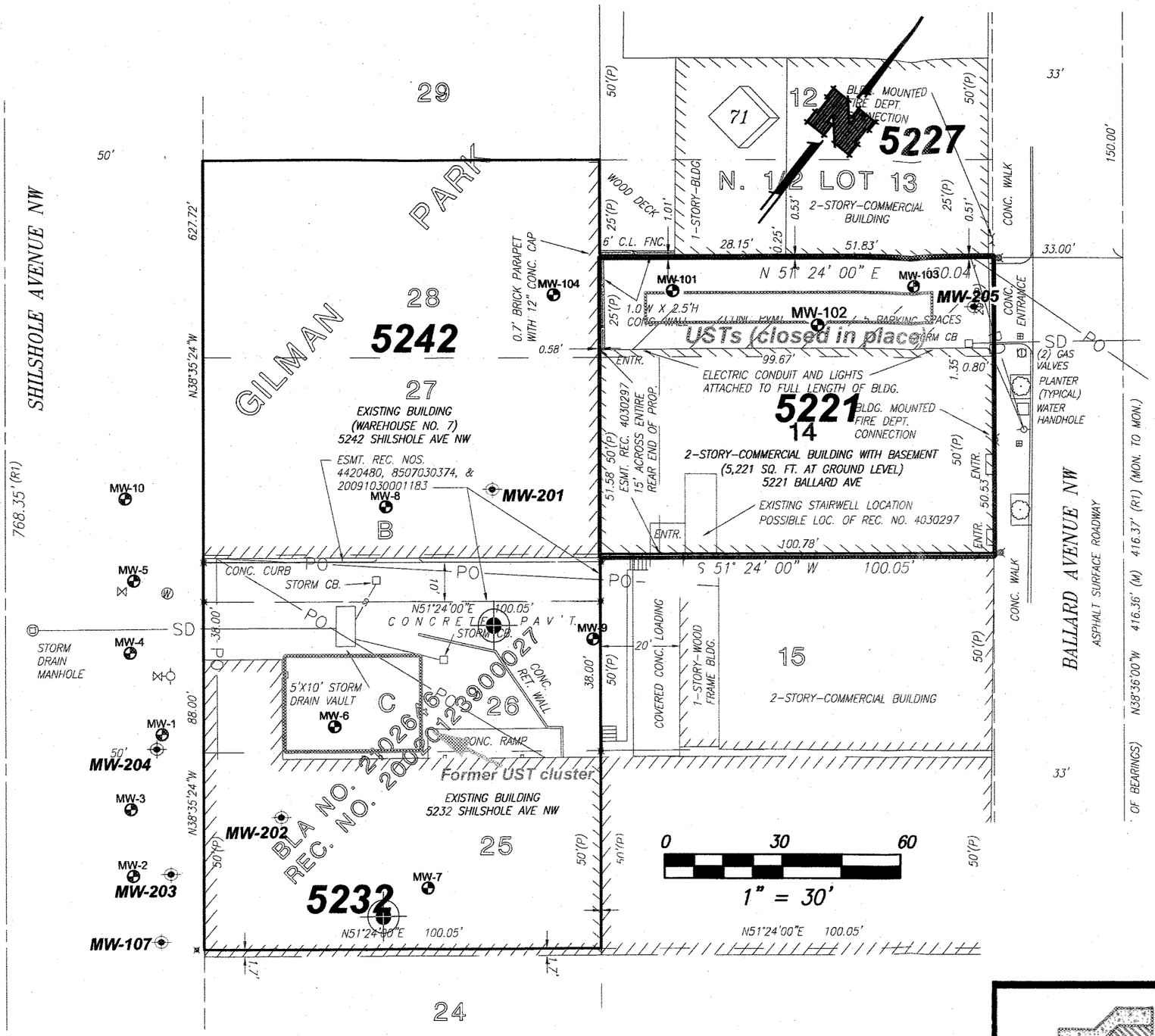
Geotechnical Consultants

Chart 1
5221 Ballard Ave NW
Seattle, Washington

Proj. No. T-6552	Date Oct 2015	Figure 8



B-4

Site of Building Built in 2011/2012 With Basement De-watering (borings shown are geotech borings by others)

B-2

B-3

B-1

Legend

Boring Location

MW prefix indicates that the boring was completed as a monitoring well. Monitoring wells shown in red have been abandoned.

5221 Street Address

Wells Shown in Blue Are Proposed Wells

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Proposed Monitoring Wells
5221 Ballard Ave NW
Seattle, Washington

Proj. No. T-6552	Date Oct 2015	Figure 9

APPENDIX A

BORING LOGS

LOG OF MONITORING WELL MW-101

Figure No. B-13

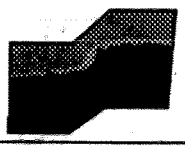
Project: 5221 Ballard Avenue North **Project No:** T-6552 **Date Drilled:** 5/6/11

Client: HALCO PROPERTIES, LLC **Driller:** Cascade Drilling **Logged By:** NRH

Location: Seattle, Washington **Approx. Elev:** N/A

Depth (ft)	Sample Interval	Soil Description	Consistency/ Relative Density	Moisture Content % Wp |-----x-----| Wl 10 30 50 70 90	Pocket Penetrometer △ TSF △ 1 2 3 4 SPT (N) • Blows/ft • 10 20 30 40	Observ. Well
1		(3.5 inches ASPHALT SLAB)				
2		Brown silty SAND/sandy SILT, moist. (Fill)	Soft			
3						
4					6	
5		Dark gray sandy SILT, moist, light hydrocarbon odor. Mottled discoloration. (FIll)	Soft			
6						
7		Becomes sandier, occasional small chunks of brick, copper.				
8						
9		Moderate hydrocarbon odor.	Medium Dense		17	
10						
11						
12			Dense			
13						
14		Gray silty SAND with gravel, moist, becomes wet by 13 feet. (Till)			51	
15						
16					49	
17			Dense			
18						
19					50	
20						
21		Boring terminated at 20 feet. 2-inch PVC monitoring well installed as shown using 0.010 slotted screen from 10 to 20 feet.				
22						
23						
24						
25						

Note: This borehole log has been prepared for geotechnical purposes. This information pertains only to this boring location and should not be interpeted as being indicative of other areas of the site.



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LOG OF MONITORING WELL MW-102

Figure No. B-14

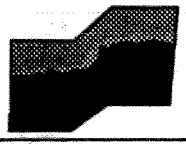
Project: 5221 Ballard Avenue North **Project No:** T-6552 **Date Drilled:** 5/6/11

Client: HALCO PROPERTIES, LLC **Driller:** Cascade Drilling **Logged By:** NRH

Location: Seattle, Washington **Approx. Elev:** N/A

Depth (ft)	Sample Interval	Soil Description	Consistency/ Relative Density	Moisture Content % Wp |-----x-----| Wl 10 30 50 70 90	Pocket Penetrometer △ TSF △ 1 2 3 4 / SPT (N) • Blows/ft • 10 20 30 40	Observ. Well
1–6		(7 inches ASPHALT) Brown silty SAND with gravel, moist. (Till)	Loose/Soft		4	
7–9		Pea gravel with silt and brick bits, moderate hydrocarbon odor. (Fill)	Loose		17	
10–11		Gray silty SAND with gravel, moist, becomes wet by 12.5 feet. (Till)	Medium Dense			
12–13			Dense		50	
14–15		Minor amount of silt by 15 feet.			50	
16–18			Dense		50	
19–20					50	
21–25		Boring terminated at 20 feet. 2-inch PVC monitoring well installed as shown using 0.010 slotted screen from 10 to 20 feet.				

Note: This borehole log has been prepared for geotechnical purposes. This information pertains only to this boring location and should not be interpeted as being indicative of other areas of the site.



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LOG OF MONITORING WELL MW-103

Figure No. B-15

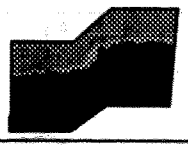
Project: 5221 Ballard Avenue North **Project No:** T-6552 **Date Drilled:** 5/6/11

Client: HALCO PROPERTIES, LLC **Driller:** Cascade Drilling **Logged By:** NRH

Location: Seattle, Washington **Approx. Elev:** N/A

Depth (ft)	Sample Interval	Soil Description	Consistency/ Relative Density	Moisture Content % Wp |-----x-----| Wl 10 30 50 70 90	Pocket Penetrometer △ TSF △ 1 2 3 4 SPT (N) • Blows/ft • 10 20 30 40	Observ. Well
1–10		(5 inches ASPHALT SLAB) Brown silty SAND/sandy SILT, small brick bits, moist. (Fill) Light hydrocarbon odor.	Loose/Soft Medium Dense		5 25	
10–20		Gray silty SAND, moist, wet by 12.5 feet, light to moderate hydrocarbon odor, slight sheen from 10 to 14 feet. (TIII)	Dense		40 50 50 50	
20–25		Boring terminated at 20 feet. 2-inch PVC monitoring well installed as shown using 0.010 slotted screen from 10 to 20 feet.				

Note: This borehole log has been prepared for geotechnical purposes. This information pertains only to this boring location and should not be interpeted as being indicative of other areas of the site.



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LOG OF MONITORING WELL MW-104

Figure No. B-16

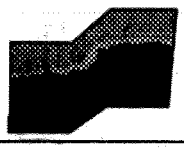
Project: 5221 Ballard Avenue North **Project No:** T-6552 **Date Drilled:** 6/13/11

Client: HALCO PROPERTIES, LLC **Driller:** Boretec **Logged By:** NRH

Location: Ballard, Washington **Approx. Elev:** N/A

Depth (ft)	Sample Interval	Soil Description	Odor/Sheen	Recovery % (20 40 60 80 100)	PID (PPM)	Observ. Well
		7-inch thick concrete slab.				
1						
2		Dark brown sandy SILT, moist.	Light Odor/No	98.0	0.0	
3		Becomes gray.				
4				100.0		
5			No/No		0.0	
6						
7					0.0	
8						
9						
10			No/No			
11		Saturated gray silty SAND/sandy SILT. (SM-ML)				
12						
13					0.0	
14				100.0		
15			No/No			
16		Terminated at 15 feet. 2-inch PVC monitoring well with .10 screen from 5 to 15 feet constructed as shown.				
17						
18						
19						
20						

Note: This borehole log has been prepared for geotechnical purposes. This information pertains only to this boring location and should not be interpeted as being indicative of other areas of the site.



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LOG OF MONITORING WELL MW-105

Figure No. B-17

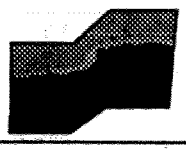
Project: 5221 Ballard Avenue **Project No:** T-6552 **Date Drilled:** 2/18/13

Client: HALCO PROPERTIES, LLC **Driller:** Cascade **Logged By:** NRH

Location: Ballard, Washington **Approx. Elev:** N/A

Depth (ft)	Sample Interval	Soil Description	Odor/Sheen	Recovery % (20 40 60 80 100)	PID (PPM)	Observ. Well
1–4		(2 inches ASPHALT) FILL: brown sand, moist.	Light Odor on Lower 8 Feet			
5				100.0	711	
6–10		FILL: gray and dark brown silty sand with gravel, moist, occasional brick chunks. 3/3/4 Occasional organics. 9/18/44	Moderate Odor	100.0	474	
11–15		Gray silty SAND with gravel, fine grained, moist, slightly mottled. (SM) 33/50 for 6	No/No	100.0	10.1	
16–20		Gray SAND, fine grained, moist. (SP)	No/No	100.0	9.0	
21–25		Boring terminated at 21.5 feet. 2-inch PVC monitoring well constructed with 20 slot screen from 10 to 20 feet. 300 ib hammer.				

Note: This borehole log has been prepared for geotechnical purposes. This information pertains only to this boring location and should not be interpeted as being indicative of other areas of the site.



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LOG OF MONITORING WELL MW-106

Figure No. B-18

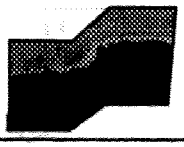
Project: 5221 Ballard Avenue **Project No:** T-6552 **Date Drilled:** 2/18/13

Client: HALCO PROPERTIES, LLC **Driller:** Cascade Drilling **Logged By:** NRH

Location: Seattle, Washington **Approx. Elev:** N/A

Depth (ft)	Sample Interval	Soil Description	Odor/Sheen	Recovery % (20 40 60 80 100)	PID (PPM)	Observ. Well
1–5		(2 inches ASPHALT) FILL: brown sand and silty sand with gravel, moist.				
6–12		FILL: gray and dark brown silt and silty sand with gravel, moist, mottled, occasional brick chunks.	Light Odor	100.0	655	
12–17		Gray and brown silty SAND with gravel, moist, mottled. (SM)	No/No	50.0	1.6	
18–20		Gray SAND with gravel, moist. (SP)	No/No	33.0	0.0	
20–25		Boring terminated at 20 feet. 2-inch PVC monitoring well constructed with 20 slot screen from 10 to 20 feet. 300 ib hammer.				

Note: This borehole log has been prepared for geotechnical purposes. This information pertains only to this boring location and should not be interpeted as being indicative of other areas of the site.



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LOG OF MONITORING WELL MW-107

Figure No. B-15

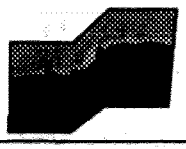
Project: Former C and C Paints **Project No:** T-6552-1 **Date Drilled:** 3/27/13

Client: **Driller:** Cascade Drilling **Logged By:** NRH

Location: Seattle, Washington **Approx. Elev:** N/A

Depth (ft)	Sample Interval	Soil Description	Odor/Sheen	Recovery % (20 40 60 80 100)	PID (PPM)	Observ. Well
1–8		FILL: brown sand, loose to medium dense, moist.	No/No			
8–19		Gray silty SAND, fine to medium grained, moist to wet. (SM)	No/No	80.0	0.0	
10–13				100.0	0.0	
13–16				80.0	0.0	
16–18		Becomes fine grained.	No/No	100.0	0.0	
19–20		Boring terminated at 18.5 feet in native silty SAND with gravel.				

Note: This borehole log has been prepared for geotechnical purposes. This information pertains only to this boring location and should not be interpeted as being indicative of other areas of the site.



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LOG OF MONITORING WELL MW-201

Figure No.

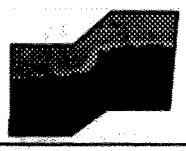
Project: Halco **Project No:** T-6552 **Date Drilled:** 9/10/14

Client: Halco **Driller:** BORETEC **Logged By:** TB

Location: Seattle, Washington **Approx. Elev:** 27.88 +/- Feet

Depth (ft)	Sample Interval	Soil Description	Odor/Sheen	Blow Count (10 30 50 70 90)	PID (PPM)	Observ. Well
1		(6 inches CONCRETE)	No/No	7.0		
2		Gray silty fine SAND with gravel, moist. (Till)				
3						
4					0	
5			No/No	78.0		
6						
7						
8						
9						
10		With less gravel below 10 feet.	No/No	67.0		
11						
12						
13						
14						
15			No/No	50.0		
16						
17						
18						
19			No/No			
20				50.0		
21						
22						
23						
24						
25			N/A	50.0		
26						
27						
28		Boring terminated at 28 feet.				
29		2-inch PVC monitoring well built as shown.				
30						

Note: This borehole log has been prepared for geotechnical purposes. This information pertains only to this boring location and should not be interpeted as being indicative of other areas of the site.



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LOG OF MONITORING WELL MW-202

Figure No.

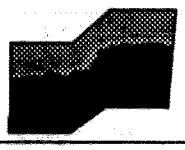
Project: Halco **Project No:** T-6552 **Date Drilled:** 9/10/15

Client: Halco **Driller:** BORETEC **Logged By:** TB

Location: Seattle, Washington **Approx. Elev:** 26.67 +/- Feet

Depth (ft)	Sample Interval	Soil Description	Odor/Sheen	Blow Count (10 30 50 70 90)	PID (PPM)	Observ. Well
1		(6 inches CONCRETE SLAB)	Strong Odor			
2		Dark gray silty fine SAND, moist.				
3						
4						
5				30.0 *	163	
6						
7						
8						
9						
10			No Odor	50.0 *	14	
11						
12						
13						
14		Becomes wet at 15 feet.				
15			No Odor	50.0 *	2.4	
16						
17						
18						
19						
20			No Odor	50.0 *	3.3	
21						
22		Boring terminated at 21 feet. 2-inch PVC monitoring well built as shown.				
23						
24						
25						

Note: This borehole log has been prepared for geotechnical purposes. This information pertains only to this boring location and should not be interpeted as being indicative of other areas of the site.



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LOG OF MONITORING WELL MW-203

Figure No.

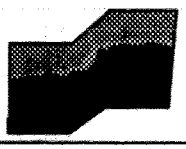
Project: Shilshole Parcels **Project No:** T-6552-1 **Date Drilled:** 9/11/14

Client: **Driller:** BORETEC **Logged By:** NRH

Location: Seattle, Washington **Approx. Elev:** N/A

Depth (ft)	Sample Interval	Soil Description	Odor/Sheen	Blow Count (10 20 30 40)	PID (PPM)	Observ. Well
1–6		FILL: dark gray silty sand with gravel, fine grained, moist, wood and metal debris.	No/No	5.0 *	0.0	
7–11		Gray silty SAND with gravel, fine grained, moist, thin sand lenses. (SM) Becomes wet.	No/No	35.0 *	0.0	
12–16			No/No	50.0 *	0.0	
17–21			No/No	50.0 *	0.0	
22–25		Boring terminated at 21.5 feet. 2-inch PVC monitoring well installed with .010 screen from 10 to 20 feet.				

Note: This borehole log has been prepared for geotechnical purposes. This information pertains only to this boring location and should not be interpeted as being indicative of other areas of the site.



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LOG OF MONITORING WELL MW-204

Figure No.

Project: Shilshole Parcels **Project No:** T-6552-1 **Date Drilled:** 9/11/14

Client: **Driller:** BORETEC **Logged By:** NRH

Location: Seattle, Washington **Approx. Elev:** N/A

Depth (ft)	Sample Interval	Soil Description	Odor/Sheen	Blow Count (10 20 30 40)	PID (PPM)	Observ. Well
1–4		FILL: gray silty sand with gravel, fine grained, moist.				
5			No/No	3.0 *	0.0 ppm	
6–9		Becomes wet.				
10			No/No	7.0 *	0.0 ppm	
11–14						
15			No/No		50.0 * 0.0 ppm	
16–19						
20					50.0 * 0.0 ppm	
21			No/No			
22–25		Boring terminated at 21.5 feet. 2-inch PVC monitoring well installed with .010 screen from 10 to 20 feet.				

Note: This borehole log has been prepared for geotechnical purposes. This information pertains only to this boring location and should not be interpeted as being indicative of other areas of the site.

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LOG OF BORING NO. MW-205

Figure No.

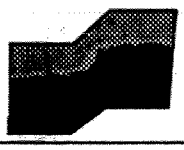
Project: 5221 Ballard Avenue **Project No:** T-6552 **Date Drilled:** 11/3/14

Client: **Driller:** Cascade Drilling **Logged By:** NRH

Location: Ballard, Washington **Approx. Elev:** N/A

Depth (ft)	Sample Interval	Soil Description	Consistency/ Relative Density	Moisture Content % Wp |-----x-----| Wl 10 30 50 70 90	Pocket Penetrometer △ TSF △ 1 2 3 4 / SPT (N) ● Blows/ft ● 10 20 30 40	Observ. Well
1–4		(4 inches CONCRETE SLAB) FILL: tan/brown silt, moist.	Soft			
5–12		FILL: grayish-brown silty sand with gravel, moist.	Loose		5 ● 9 ●	
12–25		Gray silty SAND with gravel, fine to medium grained, moist. (SM) *Continued on Next Page.	Dense		50/6" 50/6" 50/6"	

Note: This borehole log has been prepared for geotechnical purposes. This information pertains only to this boring location and should not be interpeted as being indicative of other areas of the site.



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LOG OF BORING NO. MW-205

Figure No.

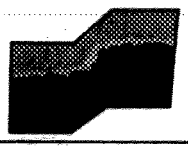
Project: 5221 Ballard Avenue **Project No:** T-6552 **Date Drilled:** 11/3/14

Client: **Driller:** Cascade Drilling **Logged By:** NRH

Location: Ballard, Washington **Approx. Elev:** N/A

Depth (ft)	Sample Interval	Soil Description	Consistency/ Relative Density	Moisture Content % Wp |-----x-----| Wl 10 20 30 40	Pocket Penetrometer △ TSF △ 1 2 3 4 SPT (N) • Blows/ft • 10 20 30 40	Observ. Well
26–50		Becomes wet to saturated.			50/6"	
34–46		Gray SAND, fine to medium grained, wet, occasional gravel. (SP)	Dense		50/6", 50/6", 50/6"	
47–50		Boring terminated at 46.5 feet. 2-inch PVC monitoring well constructed with 0.010 screen from 34 to 44 feet. Sampler driven with 300 ib hammer.				

Note: This borehole log has been prepared for geotechnical purposes. This information pertains only to this boring location and should not be interpeted as being indicative of other areas of the site.



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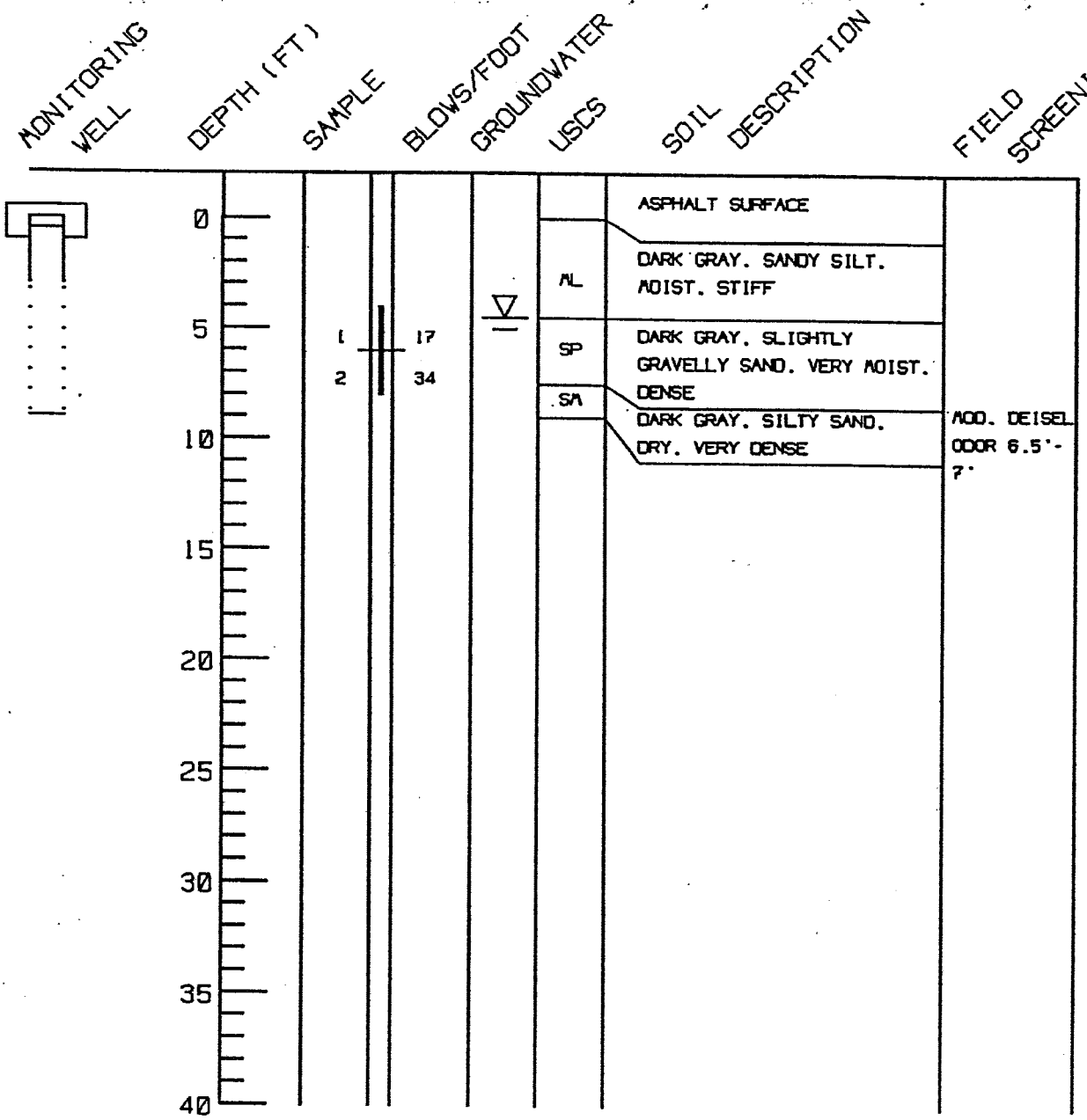
MW-1

There is no well log for MW-1 in the project documents nor in WDOE data base. Our measurements of MW-1 shows that the well had a total depth of 9.59 feet, the screen interval is not known. This well has been lawfully abandoned.

MONITORING WELL MW2

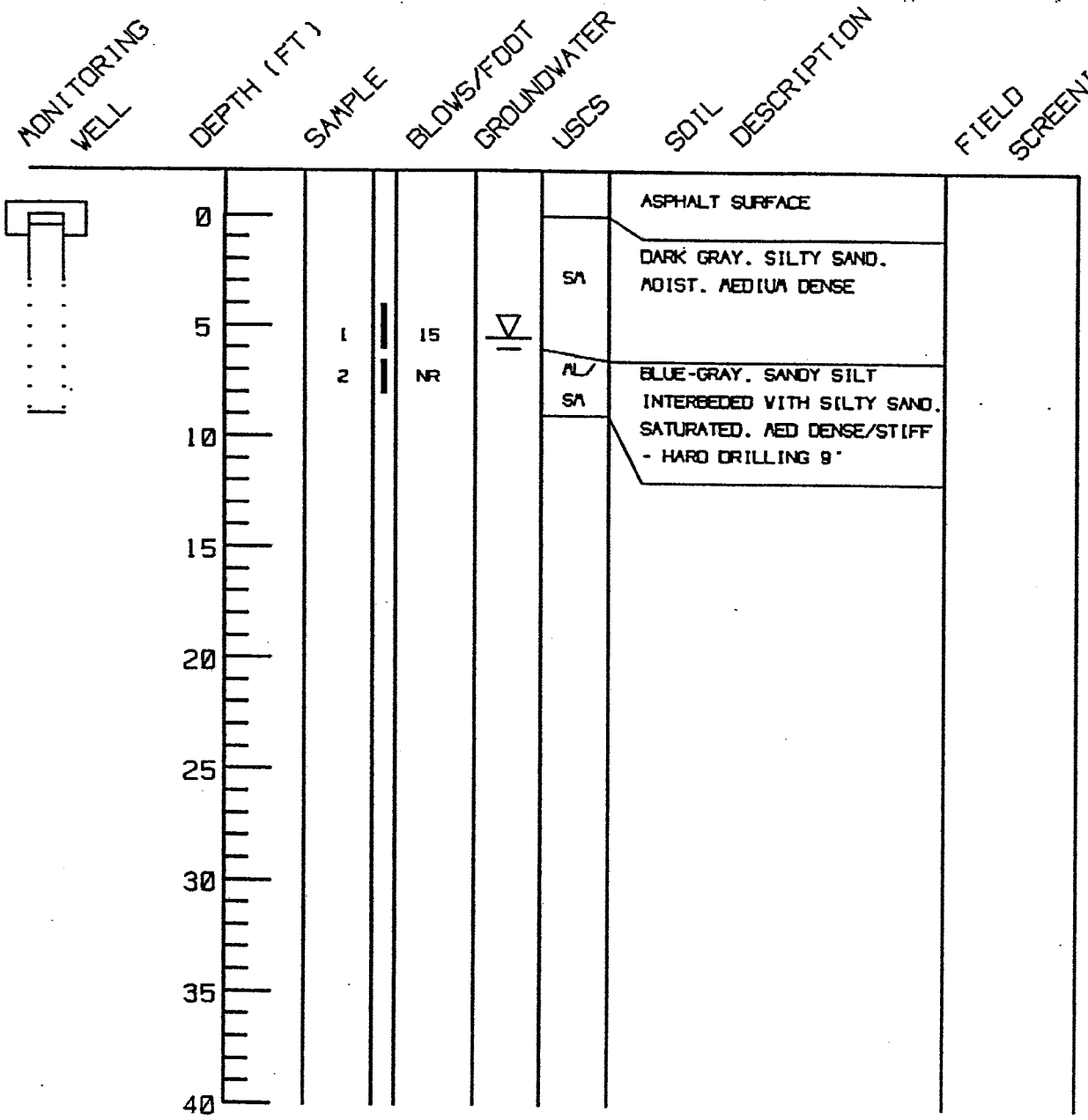


NOTES: - Sample numbering includes prefix indicating monitoring well or boring (e.g.: sample MW1-1 is sample 1 from monitoring well MW1).

- HS indicates results of head space screening. Results in parts per million (ppm). ND denotes none detected.

MONITORING WELL/BORING LOG C & C Paints Seattle, Washington	Columbia Environmental, Inc. Project Number 95603-1 February 1996 *Logged by:* WRS

MONITORING WELL MW3

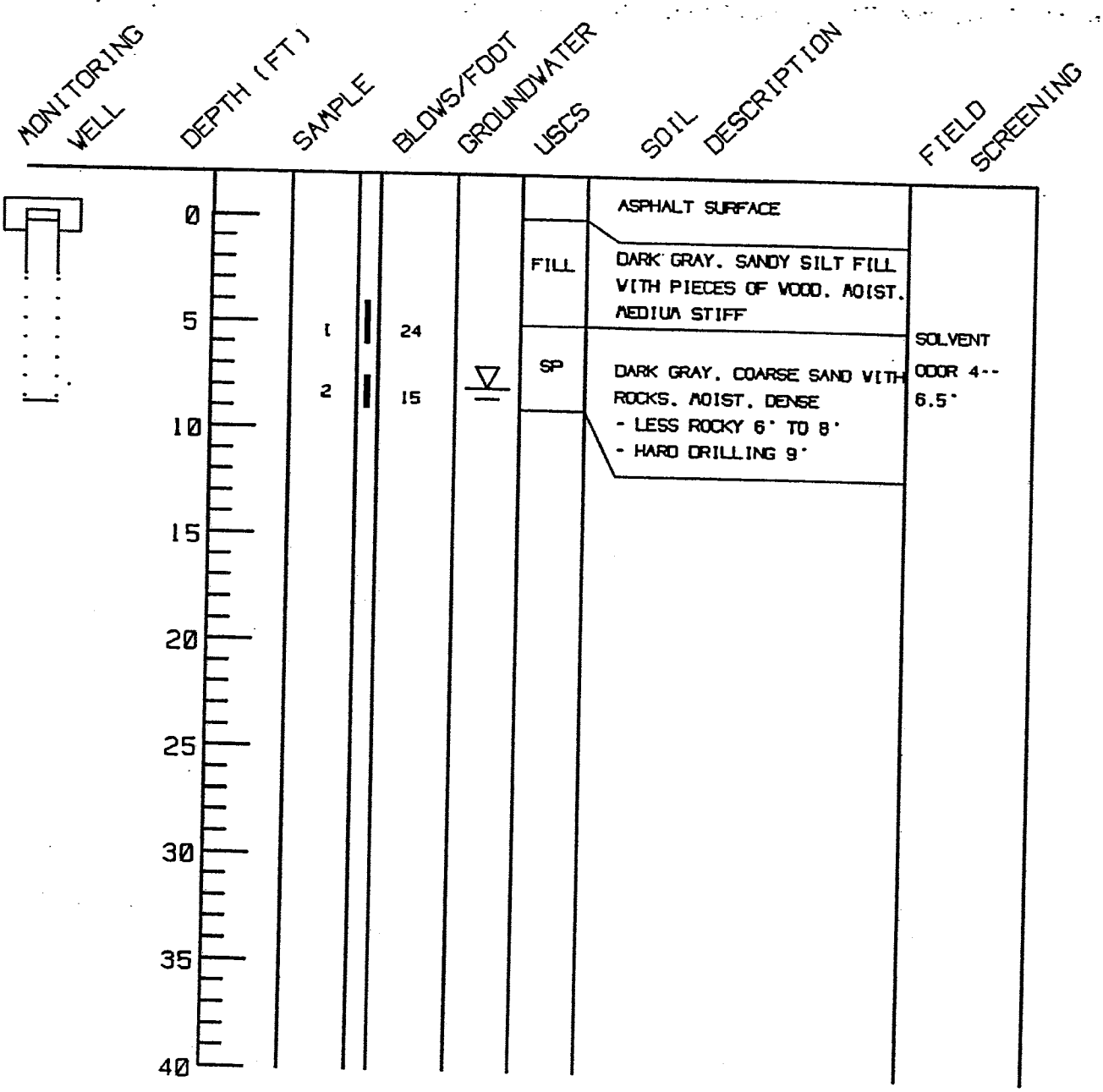


NOTES: - Sample numbering includes prefix indicating monitoring well or boring (e.g.: sample MW1-1 is sample 1 from monitoring well MW1).

- HS indicates results of head space screening. Results in parts per million (ppm). ND denotes none detected.

MONITORING WELL/BORING LOG C & C Paints Seattle, Washington	Columbia Environmental, Inc. Project Number 95603-1 February 1996 *Logged by:* WRS

MONITORING WELL MW4

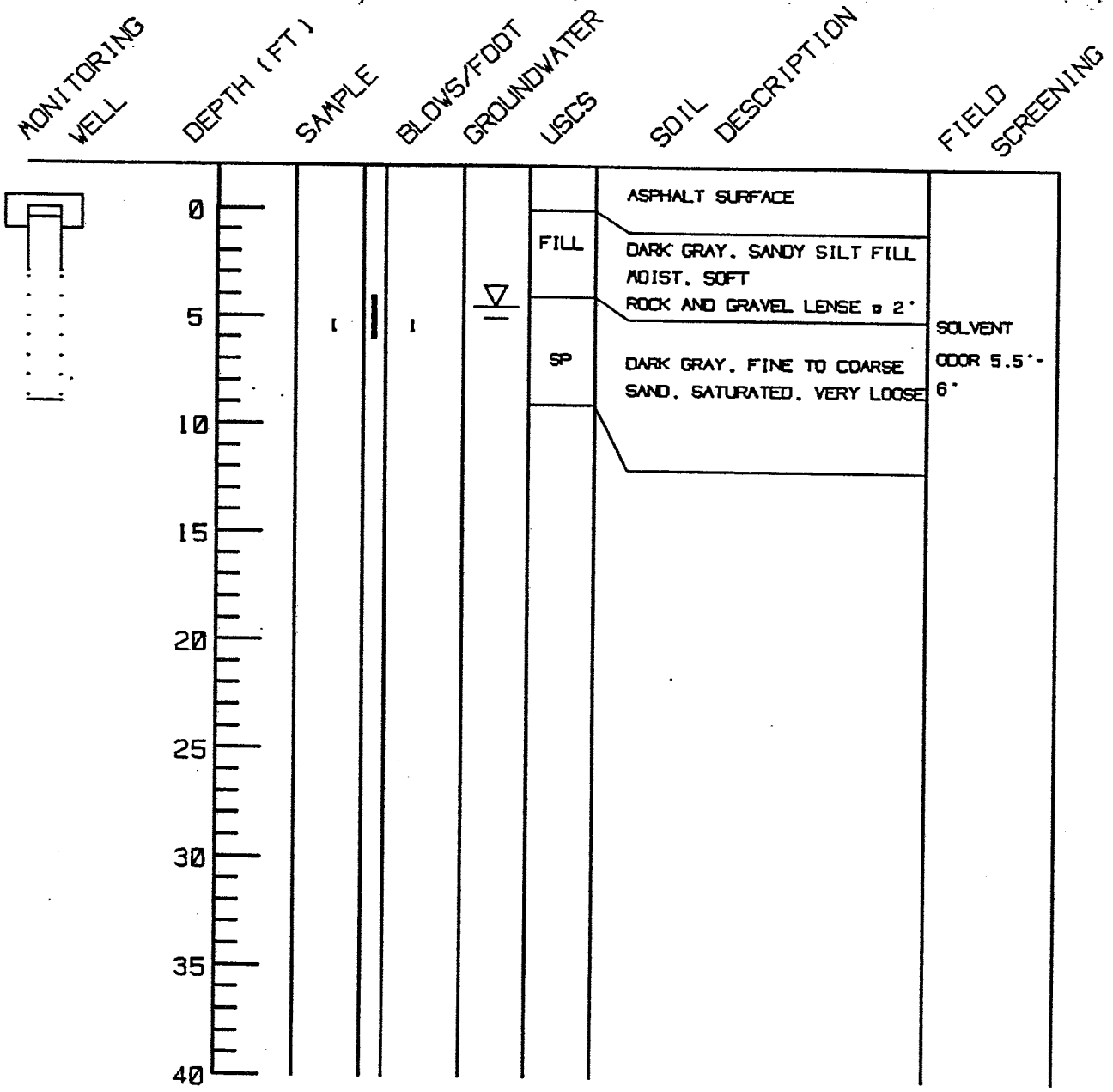


NOTES: - Sample numbering includes prefix indicating monitoring well or boring (e.g.: sample MW1-1 is sample 1 from monitoring well MW1).

- HS indicates results of head space screening. Results in parts per million (ppm). ND denotes none detected.

MONITORING WELL/BORING LOG C & C Paints Seattle, Washington	Columbia Environmental, Inc. Project Number 95603-1 February 1996 *Logged by:* WRS

MONITORING WELL MW5

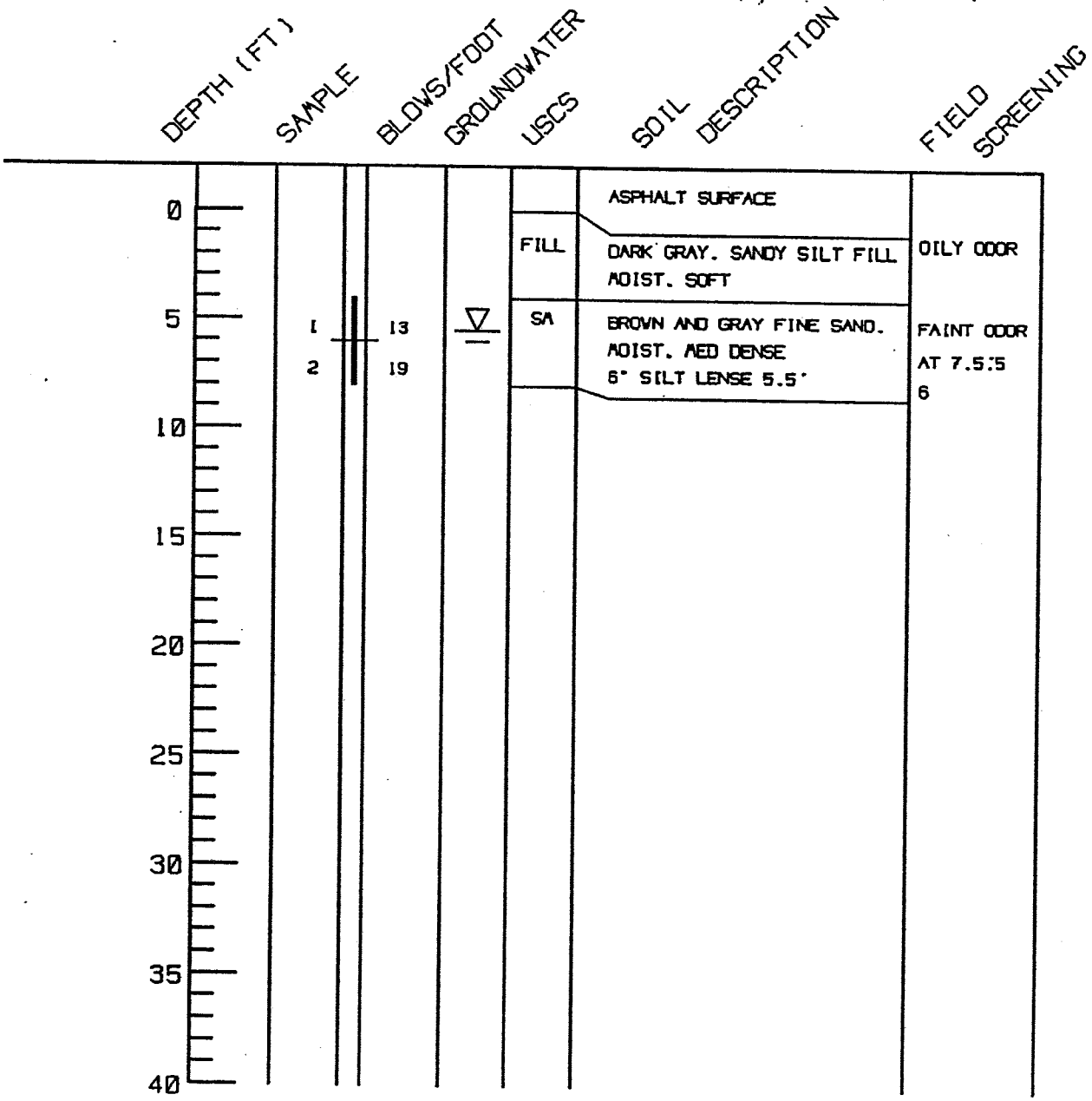


NOTES: - Sample numbering includes prefix indicating monitoring well or boring (e.g.: sample MW1-1 is sample 1 from monitoring well MW1).

- HS indicates results of head space screening. Results in parts per million (ppm). ND denotes none detected.

MONITORING WELL/BORING LOG C & C Paints Seattle, Washington	Columbia Environmental, Inc. Project Number 95603-1 February 1996 *Logged by:* WRS

TEST BORING B6



NOTES: - Sample numbering includes prefix indicating monitoring well or boring (e.g.: sample MW1-1 is sample 1 from monitoring well MW1).

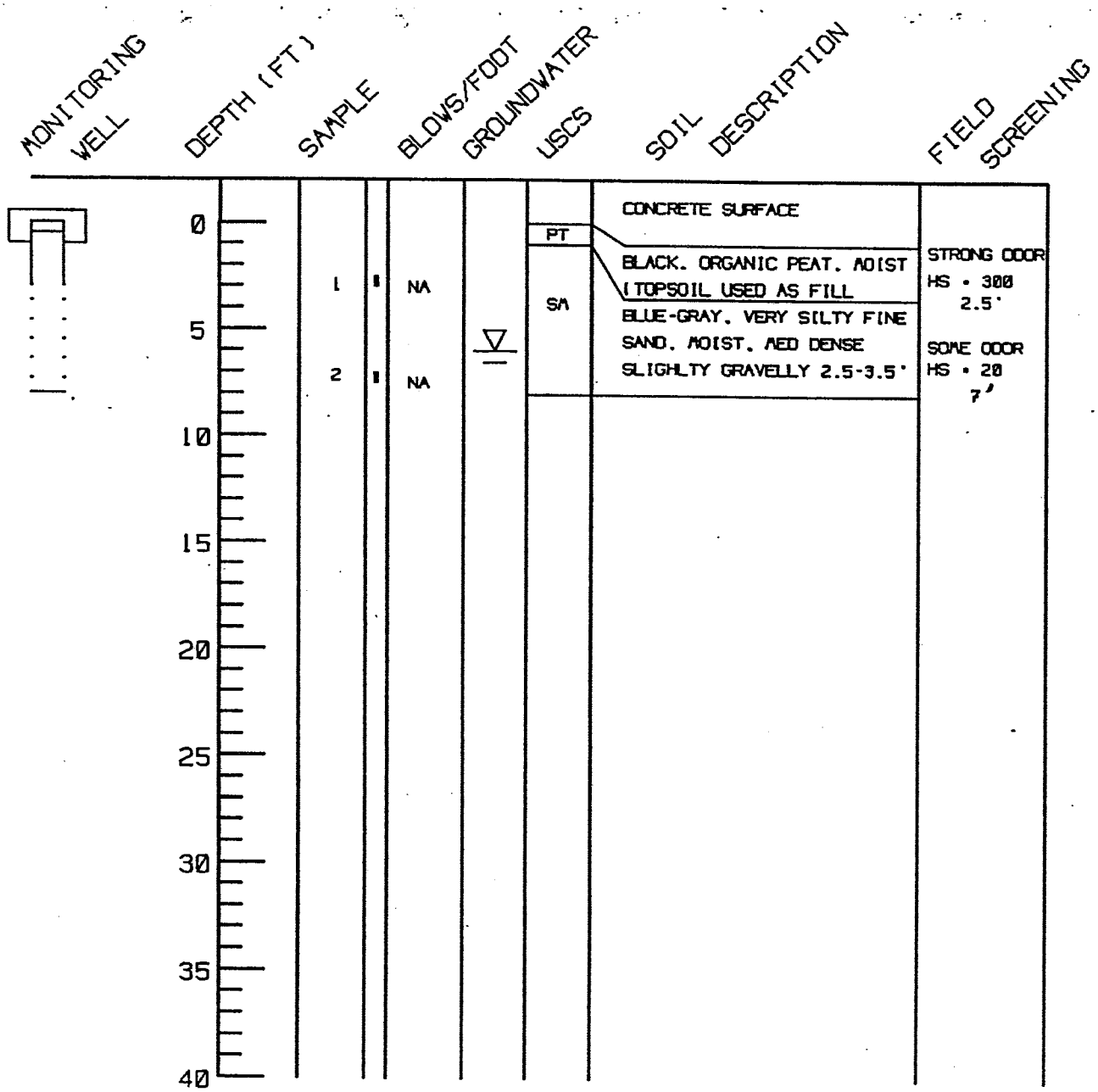
- HS indicates results of head space screening. Results in parts per million (ppm). ND denotes none detected.

MONITORING WELL/BORING LOG C & C Paints Seattle, Washington	Columbia Environmental, Inc. Project Number 95603-1 February 1996 *Logged by:* WRS

MW-6

There is no well log for MW-6 in the project documents nor in WDOE data base. Our measurements of MW-6 shows that the well had a total depth of 15.32 feet, the screen interval is not known. This well remains in service.

MONITORING WELL MW7

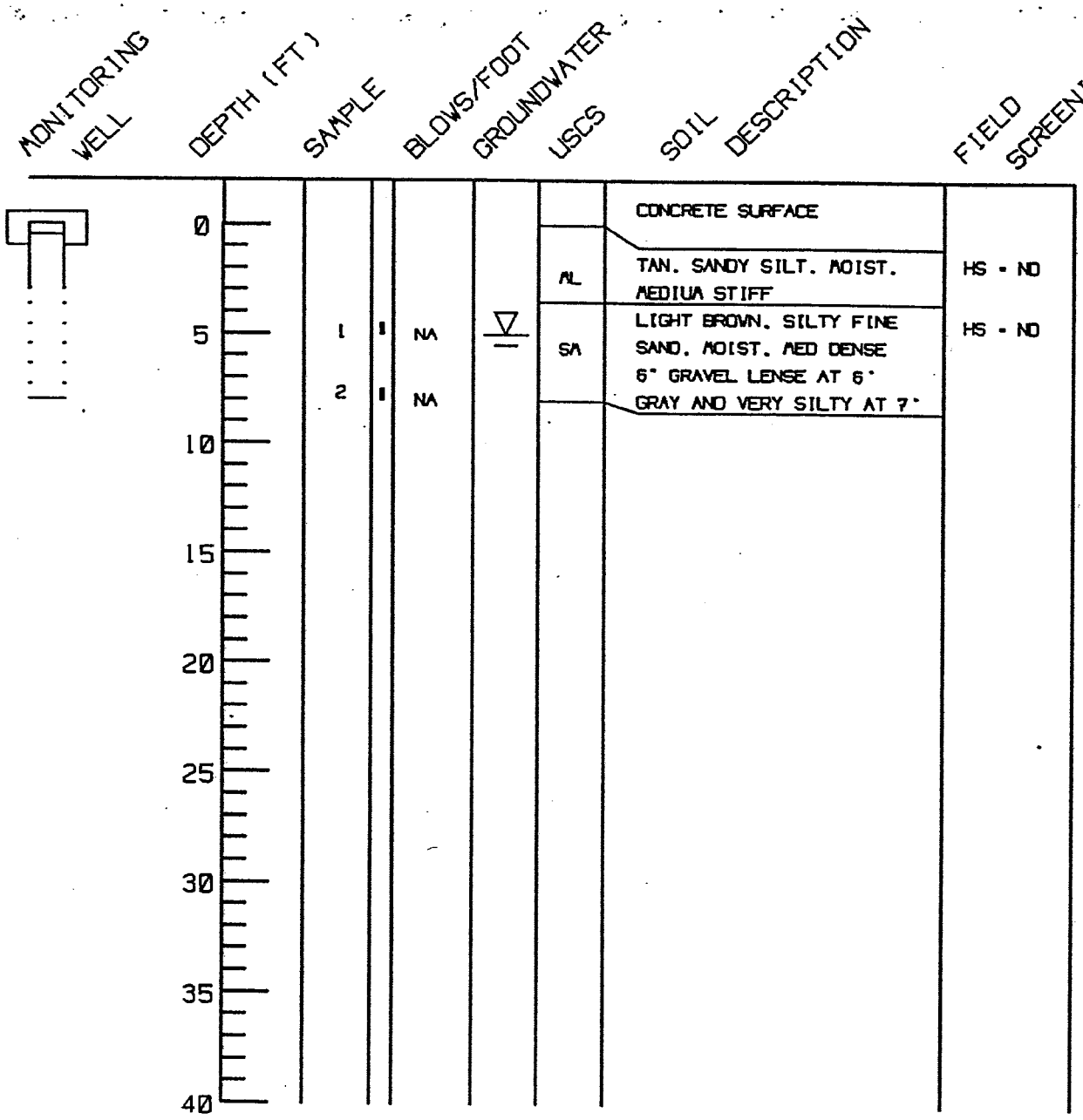


NOTES: - Sample numbering includes prefix indicating monitoring well or boring (e.g.: sample MW1-1 is sample 1 from monitoring well MW1).

- HS indicates results of head space screening. Results in parts per million (ppm). ND denotes none detected.

MONITORING WELL/BORING LOG C & C Paints Seattle, Washington	Columbia Environmental, Inc. Project Number 95603-1 February 1996 *Logged by:* HMP

MONITORING WELL MW8

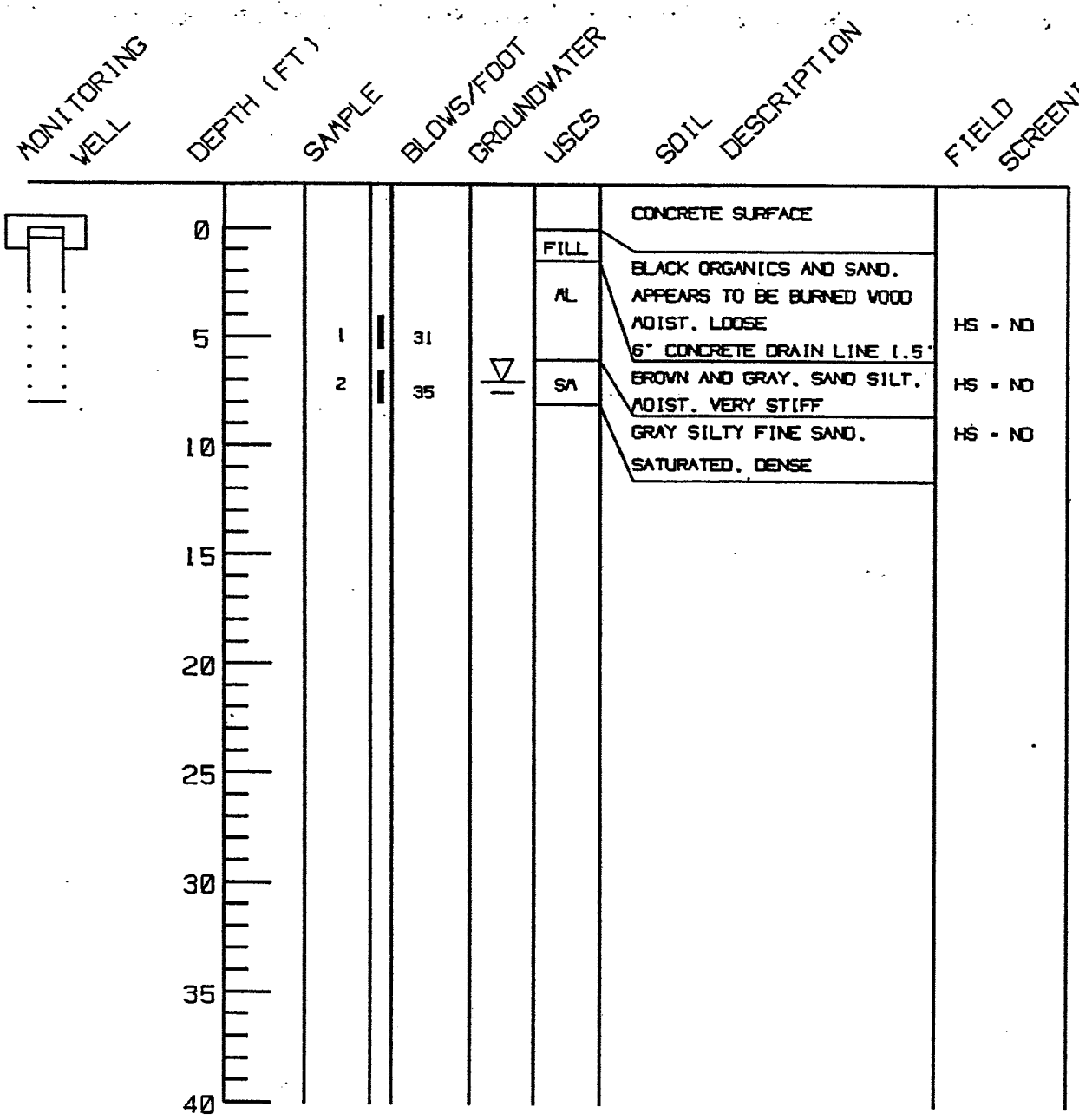


NOTES: - Sample numbering includes prefix indicating monitoring well or boring (e.g.: sample MW1-1 is sample 1 from monitoring well MW1).

- HS indicates results of head space screening. Results in parts per million (ppm). ND denotes none detected.

MONITORING WELL/BORING LOG C & C Paints Seattle, Washington	Columbia Environmental, Inc. Project Number 95603-1 February 1996 *Logged by:* HMP

MONITORING WELL MW9

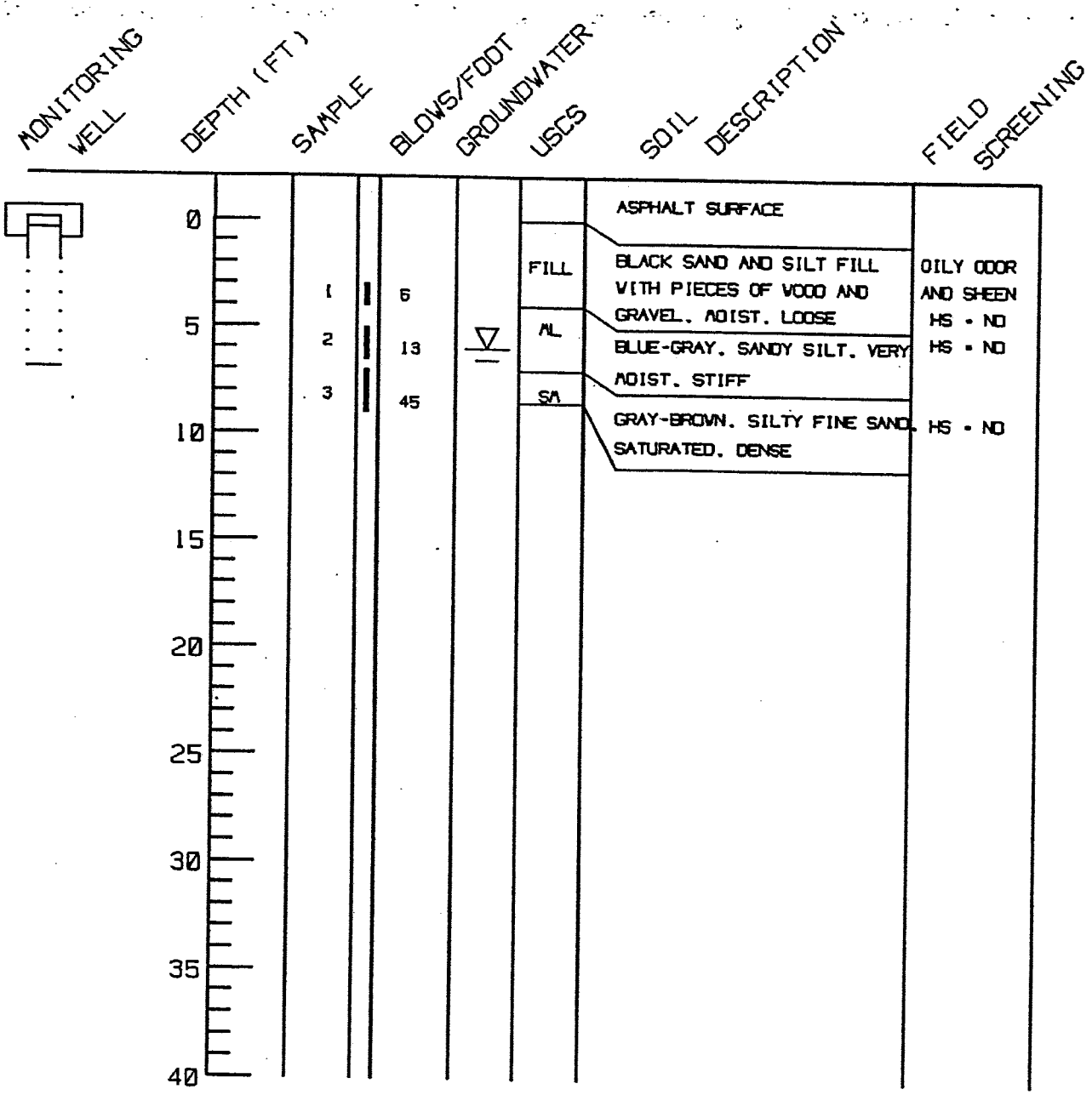


NOTES: - Sample numbering includes prefix indicating monitoring well or boring (e.g.: sample MW1-1 is sample 1 from monitoring well MW1).

- HS indicates results of head space screening. Results in parts per million (ppm). ND denotes none detected.

MONITORING WELL/BORING LOG C & C Paints Seattle, Washington	Columbia Environmental, Inc. Project Number 95603-1 February 1996 *Logged by:* HMP

MONITORING WELL MW10



NOTES: - Sample numbering includes prefix indicating monitoring well or boring (e.g.: sample MW1-1 is sample 1 from monitoring well MW1).

- HS indicates results of head space screening. Results in parts per million (ppm). ND denotes none detected.

MONITORING WELL/BORING LOG C & C Paints Seattle, Washington	Columbia Environmental, Inc. Project Number 95603-1 February 1996 *Logged by:* HMP

APPENDIX B
FIELD SAMPLING

5221 Ballard Avenue NW
Seattle, Washington

Groundwater samples have been taken with a peristaltic pump using dedicated tubing and low flow purge methodology. For MW-205, a submersible stainless steel pump is used to purge the well. During groundwater sampling, some basic parameters were monitored. All parameter monitoring by Terra Associates has been done with a flow through cell. The recent and archived groundwater parameters are summarized below in Table B-2.

Table B-2
Groundwater Parameters

Well Number	Date	pH	Conductivity	DO	ORP	Temp.
MW-1	6/21/06	6.19	600	NM	NM	NM
	12/15/06	6.97	NM	NM	NM	NM
	4/29/11	NM	NM	NM	NM	15.8
MW-2	6/21/06	6.97	249	NM	NM	NM
	12/15/06	6.9	NM	NM	NM	NM
MW-3	12/15/06	6.35	NM	NM	NM	NM
MW-4	6/21/06	6.3	484	NM	NM	NM
	12/15/06	6.9	NM	NM	NM	NM
	9/27/13	6.5	654	0.57	-75	20.1
MW-5	6/21/06	6.05	430	NM	NM	NM
	12/15/06	6.85	NM	NM	NM	NM
MW-6	6/21/06	6.67	521	NM	NM	NM
	12/15/06	6.9	NM	NM	NM	NM
	4/29/11	NM	NM	NM	NM	12.6
	9/27/13	6.16	379	0	-2	19.24
	5/27/15	6.27	316	1.82	-19.2	14.51
MW-7	6/21/06	6.7	511	NM	NM	NM
	4/29/11	NM	NM	NM	NM	14.4
MW-8	6/21/06	6.6	579	NM	NM	NM
	12/15/06	7.0	NM	NM	NM	NM
MW-10	12/15/06	6.9	NM	NM	NM	NM
MW-101	5/10/11	NM	NM	NM	NM	15.3
	7/6/11	6.55	148	0.32	-10	16.0
MW-102	5/10/11	NM	NM	NM	NM	15.2
MW-103	5/10/11	NM	NM	NM	NM	16.1
	7/6/11	6.49	113	0.3	-45	16.6
MW-107	7/11/13	6.53	855	0.6	-69	17.03
	9/27/13	7.06	968	0	-94	20.09
	2/20/15	6.91	NM	0.67	-92.2	14.32

Table B-2 (continued)
Groundwater Parameters

Well Number	Date	pH	Conductivity	DO	ORP	Temp.
MW-201						
	2/20/15	7.27	NM	0.89	-9	15.23
	5/27/15	7.01	444	1.94	-50.2	15.16
MW-202						
	2/20/15	6.82	NM	0.71	-82.3	14.61
	5/27/15	6.62	638	0.68	-58.1	14.88
MW-203						
	2/20/15	6.95	NM	0.56	-116.7	14.67
	5/27/15	6.52	526	1.01	-57.1	15.83
MW-204						
	2/20/15	6.7	NM	0.84	-98.4	14.4
	5/27/15	6.55	489	0.7	-83.5	15.87
MW-205						
	2/20/15	7.02	NM	0.88	46.2	16.24
	5/28/15	6.73	297	1.22	136.1	15.38

Notes: Data prior to 2011 was collected by others.
DO is measured in ppm.
ORP is measured in milli volts.
Conductivity is measured in micro Siemens.
pH is in standard units.
Temperature is in degrees Celsius.

APPENDIX C
ANALYTICAL TESTING
GROUNDWATER

5221 Ballard Avenue NW
Seattle, Washington

All groundwater samples were placed into laboratory-prepared glassware. Each sample was given unique sample identification. All samples were kept refrigerated pending delivery to OnSite Environmental Inc. in Redmond, Washington. Chain of custody protocols were followed for all samples. OnSite Environmental Inc. has accreditation from Ecology for all of the testing performed during this project.

All testing was performed within the designated holding times. At the laboratory, standard quality control procedures were followed. The procedures consisted of sample blanks, duplicates, and matrix spikes. All testing was within normal standards.

Based on our review of the laboratory data, it is our opinion that the results are acceptable for current use. Only analytical test report that have not been included in prior reports are included in this appendix.

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

May 18, 2011

Chuck Lie
Terra Associates, Inc.
12525 Willows Road, Suite 101
Kirkland, WA 98034

Re: Analytical Data for Project 6552-1
Laboratory Reference No. 1105-082

Dear Chuck:

Enclosed are the analytical results and associated quality control data for samples submitted on May 10, 2011.

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,

David Baumeister
Project Manager

Enclosures

Date of Report: May 18, 2011
Samples Submitted: May 10, 2011
Laboratory Reference: 1105-082
Project: 6552-1

Case Narrative

Samples were collected on May 10, 2011 and received by the laboratory on May 10, 2011. 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: May 18, 2011
Samples Submitted: May 10, 2011
Laboratory Reference: 1105-082
Project: 6552-1

NWTPH-Gx

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-101**					
Laboratory ID:	05-082-01					
Gasoline	**160**	100	NWTPH-Gx	5-11-11	5-11-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*100*	*73-121*				
Client ID:	**MW-102**					
Laboratory ID:	05-082-02					
Gasoline	**ND**	500	NWTPH-Gx	5-11-11	5-11-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*98*	*73-121*				
Client ID:	**MW-103**					
Laboratory ID:	05-082-03					
Gasoline	**940**	500	NWTPH-Gx	5-11-11	5-11-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*97*	*73-121*				

Date of Report: May 18, 2011
Samples Submitted: May 10, 2011
Laboratory Reference: 1105-082
Project: 6552-1

NWTPH-Gx
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0511W1					
Gasoline	ND	100	NWTPH-Gx	5-11-11	5-11-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*99*	*73-121*				

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	05-082-01								
	ORIG	DUP							
Gasoline	160	153	NA	NA	NA	NA	4	30	
Surrogate:									
Fluorobenzene					*100*	*100*	*73-121*		

Date of Report: May 18, 2011
Samples Submitted: May 10, 2011
Laboratory Reference: 1105-082
Project: 6552-1

NWTPH-Dx
(with acid/silica gel clean-up)

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-101**					
Laboratory ID:	05-082-01					
Diesel Range Organics	**ND**	0.26	NWTPH-Dx	5-17-11	5-17-11	
Lube Oil Range Organics	**ND**	0.41	NWTPH-Dx	5-17-11	5-17-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*100*	*50-150*				
Client ID:	**MW-102**					
Laboratory ID:	05-082-02					
Diesel Range Organics	**ND**	0.27	NWTPH-Dx	5-17-11	5-17-11	U1
Lube Oil Range Organics	**ND**	0.41	NWTPH-Dx	5-17-11	5-17-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*106*	*50-150*				
Client ID:	**MW-103**					
Laboratory ID:	05-082-03					
Diesel Range Organics	**ND**	0.70	NWTPH-Dx	5-17-11	5-17-11	U1
Lube Oil Range Organics	**ND**	0.42	NWTPH-Dx	5-17-11	5-17-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*102*	*50-150*				

Date of Report: May 18, 2011
Samples Submitted: May 10, 2011
Laboratory Reference: 1105-082
Project: 6552-1

NWTPH-Dx
QUALITY CONTROL
(with acid/silica gel clean-up)

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0517W1					
Diesel Range Organics	ND	0.25	NWTPH-Dx	5-17-11	5-17-11	
Lube Oil Range Organics	ND	0.40	NWTPH-Dx	5-17-11	5-17-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*102*	*50-150*				

Analyte	Result		Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE							
Laboratory ID:	05-082-01						
	ORIG	DUP					
Diesel Range Organics	ND	ND			NA	NA	
Lube Oil Range Organics	ND	ND			NA	NA	
Surrogate:							
o-Terphenyl			*100* *101*	*50-150*			

Date of Report: May 18, 2011
Samples Submitted: May 10, 2011
Laboratory Reference: 1105-082
Project: 6552-1

VOLATILES by EPA 8260B
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-101**					
Laboratory ID:	05-082-01					
Dichlorodifluoromethane	ND	0.20	EPA 8260	5-12-11	5-12-11	
Chloromethane	ND	1.0	EPA 8260	5-12-11	5-12-11	
Vinyl Chloride	ND	0.20	EPA 8260	5-12-11	5-12-11	
Bromomethane	ND	0.20	EPA 8260	5-12-11	5-12-11	
Chloroethane	ND	1.0	EPA 8260	5-12-11	5-12-11	
Trichlorofluoromethane	ND	0.20	EPA 8260	5-12-11	5-12-11	
1,1-Dichloroethene	ND	0.20	EPA 8260	5-12-11	5-12-11	
Acetone	ND	5.0	EPA 8260	5-12-11	5-12-11	
Iodomethane	ND	1.0	EPA 8260	5-12-11	5-12-11	
Carbon Disulfide	ND	0.20	EPA 8260	5-12-11	5-12-11	
Methylene Chloride	ND	1.0	EPA 8260	5-12-11	5-12-11	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260	5-12-11	5-12-11	
Methyl t-Butyl Ether	ND	0.20	EPA 8260	5-12-11	5-12-11	
1,1-Dichloroethane	0.49	0.20	EPA 8260	5-12-11	5-12-11	
Vinyl Acetate	ND	2.0	EPA 8260	5-12-11	5-12-11	
2,2-Dichloropropane	ND	0.20	EPA 8260	5-12-11	5-12-11	
(cis) 1,2-Dichloroethene	0.39	0.20	EPA 8260	5-12-11	5-12-11	
2-Butanone	ND	5.0	EPA 8260	5-12-11	5-12-11	
Bromochloromethane	ND	0.20	EPA 8260	5-12-11	5-12-11	
Chloroform	1.1	0.20	EPA 8260	5-12-11	5-12-11	
1,1,1-Trichloroethane	ND	0.20	EPA 8260	5-12-11	5-12-11	
Carbon Tetrachloride	ND	0.20	EPA 8260	5-12-11	5-12-11	
1,1-Dichloropropene	ND	0.20	EPA 8260	5-12-11	5-12-11	
Benzene	1.3	0.20	EPA 8260	5-12-11	5-12-11	
1,2-Dichloroethane	ND	0.20	EPA 8260	5-12-11	5-12-11	
Trichloroethene	ND	0.20	EPA 8260	5-12-11	5-12-11	
1,2-Dichloropropane	ND	0.20	EPA 8260	5-12-11	5-12-11	
Dibromomethane	ND	0.20	EPA 8260	5-12-11	5-12-11	
Bromodichloromethane	ND	0.20	EPA 8260	5-12-11	5-12-11	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260	5-12-11	5-12-11	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260	5-12-11	5-12-11	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260	5-12-11	5-12-11	
Toluene	ND	1.0	EPA 8260	5-12-11	5-12-11	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260	5-12-11	5-12-11	

Date of Report: May 18, 2011
Samples Submitted: May 10, 2011
Laboratory Reference: 1105-082
Project: 6552-1

VOLATILES by EPA 8260B
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-101**					
Laboratory ID:	05-082-01					
1,1,2-Trichloroethane	ND	0.20	EPA 8260	5-12-11	5-12-11	
Tetrachloroethene	ND	0.20	EPA 8260	5-12-11	5-12-11	
1,3-Dichloropropane	ND	0.20	EPA 8260	5-12-11	5-12-11	
2-Hexanone	ND	2.0	EPA 8260	5-12-11	5-12-11	
Dibromochloromethane	ND	0.20	EPA 8260	5-12-11	5-12-11	
1,2-Dibromoethane	ND	0.20	EPA 8260	5-12-11	5-12-11	
Chlorobenzene	ND	0.20	EPA 8260	5-12-11	5-12-11	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260	5-12-11	5-12-11	
Ethylbenzene	0.95	0.20	EPA 8260	5-12-11	5-12-11	
m,p-Xylene	1.5	0.40	EPA 8260	5-12-11	5-12-11	
o-Xylene	ND	0.20	EPA 8260	5-12-11	5-12-11	
Styrene	ND	0.20	EPA 8260	5-12-11	5-12-11	
Bromoform	ND	1.0	EPA 8260	5-12-11	5-12-11	
Isopropylbenzene	1.1	0.20	EPA 8260	5-12-11	5-12-11	
Bromobenzene	ND	0.20	EPA 8260	5-12-11	5-12-11	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260	5-12-11	5-12-11	
1,2,3-Trichloropropane	ND	0.20	EPA 8260	5-12-11	5-12-11	
n-Propylbenzene	1.1	0.20	EPA 8260	5-12-11	5-12-11	
2-Chlorotoluene	ND	0.20	EPA 8260	5-12-11	5-12-11	
4-Chlorotoluene	ND	0.20	EPA 8260	5-12-11	5-12-11	
1,3,5-Trimethylbenzene	0.77	0.20	EPA 8260	5-12-11	5-12-11	
tert-Butylbenzene	ND	0.20	EPA 8260	5-12-11	5-12-11	
1,2,4-Trimethylbenzene	5.2	0.20	EPA 8260	5-12-11	5-12-11	
sec-Butylbenzene	ND	0.20	EPA 8260	5-12-11	5-12-11	
1,3-Dichlorobenzene	ND	0.20	EPA 8260	5-12-11	5-12-11	
p-Isopropyltoluene	ND	0.20	EPA 8260	5-12-11	5-12-11	
1,4-Dichlorobenzene	ND	0.20	EPA 8260	5-12-11	5-12-11	
1,2-Dichlorobenzene	ND	0.20	EPA 8260	5-12-11	5-12-11	
n-Butylbenzene	ND	0.20	EPA 8260	5-12-11	5-12-11	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260	5-12-11	5-12-11	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260	5-12-11	5-12-11	
Hexachlorobutadiene	ND	0.20	EPA 8260	5-12-11	5-12-11	
Naphthalene	ND	1.0	EPA 8260	5-12-11	5-12-11	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260	5-12-11	5-12-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*88*	*68-107*				
Toluene-d8	*90*	*73-102*				
4-Bromofluorobenzene	*88*	*65-104*				

Date of Report: May 18, 2011
Samples Submitted: May 10, 2011
Laboratory Reference: 1105-082
Project: 6552-1

VOLATILES by EPA 8260B
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-102**					
Laboratory ID:	05-082-02					
Dichlorodifluoromethane	ND	0.20	EPA 8260	5-12-11	5-12-11	
Chloromethane	ND	1.0	EPA 8260	5-12-11	5-12-11	
Vinyl Chloride	ND	0.20	EPA 8260	5-12-11	5-12-11	
Bromomethane	ND	0.20	EPA 8260	5-12-11	5-12-11	
Chloroethane	ND	1.0	EPA 8260	5-12-11	5-12-11	
Trichlorofluoromethane	ND	0.20	EPA 8260	5-12-11	5-12-11	
1,1-Dichloroethene	ND	0.20	EPA 8260	5-12-11	5-12-11	
Acetone	ND	5.0	EPA 8260	5-12-11	5-12-11	
Iodomethane	ND	1.0	EPA 8260	5-12-11	5-12-11	
Carbon Disulfide	ND	0.20	EPA 8260	5-12-11	5-12-11	
Methylene Chloride	ND	1.0	EPA 8260	5-12-11	5-12-11	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260	5-12-11	5-12-11	
Methyl t-Butyl Ether	ND	0.20	EPA 8260	5-12-11	5-12-11	
1,1-Dichloroethane	ND	0.20	EPA 8260	5-12-11	5-12-11	
Vinyl Acetate	ND	2.0	EPA 8260	5-12-11	5-12-11	
2,2-Dichloropropane	ND	0.20	EPA 8260	5-12-11	5-12-11	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260	5-12-11	5-12-11	
2-Butanone	ND	5.0	EPA 8260	5-12-11	5-12-11	
Bromochloromethane	ND	0.20	EPA 8260	5-12-11	5-12-11	
Chloroform	ND	0.20	EPA 8260	5-12-11	5-12-11	
1,1,1-Trichloroethane	ND	0.20	EPA 8260	5-12-11	5-12-11	
Carbon Tetrachloride	ND	0.20	EPA 8260	5-12-11	5-12-11	
1,1-Dichloropropene	ND	0.20	EPA 8260	5-12-11	5-12-11	
Benzene	ND	0.20	EPA 8260	5-12-11	5-12-11	
1,2-Dichloroethane	ND	0.20	EPA 8260	5-12-11	5-12-11	
Trichloroethene	ND	0.20	EPA 8260	5-12-11	5-12-11	
1,2-Dichloropropane	ND	0.20	EPA 8260	5-12-11	5-12-11	
Dibromomethane	ND	0.20	EPA 8260	5-12-11	5-12-11	
Bromodichloromethane	ND	0.20	EPA 8260	5-12-11	5-12-11	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260	5-12-11	5-12-11	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260	5-12-11	5-12-11	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260	5-12-11	5-12-11	
Toluene	ND	1.0	EPA 8260	5-12-11	5-12-11	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260	5-12-11	5-12-11	

Date of Report: May 18, 2011
Samples Submitted: May 10, 2011
Laboratory Reference: 1105-082
Project: 6552-1

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-102**					
Laboratory ID:	05-082-02					
1,1,2-Trichloroethane	ND	0.20	EPA 8260	5-12-11	5-12-11	
Tetrachloroethene	ND	0.20	EPA 8260	5-12-11	5-12-11	
1,3-Dichloropropane	ND	0.20	EPA 8260	5-12-11	5-12-11	
2-Hexanone	ND	2.0	EPA 8260	5-12-11	5-12-11	
Dibromochloromethane	ND	0.20	EPA 8260	5-12-11	5-12-11	
1,2-Dibromoethane	ND	0.20	EPA 8260	5-12-11	5-12-11	
Chlorobenzene	ND	0.20	EPA 8260	5-12-11	5-12-11	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260	5-12-11	5-12-11	
Ethylbenzene	ND	0.20	EPA 8260	5-12-11	5-12-11	
m,p-Xylene	ND	0.40	EPA 8260	5-12-11	5-12-11	
o-Xylene	ND	0.20	EPA 8260	5-12-11	5-12-11	
Styrene	ND	0.20	EPA 8260	5-12-11	5-12-11	
Bromoform	ND	1.0	EPA 8260	5-12-11	5-12-11	
Isopropylbenzene	ND	0.20	EPA 8260	5-12-11	5-12-11	
Bromobenzene	ND	0.20	EPA 8260	5-12-11	5-12-11	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260	5-12-11	5-12-11	
1,2,3-Trichloropropane	ND	0.20	EPA 8260	5-12-11	5-12-11	
n-Propylbenzene	ND	0.20	EPA 8260	5-12-11	5-12-11	
2-Chlorotoluene	ND	0.20	EPA 8260	5-12-11	5-12-11	
4-Chlorotoluene	ND	0.20	EPA 8260	5-12-11	5-12-11	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260	5-12-11	5-12-11	
tert-Butylbenzene	ND	0.20	EPA 8260	5-12-11	5-12-11	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260	5-12-11	5-12-11	
sec-Butylbenzene	ND	0.20	EPA 8260	5-12-11	5-12-11	
1,3-Dichlorobenzene	ND	0.20	EPA 8260	5-12-11	5-12-11	
p-Isopropyltoluene	ND	0.20	EPA 8260	5-12-11	5-12-11	
1,4-Dichlorobenzene	ND	0.20	EPA 8260	5-12-11	5-12-11	
1,2-Dichlorobenzene	ND	0.20	EPA 8260	5-12-11	5-12-11	
n-Butylbenzene	ND	0.20	EPA 8260	5-12-11	5-12-11	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260	5-12-11	5-12-11	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260	5-12-11	5-12-11	
Hexachlorobutadiene	ND	0.20	EPA 8260	5-12-11	5-12-11	
Naphthalene	ND	1.0	EPA 8260	5-12-11	5-12-11	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260	5-12-11	5-12-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*88*	*68-107*				
Toluene-d8	*90*	*73-102*				
4-Bromofluorobenzene	*88*	*65-104*				

Date of Report: May 18, 2011
Samples Submitted: May 10, 2011
Laboratory Reference: 1105-082
Project: 6552-1

VOLATILES by EPA 8260B
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Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-103**					
Laboratory ID:	05-082-03					
Dichlorodifluoromethane	ND	0.20	EPA 8260	5-12-11	5-12-11	
Chloromethane	ND	1.0	EPA 8260	5-12-11	5-12-11	
Vinyl Chloride	ND	0.20	EPA 8260	5-12-11	5-12-11	
Bromomethane	ND	0.20	EPA 8260	5-12-11	5-12-11	
Chloroethane	ND	1.0	EPA 8260	5-12-11	5-12-11	
Trichlorofluoromethane	ND	0.20	EPA 8260	5-12-11	5-12-11	
1,1-Dichloroethene	ND	0.20	EPA 8260	5-12-11	5-12-11	
Acetone	ND	5.0	EPA 8260	5-12-11	5-12-11	
Iodomethane	ND	1.0	EPA 8260	5-12-11	5-12-11	
Carbon Disulfide	ND	0.20	EPA 8260	5-12-11	5-12-11	
Methylene Chloride	ND	1.0	EPA 8260	5-12-11	5-12-11	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260	5-12-11	5-12-11	
Methyl t-Butyl Ether	ND	0.20	EPA 8260	5-12-11	5-12-11	
1,1-Dichloroethane	ND	0.20	EPA 8260	5-12-11	5-12-11	
Vinyl Acetate	ND	2.0	EPA 8260	5-12-11	5-12-11	
2,2-Dichloropropane	ND	0.20	EPA 8260	5-12-11	5-12-11	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260	5-12-11	5-12-11	
2-Butanone	ND	5.0	EPA 8260	5-12-11	5-12-11	
Bromochloromethane	ND	0.20	EPA 8260	5-12-11	5-12-11	
Chloroform	ND	0.20	EPA 8260	5-12-11	5-12-11	
1,1,1-Trichloroethane	ND	0.20	EPA 8260	5-12-11	5-12-11	
Carbon Tetrachloride	ND	0.20	EPA 8260	5-12-11	5-12-11	
1,1-Dichloropropene	ND	0.20	EPA 8260	5-12-11	5-12-11	
Benzene	ND	0.20	EPA 8260	5-12-11	5-12-11	
1,2-Dichloroethane	ND	0.20	EPA 8260	5-12-11	5-12-11	
Trichloroethene	ND	0.20	EPA 8260	5-12-11	5-12-11	
1,2-Dichloropropane	ND	0.20	EPA 8260	5-12-11	5-12-11	
Dibromomethane	ND	0.20	EPA 8260	5-12-11	5-12-11	
Bromodichloromethane	ND	0.20	EPA 8260	5-12-11	5-12-11	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260	5-12-11	5-12-11	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260	5-12-11	5-12-11	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260	5-12-11	5-12-11	
Toluene	ND	1.0	EPA 8260	5-12-11	5-12-11	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260	5-12-11	5-12-11	

Date of Report: May 18, 2011
Samples Submitted: May 10, 2011
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-103**					
Laboratory ID:	05-082-03					
1,1,2-Trichloroethane	ND	0.20	EPA 8260	5-12-11	5-12-11	
Tetrachloroethene	ND	0.20	EPA 8260	5-12-11	5-12-11	
1,3-Dichloropropane	ND	0.20	EPA 8260	5-12-11	5-12-11	
2-Hexanone	ND	2.0	EPA 8260	5-12-11	5-12-11	
Dibromochloromethane	ND	0.20	EPA 8260	5-12-11	5-12-11	
1,2-Dibromoethane	ND	0.20	EPA 8260	5-12-11	5-12-11	
Chlorobenzene	ND	0.20	EPA 8260	5-12-11	5-12-11	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260	5-12-11	5-12-11	
Ethylbenzene	ND	0.20	EPA 8260	5-12-11	5-12-11	
m,p-Xylene	ND	0.40	EPA 8260	5-12-11	5-12-11	
o-Xylene	ND	0.20	EPA 8260	5-12-11	5-12-11	
Styrene	ND	0.20	EPA 8260	5-12-11	5-12-11	
Bromoform	ND	1.0	EPA 8260	5-12-11	5-12-11	
Isopropylbenzene	ND	0.20	EPA 8260	5-12-11	5-12-11	
Bromobenzene	ND	0.20	EPA 8260	5-12-11	5-12-11	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260	5-12-11	5-12-11	
1,2,3-Trichloropropane	ND	0.20	EPA 8260	5-12-11	5-12-11	
n-Propylbenzene	ND	0.20	EPA 8260	5-12-11	5-12-11	
2-Chlorotoluene	ND	0.20	EPA 8260	5-12-11	5-12-11	
4-Chlorotoluene	ND	0.20	EPA 8260	5-12-11	5-12-11	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260	5-12-11	5-12-11	
tert-Butylbenzene	ND	0.20	EPA 8260	5-12-11	5-12-11	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260	5-12-11	5-12-11	
sec-Butylbenzene	ND	0.20	EPA 8260	5-12-11	5-12-11	
1,3-Dichlorobenzene	ND	0.20	EPA 8260	5-12-11	5-12-11	
p-Isopropyltoluene	ND	0.20	EPA 8260	5-12-11	5-12-11	
1,4-Dichlorobenzene	ND	0.20	EPA 8260	5-12-11	5-12-11	
1,2-Dichlorobenzene	ND	0.20	EPA 8260	5-12-11	5-12-11	
n-Butylbenzene	ND	0.20	EPA 8260	5-12-11	5-12-11	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260	5-12-11	5-12-11	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260	5-12-11	5-12-11	
Hexachlorobutadiene	ND	0.20	EPA 8260	5-12-11	5-12-11	
Naphthalene	ND	1.0	EPA 8260	5-12-11	5-12-11	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260	5-12-11	5-12-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*84*	*68-107*				
Toluene-d8	*88*	*73-102*				
4-Bromofluorobenzene	*86*	*65-104*				

Date of Report: May 18, 2011
Samples Submitted: May 10, 2011
Laboratory Reference: 1105-082
Project: 6552-1

VOLATILES by EPA 8260B
METHOD BLANK QUALITY CONTROL
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0512W1					
Dichlorodifluoromethane	ND	0.20	EPA 8260	5-12-11	5-12-11	
Chloromethane	ND	1.0	EPA 8260	5-12-11	5-12-11	
Vinyl Chloride	ND	0.20	EPA 8260	5-12-11	5-12-11	
Bromomethane	ND	0.20	EPA 8260	5-12-11	5-12-11	
Chloroethane	ND	1.0	EPA 8260	5-12-11	5-12-11	
Trichlorofluoromethane	ND	0.20	EPA 8260	5-12-11	5-12-11	
1,1-Dichloroethene	ND	0.20	EPA 8260	5-12-11	5-12-11	
Acetone	ND	5.0	EPA 8260	5-12-11	5-12-11	
Iodomethane	ND	1.0	EPA 8260	5-12-11	5-12-11	
Carbon Disulfide	ND	0.20	EPA 8260	5-12-11	5-12-11	
Methylene Chloride	ND	1.0	EPA 8260	5-12-11	5-12-11	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260	5-12-11	5-12-11	
Methyl t-Butyl Ether	ND	0.20	EPA 8260	5-12-11	5-12-11	
1,1-Dichloroethane	ND	0.20	EPA 8260	5-12-11	5-12-11	
Vinyl Acetate	ND	2.0	EPA 8260	5-12-11	5-12-11	
2,2-Dichloropropane	ND	0.20	EPA 8260	5-12-11	5-12-11	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260	5-12-11	5-12-11	
2-Butanone	ND	5.0	EPA 8260	5-12-11	5-12-11	
Bromochloromethane	ND	0.20	EPA 8260	5-12-11	5-12-11	
Chloroform	ND	0.20	EPA 8260	5-12-11	5-12-11	
1,1,1-Trichloroethane	ND	0.20	EPA 8260	5-12-11	5-12-11	
Carbon Tetrachloride	ND	0.20	EPA 8260	5-12-11	5-12-11	
1,1-Dichloropropene	ND	0.20	EPA 8260	5-12-11	5-12-11	
Benzene	ND	0.20	EPA 8260	5-12-11	5-12-11	
1,2-Dichloroethane	ND	0.20	EPA 8260	5-12-11	5-12-11	
Trichloroethene	ND	0.20	EPA 8260	5-12-11	5-12-11	
1,2-Dichloropropane	ND	0.20	EPA 8260	5-12-11	5-12-11	
Dibromomethane	ND	0.20	EPA 8260	5-12-11	5-12-11	
Bromodichloromethane	ND	0.20	EPA 8260	5-12-11	5-12-11	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260	5-12-11	5-12-11	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260	5-12-11	5-12-11	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260	5-12-11	5-12-11	
Toluene	ND	1.0	EPA 8260	5-12-11	5-12-11	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260	5-12-11	5-12-11	

Date of Report: May 18, 2011
Samples Submitted: May 10, 2011
Laboratory Reference: 1105-082
Project: 6552-1

VOLATILES by EPA 8260B
METHOD BLANK QUALITY CONTROL
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0512W1					
1,1,2-Trichloroethane	ND	0.20	EPA 8260	5-12-11	5-12-11	
Tetrachloroethene	ND	0.20	EPA 8260	5-12-11	5-12-11	
1,3-Dichloropropane	ND	0.20	EPA 8260	5-12-11	5-12-11	
2-Hexanone	ND	2.0	EPA 8260	5-12-11	5-12-11	
Dibromochloromethane	ND	0.20	EPA 8260	5-12-11	5-12-11	
1,2-Dibromoethane	ND	0.20	EPA 8260	5-12-11	5-12-11	
Chlorobenzene	ND	0.20	EPA 8260	5-12-11	5-12-11	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260	5-12-11	5-12-11	
Ethylbenzene	ND	0.20	EPA 8260	5-12-11	5-12-11	
m,p-Xylene	ND	0.40	EPA 8260	5-12-11	5-12-11	
o-Xylene	ND	0.20	EPA 8260	5-12-11	5-12-11	
Styrene	ND	0.20	EPA 8260	5-12-11	5-12-11	
Bromoform	ND	1.0	EPA 8260	5-12-11	5-12-11	
Isopropylbenzene	ND	0.20	EPA 8260	5-12-11	5-12-11	
Bromobenzene	ND	0.20	EPA 8260	5-12-11	5-12-11	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260	5-12-11	5-12-11	
1,2,3-Trichloropropane	ND	0.20	EPA 8260	5-12-11	5-12-11	
n-Propylbenzene	ND	0.20	EPA 8260	5-12-11	5-12-11	
2-Chlorotoluene	ND	0.20	EPA 8260	5-12-11	5-12-11	
4-Chlorotoluene	ND	0.20	EPA 8260	5-12-11	5-12-11	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260	5-12-11	5-12-11	
tert-Butylbenzene	ND	0.20	EPA 8260	5-12-11	5-12-11	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260	5-12-11	5-12-11	
sec-Butylbenzene	ND	0.20	EPA 8260	5-12-11	5-12-11	
1,3-Dichlorobenzene	ND	0.20	EPA 8260	5-12-11	5-12-11	
p-Isopropyltoluene	ND	0.20	EPA 8260	5-12-11	5-12-11	
1,4-Dichlorobenzene	ND	0.20	EPA 8260	5-12-11	5-12-11	
1,2-Dichlorobenzene	ND	0.20	EPA 8260	5-12-11	5-12-11	
n-Butylbenzene	ND	0.20	EPA 8260	5-12-11	5-12-11	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260	5-12-11	5-12-11	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260	5-12-11	5-12-11	
Hexachlorobutadiene	ND	0.20	EPA 8260	5-12-11	5-12-11	
Naphthalene	ND	1.0	EPA 8260	5-12-11	5-12-11	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260	5-12-11	5-12-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*83*	*68-107*				
Toluene-d8	*86*	*73-102*				
4-Bromofluorobenzene	*80*	*65-104*				

Date of Report: May 18, 2011
Samples Submitted: May 10, 2011
Laboratory Reference: 1105-082
Project: 6552-1

VOLATILES by EPA 8260B
SB/SBD QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0512W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**9.43**	**9.82**	10.0	10.0	94	98	70-130	4	11	
Benzene	**9.76**	**9.65**	10.0	10.0	98	97	79-123	1	8	
Trichloroethene	**9.71**	**9.70**	10.0	10.0	97	97	82-113	0	9	
Toluene	**10.3**	**10.1**	10.0	10.0	103	101	84-113	2	8	
Chlorobenzene	**10.4**	**10.4**	10.0	10.0	104	104	89-111	0	8	
Surrogate:										
Dibromofluoromethane					*85*	*85*	*68-107*			
Toluene-d8					*90*	*86*	*73-102*			
4-Bromofluorobenzene					*85*	*82*	*65-104*			

OnSite Environmental Inc.

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.

Y - Sample extract treated with an acid/silica gel cleanup procedure.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

July 8, 2011

Chuck Lie
Terra Associates, Inc.
12525 Willows Road, Suite 101
Kirkland, WA 98034

Re: Analytical Data for Project 6582
Laboratory Reference No. 1106-252

Dear Chuck:

Enclosed are the analytical results and associated quality control data for samples submitted on June 29, 2011.

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,

David Baumeister
Project Manager

Enclosures

Date of Report: July 8, 2011
Samples Submitted: June 29, 2011
Laboratory Reference: 1106-252
Project: 6582

Case Narrative

Samples were collected on June 29, 2011 and received by the laboratory on June 29, 2011. 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: July 8, 2011
Samples Submitted: June 29, 2011
Laboratory Reference: 1106-252
Project: 6582

NWTPH-Gx

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-201**					
Laboratory ID:	06-252-01					
Gasoline	ND	100	NWTPH-Gx	7-1-11	7-1-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*90*	*73-121*				

Date of Report: July 8, 2011
Samples Submitted: June 29, 2011
Laboratory Reference: 1106-252
Project: 6582

NWTPH-Gx
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0701W2					
Gasoline	**ND**	100	NWTPH-Gx	7-1-11	7-1-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*93*	*73-121*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	06-251-02										
	ORIG	DUP									
Gasoline	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Surrogate:											
Fluorobenzene						*91*	*100*	*73-121*			

Date of Report: July 8, 2011
Samples Submitted: June 29, 2011
Laboratory Reference: 1106-252
Project: 6582

NWTPH-Dx
(with acid/silica gel clean-up)

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-201**					
Laboratory ID:	06-252-01					
Diesel Range Organics	**ND**	0.26	NWTPH-Dx	7-5-11	7-7-11	
Lube Oil Range Organics	**ND**	0.41	NWTPH-Dx	7-5-11	7-7-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*95*	*50-150*				

Date of Report: July 8, 2011
Samples Submitted: June 29, 2011
Laboratory Reference: 1106-252
Project: 6582

NWTPH-Dx
QUALITY CONTROL
(with acid/silica gel clean-up)

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0705W1					
Diesel Range Organics	**ND**	0.25	NWTPH-Dx	7-5-11	7-6-11	
Lube Oil Range Organics	**ND**	0.40	NWTPH-Dx	7-5-11	7-6-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*101*	*50-150*				

Analyte	Result		Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE							
Laboratory ID:	06-267-01						
	ORIG	DUP					
Diesel Range Organics	**ND**	**ND**			NA	NA	
Lube Oil Range Organics	**ND**	**ND**			NA	NA	
Surrogate:							
o-Terphenyl			*111* *103*	*50-150*			

Date of Report: July 8, 2011
Samples Submitted: June 29, 2011
Laboratory Reference: 1106-252
Project: 6582

VOLATILES by EPA 8260B
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-201**					
Laboratory ID:	06-252-01					
Dichlorodifluoromethane	ND	0.20	EPA 8260	7-1-11	7-1-11	
Chloromethane	ND	1.0	EPA 8260	7-1-11	7-1-11	
Vinyl Chloride	ND	0.20	EPA 8260	7-1-11	7-1-11	
Bromomethane	ND	0.20	EPA 8260	7-1-11	7-1-11	
Chloroethane	ND	1.0	EPA 8260	7-1-11	7-1-11	
Trichlorofluoromethane	ND	0.20	EPA 8260	7-1-11	7-1-11	
1,1-Dichloroethene	ND	0.20	EPA 8260	7-1-11	7-1-11	
Acetone	ND	5.0	EPA 8260	7-1-11	7-1-11	
Iodomethane	ND	1.0	EPA 8260	7-1-11	7-1-11	
Carbon Disulfide	ND	0.20	EPA 8260	7-1-11	7-1-11	
Methylene Chloride	ND	1.0	EPA 8260	7-1-11	7-1-11	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260	7-1-11	7-1-11	
Methyl t-Butyl Ether	ND	0.20	EPA 8260	7-1-11	7-1-11	
1,1-Dichloroethane	0.23	0.20	EPA 8260	7-1-11	7-1-11	
Vinyl Acetate	ND	2.0	EPA 8260	7-1-11	7-1-11	
2,2-Dichloropropane	ND	0.20	EPA 8260	7-1-11	7-1-11	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260	7-1-11	7-1-11	
2-Butanone	ND	5.0	EPA 8260	7-1-11	7-1-11	
Bromochloromethane	ND	0.20	EPA 8260	7-1-11	7-1-11	
Chloroform	ND	0.20	EPA 8260	7-1-11	7-1-11	
1,1,1-Trichloroethane	ND	0.20	EPA 8260	7-1-11	7-1-11	
Carbon Tetrachloride	ND	0.20	EPA 8260	7-1-11	7-1-11	
1,1-Dichloropropene	ND	0.20	EPA 8260	7-1-11	7-1-11	
Benzene	0.27	0.20	EPA 8260	7-1-11	7-1-11	
1,2-Dichloroethane	ND	0.20	EPA 8260	7-1-11	7-1-11	
Trichloroethene	ND	0.20	EPA 8260	7-1-11	7-1-11	
1,2-Dichloropropane	ND	0.20	EPA 8260	7-1-11	7-1-11	
Dibromomethane	ND	0.20	EPA 8260	7-1-11	7-1-11	
Bromodichloromethane	ND	0.20	EPA 8260	7-1-11	7-1-11	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260	7-1-11	7-1-11	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260	7-1-11	7-1-11	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260	7-1-11	7-1-11	
Toluene	ND	1.0	EPA 8260	7-1-11	7-1-11	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260	7-1-11	7-1-11	

Date of Report: July 8, 2011
Samples Submitted: June 29, 2011
Laboratory Reference: 1106-252
Project: 6582

VOLATILES by EPA 8260B
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-201**					
Laboratory ID:	06-252-01					
1,1,2-Trichloroethane	ND	0.20	EPA 8260	7-1-11	7-1-11	
Tetrachloroethene	ND	0.20	EPA 8260	7-1-11	7-1-11	
1,3-Dichloropropane	ND	0.20	EPA 8260	7-1-11	7-1-11	
2-Hexanone	ND	2.0	EPA 8260	7-1-11	7-1-11	
Dibromochloromethane	ND	0.20	EPA 8260	7-1-11	7-1-11	
1,2-Dibromoethane	ND	0.20	EPA 8260	7-1-11	7-1-11	
Chlorobenzene	ND	0.20	EPA 8260	7-1-11	7-1-11	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260	7-1-11	7-1-11	
Ethylbenzene	ND	0.20	EPA 8260	7-1-11	7-1-11	
m,p-Xylene	ND	0.40	EPA 8260	7-1-11	7-1-11	
o-Xylene	ND	0.20	EPA 8260	7-1-11	7-1-11	
Styrene	ND	0.20	EPA 8260	7-1-11	7-1-11	
Bromoform	ND	1.0	EPA 8260	7-1-11	7-1-11	
Isopropylbenzene	ND	0.20	EPA 8260	7-1-11	7-1-11	
Bromobenzene	ND	0.20	EPA 8260	7-1-11	7-1-11	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260	7-1-11	7-1-11	
1,2,3-Trichloropropane	ND	0.20	EPA 8260	7-1-11	7-1-11	
n-Propylbenzene	ND	0.20	EPA 8260	7-1-11	7-1-11	
2-Chlorotoluene	ND	0.20	EPA 8260	7-1-11	7-1-11	
4-Chlorotoluene	ND	0.20	EPA 8260	7-1-11	7-1-11	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260	7-1-11	7-1-11	
tert-Butylbenzene	ND	0.20	EPA 8260	7-1-11	7-1-11	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260	7-1-11	7-1-11	
sec-Butylbenzene	ND	0.20	EPA 8260	7-1-11	7-1-11	
1,3-Dichlorobenzene	ND	0.20	EPA 8260	7-1-11	7-1-11	
p-Isopropyltoluene	ND	0.20	EPA 8260	7-1-11	7-1-11	
1,4-Dichlorobenzene	ND	0.20	EPA 8260	7-1-11	7-1-11	
1,2-Dichlorobenzene	ND	0.20	EPA 8260	7-1-11	7-1-11	
n-Butylbenzene	ND	0.20	EPA 8260	7-1-11	7-1-11	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260	7-1-11	7-1-11	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260	7-1-11	7-1-11	
Hexachlorobutadiene	ND	0.20	EPA 8260	7-1-11	7-1-11	
Naphthalene	ND	1.0	EPA 8260	7-1-11	7-1-11	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260	7-1-11	7-1-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*89*	*68-110*				
Toluene-d8	*91*	*73-110*				
4-Bromofluorobenzene	*80*	*65-110*				

Date of Report: July 8, 2011
Samples Submitted: June 29, 2011
Laboratory Reference: 1106-252
Project: 6582

VOLATILES by EPA 8260B
METHOD BLANK QUALITY CONTROL
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0701W2					
Dichlorodifluoromethane	ND	0.20	EPA 8260	7-1-11	7-1-11	
Chloromethane	ND	1.0	EPA 8260	7-1-11	7-1-11	
Vinyl Chloride	ND	0.20	EPA 8260	7-1-11	7-1-11	
Bromomethane	ND	0.20	EPA 8260	7-1-11	7-1-11	
Chloroethane	ND	1.0	EPA 8260	7-1-11	7-1-11	
Trichlorofluoromethane	ND	0.20	EPA 8260	7-1-11	7-1-11	
1,1-Dichloroethene	ND	0.20	EPA 8260	7-1-11	7-1-11	
Acetone	ND	5.0	EPA 8260	7-1-11	7-1-11	
Iodomethane	ND	1.0	EPA 8260	7-1-11	7-1-11	
Carbon Disulfide	ND	0.20	EPA 8260	7-1-11	7-1-11	
Methylene Chloride	ND	1.0	EPA 8260	7-1-11	7-1-11	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260	7-1-11	7-1-11	
Methyl t-Butyl Ether	ND	0.20	EPA 8260	7-1-11	7-1-11	
1,1-Dichloroethane	ND	0.20	EPA 8260	7-1-11	7-1-11	
Vinyl Acetate	ND	2.0	EPA 8260	7-1-11	7-1-11	
2,2-Dichloropropane	ND	0.20	EPA 8260	7-1-11	7-1-11	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260	7-1-11	7-1-11	
2-Butanone	ND	5.0	EPA 8260	7-1-11	7-1-11	
Bromochloromethane	ND	0.20	EPA 8260	7-1-11	7-1-11	
Chloroform	ND	0.20	EPA 8260	7-1-11	7-1-11	
1,1,1-Trichloroethane	ND	0.20	EPA 8260	7-1-11	7-1-11	
Carbon Tetrachloride	ND	0.20	EPA 8260	7-1-11	7-1-11	
1,1-Dichloropropene	ND	0.20	EPA 8260	7-1-11	7-1-11	
Benzene	ND	0.20	EPA 8260	7-1-11	7-1-11	
1,2-Dichloroethane	ND	0.20	EPA 8260	7-1-11	7-1-11	
Trichloroethene	ND	0.20	EPA 8260	7-1-11	7-1-11	
1,2-Dichloropropane	ND	0.20	EPA 8260	7-1-11	7-1-11	
Dibromomethane	ND	0.20	EPA 8260	7-1-11	7-1-11	
Bromodichloromethane	ND	0.20	EPA 8260	7-1-11	7-1-11	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260	7-1-11	7-1-11	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260	7-1-11	7-1-11	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260	7-1-11	7-1-11	
Toluene	ND	1.0	EPA 8260	7-1-11	7-1-11	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260	7-1-11	7-1-11	

Date of Report: July 8, 2011
Samples Submitted: June 29, 2011
Laboratory Reference: 1106-252
Project: 6582

VOLATILES by EPA 8260B
METHOD BLANK QUALITY CONTROL
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0701W2					
1,1,2-Trichloroethane	ND	0.20	EPA 8260	7-1-11	7-1-11	
Tetrachloroethene	ND	0.20	EPA 8260	7-1-11	7-1-11	
1,3-Dichloropropane	ND	0.20	EPA 8260	7-1-11	7-1-11	
2-Hexanone	ND	2.0	EPA 8260	7-1-11	7-1-11	
Dibromochloromethane	ND	0.20	EPA 8260	7-1-11	7-1-11	
1,2-Dibromoethane	ND	0.20	EPA 8260	7-1-11	7-1-11	
Chlorobenzene	ND	0.20	EPA 8260	7-1-11	7-1-11	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260	7-1-11	7-1-11	
Ethylbenzene	ND	0.20	EPA 8260	7-1-11	7-1-11	
m,p-Xylene	ND	0.40	EPA 8260	7-1-11	7-1-11	
o-Xylene	ND	0.20	EPA 8260	7-1-11	7-1-11	
Styrene	ND	0.20	EPA 8260	7-1-11	7-1-11	
Bromoform	ND	1.0	EPA 8260	7-1-11	7-1-11	
Isopropylbenzene	ND	0.20	EPA 8260	7-1-11	7-1-11	
Bromobenzene	ND	0.20	EPA 8260	7-1-11	7-1-11	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260	7-1-11	7-1-11	
1,2,3-Trichloropropane	ND	0.20	EPA 8260	7-1-11	7-1-11	
n-Propylbenzene	ND	0.20	EPA 8260	7-1-11	7-1-11	
2-Chlorotoluene	ND	0.20	EPA 8260	7-1-11	7-1-11	
4-Chlorotoluene	ND	0.20	EPA 8260	7-1-11	7-1-11	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260	7-1-11	7-1-11	
tert-Butylbenzene	ND	0.20	EPA 8260	7-1-11	7-1-11	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260	7-1-11	7-1-11	
sec-Butylbenzene	ND	0.20	EPA 8260	7-1-11	7-1-11	
1,3-Dichlorobenzene	ND	0.20	EPA 8260	7-1-11	7-1-11	
p-Isopropyltoluene	ND	0.20	EPA 8260	7-1-11	7-1-11	
1,4-Dichlorobenzene	ND	0.20	EPA 8260	7-1-11	7-1-11	
1,2-Dichlorobenzene	ND	0.20	EPA 8260	7-1-11	7-1-11	
n-Butylbenzene	ND	0.20	EPA 8260	7-1-11	7-1-11	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260	7-1-11	7-1-11	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260	7-1-11	7-1-11	
Hexachlorobutadiene	ND	0.20	EPA 8260	7-1-11	7-1-11	
Naphthalene	ND	1.0	EPA 8260	7-1-11	7-1-11	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260	7-1-11	7-1-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*87*	*68-110*				
Toluene-d8	*92*	*73-110*				
4-Bromofluorobenzene	*82*	*65-110*				

Date of Report: July 8, 2011
Samples Submitted: June 29, 2011
Laboratory Reference: 1106-252
Project: 6582

VOLATILES by EPA 8260B
SB/SBD QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0701W2									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**10.9**	**11.4**	10.0	10.0	109	114	70-130	4	11	
Benzene	**9.77**	**10.1**	10.0	10.0	98	101	75-123	3	8	
Trichloroethene	**10.2**	**10.0**	10.0	10.0	102	100	80-113	2	9	
Toluene	**10.1**	**10.3**	10.0	10.0	101	103	80-113	2	8	
Chlorobenzene	**10.1**	**10.2**	10.0	10.0	101	102	80-111	1	8	
Surrogate:										
Dibromofluoromethane					*82*	*88*	*68-110*			
Toluene-d8					*90*	*91*	*73-110*			
4-Bromofluorobenzene					*82*	*82*	*65-110*			

OnSite Environmental Inc.

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.

Y - Sample extract treated with an acid/silica gel cleanup procedure.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

Chain of Custody

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Page 1 of 1

Laboratory Number: 06-252

Company: Terra Associates

Project Number: 6522

Project Name:

Project Manager: Chuck Lo

Sampled by: Nicolas Hoffman

Turnaround Request (in working days)

(Check One)

Same Day ☐ 1 Day ☐

2 Days ☐ 3 Days ☐

X Standard (7 Days)
(TPH analysis 5 Days)

(other)

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	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 RCRA / MTCA Metals (circle one)	TCLP Metals	HEM (oil and grease) 1664	% Moisture
1	MW-201	6/20/11	12:20	W	6			X	XX												

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished		Terra Associates	6/29/11	16:10	
Received			6/29/11	16:10	
Relinquished					
Received					
Relinquished					
Received					
Reviewed/Date		Reviewed/Date			Chromatograms with final report

Chain of Custody

Page 1 of 1

OnSite Environmental Inc.
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Phone: (425) 883-3881 • www.onsite-env.com

Company: Terra Associates
Project Number: 6582
Project Name:
Project Manager: Chuck Lia
Sampled by: Nicolas Hoffman

Turnaround Request (in working days)

(Check One)

- ☐ Same Day ☐ 1 Day
- ☐ 2 Days ☐ 3 Days
- ☒ Standard (7 Days) (TPH analysis 5 Days)
- ☐ _____ (other)

Laboratory Number: 06-252

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	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 RCRA / MTCA Metals (circle one)	TCLP Metals	HEM (oil and grease) 1664	% Moisture
1	MW-201	6/29/11	12:20	W	6			X	XX												

	Signature	Company	Date	Time
Relinquished		Terra Associates	6/29/11	16:10
Received			6/29/11	1610
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Chromatograms with final report ☐

ta Pac evel I evel I ectron Deliv (EDD

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

April 19, 2013

Chuck Lie
Terra Associates, Inc.
12525 Willows Road, Suite 101
Kirkland, WA 98034

Re: Analytical Data for Project 6552-1
Laboratory Reference No. 1304-101

Dear Chuck:

Enclosed are the analytical results and associated quality control data for samples submitted on April 12, 2013.

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,

David Baumeister
Project Manager

Enclosures

Date of Report: April 19, 2013
Samples Submitted: April 12, 2013
Laboratory Reference: 1304-101
Project: 6552-1

Case Narrative

Samples were collected on April 12, 2013 and received by the laboratory on April 12, 2013. 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.

NWTPH Gx/BTEX Analysis

The chromatogram for sample MW-107 is not similar to that of a typical gas.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

Date of Report: April 19, 2013
Samples Submitted: April 12, 2013
Laboratory Reference: 1304-101
Project: 6552-1

NWTPH-Gx/BTEX

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-107**					
Laboratory ID:	04-101-01					
Benzene	**ND**	1.0	EPA 8021B	4-16-13	4-16-13	
Toluene	**4.5**	1.0	EPA 8021B	4-16-13	4-16-13	
Ethyl Benzene	**1100**	100	EPA 8021B	4-17-13	4-17-13	
m,p-Xylene	**4000**	100	EPA 8021B	4-17-13	4-17-13	
o-Xylene	**1100**	100	EPA 8021B	4-17-13	4-17-13	
Gasoline	**6900**	100	NWTPH-Gx	4-16-13	4-16-13	T
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*89*	*71-116*				

Date of Report: April 19, 2013
Samples Submitted: April 12, 2013
Laboratory Reference: 1304-101
Project: 6552-1

NWTPH-Gx/BTEX
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0416W2					
Benzene	**ND**	1.0	EPA 8021B	4-16-13	4-16-13	
Toluene	**ND**	1.0	EPA 8021B	4-16-13	4-16-13	
Ethyl Benzene	**ND**	1.0	EPA 8021B	4-16-13	4-16-13	
m,p-Xylene	**ND**	1.0	EPA 8021B	4-16-13	4-16-13	
o-Xylene	**ND**	1.0	EPA 8021B	4-16-13	4-16-13	
Gasoline	**ND**	100	NWTPH-Gx	4-16-13	4-16-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*89*	*71-116*				
Laboratory ID:	MB0417W1					
Benzene	**ND**	1.0	EPA 8021B	4-17-13	4-17-13	
Toluene	**ND**	1.0	EPA 8021B	4-17-13	4-17-13	
Ethyl Benzene	**ND**	1.0	EPA 8021B	4-17-13	4-17-13	
m,p-Xylene	**ND**	1.0	EPA 8021B	4-17-13	4-17-13	
o-Xylene	**ND**	1.0	EPA 8021B	4-17-13	4-17-13	
Gasoline	**ND**	100	NWTPH-Gx	4-17-13	4-17-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*88*	*71-116*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	04-114-11										
	ORIG	DUP									
Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Toluene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Ethyl Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
m,p-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
o-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Gasoline	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Surrogate:											
Fluorobenzene						*89*	*90*	*71-116*			
MATRIX SPIKES											
Laboratory ID:	04-114-10										
	MS	MSD	MS	MSD		MS	MSD				
Benzene	**45.1**	**48.1**	50.0	50.0	ND	**90**	**96**	81-121	6	11	
Toluene	**45.3**	**48.0**	50.0	50.0	ND	**91**	**96**	83-122	6	13	
Ethyl Benzene	**44.4**	**47.1**	50.0	50.0	ND	**89**	**94**	81-121	6	15	
m,p-Xylene	**44.9**	**47.3**	50.0	50.0	ND	**90**	**95**	80-119	5	16	
o-Xylene	**44.7**	**47.0**	50.0	50.0	ND	**89**	**94**	80-119	5	15	
Surrogate:											
Fluorobenzene						*93*	*94*	*71-116*			

Date of Report: April 19, 2013
Samples Submitted: April 12, 2013
Laboratory Reference: 1304-101
Project: 6552-1

NWTPH-Dx

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-107**					
Laboratory ID:	04-101-01					
Diesel Range Organics	ND	0.59	NWTPH-Dx	4-12-13	4-16-13	U1
Lube Oil Range Organics	ND	0.41	NWTPH-Dx	4-12-13	4-16-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*73*	*50-150*				

Date of Report: April 19, 2013
Samples Submitted: April 12, 2013
Laboratory Reference: 1304-101
Project: 6552-1

NWTPH-Dx
QUALITY CONTROL

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0412W1					
Diesel Range Organics	**ND**	0.13	NWTPH-Dx	4-12-13	4-16-13	
Lube Oil Range Organics	**ND**	0.20	NWTPH-Dx	4-12-13	4-16-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*75*	*50-150*				

Analyte	Result		Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE							
Laboratory ID:	04-087-06						
	ORIG	DUP					
Diesel Range Organics	**ND**	**ND**			NA	NA	
Lube Oil Range Organics	**ND**	**ND**			NA	NA	
Surrogate:							
o-Terphenyl			*78 96*	*50-150*			

OnSite Environmental Inc.

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 gas.

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.

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

Chain of Custody

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

Company: Terra Associates Inc.
Project Number: 6552-1
Project Name: —
Project Manager: Chuck Lie
Sampled by: Nicolas R. Hoffman

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 04-101

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	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 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals/ MTCA Metals (circle one)	TCLP Metals	HEM (oil and grease) 1664A						% Moisture
1	MW-107	4/12/13	7:30	Water			X		X																	

	Signature	Company	Date	Time
Relinquished		TAI	4/12/13	8:35
Received		OSE	4/12/13	8:35
Relinquished				
Received				
Relinquished				
Received				

Comments/Special Instructions

Reviewed/Date

Reviewed/Date

Chromatograms with final report

ta Pac evel I evel I ctroni Deliver EDDs) ____ ____

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

March 6, 2014

Chuck Lie
Terra Associates, Inc.
12525 Willows Road, Suite 101
Kirkland, WA 98034

Re: Analytical Data for Project 6552
Laboratory Reference No. 1402-198

Dear Chuck:

Enclosed are the analytical results and associated quality control data for samples submitted on February 26, 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,

David Baumeister
Project Manager

Enclosures

Date of Report: March 6, 2014
Samples Submitted: February 26, 2014
Laboratory Reference: 1402-198
Project: 6552

Case Narrative

Samples were collected on February 25, 2014 and received by the laboratory on February 26, 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: March 6, 2014
Samples Submitted: February 26, 2014
Laboratory Reference: 1402-198
Project: 6552

NWTPH-Gx/BTEX

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-6**					
Laboratory ID:	02-198-01					
Benzene	ND	1.0	EPA 8021B	3-3-14	3-3-14	
Toluene	ND	1.0	EPA 8021B	3-3-14	3-3-14	
Ethyl Benzene	ND	1.0	EPA 8021B	3-3-14	3-3-14	
m,p-Xylene	ND	1.0	EPA 8021B	3-3-14	3-3-14	
o-Xylene	ND	1.0	EPA 8021B	3-3-14	3-3-14	
Gasoline	ND	100	NWTPH-Gx	3-3-14	3-3-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*96*	*71-112*				
Client ID:	**MW-107**					
Laboratory ID:	02-198-02					
Benzene	ND	1.0	EPA 8021B	3-3-14	3-3-14	
Toluene	ND	1.0	EPA 8021B	3-3-14	3-3-14	
Ethyl Benzene	84	1.0	EPA 8021B	3-3-14	3-3-14	
m,p-Xylene	150	10	EPA 8021B	3-4-14	3-4-14	
o-Xylene	39	1.0	EPA 8021B	3-3-14	3-3-14	
Gasoline	840	100	NWTPH-Gx	3-3-14	3-3-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*94*	*71-112*				
Client ID:	**MW-2**					
Laboratory ID:	02-198-03					
Benzene	ND	1.0	EPA 8021B	3-3-14	3-3-14	
Toluene	ND	1.0	EPA 8021B	3-3-14	3-3-14	
Ethyl Benzene	ND	1.0	EPA 8021B	3-3-14	3-3-14	
m,p-Xylene	ND	1.0	EPA 8021B	3-3-14	3-3-14	
o-Xylene	ND	1.0	EPA 8021B	3-3-14	3-3-14	
Gasoline	ND	100	NWTPH-Gx	3-3-14	3-3-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*93*	*71-112*				

Date of Report: March 6, 2014
Samples Submitted: February 26, 2014
Laboratory Reference: 1402-198
Project: 6552

NWTPH-Gx/BTEX
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0303W2					
Benzene	**ND**	1.0	EPA 8021B	3-3-14	3-3-14	
Toluene	**ND**	1.0	EPA 8021B	3-3-14	3-3-14	
Ethyl Benzene	**ND**	1.0	EPA 8021B	3-3-14	3-3-14	
m,p-Xylene	**ND**	1.0	EPA 8021B	3-3-14	3-3-14	
o-Xylene	**ND**	1.0	EPA 8021B	3-3-14	3-3-14	
Gasoline	**ND**	100	NWTPH-Gx	3-3-14	3-3-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*98*	*71-112*				
Laboratory ID:	MB0304W1					
Benzene	**ND**	1.0	EPA 8021B	3-4-14	3-4-14	
Toluene	**ND**	1.0	EPA 8021B	3-4-14	3-4-14	
Ethyl Benzene	**ND**	1.0	EPA 8021B	3-4-14	3-4-14	
m,p-Xylene	**ND**	1.0	EPA 8021B	3-4-14	3-4-14	
o-Xylene	**ND**	1.0	EPA 8021B	3-4-14	3-4-14	
Gasoline	**ND**	100	NWTPH-Gx	3-4-14	3-4-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*96*	*71-112*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	02-228-02										
	ORIG	DUP									
Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Toluene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Ethyl Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
m,p-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
o-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Gasoline	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Surrogate:											
Fluorobenzene						*99*	*96*	*71-112*			
SPIKE BLANKS											
Laboratory ID:	SB0303W1										
	SB	SBD	SB	SBD		SB	SBD				
Benzene	**56.4**	**53.1**	50.0	50.0		**113**	**106**	86-116	6	11	
Toluene	**55.8**	**53.9**	50.0	50.0		**112**	**108**	86-117	3	12	
Ethyl Benzene	**56.1**	**56.3**	50.0	50.0		**112**	**113**	86-118	0	13	
m,p-Xylene	**56.1**	**56.0**	50.0	50.0		**112**	**112**	86-118	0	14	
o-Xylene	**55.5**	**56.2**	50.0	50.0		**111**	**112**	85-117	1	14	
Surrogate:											
Fluorobenzene						*97*	*97*	*71-112*			

Date of Report: March 6, 2014
Samples Submitted: February 26, 2014
Laboratory Reference: 1402-198
Project: 6552

NWTPH-Dx

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-6**					
Laboratory ID:	02-198-01					
Diesel Range Organics	ND	0.26	NWTPH-Dx	2-27-14	2-27-14	
Lube Oil Range Organics	ND	0.41	NWTPH-Dx	2-27-14	2-27-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*78*	*50-150*				
Client ID:	**MW-107**					
Laboratory ID:	02-198-02					
Diesel Range Organics	ND	0.28	NWTPH-Dx	2-27-14	2-27-14	U1
Lube Oil Range Organics	ND	0.41	NWTPH-Dx	2-27-14	2-27-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*80*	*50-150*				
Client ID:	**MW-2**					
Laboratory ID:	02-198-03					
Diesel Range Organics	ND	5.1	NWTPH-Dx	2-27-14	2-27-14	
Lube Oil	16	8.2	NWTPH-Dx	2-27-14	2-27-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	---	*50-150*				S

Date of Report: March 6, 2014
Samples Submitted: February 26, 2014
Laboratory Reference: 1402-198
Project: 6552

NWTPH-Dx
QUALITY CONTROL

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0227W1					
Diesel Range Organics	**ND**	0.25	NWTPH-Dx	2-27-14	2-27-14	
Lube Oil Range Organics	**ND**	0.40	NWTPH-Dx	2-27-14	2-27-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*78*	*50-150*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	02-183-01										
	ORIG	DUP									
Diesel Range	**ND**	**ND**	NA	NA		NA		NA	NA	NA	X1
Lube Oil Range	**ND**	**ND**	NA	NA		NA		NA	NA	NA	X1
Surrogate:											
o-Terphenyl						*86*	*88*	*50-150*			

OnSite Environmental Inc.

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

Chain of Custody

Page 1 of 1

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

Company: Terra Associates Inc.
Project Number: 6552
Project Name: ———
Project Manager: Chuck Lie
Sampled by: Nicolas R. Hoffman

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 02-198

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	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 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals/ MTCA Metals (circle one)	TCLP Metals	HEM (oil and grease) 1664A	% Moisture
1	MW-6	2/25/13	14:00	Water	4		X		X												
2	MW-107	2/25/13	14:40	Water	4		X		X												
3	MW-2	2/25/13	15:20	Water	3		X		X												

	Signature	Company	Date	Time
Relinquished		TAI	2/26/14	12:28
Received		OSE	2/26/14	1228
Relinquished				
Received				
Relinquished				
Received				

Comments/Special Instructions

Reviewed/Date

Reviewed/Date

Chromatograms with final report ☐

Rack avel III avel IV ronic livera)Ds)

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

October 2, 2014

Chuck Lie
Terra Associates, Inc.
12525 Willows Road, Suite 101
Kirkland, WA 98034

Re: Analytical Data for Project T-6552-1
Laboratory Reference No. 1409-242

Dear Chuck:

Enclosed are the analytical results and associated quality control data for samples submitted on September 24, 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,

David Baumeister
Project Manager

Enclosures

Date of Report: October 2, 2014
Samples Submitted: September 24, 2014
Laboratory Reference: 1409-242
Project: T-6552-1

Case Narrative

Samples were collected on September 24, 2014 and received by the laboratory on September 24, 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.

NWTPH Gx/BTEX Analysis

The chromatogram for sample MW-202 is not similar to that of a typical gas.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

Date of Report: October 2, 2014
Samples Submitted: September 24, 2014
Laboratory Reference: 1409-242
Project: T-6552-1

NWTPH-Gx/BTEX

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-201**					
Laboratory ID:	09-242-01					
Benzene	ND	0.50	EPA 8021B	9-25-14	9-25-14	
Toluene	ND	1.0	EPA 8021B	9-25-14	9-25-14	
Ethyl Benzene	ND	1.0	EPA 8021B	9-25-14	9-25-14	
m,p-Xylene	ND	1.0	EPA 8021B	9-25-14	9-25-14	
o-Xylene	ND	1.0	EPA 8021B	9-25-14	9-25-14	
Gasoline	ND	100	NWTPH-Gx	9-25-14	9-25-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*92*	*71-112*				
Client ID:	**MW-202**					
Laboratory ID:	09-242-02					
Benzene	ND	0.50	EPA 8021B	9-25-14	9-25-14	
Toluene	6.3	1.0	EPA 8021B	9-25-14	9-25-14	
Ethyl Benzene	51	1.0	EPA 8021B	9-25-14	9-25-14	
m,p-Xylene	46	1.0	EPA 8021B	9-25-14	9-25-14	
o-Xylene	44	1.0	EPA 8021B	9-25-14	9-25-14	
Gasoline	380	100	NWTPH-Gx	9-25-14	9-25-14	T
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*91*	*71-112*				
Client ID:	**MW-203**					
Laboratory ID:	09-242-03					
Benzene	ND	0.50	EPA 8021B	9-25-14	9-25-14	
Toluene	ND	1.0	EPA 8021B	9-25-14	9-25-14	
Ethyl Benzene	3.8	1.0	EPA 8021B	9-25-14	9-25-14	
m,p-Xylene	1.7	1.0	EPA 8021B	9-25-14	9-25-14	
o-Xylene	ND	1.0	EPA 8021B	9-25-14	9-25-14	
Gasoline	ND	100	NWTPH-Gx	9-25-14	9-25-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*87*	*71-112*				

Date of Report: October 2, 2014
Samples Submitted: September 24, 2014
Laboratory Reference: 1409-242
Project: T-6552-1

NWTPH-Gx/BTEX

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-204**					
Laboratory ID:	09-242-04					
Benzene	**ND**	0.50	EPA 8021B	9-25-14	9-25-14	
Toluene	**ND**	1.0	EPA 8021B	9-25-14	9-25-14	
Ethyl Benzene	**ND**	1.0	EPA 8021B	9-25-14	9-25-14	
m,p-Xylene	**ND**	1.0	EPA 8021B	9-25-14	9-25-14	
o-Xylene	**ND**	1.0	EPA 8021B	9-25-14	9-25-14	
Gasoline	**160**	100	NWTPH-Gx	9-25-14	9-25-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*91*	*71-112*				

Date of Report: October 2, 2014
Samples Submitted: September 24, 2014
Laboratory Reference: 1409-242
Project: T-6552-1

NWTPH-Gx/BTEX
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0925W2					
Benzene	ND	0.50	EPA 8021B	9-25-14	9-25-14	
Toluene	ND	1.0	EPA 8021B	9-25-14	9-25-14	
Ethyl Benzene	ND	1.0	EPA 8021B	9-25-14	9-25-14	
m,p-Xylene	ND	1.0	EPA 8021B	9-25-14	9-25-14	
o-Xylene	ND	1.0	EPA 8021B	9-25-14	9-25-14	
Gasoline	ND	100	NWTPH-Gx	9-25-14	9-25-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*88*	*71-112*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	09-246-02										
	ORIG	DUP									
Benzene	ND	ND	NA	NA		NA		NA	NA	30	
Toluene	ND	ND	NA	NA		NA		NA	NA	30	
Ethyl Benzene	ND	ND	NA	NA		NA		NA	NA	30	
m,p-Xylene	ND	ND	NA	NA		NA		NA	NA	30	
o-Xylene	ND	ND	NA	NA		NA		NA	NA	30	
Gasoline	ND	ND	NA	NA		NA		NA	NA	30	
Surrogate:											
Fluorobenzene						*92*	*92*	*71-112*			
MATRIX SPIKES											
Laboratory ID:	09-246-01										
	MS	MSD	MS	MSD		MS	MSD				
Benzene	56.0	53.5	50.0	50.0	ND	112	107	78-120	5	12	
Toluene	56.5	53.2	50.0	50.0	ND	113	106	80-121	6	12	
Ethyl Benzene	55.5	52.5	50.0	50.0	ND	111	105	81-120	6	13	
m,p-Xylene	55.7	52.2	50.0	50.0	ND	111	104	81-119	6	13	
o-Xylene	55.4	52.2	50.0	50.0	ND	111	104	79-117	6	13	
Surrogate:											
Fluorobenzene						*98*	*100*	*71-112*			

Date of Report: October 2, 2014
Samples Submitted: September 24, 2014
Laboratory Reference: 1409-242
Project: T-6552-1

NWTPH-Dx

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-203**					
Laboratory ID:	09-242-03					
Diesel Range Organics	**ND**	0.26	NWTPH-Dx	10-1-14	10-2-14	
Lube Oil Range Organics	**ND**	0.42	NWTPH-Dx	10-1-14	10-2-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*82*	*50-150*				
Client ID:	**MW-204**					
Laboratory ID:	09-242-04					
Diesel Range Organics	**0.47**	0.26	NWTPH-Dx	10-1-14	10-1-14	
Lube Oil Range Organics	**ND**	0.41	NWTPH-Dx	10-1-14	10-1-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*93*	*50-150*				

Date of Report: October 2, 2014
Samples Submitted: September 24, 2014
Laboratory Reference: 1409-242
Project: T-6552-1

NWTPH-Dx
QUALITY CONTROL

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1001W1					
Diesel Range Organics	ND	0.25	NWTPH-Dx	10-1-14	10-1-14	
Lube Oil Range Organics	ND	0.40	NWTPH-Dx	10-1-14	10-1-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*95*	*50-150*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	09-254-01										
	ORIG	DUP									
Diesel Range Organics	1.27	1.14	NA	NA		NA		NA	11	NA	
Lube Oil Range	ND	ND	NA	NA		NA		NA	NA	NA	U1
Surrogate:											
o-Terphenyl						*98*	*88*	*50-150*			

OnSite Environmental Inc.

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 - The sample chromatogram is not similar to a typical gas.

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

Chain of Custody

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

Company: Tetra Associates, Inc.
Project Number: T-6552-1
Project Name:
Project Manager: Charles Lee
Sampled by: Terry Bukowski

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 09-242

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-G	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A						% Moisture
1	MW-201	9/24/19	1325	Water	3		X																			
2	MW-202		1150		3		X																			
3	MW-203		0845		5		X		X																	
4	MW-204		1045		5		X		X																	

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished		Enviro Sales LLC	9-24-19	1645	
Received			9/24/19	1645	
Relinquished					
Received					
Relinquished					
Received					
Reviewed/Date		Reviewed/Date			Chromatograms with final report

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

March 3, 2015

Chuck Lie
Terra Associates, Inc.
12525 Willows Road, Suite 101
Kirkland, WA 98034

Re: Analytical Data for Project T-6552-1
Laboratory Reference No. 1502-199

Dear Chuck:

Enclosed are the analytical results and associated quality control data for samples submitted on February 20, 2015.

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,

David Baumeister
Project Manager

Enclosures

Date of Report: March 3, 2015
Samples Submitted: February 20, 2015
Laboratory Reference: 1502-199
Project: T-6552-1

Case Narrative

Samples were collected on February 20, 2015 and received by the laboratory on February 20, 2015. 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.

NWTPH Gx/BTEX Analysis

The chromatograms for samples MW-202 and MW-203 are not similar to those of a typical gas.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

Date of Report: March 3, 2015
Samples Submitted: February 20, 2015
Laboratory Reference: 1502-199
Project: T-6552-1

NWTPH-Gx/BTEX

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-205**					
Laboratory ID:	02-199-01					
Benzene	**ND**	0.50	EPA 8021B	2-23-15	2-23-15	
Toluene	**ND**	1.0	EPA 8021B	2-23-15	2-23-15	
Ethyl Benzene	**ND**	1.0	EPA 8021B	2-23-15	2-23-15	
m,p-Xylene	**ND**	1.0	EPA 8021B	2-23-15	2-23-15	
o-Xylene	**ND**	1.0	EPA 8021B	2-23-15	2-23-15	
Gasoline	**ND**	100	NWTPH-Gx	2-23-15	2-23-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*98*	*71-113*				
Client ID:	**MW-201**					
Laboratory ID:	02-199-02					
Benzene	**ND**	0.50	EPA 8021B	2-23-15	2-23-15	
Toluene	**ND**	1.0	EPA 8021B	2-23-15	2-23-15	
Ethyl Benzene	**ND**	1.0	EPA 8021B	2-23-15	2-23-15	
m,p-Xylene	**ND**	1.0	EPA 8021B	2-23-15	2-23-15	
o-Xylene	**ND**	1.0	EPA 8021B	2-23-15	2-23-15	
Gasoline	**ND**	100	NWTPH-Gx	2-23-15	2-23-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*98*	*71-113*				
Client ID:	**MW-202**					
Laboratory ID:	02-199-03					
Benzene	**4.6**	0.50	EPA 8021B	2-23-15	2-23-15	
Toluene	**31**	1.0	EPA 8021B	2-23-15	2-23-15	
Ethyl Benzene	**3900**	100	EPA 8021B	2-24-15	2-24-15	
m,p-Xylene	**9200**	100	EPA 8021B	2-24-15	2-24-15	
o-Xylene	**1900**	100	EPA 8021B	2-24-15	2-24-15	
Gasoline	**42000**	10000	NWTPH-Gx	2-24-15	2-24-15	T
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*96*	*71-113*				

Date of Report: March 3, 2015
Samples Submitted: February 20, 2015
Laboratory Reference: 1502-199
Project: T-6552-1

NWTPH-Gx/BTEX

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-204**					
Laboratory ID:	02-199-04					
Benzene	ND	0.50	EPA 8021B	2-23-15	2-23-15	
Toluene	ND	1.0	EPA 8021B	2-23-15	2-23-15	
Ethyl Benzene	3.2	1.0	EPA 8021B	2-23-15	2-23-15	
m,p-Xylene	8.5	1.0	EPA 8021B	2-24-15	2-24-15	
o-Xylene	1.5	1.0	EPA 8021B	2-23-15	2-23-15	
Gasoline	170	100	NWTPH-Gx	2-23-15	2-23-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*98*	*71-113*				
Client ID:	**MW-203**					
Laboratory ID:	02-199-05					
Benzene	ND	0.50	EPA 8021B	2-23-15	2-23-15	
Toluene	ND	1.0	EPA 8021B	2-23-15	2-23-15	
Ethyl Benzene	18	1.0	EPA 8021B	2-23-15	2-23-15	
m,p-Xylene	20	1.0	EPA 8021B	2-24-15	2-24-15	
o-Xylene	1.4	1.0	EPA 8021B	2-23-15	2-23-15	
Gasoline	150	100	NWTPH-Gx	2-23-15	2-23-15	T
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*98*	*71-113*				
Client ID:	**MW-107**					
Laboratory ID:	02-199-06					
Benzene	ND	0.50	EPA 8021B	2-23-15	2-23-15	
Toluene	ND	1.0	EPA 8021B	2-23-15	2-23-15	
Ethyl Benzene	ND	1.0	EPA 8021B	2-23-15	2-23-15	
m,p-Xylene	ND	1.0	EPA 8021B	2-23-15	2-23-15	
o-Xylene	ND	1.0	EPA 8021B	2-23-15	2-23-15	
Gasoline	ND	100	NWTPH-Gx	2-23-15	2-23-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*99*	*71-113*				

Date of Report: March 3, 2015
Samples Submitted: February 20, 2015
Laboratory Reference: 1502-199
Project: T-6552-1

NWTPH-Gx/BTEX
METHOD BLANK QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0223W1					
Benzene	**ND**	0.50	EPA 8021B	2-23-15	2-23-15	
Toluene	**ND**	1.0	EPA 8021B	2-23-15	2-23-15	
Ethyl Benzene	**ND**	1.0	EPA 8021B	2-23-15	2-23-15	
m,p-Xylene	**ND**	1.0	EPA 8021B	2-23-15	2-23-15	
o-Xylene	**ND**	1.0	EPA 8021B	2-23-15	2-23-15	
Gasoline	**ND**	100	NWTPH-Gx	2-23-15	2-23-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*103*	*71-113*				
Laboratory ID:	MB0223W2					
Benzene	**ND**	0.50	EPA 8021B	2-23-15	2-23-15	
Toluene	**ND**	1.0	EPA 8021B	2-23-15	2-23-15	
Ethyl Benzene	**ND**	1.0	EPA 8021B	2-23-15	2-23-15	
m,p-Xylene	**ND**	1.0	EPA 8021B	2-23-15	2-23-15	
o-Xylene	**ND**	1.0	EPA 8021B	2-23-15	2-23-15	
Gasoline	**ND**	100	NWTPH-Gx	2-23-15	2-23-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*101*	*71-113*				
Laboratory ID:	MB0224W1					
Benzene	**ND**	0.50	EPA 8021B	2-24-15	2-24-15	
Toluene	**ND**	1.0	EPA 8021B	2-24-15	2-24-15	
Ethyl Benzene	**ND**	1.0	EPA 8021B	2-24-15	2-24-15	
m,p-Xylene	**ND**	1.0	EPA 8021B	2-24-15	2-24-15	
o-Xylene	**ND**	1.0	EPA 8021B	2-24-15	2-24-15	
Gasoline	**ND**	100	NWTPH-Gx	2-24-15	2-24-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*97*	*71-113*				

Date of Report: March 3, 2015
Samples Submitted: February 20, 2015
Laboratory Reference: 1502-199
Project: T-6552-1

NWTPH-Gx/BTEX
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	02-191-05										
	ORIG	DUP									
Benzene	ND	ND	NA	NA		NA		NA	NA	30	
Toluene	ND	ND	NA	NA		NA		NA	NA	30	
Ethyl Benzene	ND	ND	NA	NA		NA		NA	NA	30	
m,p-Xylene	ND	ND	NA	NA		NA		NA	NA	30	
o-Xylene	ND	ND	NA	NA		NA		NA	NA	30	
Gasoline	ND	ND	NA	NA		NA		NA	NA	30	
Surrogate:											
Fluorobenzene						*94*	*96*	*71-113*			
Laboratory ID:	02-198-01										
	ORIG	DUP									
Benzene	ND	ND	NA	NA		NA		NA	NA	30	
Toluene	ND	ND	NA	NA		NA		NA	NA	30	
Ethyl Benzene	ND	ND	NA	NA		NA		NA	NA	30	
m,p-Xylene	ND	ND	NA	NA		NA		NA	NA	30	
o-Xylene	ND	ND	NA	NA		NA		NA	NA	30	
Gasoline	ND	ND	NA	NA		NA		NA	NA	30	
Surrogate:											
Fluorobenzene						*104*	*105*	*71-113*			
MATRIX SPIKES											
Laboratory ID:	02-198-01										
	MS	MSD	MS	MSD		MS	MSD				
Benzene	48.9	48.9	50.0	50.0	ND	98	98	82-120	0	14	
Toluene	50.1	49.7	50.0	50.0	ND	100	99	83-120	1	14	
Ethyl Benzene	51.2	50.8	50.0	50.0	ND	102	102	83-120	1	15	
m,p-Xylene	51.4	51.0	50.0	50.0	ND	103	102	81-123	1	15	
o-Xylene	51.2	50.8	50.0	50.0	ND	102	102	80-120	1	16	
Surrogate:											
Fluorobenzene						*98*	*99*	*71-113*			

Date of Report: March 3, 2015
Samples Submitted: February 20, 2015
Laboratory Reference: 1502-199
Project: T-6552-1

NWTPH-Dx

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-205**					
Laboratory ID:	02-199-01					
Diesel Range Organics	**ND**	0.28	NWTPH-Dx	2-23-15	2-23-15	
Lube Oil Range Organics	**ND**	0.44	NWTPH-Dx	2-23-15	2-23-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*87*	*50-150*				
Client ID:	**MW-201**					
Laboratory ID:	02-199-02					
Diesel Range Organics	**ND**	0.26	NWTPH-Dx	2-23-15	2-23-15	
Lube Oil Range Organics	**ND**	0.41	NWTPH-Dx	2-23-15	2-23-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*86*	*50-150*				
Client ID:	**MW-202**					
Laboratory ID:	02-199-03					
Diesel Range Organics	**0.70**	0.27	NWTPH-Dx	2-23-15	2-23-15	
Lube Oil Range Organics	**ND**	0.44	NWTPH-Dx	2-23-15	2-23-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*88*	*50-150*				
Client ID:	**MW-204**					
Laboratory ID:	02-199-04					
Diesel Range Organics	**0.43**	0.28	NWTPH-Dx	2-23-15	2-23-15	
Lube Oil Range Organics	**ND**	0.45	NWTPH-Dx	2-23-15	2-23-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*86*	*50-150*				
Client ID:	**MW-203**					
Laboratory ID:	02-199-05					
Diesel Range Organics	**ND**	0.29	NWTPH-Dx	2-23-15	2-23-15	
Lube Oil Range Organics	**ND**	0.47	NWTPH-Dx	2-23-15	2-23-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*89*	*50-150*				
Client ID:	**MW-107**					
Laboratory ID:	02-199-06					
Diesel Range Organics	**0.35**	0.28	NWTPH-Dx	2-23-15	2-23-15	
Lube Oil Range Organics	**ND**	0.46	NWTPH-Dx	2-23-15	2-23-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*93*	*50-150*				

Date of Report: March 3, 2015
Samples Submitted: February 20, 2015
Laboratory Reference: 1502-199
Project: T-6552-1

NWTPH-Dx
QUALITY CONTROL

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0223W1					
Diesel Range Organics	ND	0.25	NWTPH-Dx	2-23-15	2-23-15	
Lube Oil Range Organics	ND	0.40	NWTPH-Dx	2-23-15	2-23-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*83*	*50-150*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	02-191-01										
	ORIG	DUP									
Diesel Fuel #2	13.1	10.4	NA	NA		NA		NA	23	NA	X1
Lube Oil Range	ND	ND	NA	NA		NA		NA	NA	NA	U1,X1
Surrogate:											
o-Terphenyl						*121*	*112*	*50-150*			

Date of Report: March 3, 2015
Samples Submitted: February 20, 2015
Laboratory Reference: 1502-199
Project: T-6552-1

TOTAL LEAD
EPA 200.8

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	02-199-01					
Client ID:	**MW-205**					
Lead	**13**	2.2	200.8	2-25-15	2-25-15	
Lab ID:	02-199-02					
Client ID:	**MW-201**					
Lead	**ND**	1.1	200.8	2-25-15	2-25-15	
Lab ID:	02-199-03					
Client ID:	**MW-202**					
Lead	**2.5**	1.1	200.8	2-25-15	2-25-15	
Lab ID:	02-199-04					
Client ID:	**MW-204**					
Lead	**ND**	1.1	200.8	2-25-15	2-25-15	
Lab ID:	02-199-05					
Client ID:	**MW-203**					
Lead	**ND**	1.1	200.8	2-25-15	2-25-15	
Lab ID:	02-199-06					
Client ID:	**MW-107**					
Lead	**ND**	1.1	200.8	2-25-15	2-25-15	

Date of Report: March 3, 2015
Samples Submitted: February 20, 2015
Laboratory Reference: 1502-199
Project: T-6552-1

TOTAL LEAD
EPA 200.8
METHOD BLANK QUALITY CONTROL

Date Extracted:	2-25-15
Date Analyzed:	2-25-15
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	MB0225WM1

Analyte	Method	Result	PQL
Lead	200.8	ND	1.1

Date of Report: March 3, 2015
Samples Submitted: February 20, 2015
Laboratory Reference: 1502-199
Project: T-6552-1

TOTAL LEAD
EPA 200.8
DUPLICATE QUALITY CONTROL

Date Extracted: 2-25-15
Date Analyzed: 2-25-15

Matrix: Water
Units: ug/L (ppb)

Lab ID: 02-186-05

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Lead	**ND**	**ND**	NA	1.1	

Date of Report: March 3, 2015
Samples Submitted: February 20, 2015
Laboratory Reference: 1502-199
Project: T-6552-1

TOTAL LEAD
EPA 200.8
MS/MSD QUALITY CONTROL

Date Extracted: 2-25-15
Date Analyzed: 2-25-15

Matrix: Water
Units: ug/L (ppb)

Lab ID: 02-186-05

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Lead	111	101	91	104	94	4	

Date of Report: March 3, 2015
Samples Submitted: February 20, 2015
Laboratory Reference: 1502-199
Project: T-6552-1

DISSOLVED LEAD
EPA 200.8

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	02-199-01					
Client ID:	**MW-205**					
Lead	**ND**	1.0	200.8		2-23-15	
Lab ID:	02-199-02					
Client ID:	**MW-201**					
Lead	**ND**	1.0	200.8		2-23-15	
Lab ID:	02-199-03					
Client ID:	**MW-202**					
Lead	**ND**	1.0	200.8		2-23-15	
Lab ID:	02-199-04					
Client ID:	**MW-204**					
Lead	**ND**	1.0	200.8		2-23-15	
Lab ID:	02-199-05					
Client ID:	**MW-203**					
Lead	**ND**	1.0	200.8		2-23-15	
Lab ID:	02-199-06					
Client ID:	**MW-107**					
Lead	**ND**	1.0	200.8		2-23-15	

Date of Report: March 3, 2015
Samples Submitted: February 20, 2015
Laboratory Reference: 1502-199
Project: T-6552-1

DISSOLVED LEAD
EPA 200.8
METHOD BLANK QUALITY CONTROL

Date Analyzed:	2-23-15
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	MB0219F1

Analyte	Method	Result	PQL
Lead	200.8	ND	1.0

Date of Report: March 3, 2015
Samples Submitted: February 20, 2015
Laboratory Reference: 1502-199
Project: T-6552-1

DISSOLVED LEAD
EPA 200.8
DUPLICATE QUALITY CONTROL

Date Analyzed: 2-23-15

Matrix: Water
Units: ug/L (ppb)

Lab ID: 02-186-05

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Lead	**ND**	**ND**	NA	1.0	

Date of Report: March 3, 2015
Samples Submitted: February 20, 2015
Laboratory Reference: 1502-199
Project: T-6552-1

DISSOLVED LEAD
EPA 200.8
MS/MSD QUALITY CONTROL

Date Analyzed: 2-23-15

Matrix: Water
Units: ug/L (ppb)

Lab ID: 02-186-05

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Lead	80	77.2	97	78.5	98	2	

OnSite Environmental Inc.

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 gas.

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

Am Test Inc.
13600 NE 126TH PL
Suite C
Kirkland, WA 98034
(425) 885-1664

Professional Analytical Services

Mar 3 2015
On-Site Environmental
14648 NE 95th ST
Redmond, WA 98052
Attention: David Baumeister

Dear David Baumeister:

Enclosed please find the analytical data for your project.

The following is a cross correlation of client and laboratory identifications for your convenience.

CLIENT ID	MATRIX	AMTEST ID	TEST
MW-201	Water	15-A002431	Glycols
MW-202	Water	15-A002432	Glycols
MW-204	Water	15-A002433	Glycols
MW-203	Water	15-A002434	Glycols

Your samples were received on Tuesday, February 24, 2015. At the time of receipt, the samples were logged in and properly maintained prior to the subsequent analysis.

The analytical procedures used at AmTest are well documented and are typically derived from the protocols of the EPA, USDA, FDA or the Army Corps of Engineers.

Following the analytical data you will find the Quality Control (QC) results.

Please note that the detection limits that are listed in the body of the report refer to the Practical Quantitation Limits (PQL's), as opposed to the Method Detection Limits (MDL's).

If you should have any questions pertaining to the data package, please feel free to conact me.

Sincerely,

Aaron W. Young
Laboratory Manager

Project #: T-6552-1
PO Number: 02-199

BACT = Bacteriological
CONV = Conventionals
MET = Metals
ORG = Organics
NUT=Nutrients
DEM=Demand
MIN=Minerals

Am Test Inc.
13600 NE 126TH PL
Suite C
Kirkland, WA 98034
(425) 885-1664
www.amtestlab.com

AMTEST LABORATORIES

Professional Analytical Services

ANALYSIS REPORT

On-Site Environmental
14648 NE 95th ST
Redmond, WA 98052
Attention: David Baumeister
Project #: T-6552-1
PO Number: 02-199
All results reported on an as received basis.

Date Received: 02/24/15
Date Reported: 3/ 3/15

AMTEST Identification Number **15-A002431**
Client Identification **MW-201**
Sampling Date **02/20/15, 09:00**

Glycols

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Ethylene Glycol	< 10	mg/l		10	EPA 8015 MOD	ED	02/26/15

AMTEST Identification Number **15-A002432**
Client Identification **MW-202**
Sampling Date **02/20/15, 10:00**

Glycols

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Ethylene Glycol	< 10	mg/l		10	EPA 8015 MOD	ED	02/26/15

AMTEST Identification Number **15-A002433**
Client Identification **MW-204**
Sampling Date **02/20/15, 11:30**

Glycols

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Ethylene Glycol	< 10	mg/l		10	EPA 8015 MOD	ED	02/26/15

AMTEST Identification Number 15-A002434
Client Identification MW-203
Sampling Date 02/20/15, 13:30

Glycols

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Ethylene Glycol	< 10	mg/l		10	EPA 8015 MOD	ED	02/26/15

Aaron W. Young
Laboratory Manager

Am Test Inc.
13600 NE 126th PL
Suite C
Kirkland, WA, 98034
(425) 885-1664
www.amtestlab.com

AMTEST LABORATORIES

Professional Analytical Services

QC Summary for sample numbers: 15-A002431 to 15-A002434

STANDARD REFERENCE MATERIALS

ANALYTE	UNITS	TRUE VALUE	MEASURED VALUE	RECOVERY
Ethylene Glycol	mg/l	100.	91.3	91.3 %

BLANKS

ANALYTE	UNITS	RESULT
Ethylene Glycol	mg/l	< 10

OnSite Environmental Inc.

14648 NE 95th Street, Redmond, WA 98052 · (425) 883-3881

Laboratory Reference #: 02-199

Subcontract Laboratory: AmTest Laboratories

Turnaround Request: 1 Day 2 Day 3 Day (Standard)

Project Manager: David Baumeister

Attention: Aaron Young

email: dbaumeister@onsite-env.com

13600 NE 126th Pl Kirkland, WA 98034

Project Number: T-6553-1

Phone Number: (425) 885-1664

Other:

Project Name:

Date/Time:

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	Requested Analysis
2431	MW-201	2/20/15	0900	W	2	Ethylene Glycol
2432	MW-202	↓	1000	↓	↓	↓ ↓
2433	MW-204		1130			
2434	MW-203	↓	1330	↓	↓	

Signature	Company	Date	Time	Comments/Special Instructions
Relinquished by:		2/24/15	1505	
Received by: Andrea Baker	AMTEST	2/24/15	1505	12.5°C
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				

Chain of Custody

Page 1 of 1

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

Laboratory Number: 02-199

Company: Terra Assoc.
Project Number: T-6552-1
Project Name: Hattie's Hat/Salmon Bay
Project Manager: Chuck Lie
Sampled by: Pat Reed

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days)
(TPH analysis 5 Days)
☐ _____ (other)

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	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 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	T, Pb Lead	Dissolved Lead	Ethylene Glycol			% Moisture
1	MW-205	2/20/15	0730	W	5			X	X													X	X				
2	MW-201	2/20/15	0820	W	8			X	X													X	X	X			
3	MW-202	2/20/15	1000	W	8			X	X													X	X	X			
4	MW-204	2/20/15	1130	W	8			X	X													X	X	X			
5	MW-203	2/20/15	1330	W	9			X	X													X	X	X			
6	MW-107	2/20/15	1415	W	7			X	X													X	X				

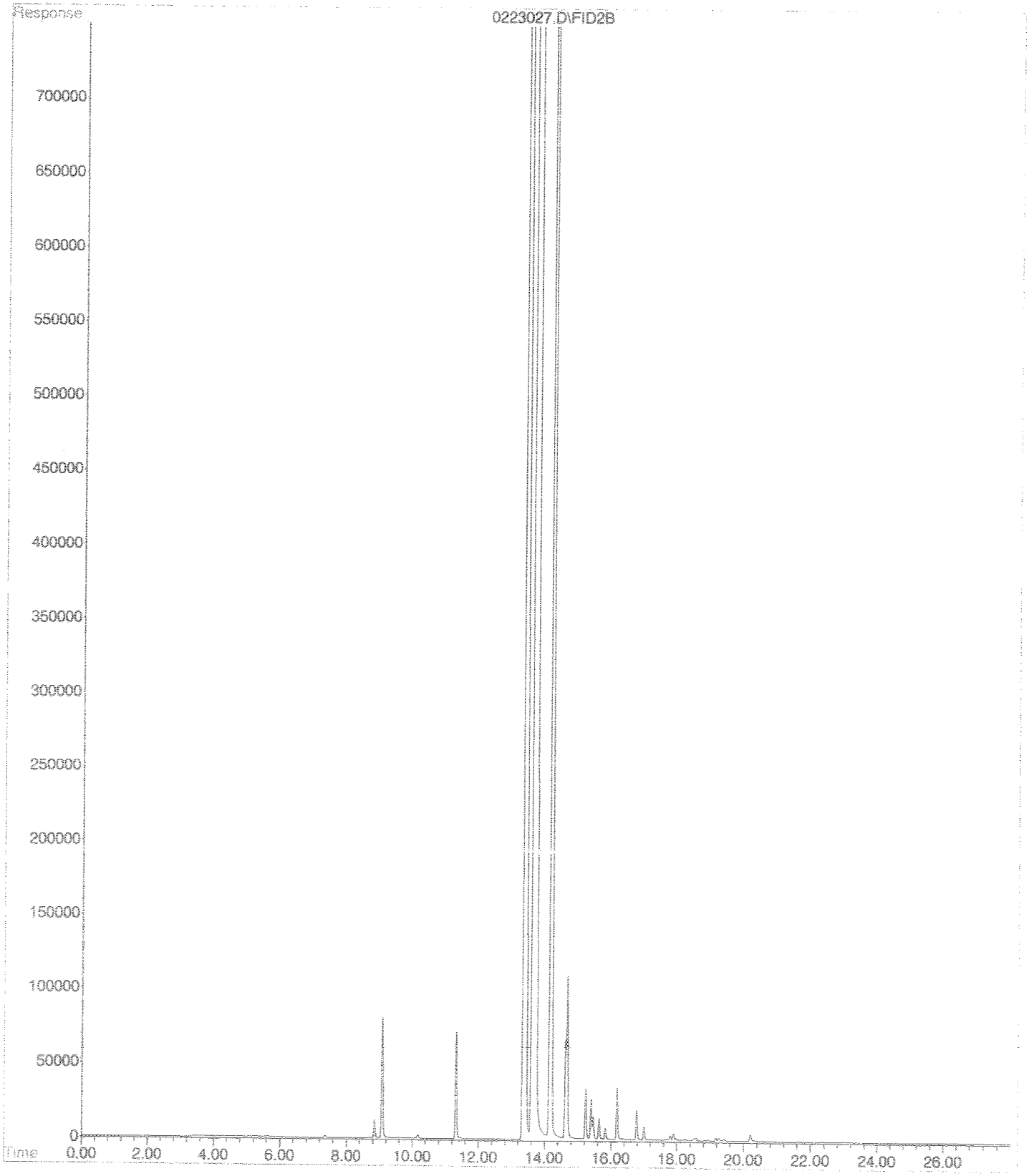
	Signature	Company	Date	Time
Relinquished	Patrick L. Reed	Terra Assoc	2/20/15	1700
Received		OSE	2/20/15	1700
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

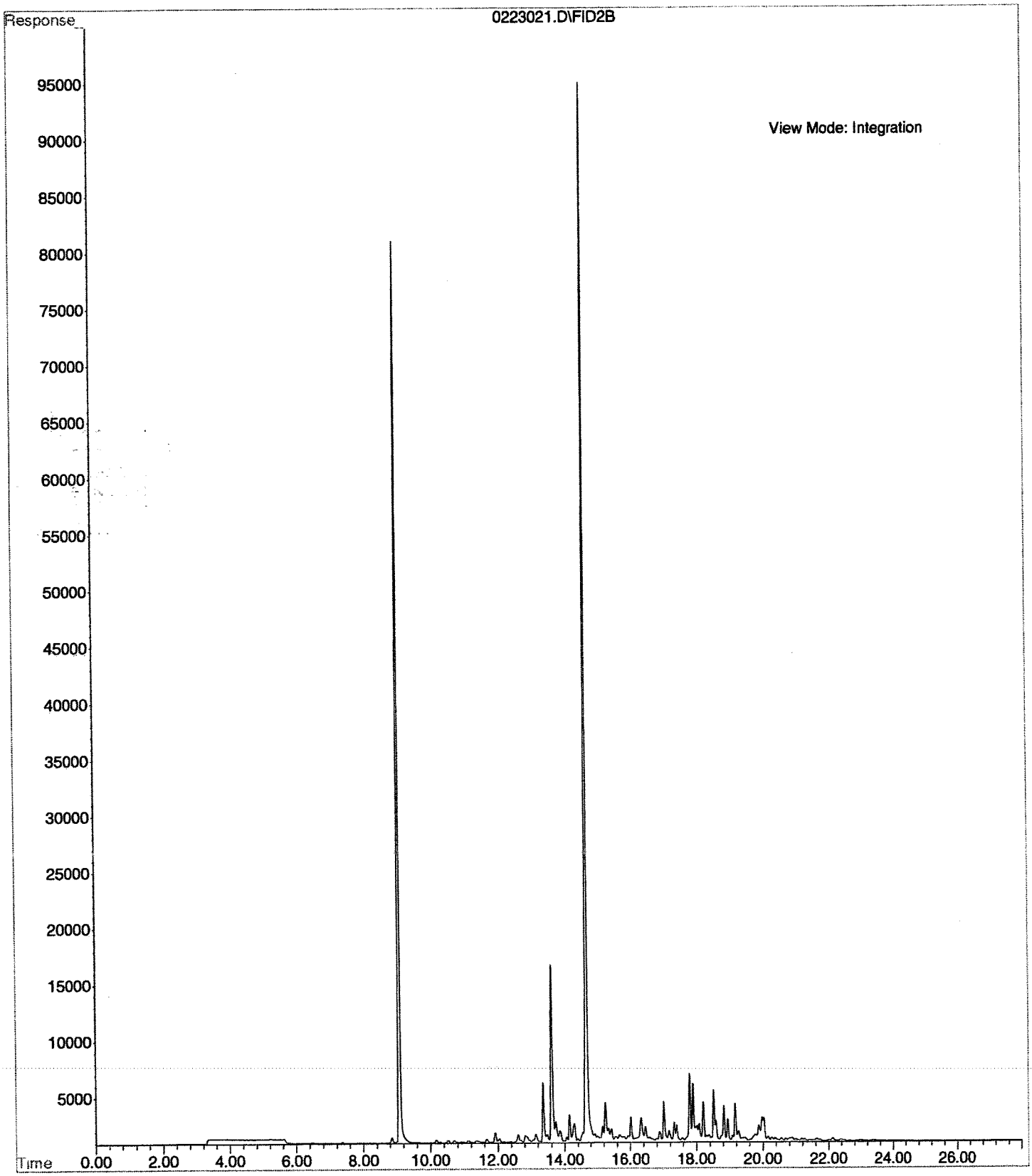
Dissolved Lead field filtered.
MW 205 - one VOA for TPHgx fell + broke.
Samples MW 205, 201, 202, and 204 have 1(1/2) liter jars for TPH Dx.
Samples MW-203 and 107 have two half liter Acids for TPH Dx.

Chromatograms with final report ☐

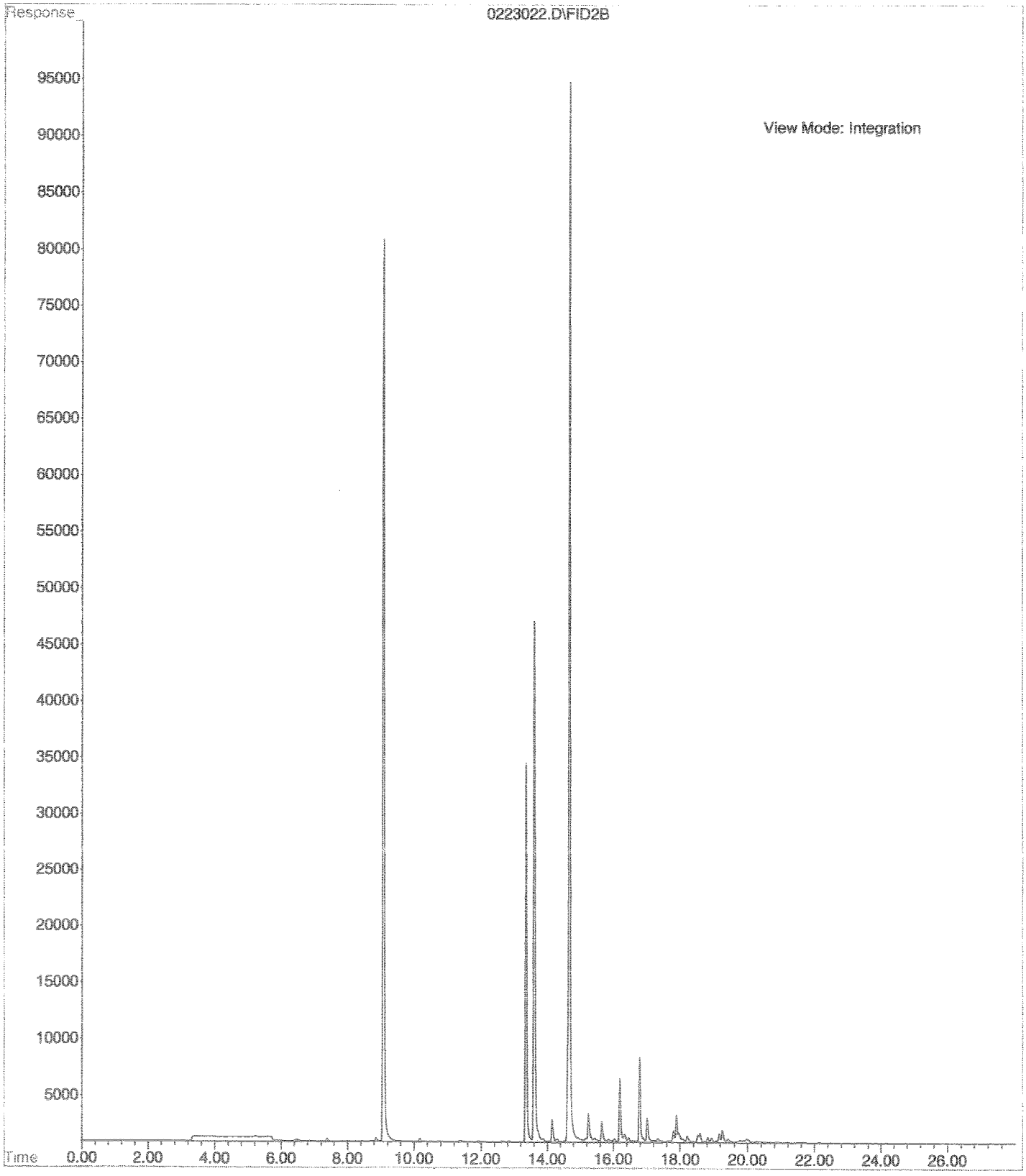
File : X:\BTEX\HOPE\DATA\H150223\0223027.D
Operator :
Acquired : 24 Feb 2015 4:46 using AcqMethod 150217B.M
Instrument : HOPE
Sample Name: 02-199-03d
Misc Info : V2-36-17
Vial Number: 27



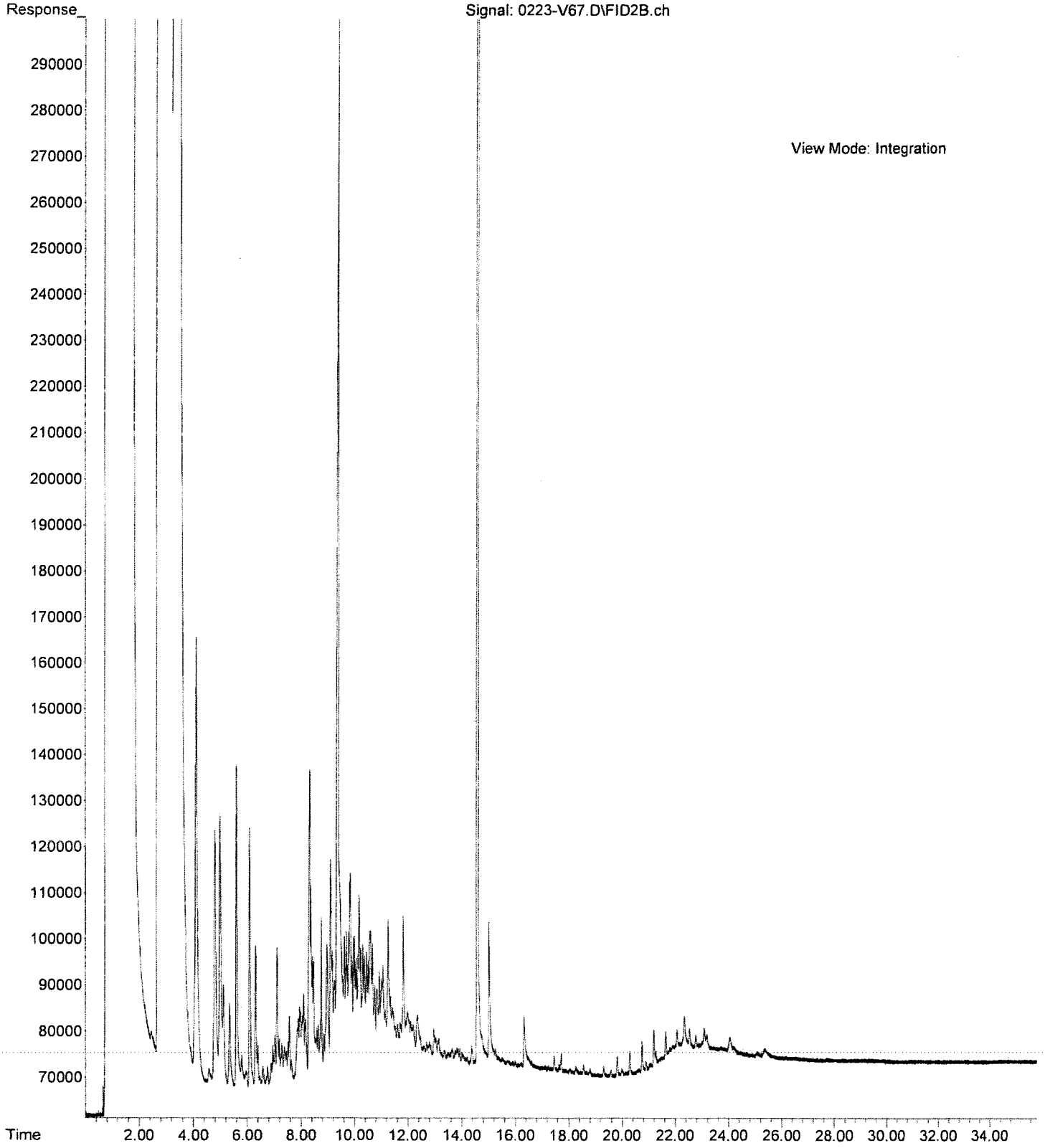
File : X:\BTEX\HOPE\DATA\H150223\0223021.D
Operator :
Acquired : 24 Feb 2015 1:28 using AcqMethod 150217B.M
Instrument : HOPE
Sample Name: 02-199-04d
Misc Info : V2-36-17
Vial Number: 21



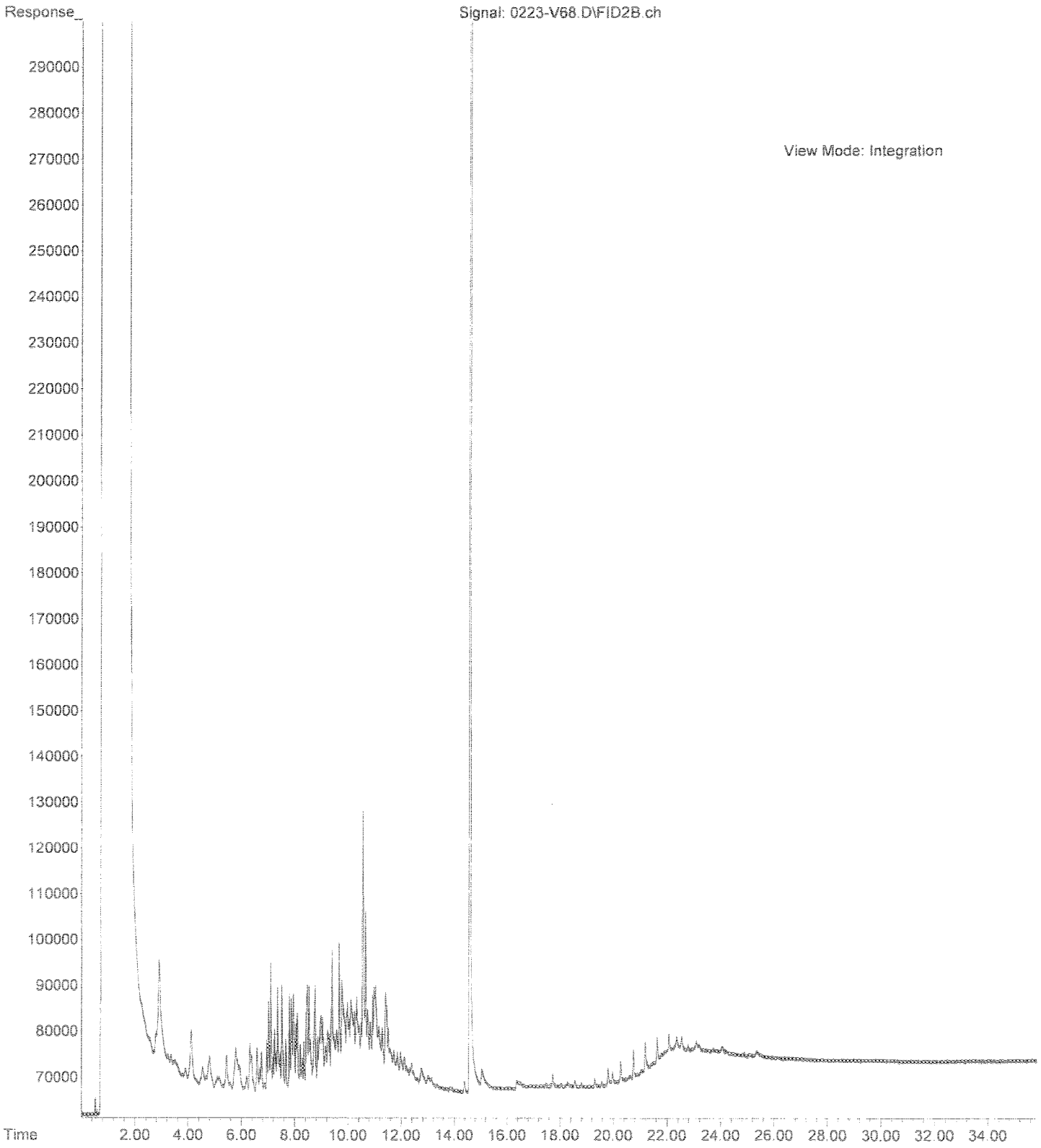
File : X:\BTEX\HOPE\DATA\H150223\0223022.D
Operator :
Acquired : 24 Feb 2015 2:01 using AcqMethod 150217B.M
Instrument : HOPE
Sample Name: 02-199-05e
Misc Info : V2-36-17
Vial Number: 22



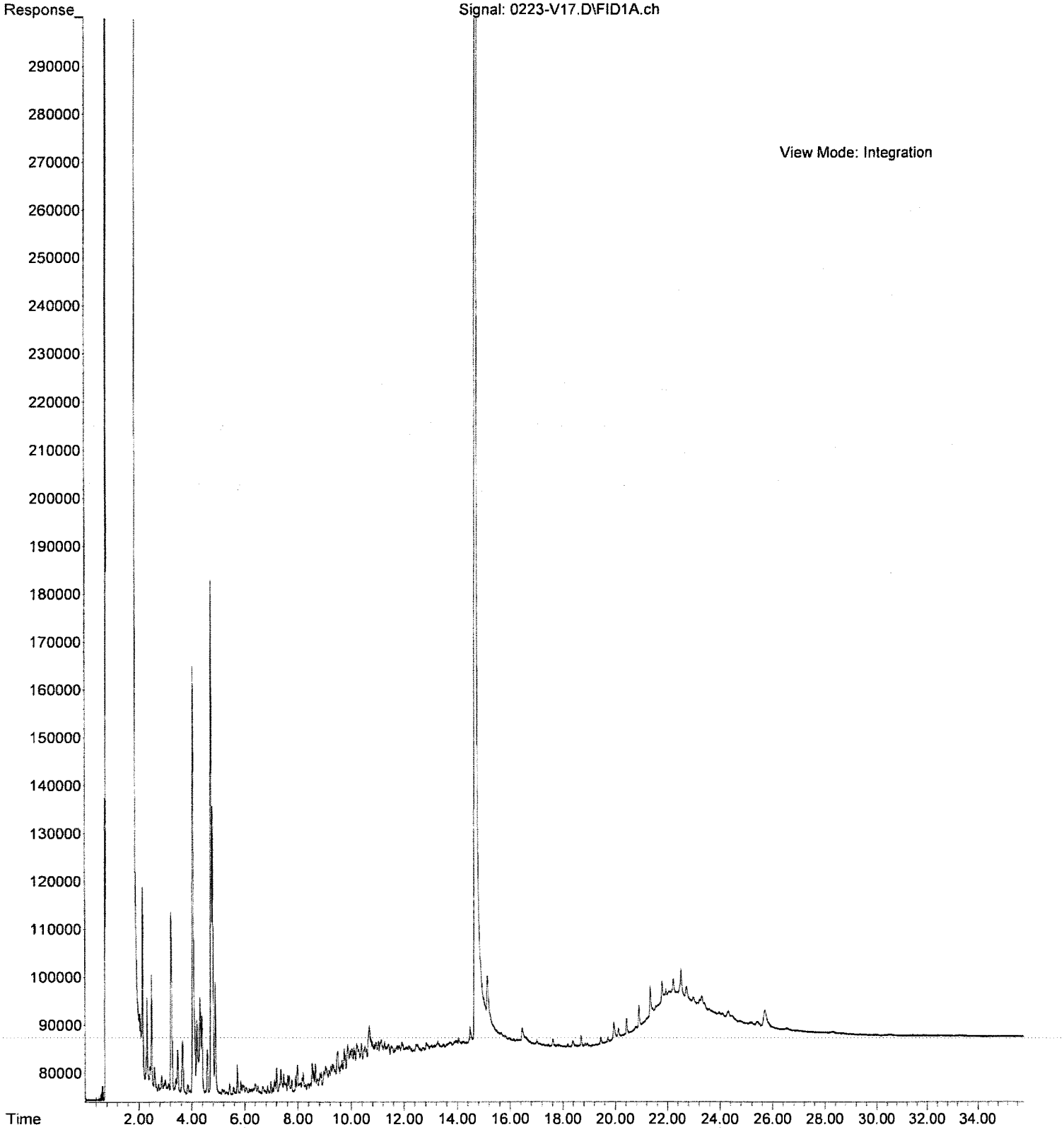
File :C:\msdchem\2\DATA\V150223.SEC\0223-V67.D
Operator :
Acquired : 23 Feb 2015 20:31 using AcqMethod V150209F.M
Instrument : Vigo
Sample Name: 02-199-03
Misc Info :
Vial Number: 67



File :C:\msdchem\2\DATA\V150223.SEC\0223-V68.D
Operator :
Acquired : 23 Feb 2015 21:12 using AcqMethod V150209F.M
Instrument : Vigo
Sample Name: 02-199-04
Misc Info :
Vial Number: 68



File :C:\msdchem\2\DATA\V150223\0223-V17.D
Operator :
Acquired : 23 Feb 2015 20:31 using AcqMethod V150209F.M
Instrument : Vigo
Sample Name: 02-199-06
Misc Info :
Vial Number: 17



OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

December 3, 2014

Chuck Lie
Terra Associates, Inc.
12525 Willows Road, Suite 101
Kirkland, WA 98034

Re: Analytical Data for Project 6552
Laboratory Reference No. 1411-259

Dear Chuck:

Enclosed are the analytical results and associated quality control data for samples submitted on November 25, 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,

David Baumeister
Project Manager

Enclosures

Date of Report: December 3, 2014
Samples Submitted: November 25, 2014
Laboratory Reference: 1411-259
Project: 6552

Case Narrative

Samples were collected on November 25, 2014 and received by the laboratory on November 25, 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: December 3, 2014
Samples Submitted: November 25, 2014
Laboratory Reference: 1411-259
Project: 6552

NWTPH-Gx/BTEX

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-301**	MW-205 crl				
Laboratory ID:	11-259-01					
Benzene	**ND**	0.50	EPA 8021B	11-26-14	11-26-14	
Toluene	**ND**	1.0	EPA 8021B	11-26-14	11-26-14	
Ethyl Benzene	**ND**	1.0	EPA 8021B	11-26-14	11-26-14	
m,p-Xylene	**ND**	1.0	EPA 8021B	11-26-14	11-26-14	
o-Xylene	**ND**	1.0	EPA 8021B	11-26-14	11-26-14	
Gasoline	**ND**	100	NWTPH-Gx	11-26-14	11-26-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*81*	*71-113*				

Date of Report: December 3, 2014
Samples Submitted: November 25, 2014
Laboratory Reference: 1411-259
Project: 6552

NWTPH-Gx/BTEX
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1126W2					
Benzene	**ND**	1.0	EPA 8021B	11-26-14	11-26-14	
Toluene	**ND**	1.0	EPA 8021B	11-26-14	11-26-14	
Ethyl Benzene	**ND**	1.0	EPA 8021B	11-26-14	11-26-14	
m,p-Xylene	**ND**	1.0	EPA 8021B	11-26-14	11-26-14	
o-Xylene	**ND**	1.0	EPA 8021B	11-26-14	11-26-14	
Gasoline	**ND**	100	NWTPH-Gx	11-26-14	11-26-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*86*	*71-113*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	11-257-01										
	ORIG	DUP									
Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Toluene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Ethyl Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
m,p-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
o-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Gasoline	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Surrogate:											
Fluorobenzene						*88*	*84*	*71-113*			
MATRIX SPIKES											
Laboratory ID:	11-234-01										
	MS	MSD	MS	MSD		MS	MSD				
Benzene	**52.0**	**52.9**	50.0	50.0	ND	**104**	**106**	82-120	2	14	
Toluene	**50.6**	**51.5**	50.0	50.0	ND	**101**	**103**	83-120	2	14	
Ethyl Benzene	**49.7**	**50.6**	50.0	50.0	ND	**99**	**101**	83-120	2	15	
m,p-Xylene	**49.8**	**50.6**	50.0	50.0	ND	**100**	**101**	81-123	2	15	
o-Xylene	**48.6**	**48.7**	50.0	50.0	ND	**97**	**97**	80-120	0	16	
Surrogate:											
Fluorobenzene						*90*	*91*	*71-113*			

OnSite Environmental Inc.

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.

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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.

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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.

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T - The sample chromatogram is not similar to a typical _____.

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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.

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ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

Chain of Custody

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

Company: Terra Associates Inc.
Project Number: 6552
Project Name:
Project Manager: Chuck Lia
Sampled by: Nicolas R. Huffman

Turnaround Request (in working days)

(Check One)

- ☐ Same Day
- ☐ 1 Day
- ☐ 2 Days
- ☐ 3 Days
- ☒ Standard (7 Days) (TPH analysis 5 Days)
- ☐ _____ (other)

Laboratory Number: 11-259

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	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 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A					% Moisture
1	MW-301 MW-205	11/25/14	10:20	Water	4		X																			

	Signature	Company	Date	Time
Relinquished		TAI	11/25/14	12:50
Received		COC	11/25/14	1250
Relinquished				
Received				
Relinquished				
Received				

Comments/Special Instructions

Reviewed/Date

Reviewed/Date

Chromatograms with final report ☐

...lankard ...evel III ...evel IV ...tronic ...eliverables ...DDs)

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

January 14, 2015

Chuck Lie
Terra Associates, Inc.
12525 Willows Road, Suite 101
Kirkland, WA 98034

Re: Analytical Data for Project 6552
Laboratory Reference No. 1501-053

Dear Chuck:

Enclosed are the analytical results and associated quality control data for samples submitted on January 12, 2015.

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,

David Baumeister
Project Manager

Enclosures

Date of Report: January 14, 2015
Samples Submitted: January 12, 2015
Laboratory Reference: 1501-053
Project: 6552

Case Narrative

Samples were collected on January 12, 2015 and received by the laboratory on January 12, 2015. 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: January 14, 2015
Samples Submitted: January 12, 2015
Laboratory Reference: 1501-053
Project: 6552

PAHs EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-301**					
Laboratory ID:	01-053-01	MW-205 crl				
Naphthalene	ND	0.094	EPA 8270D/SIM	1-13-15	1-13-15	
2-Methylnaphthalene	ND	0.094	EPA 8270D/SIM	1-13-15	1-13-15	
1-Methylnaphthalene	ND	0.094	EPA 8270D/SIM	1-13-15	1-13-15	
Acenaphthylene	ND	0.094	EPA 8270D/SIM	1-13-15	1-13-15	
Acenaphthene	ND	0.094	EPA 8270D/SIM	1-13-15	1-13-15	
Fluorene	ND	0.094	EPA 8270D/SIM	1-13-15	1-13-15	
Phenanthrene	ND	0.094	EPA 8270D/SIM	1-13-15	1-13-15	
Anthracene	ND	0.094	EPA 8270D/SIM	1-13-15	1-13-15	
Fluoranthene	ND	0.094	EPA 8270D/SIM	1-13-15	1-13-15	
Pyrene	ND	0.094	EPA 8270D/SIM	1-13-15	1-13-15	
Benzo[a]anthracene	ND	0.0094	EPA 8270D/SIM	1-13-15	1-13-15	
Chrysene	ND	0.0094	EPA 8270D/SIM	1-13-15	1-13-15	
Benzo[b]fluoranthene	ND	0.0094	EPA 8270D/SIM	1-13-15	1-13-15	
Benzo(j,k)fluoranthene	ND	0.0094	EPA 8270D/SIM	1-13-15	1-13-15	
Benzo[a]pyrene	ND	0.0094	EPA 8270D/SIM	1-13-15	1-13-15	
Indeno(1,2,3-c,d)pyrene	ND	0.0094	EPA 8270D/SIM	1-13-15	1-13-15	
Dibenz[a,h]anthracene	ND	0.0094	EPA 8270D/SIM	1-13-15	1-13-15	
Benzo[g,h,i]perylene	ND	0.0094	EPA 8270D/SIM	1-13-15	1-13-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*80*	*39 - 109*				
Pyrene-d10	*86*	*53 - 131*				
Terphenyl-d14	*93*	*44 - 104*				

Date of Report: January 14, 2015
Samples Submitted: January 12, 2015
Laboratory Reference: 1501-053
Project: 6552

PAHs EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0113W1					
Naphthalene	**ND**	0.10	EPA 8270D/SIM	1-13-15	1-13-15	
2-Methylnaphthalene	**ND**	0.10	EPA 8270D/SIM	1-13-15	1-13-15	
1-Methylnaphthalene	**ND**	0.10	EPA 8270D/SIM	1-13-15	1-13-15	
Acenaphthylene	**ND**	0.10	EPA 8270D/SIM	1-13-15	1-13-15	
Acenaphthene	**ND**	0.10	EPA 8270D/SIM	1-13-15	1-13-15	
Fluorene	**ND**	0.10	EPA 8270D/SIM	1-13-15	1-13-15	
Phenanthrene	**ND**	0.10	EPA 8270D/SIM	1-13-15	1-13-15	
Anthracene	**ND**	0.10	EPA 8270D/SIM	1-13-15	1-13-15	
Fluoranthene	**ND**	0.10	EPA 8270D/SIM	1-13-15	1-13-15	
Pyrene	**ND**	0.10	EPA 8270D/SIM	1-13-15	1-13-15	
Benzo[a]anthracene	**ND**	0.010	EPA 8270D/SIM	1-13-15	1-13-15	
Chrysene	**ND**	0.010	EPA 8270D/SIM	1-13-15	1-13-15	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270D/SIM	1-13-15	1-13-15	
Benzo(j,k)fluoranthene	**ND**	0.010	EPA 8270D/SIM	1-13-15	1-13-15	
Benzo[a]pyrene	**ND**	0.010	EPA 8270D/SIM	1-13-15	1-13-15	
Indeno(1,2,3-c,d)pyrene	**ND**	0.010	EPA 8270D/SIM	1-13-15	1-13-15	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270D/SIM	1-13-15	1-13-15	
Benzo[g,h,i]perylene	**ND**	0.010	EPA 8270D/SIM	1-13-15	1-13-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*91*	*39 - 109*				
Pyrene-d10	*92*	*53 - 131*				
Terphenyl-d14	*102*	*44 - 104*				

Date of Report: January 14, 2015
Samples Submitted: January 12, 2015
Laboratory Reference: 1501-053
Project: 6552

PAHs EPA 8270D/SIM
SB/SBD QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0113W1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	**0.304**	**0.369**	0.500	0.500	61	74	41 - 105	19	46	
Acenaphthylene	**0.333**	**0.293**	0.500	0.500	67	59	48 - 109	13	43	
Acenaphthene	**0.336**	**0.372**	0.500	0.500	67	74	52 - 105	10	40	
Fluorene	**0.370**	**0.435**	0.500	0.500	74	87	60 - 108	16	41	
Phenanthrene	**0.375**	**0.438**	0.500	0.500	75	88	61 - 110	15	36	
Anthracene	**0.578**	**0.636**	0.500	0.500	116	127	57 - 130	10	37	
Fluoranthene	**0.422**	**0.483**	0.500	0.500	84	97	60 - 120	13	35	
Pyrene	**0.417**	**0.471**	0.500	0.500	83	94	66 - 127	12	37	
Benzo[a]anthracene	**0.475**	**0.527**	0.500	0.500	95	105	60 - 135	10	34	
Chrysene	**0.384**	**0.438**	0.500	0.500	77	88	64 - 113	13	34	
Benzo[b]fluoranthene	**0.413**	**0.471**	0.500	0.500	83	94	66 - 126	13	37	
Benzo(j,k)fluoranthene	**0.408**	**0.457**	0.500	0.500	82	91	66 - 123	11	39	
Benzo[a]pyrene	**0.405**	**0.406**	0.500	0.500	81	81	63 - 130	0	37	
Indeno(1,2,3-c,d)pyrene	**0.411**	**0.469**	0.500	0.500	82	94	63 - 130	13	42	
Dibenz[a,h]anthracene	**0.411**	**0.473**	0.500	0.500	82	95	60 - 124	14	44	
Benzo[g,h,i]perylene	**0.397**	**0.456**	0.500	0.500	79	91	60 - 119	14	45	
Surrogate:										
2-Fluorobiphenyl					*72*	*85*	*39 - 109*			
Pyrene-d10					*85*	*95*	*53 - 131*			
Terphenyl-d14					*90*	*101*	*44 - 104*			

OnSite Environmental Inc.

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M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

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O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

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Chain of Custody

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

Laboratory Number: 01-053

Company: Tara Associates Inc

Project Number: 6552

Project Name:

Project Manager: Chuck Lee

Sampled by: Nicolas R. Huffman

Turnaround Required (in working days)

(Check One)

- ☐ Same Day
- ☐ 1 Day
- ☐ 2 Days
- ☐ 3 Days
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- ☐ (other)

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	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 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D-SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	% Moisture
1	MW-301 MW-205 DT	11/12/15	10:15	Water	2								X									

	Signature	Company	Date	Time
Relinquished		TAI	11/12/15	11:10
Received		COSE	11/12/15	1110
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Chromatograms with final report

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

June 1, 2015

Chuck Lie
Terra Associates, Inc.
12525 Willows Road, Suite 101
Kirkland, WA 98034

Re: Analytical Data for Project 6552
Laboratory Reference No. 1505-250

Dear Chuck:

Enclosed are the analytical results and associated quality control data for samples submitted on May 28, 2015.

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,

David Baumeister
Project Manager

Enclosures

Date of Report: June 1, 2015
Samples Submitted: May 28, 2015
Laboratory Reference: 1505-250
Project: 6552

NWTPH-Gx/BTEX
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0528W1					
Benzene	ND	0.50	EPA 8021B	5-28-15	5-28-15	
Toluene	ND	1.0	EPA 8021B	5-28-15	5-28-15	
Ethyl Benzene	ND	1.0	EPA 8021B	5-28-15	5-28-15	
m,p-Xylene	ND	1.0	EPA 8021B	5-28-15	5-28-15	
o-Xylene	ND	1.0	EPA 8021B	5-28-15	5-28-15	
Gasoline	ND	100	NWTPH-Gx	5-28-15	5-28-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*84*	*71-113*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	05-242-01										
	ORIG	DUP									
Benzene	ND	ND	NA	NA		NA		NA	NA	30	
Toluene	ND	ND	NA	NA		NA		NA	NA	30	
Ethyl Benzene	ND	ND	NA	NA		NA		NA	NA	30	
m,p-Xylene	ND	ND	NA	NA		NA		NA	NA	30	
o-Xylene	ND	ND	NA	NA		NA		NA	NA	30	
Gasoline	ND	ND	NA	NA		NA		NA	NA	30	
Surrogate:											
Fluorobenzene						*84*	*84*	*71-113*			
MATRIX SPIKES											
Laboratory ID:	05-242-01										
	MS	MSD	MS	MSD		MS	MSD				
Benzene	50.4	49.4	50.0	50.0	ND	101	99	82-120	2	14	
Toluene	50.5	49.8	50.0	50.0	ND	101	100	83-120	1	14	
Ethyl Benzene	50.7	50.0	50.0	50.0	ND	101	100	83-120	1	15	
m,p-Xylene	50.8	50.7	50.0	50.0	ND	102	101	81-123	0	15	
o-Xylene	50.5	50.7	50.0	50.0	ND	101	101	80-120	0	16	
Surrogate:											
Fluorobenzene						*88*	*87*	*71-113*			

OnSite Environmental Inc.

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Chain of Custody

Page 1 of 1

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

Company: Terra Associates Inc
Project Number: 6552
Project Name:
Project Manager: Chuck Lie
Sampled by: Nicole R. Huffman

Turnaround Request (in working days)

(Check One)

- ☐ Same Day
- ☐ 1 Day
- ☐ 2 Days
- ☐ 3 Days
- ☒ Standard (7 Days) (TPH analysis 5 Days)
- ☐ _____ (other)

Laboratory Number: 05-250

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total PCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	% Moisture
1	MW-205	5/28/15	6:15	H_2O	4		X															

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished		TAI	5/28/15	9:52	
Received			5/28/15	9:52	
Relinquished					
Received					
Relinquished					
Received					
Reviewed/Date		Reviewed/Date			Chromatograms with final report ☐