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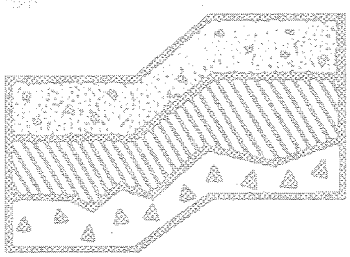
Current Groundwater Assessment
Shilshole Avenue NW Parcels
Seattle, Washington

Project No. T-6552



Terra Associates, Inc.

Prepared for:

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

October 24, 2012

TERRA ASSOCIATES, Inc.

Consultants in Geotechnical Engineering, Geology
and
Environmental Earth Sciences

October 24, 2012
Project No. T-6552

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

Subject: Current Groundwater Assessment
Shilshole Avenue NW Parcels
Seattle, Washington

Dear Mr. Cowman:

As requested, we are continuing to provide environmental sampling and consultation services to you for the former C and C Paint parcels. This report covers the groundwater conditions beneath the entire wellfield that covers 5232 and 5242 Shilshole Avenue NW and due to its upgradient location, 5221 Ballard Avenue NW as well.

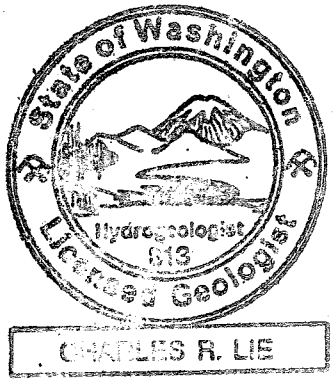
The attached report discusses our site observations, the results of analytical testing, and our conclusions. This report does not include a discussion of historic soil data beneath any of the parcels.

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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Current Groundwater Assessment
Shilshole Avenue NW Parcels
Seattle, Washington

1.0 EXECUTIVE SUMMARY

The following report presents a summary of all documented groundwater sampling at the former C and C Paint parcels at 5232 and 5242 Shilshole Avenue NW. This report includes groundwater information developed for an upgradient parcel at 5221 Ballard Avenue NW and soil sampling that took place in the warehouse at 5242 Shilshole Avenue NW in 2011. This complex has been subject to soil and groundwater monitoring since about 1995. The former USTs used for the storage of paint thinner and mineral spirits were removed in the 1990s and are documented in reports prepared by others. The prior testing of soils by others is not discussed in this report.

Based on the past and current groundwater sampling, one monitoring well, MW-1, on the Shilshole parcels has a level of total petroleum hydrocarbons above the cleanup level.

The results of our work 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:

- Review of previous reports prepared by others. The list of reports is presented in Appendix A.
- Measuring static water level in the existing wellfield on and adjacent to the Shilshole Parcels.
- Sampling groundwater from selected wells in the overall wellfield.
- Subcontracting analytical testing of groundwater samples.
- Appropriate analysis of the data.
- Preparation of this report.

3.0 SITE CONDITIONS

3.1 Surface

The site is located at 5232 and 5242 Shilshole Avenue NW in Seattle, Washington. The site location is shown on Figures 1 and 2. The site layout is shown on Figure 3. The Shilshole parcels are all developed with one-story warehouse buildings. The 5232 Shilshole Avenue NW parcel includes a parking/open storage area.

There is a building located upgradient of the Shilshole parcels that is not part of this study but was part of the C and C Paints complex. 5221 Ballard Avenue NW site consists of a two-story building with a basement level. The basement level connects with the warehouse at 5242 Shilshole Avenue NW. There is a narrow parking lot along the northwest elevation of the building.

The former UST locations on the Shilshole parcels are shown on Figure 3. The locations of the 3 paint thinner USTs on the 5221 site are shown on Figure 3.

The elevation of the parking lot at 5221 is approximately Elev. 36. The floor elevation in the basement at 5221 is approximately Elev. 28. The basement elevation corresponds with the general ground elevation along Shilshole Avenue NW.

3.2 Subsurface

On June 13, 2011, we observed one boring at the Shilshole site. The purpose of our exploration was to obtain supplemental environmental samples for site characterization of the conditions at 5221 Ballard Avenue NW. The boring is labeled as MW-104. Locations of the explorations are shown on Figure 4. The log for boring MW-104 is attached to this report in Appendix B.

In general, native subsurface conditions beneath the site consist of silty sands that are dense till soils. Overlying the dense till soil are fills. All soils encountered in the borings are granular soils.

3.3 Groundwater

Groundwater seepage was encountered in the test borings.

To allow a detailed determination of groundwater flow beneath the site, all of the existing monitoring wells were surveyed by Jim Hart and Associates. Measurements show that groundwater gradients are towards the south-southwest. The groundwater levels measured in June of 2011 are schematically shown on Figure 4. Table 1 summarizes the static water levels that have been measured on-site. The initial groundwater flow gradient was consistent with prior investigations by others.

In the fall of 2011, a new construction project started on the north side of Ballard Avenue NW next to the Olympic Athletic Club. The new building has a parking garage that extends three levels below the elevation of Ballard Avenue Northwest. To dewater the basement area, permanent dewatering pumps have been installed at approximately elevation 2. This has changed the groundwater regime in the immediate vicinity of the site. The monitoring wells at 5221 Ballard Avenue NW have gone dry as well as about half of the monitoring wells at the Shilshole parcels. This condition is expected to exist for the foreseeable future. This is reflected in the data summarized in Table 1.

Table 1
Groundwater Measurements

Monitoring Well	Surface Elev.	MP Elev.	4/29/11		5/6/11		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

Table 1 (continued)
Groundwater Measurements

Monitoring Well	Surface Elev.	MP Elev.	4/29/11		5/6/11		5/10/2011		6/29/2011	
			Depth	Elev.	Depth	Elev.	Depth	Elev.	Depth	Elev.
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

Monitoring Well	Surface Elev.	MP Elev.	9-29-11		10-17-11		11-18-11		11-29-11	
			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

Monitoring Well	Surface Elev.	MP Elev.	5-2-12		8-14-12	
			Depth	Elev.	Depth	Elev.
MW-1	26.44	26.11	NM	NM	7.52	18.59
MW-2	25.98	25.98	NM	NM	6.88	19.10
MW-3	26.05	26.05	NM	NM	7.07	18.98
MW-4	26.21	25.90	NM	NM	NM	NM
MW-5	26.32	26.32	NM	NM	NM	NM
MW-6	26.8	26.34	NM	NM	5.87	20.47
MW-7	26.89	26.60	NM	NM	dry	dry
MW-8	27.97	27.51	>8	<18.60	NM	NM
MW-9	30.24	29.99	>8	<19.51	NM	NM
MW-10	26.48	26.16	NM	NM	NM	NM
MW-101	36.77	36.37	>20	<16.37	NM	NM
MW-102	36.35	35.93	>20	<15.93	NM	NM
MW-103	36.13	35.79	>20	<15.79	NM	NM
MW-104	28.23	27.98	>15	<12.98	NM	NM

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.

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 and previous sampling by others documented in the reports listed in Appendix A. Selected groundwater samples were analyzed for the following analytes:

- Total petroleum hydrocarbons (TPH) in the gasoline through heavy oil range.
- Volatile organic compounds.

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

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

5.2 Soils

The results of analysis of soil samples taken in Boring MW-104 within the warehouse at 5242 Shilshole Avenue NW are summarized in Table 2.

Table 2a
Petroleum Hydrocarbons
Soil

Well Number	Date	Depth (feet)	TPH Gasoline Range
B-104 (MW-104)	6/13/11	2.5	15
		5	10
MTCA Method A			100

Table 2b
Volatile Organic Compounds
Soil

Well Number	Depth	Benzene	Ethyl Benzene	Toluene	m,p Xylene	o-Xylene
B-104 (MW-104)	2.5	0.0013U	0.0013U	0.0065U	0.0026U	0.0013U
MTCA		0.03	6.0	7.0	9.0	

Table 2b continued

Well Number	Depth	Acetone	isopropyl benzene	n-Propylbenzene	Sec-Butyl benzene
B-104 (MW-104)	2.5	0.037	0.0013U	0.0013U	0.0013U
MTCA		72,000	np	8,000	np

Notes All levels are reported in parts per million (ppm).
Modifier of U indicates that the compound was not present at the numerical PQL value.
PQL varies with the moisture content of the sample.
PQL in bold for benzene exceeds Method A cleanup value, PQL elevated due to elevated.
TPH in the individual samples.
Cleanup values are shown for reference purposes; site specific cleanup levels have not been developed.

5.3 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.

Table 3
Total Petroleum Hydrocarbons
Groundwater

Well Number	Date	TPH Gas Range	TPH Diesel Range	TPH Oil Range
MW-1	11/27/95	24,000	NT	NT
	6/20/96	210	NT	NT
	9/11/96	190	NT	NT
	12/10/96	190	NT	NT
	4/3/97	190	NT	NT
	1/31/98	310	NT	NT
	10/10/00	410	1.1	0.95
	9/25/02	34	0.91	0.5U
	11/14/03	18	11	
	6/21/06	NR	0.5U	0.5U
	12/15/06	ND	ND	ND
	1/18/07	ND	ND	ND
	6/12/07	5.8	ND	ND
	10/22/07	2.4	NR	ND
	3/19/08	2.7	ND	ND
	6/20/08	0.5U	NT	NT
	12/30/08	312	NT	NT
	6/2009	8.7	NT	NT
	10/2009	11.3	NT	NT
	2/2010	10.0	NT	NT
	7/27/10	1.2	0.5U	0.5U
	4/29/11	1.1	0.3U	0.41U
	8/14/12	4.9	0.38U	0.41U

Table 3 (continued)
Petroleum Hydrocarbons
Groundwater

Well Number	Date	TPH Gas Range	TPH Diesel Range	TPH Oil Range
MW-2	11/27/95	ND	NT	NT
	6/20/96	1.1	NT	NT
	9/11/96	0.9	NT	NT
	12/10/96	0.9	NT	NT
	4/3/97	0.1U	NT	NT
	1/31/98	ND	NT	NT
	10/10/00	0.13	NT	NT
	9/25/02	0.5U	NT	NT
	11/14/03	0.25U	NT	NT
	6/21/06	0.25U	0.5U	X
	12/15/06	ND	ND	ND
	1/18/07	ND	ND	NR
	6/12/07	ND	ND	NR
	10/22/07	ND	NR	NR
	3/19/08	ND	ND	ND
	6/20/08	0.05U	NT	NT
	12/30/08	ND	NT	NT
	7/27/10	0.2U	0.47	1.2
MW-3	11/27/95	ND	NT	NT
	1/31/98	ND	NT	NT
	10/10/00	ND	NT	NT
	9/25/02	0.05U	NT	NT
	11/14/03	0.05U	NT	NT
	6/26/06	0.25U	0.5U	0.5U
	12/15/06	ND	0.65	ND
	1/18/07	ND	ND	NR
	6/12/07	ND	ND	ND
	10/22/07	ND	ND	ND
	3/19/08	ND	ND	ND
	6/20/08	0.052	NT	NT
	12/30/08	ND	NT	NT
	7/27/10	0.2U	0.5U	0.5U
	8/14/12	0.1U	0.26U	0.41U

Table 3 (continued)
Petroleum Hydrocarbons
Groundwater

Well Number	Date	TPH Gas Range	TPH Diesel Range	TPH Oil Range
MW-4	11/27/95	78	NT	NT
	1/31/98	14	NT	NT
	10/10/00	0.68	NT	NT
	9/25/02	0.11	NT	NT
	11/14/03	0.05U	NT	NT
	6/21/06	0.25U	0.5U	0.5U
	12/15/06	ND	ND	ND
	1/18/07	ND	ND	ND
	6/12/07	0.11	ND	ND
	10/22/07	ND	NR	ND
	3/19/08	ND	ND	ND
	6/20/08	1.57	NT	NT
	12/30/08	ND	NT	NT
	7/27/10	0.2U	0.5U	0.5U
MW-5	11/27/95	28	NT	NT
	1/31/98	1.1	NT	NT
	10/10/00	0.2	NT	NT
	9/25/02	0.25U	NT	NT
	11/14/03	0.05U	NT	NT
	12/15/06	ND	ND	ND
	1/18/07	ND	ND	ND
	6/12/07	ND	ND	ND
	10/22/07	ND	NR	NR
	3/19/08	ND	ND	ND
	6/20/08	0.05U	NT	NT
	12/30/08	ND	NT	NT
	7/27/10	0.2U	0.5U	0.5U

Table 3 (continued)
Petroleum Hydrocarbons
Groundwater

Well Number	Date	TPH Gas Range	TPH Diesel Range	TPH Oil Range
MW-6	1/29/96	0.68	NT	NT
	10/10/00	0.84	NT	NT
	9/25/02	0.25U	NT	NT
	11/14/03	0.05U	NT	NT
	6/26/06	0.25U	0.5U	0.5U
	12/15/06	ND	ND	ND
	1/18/07	0.29	ND	ND
	6/12/07	0.32	NR	ND
	10/22/07	ND	NR	NR
	3/19/08	ND	ND	ND
	6/20/08	0.147	NT	NT
	12/30/08	0.12	NT	NT
	7/27/10	0.11	0.5U	0.5U
	4/28/11	0.16	0.26U	0.41U
	8/14/12	0.1U	0.26U	0.41U
MW-7	1/29/96	61	NT	NT
	6/20/96	16	NT	NT
	9/11/96	9.0	NT	NT
	12/10/96	15	NT	NT
	4/3/97	17	NT	NT
	1/31/98	31	NT	NT
	10/10/00	4.3	NT	NT
	9/25/02	0.89	NT	NT
	11/14/03	0.72	NT	NT
	6/21/06	0.25U	0.5U	0.5U
	1/18/07	0.077	ND	ND
	6/12/07	ND	ND	ND
	10/22/07	2.4	NR	ND
	3/19/08	0.3	ND	ND
	6/20/08	0.13	NT	NT
	12/30/08	ND	NT	NT
	7/27/10	0.2U	0.5U	0.5U
	4/28/11	0.1U	0.26U	0.41U

Table 3 (continued)
Petroleum Hydrocarbons
Groundwater

Well Number	Date	TPH Gas Range	TPH Diesel Range	TPH Oil Range
MW-8	1/29/96	ND	NT	NT
	6/20/96	0.1U	NT	NT
	9/11/96	0.1U	NT	NT
	12/10/96	0.1U	NT	NT
	4/3/97	0.1U	NT	NT
	1/31/98	ND	NT	NT
	10/10/00	0.1U	NT	NT
	9/25/02	0.05U	NT	NT
	11/14/03	0.05U	NT	NT
	6/21/06	0.25U	0.5U	0.5U
	12/15/06	ND	ND	ND
	1/18/07	ND	ND	ND
	6/12/07	ND	ND	ND
	10/22/07	ND	ND	ND
	3/19/08	ND	ND	ND
	6/20/08	0.05U	NT	NT
	12/30/08	ND	NT	NT
	7/27/10	0.2U	0.5U	0.5U
MW-9	1/29/96	ND	NT	NT
	6/20/96	0.1U	NT	NT
	9/11/96	0.1U	NT	NT
	12/10/96	0.1U	NT	NT
	4/3/97	0.1U	NT	NT
	1/31/98	ND	NT	NT
	10/10/00	0.1U	NT	NT
	9/25/02	0.05U	NT	NT
	11/14/03	0.05U	NT	NT
	1/18/07	ND	ND	ND
	6/12/07	ND	ND	ND
	10/22/07	ND	ND	ND
	3/19/08	ND	ND	ND
	6/20/08	0.05	NT	NT
	12/30/08	ND	NT	NT
	7/27/10	0.2U	0.5U	0.5U

Table 3 (continued)
Petroleum Hydrocarbons
Groundwater

Well Number	Date	TPH Gas Range	TPH Diesel Range	TPH Oil Range
MW-10	1/29/96	0.93	NT	NT
	6/20/96	1.1	NT	NT
	9/11/96	0.58	NT	NT
	12/10/96	0.1U	NT	NT
	4/3/97	0.1U	NT	NT
	1/31/98	ND	NT	NT
	10/10/00	ND	NT	NT
	9/25/02	0.05U	NT	NT
	11/14/03	0.05U	NT	NT
	12/15/06	ND	ND	ND
	6/12/07	ND	ND	ND
	10/22/07	ND	ND	ND
	3/19/08	ND	ND	ND
	6/20/08	0.05U	NT	NT
	12/30/08	ND	NT	NT
	7/27/10	0.2U	0.5U	0.5U
MW-101	5/10/11	0.16	0.26U	0.41U
	9/29/11	0.29	0.26U	0.42U
MW-102	5/10/11	0.5U	0.27U	0.41U
	9/29/11	0.59	0.26U	0.41U
MW-103	5/10/11	**0.94**	**0.7U**	0.42U
	9/29/11	0.27	0.26U	0.41U
MW-104	6/29/11	0.1U	0.41U	0.26U
	9/29/11	0.1U	0.26U	0.41U
MTCA		0.8 (1.0)	0.5	0.5

Notes: Data prior to 2011 was collected by others.
All units are ppm.
U modifier indicates that the compound was not present at the PQL.
NT indicates that the sample was not analyzed for that analyte.
ND indicates that the analyte was not detected, no detection value reported.
NR indicates that the sample result is not reported.
Cleanup values are shown for reference purposes, site specific cleanup levels have not been developed.

Table 4
Volatile Organic Compounds
Groundwater

Well Number	Date	Benzene	Ethyl benzene	Toluene	m,p-Xylene	o-Xylene
MW-1	11/27/95	930	550	41,000	855,000	
	6/20/96	8.5	14,000	300	14,000	
	9/11/96	ND	13,000	ND	58,000	
	12/10/96	7.0	14,000	270	64,000	
	4/3/97	7.6	13,000	260	51,000	NT
	1/31/98	ND	15,000	230	70,000	
	10/10/00	1.0U	16,000	120	70,100	
	9/23/02	10U	11,000	26	19,000	3,900
	11/14/03	5.0U	1,700	80	5,500	
	6/12/07	ND	240	1	280	
	12/30/08	ND	2,900	29	11,000	
	3/19/08	ND	150	ND	440	
	6/09	10U	800	10U	2,500	
	10/09	10U	825	10U	2,700	
	2/10	10U	700	10U	1,900	
	7/27/10	1.0U	40	1.0U	130	
	4/29/11	0.56	27	2.0U	47	2.6
	8/14/12	1.0U	460	1.0U	1,800	120
MW-2	11/27/95	ND	6.6	ND	27	
	9/11/96	ND	79	23	379	
	12/10/96	ND	1.1	ND	2.3	
	4/3/97	ND	ND	3.2	ND	
	1/31/98	ND	ND	ND	ND	
	10/10/00	1.0U	1.0U	36	1.0U	NT
	9/23/02	5.0U	5.0U	5.0U	5.0U	
	11/14/03	5.0U	5.0U	5.0U	15U	
	12/30/08	ND	ND	ND	ND	
MW-3	11/27/95	ND	ND	ND	ND	
	1/31/98	ND	ND	ND	ND	
	10/10/00	1.0U	1.0U	1.0U	1.6	NT
	9/23/02	1.0U	1.0U	1.0U	1.0U	
	11/14/03	1.0U	1.0U	1.0U	3.0U	
	8/14/12	1.0U	1.0U	1.0U	3.2	1.0U

Table 4 (continued)
Volatile Organic Compounds
Groundwater

Well Number	Date	Benzene	Ethyl benzene	Toluene	m,p-Xylene	o-Xylene
MW-4	11/27/95	4.0	4,600	40	20,800	
	1/31/98	ND	1300	3.0	3,075	
	10/10/00	1.0U	37	1.0U	30	NT
	9/23/02	1.0U	3.0	1.0U	16	
	11/14/03	1.0U	1.0U	1.0U	3.0U	
	6/12/07	ND	1.0	ND	6	
MW-5	11/27/95	4.0	1,500	11	7,400	
	1/31/98	ND	38	5.1	211	
	10/10/00	1.1	1	1.0U	4.9	NT
	9/23/02	5.0U	5.0U	5.0U	7.0	
	11/14/03	1.0U	1.0U	1.0U	3.0U	
MW-6	1/30/96	3.5	2.5	ND	112	
	1/31/98	3.7	ND	ND	1.7	
	10/10/00	1.9	1.0U	1.0U	1.7	NT
	9/23/02	5.0U	5.0U	5.0U	8.0	
	11/14/03	1.0U	1.0U	1.0U	3.0U	
	1/18/07	ND	16	ND	69	
	6/12/07	ND	ND	ND	ND	
	7/27/10	1.0U	1.0U	1.0U	3.0U	
	4/29/11	0.2U	0.2U	1.0U	0.4U	0.2U
	8/14/12	1.0U	1.0U	1.0U	1.0U	1.0U
MW-7	1/30/96	2.0	3,500	340	3,200	
	1/31/98	1.2	1,600	1.6	486	
	10/10/00	1.2	190	1.0U	360	NT
	9/23/02	5.0U	140	5.0U	130	
	11/14/03	5.0U	130	5.0U	210	
	1/18/07	ND	4.0	ND	69	
	6/12/07	ND	ND	ND	ND	
	3/19/08	ND	ND	ND	ND	
	4/29/11	0.2U	0.32	1.0U	0.4U	0.2U
MW-8	1/30/96	ND	ND	ND	1.0	
	9/11/96	ND	ND	ND	ND	
	6/12/07	ND	ND	ND	ND	
	1/31/98	ND	ND	ND	ND	
	10/10/00	1.0U	1.0U	1.0U	1.0U	NT
	9/23/02	1.0U	1.0U	1.0U	3.0	
	11/14/03	1.0U	1.0U	1.0U	3.0U	

Table 4 (continued)
Volatile Organic Compounds
Groundwater

Well Number	Date	Benzene	Ethyl benzene	Toluene	m,p-Xylene	o-Xylene
MW-9	1/30/96	ND	ND	ND	1.0	
	9/11/96	ND	ND	ND	ND	
	4/3/97	ND	ND	ND	ND	
	1/31/98	ND	ND	ND	ND	
	10/10/00	1.0U	1.0U	1.0U	1.0U	NT
	9/23/02	1.0U	1.0U	1.0U	2.0	
	11/14/03	1.0U	1.0U	1.0U	3.0U	
MW-10	1/30/96	ND	62	ND	39.7	
	9/11/96	ND	43	ND	171	
	12/10/96	ND	ND	ND	1.2	
	4/3/97	ND	2.1	ND	5.2	
	1/31/98	ND	ND	ND	ND	
	10/10/00	1.0U	1.0U	1.0U	1.0U	NT
	9/23/02	1.0U	1.0U	1.0U	2.0	
	11/14/03	1.0U	1.0U	1.0U	3.0U	
MW-101	5/10/11	1.3	0.95	1.0U	1.5	0.2U
	9/29/11	2.8	1.2	1.0U	0.4U	0.2U
MW-102	5/10/11	0.2U	0.2U	1.0U	0.4U	0.2U
	9/29/11	0.2U	0.2U	1.0U	0.4U	0.2U
MW-103	5/10/11	0.2U	0.2U	1.0U	0.4U	0.2U
	9/29/11	0.2U	0.2U	1.0U	0.4U	0.2U
MW-104	6/29/11	0.27	0.2U	1.0U	0.4U	0.2U
	9/29/11	0.21	0.2U	1.0U	0.4U	0.2U
MTCA		5.0	700	1,000	1,000	

Table 4 (continued)
Volatile Organic Compounds
Groundwater

Well Number	Date	Vinyl Chloride	1,1-Dichlroethane	(cis) 1,2-Dichloroehtene	Trichloroethylene	Tetrachloroethylene
MW-1	11/27/95	NT	NT	NT	NT	NT
	6/20/96	NT	NT	NT	NT	NT
	9/11/96	NT	NT	NT	NT	NT
	12/10/96	NT	NT	NT	NT	NT
	4/3/97	NT	NT	NT	NT	NT
	1/31/98	NT	NT	NT	NT	NT
	10/10/00	NT	NT	NT	NT	NT
	9/23/02	10U	10U	10U	10U	10U
	11/14/03	NT	NT	NT	NT	NT
	6/12/07	NT	NT	NT	NT	NT
	12/30/08	NT	NT	NT	NT	NT
	3/19/08	NT	NT	NT	NT	NT
	6/09	NT	NT	NT	NT	NT
	10/09	NT	NT	NT	NT	NT
	2/10	NT	NT	NT	NT	NT
	7/27/10	NT	NT	NT	NT	NT
	4/29/11	0.4U	0.4U	0.4U	0.4U	0.4U
MW-2	11/27/95	NT	NT	NT	NT	NT
	9/11/96	NT	NT	NT	NT	NT
	12/10/96	NT	NT	NT	NT	NT
	4/3/97	NT	NT	NT	NT	NT
	1/31/98	NT	NT	NT	NT	NT
	10/10/00	NT	NT	NT	NT	
	9/23/02	NT	NT	NT	NT	NT
	11/14/03	NT	NT	NT	NT	NT
	12/30/08	NT	NT	NT	NT	NT
MW-3	11/27/95	NT	NT	NT	NT	NT
	1/31/98	NT	NT	NT	NT	NT
	10/10/00	NT	NT	NT	NT	NT
	9/23/02	NT	NT	NT	NT	NT
	11/14/03	NT	NT	NT	NT	NT
	11/27/95	NT	NT	NT	NT	NT

Table 4 (continued)
Volatile Organic Compounds
Groundwater

Well Number	Date	Vinyl Chloride	1,1-Dichlroethane	(cis) 1,2-Dichloroehtene	Trichloroethylene	Tetrachloroethylene
MW-4	1/31/98	NT	NT	NT	NT	NT
	10/10/00	NT	NT	NT	NT	NT
	9/23/02	NT	NT	NT	NT	NT
	11/14/03	NT	NT	NT	NT	NT
MW-5	6/12/07	NT	NT	NT	NT	NT
	11/27/95	NT	NT	NT	NT	NT
	1/31/98	NT	NT	NT	NT	NT
	10/10/00	NT	NT	NT	NT	NT
	9/23/02	NT	NT	NT	NT	NT
	11/14/03	NT	NT	NT	NT	NT
MW-6	1/30/96	NT	NT	NT	NT	NT
	1/31/98	NT	NT	NT	NT	NT
	10/10/00	NT	NT	NT	NT	NT
	9/23/02	NT	NT	NT	NT	NT
	11/14/03	NT	NT	NT	NT	NT
	1/18/07	NT	NT	NT	NT	NT
	6/12/07	NT	NT	NT	NT	NT
	7/27/10	NT	NT	NT	NT	NT
	4/29/11	0.2U	0.20	0.2U	0.2U	0.22
	1/30/96	NT	NT	NT	NT	NT
MW-7	1/31/98	NT	NT	NT	NT	NT
	10/10/00	NT	NT	NT	NT	NT
	9/23/02	NT	NT	NT	NT	NT
	11/14/03	NT	NT	NT	NT	NT
	1/18/07	NT	NT	NT	NT	NT
	6/12/07	NT	NT	NT	NT	NT
	3/19/08	NT	NT	NT	NT	NT
	4/29/11	0.2U	0.2U	0.39	0.22	0.27
MW-8	1/30/96	NT	NT	NT	NT	NT
	9/11/96	NT	NT	NT	NT	NT
	6/12/07	NT	NT	NT	NT	NT
	1/31/98	NT	NT	NT	NT	NT
	10/10/00	NT	NT	NT	NT	NT
	9/23/02	NT	NT	NT	NT	NT
	11/14/03	NT	NT	NT	NT	NT

Table 4 (continued)
Volatile Organic Compounds
Groundwater

Well Number	Date	Vinyl Chloride	1,1-Dichloroethane	(cis) 1,2-Dichloroehtene	Trichloroethylene	Tetrachloroethylene
MW-9	1/30/96	NT	NT	NT	NT	NT
	9/11/96	NT	NT	NT	NT	NT
	4/3/97	NT	NT	NT	NT	NT
	1/31/98	NT	NT	NT	NT	NT
	10/10/00	NT	NT	NT	NT	NT
	9/23/02	NT	NT	NT	NT	NT
	11/14/03	NT	NT	NT	NT	NT
MW-10	1/30/96	NT	NT	NT	NT	NT
	9/11/96	NT	NT	NT	NT	NT
	12/10/96	NT	NT	NT	NT	NT
	4/3/97	NT	NT	NT	NT	NT
	1/31/98	NT	NT	NT	NT	NT
	10/10/00	NT	NT	NT	NT	NT
	9/23/02	NT	NT	NT	NT	NT
	11/14/03	NT	NT	NT	NT	NT
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 parts per billion, ppb.
For brevity, minor constituents such as trimethylbenzene are not shown and are below cleanup levels.
Cleanup values are Method A, values in italics are Method B or EPA PRG Region 9 values.
Cleanup values are shown for reference purposes, site specific cleanup levels have not been developed.
U modifier indicates that the analyte was not present at the numerical practical quantitation limit.
NT indicates that the analyte was not tested for the specific sample.

6.0 DISCUSSION

As can be seen in the tables, there is a clear distinction between the groundwater samples from the monitoring wells installed on the Shilshole parcels from the wells recently installed on the 5221 Ballard Avenue NW parcel. The groundwater impacts monitored in the past do not have continuity with the groundwater observed at 5221 Ballard Avenue NW. MW-8 and MW-9 are both intermediate wells, upgradient of the UST cluster on the Shilshole parcels and down or crossgradient of the wells at 5221.

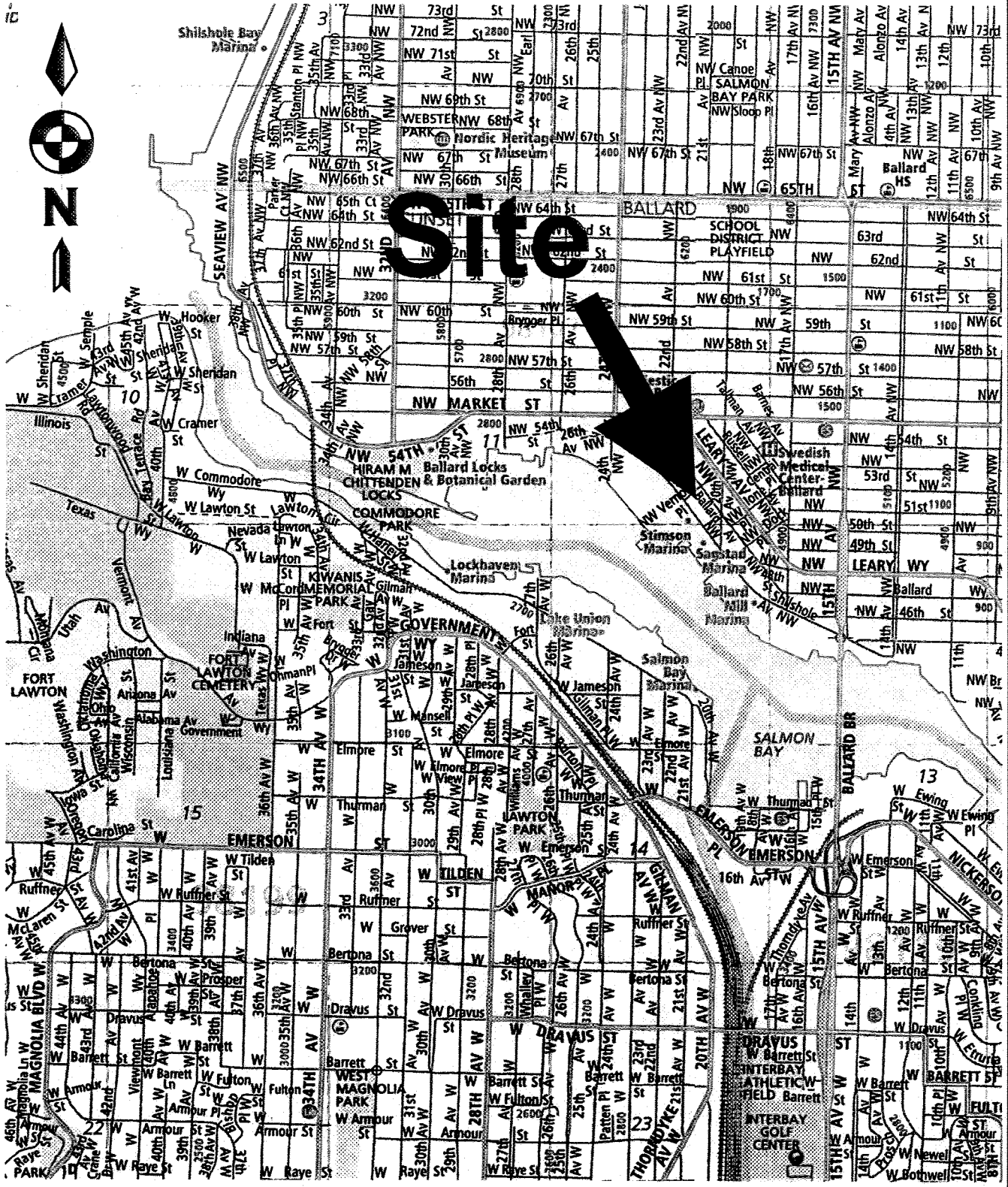
MW-1 continues to exhibit elevated gasoline levels in groundwater.

7.0 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 Shilshole Avenue NW Parcels 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 selected analyses of soils 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.



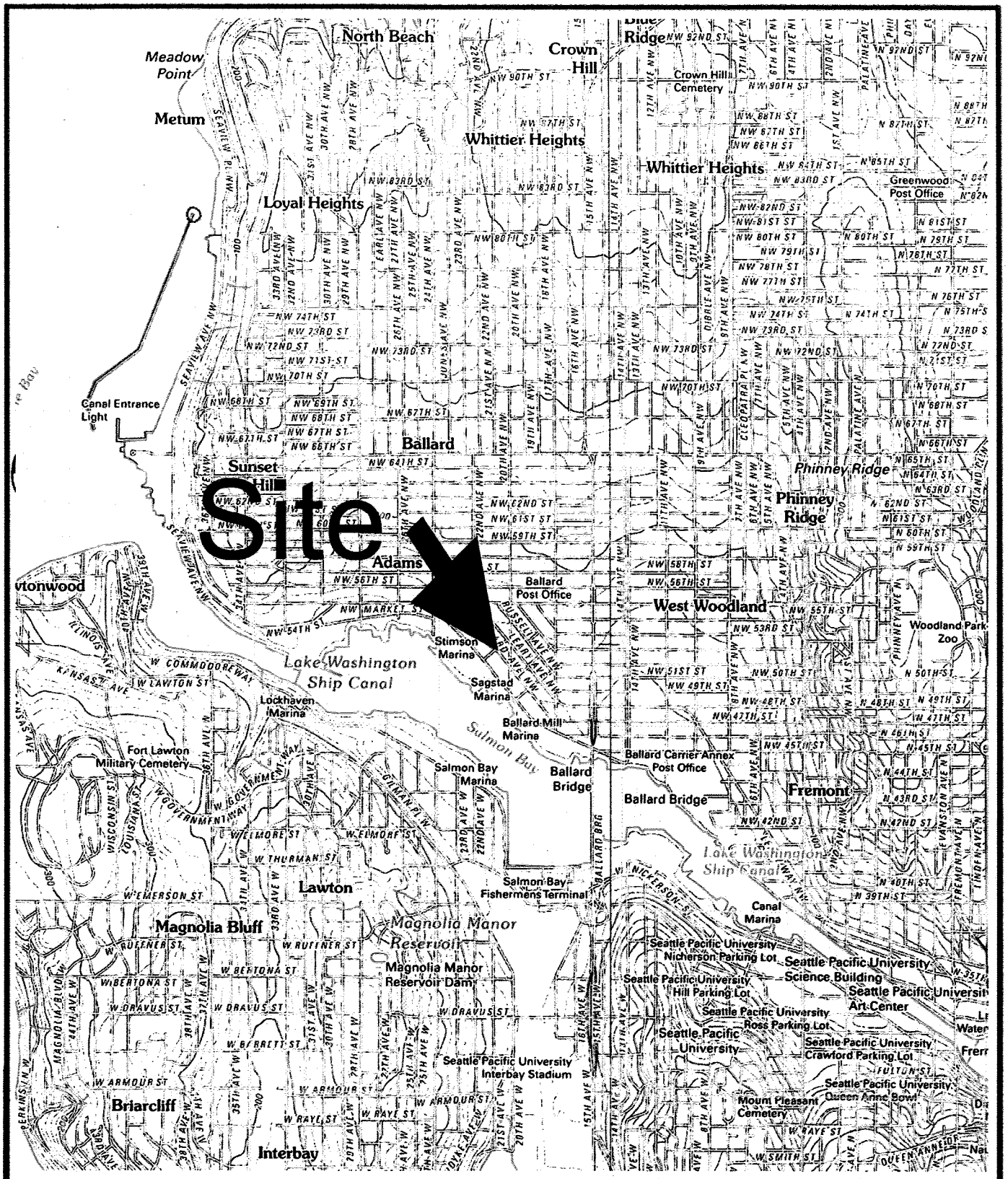
Reference: Thomas Bros King County Road Atlas. NOT TO SCALE

TERRA ASSOCIATES

Geotechnical Consultants

Vicinity Map
Shilshole Ave NW Parcels
Seattle, Washington

Proj. No T-6552	Date Oct 2012	Figure 1



Reference: Bellevue Seattle North and Shilshole Bay USGS Quadrangles

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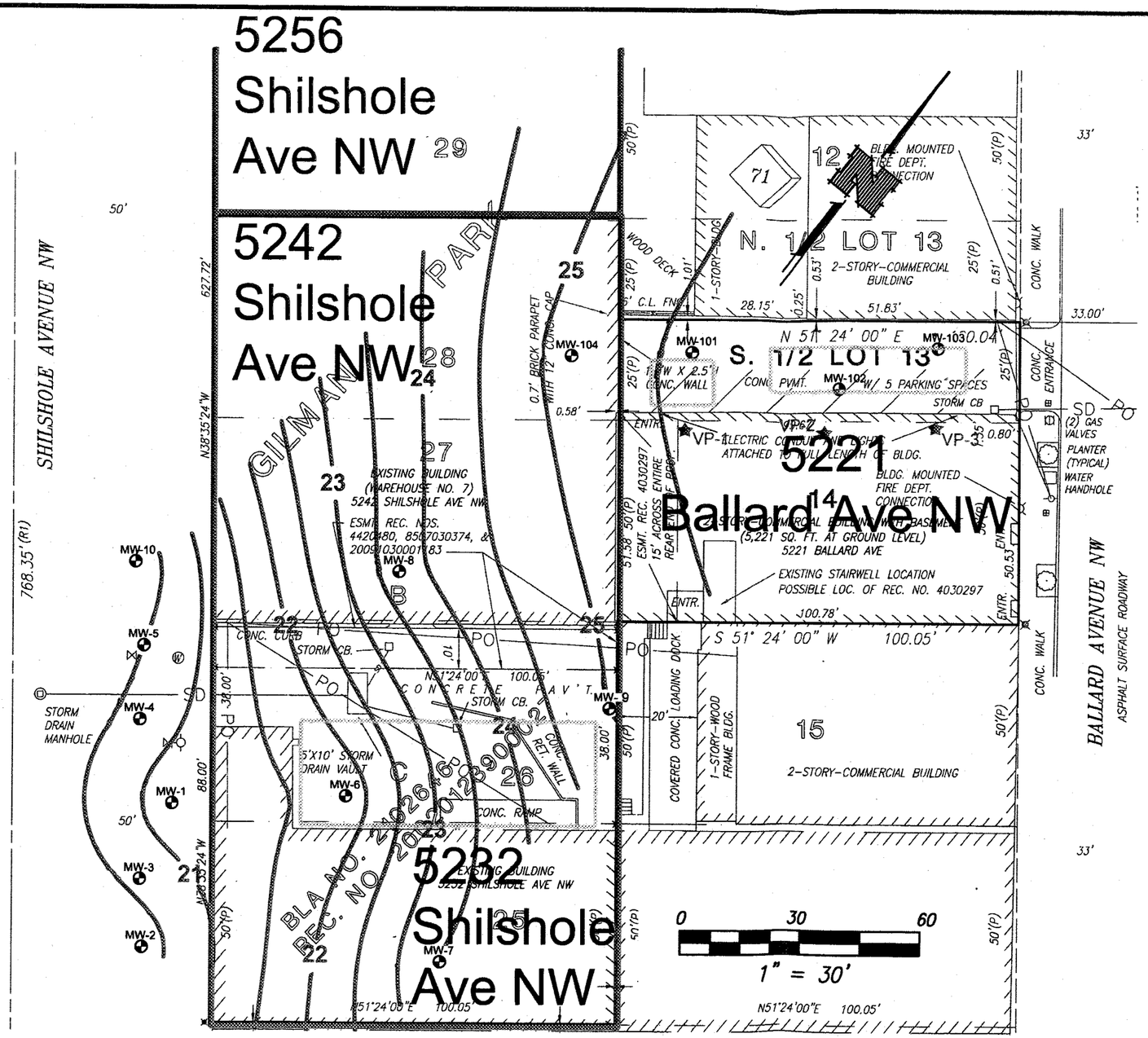
Geotechnical Consultants

Topographic Vicinity Map
Shilshole Ave NW Parcels
Seattle, Washington

Proj. No T-6552	Date Oct 2012	Figure 2



Schematic location of 5214 Ballard Ave NW

LEGEND

Schematic Location of former UST clusters

Notes

1) Monitoring wells 1 through 10 drilled by others prior to 2011
2) Monitoring wells MW-101 through 104 installed by Terra Associates in 2011.
3) Groundwater contours shown represent typical ground water conditions prior to dewatering at Olympic Health Club, 5214 Ballard Ave NW, in November of 2011. The groundwater gradient beneath northern half of the building is now towards the north.
4) Shilshole Parcels are outlined in green. No exploration or testing has been done on the parcel at 5256 Shilshole Ave NW.

Reference: Survey by Jim Hart and Associates

TERRA ASSOCIATES
Geotechnical Consultants

Exploration Location Plan
Shilshole Ave. NW Parcels
Seattle, Washington

Proj. No. T-6552 | Date Oct 2012 | Figure 3

APPENDIX A

PRIOR REPORT LIST

Appendix A – Prior Reports with Sampling by Others

Title	Author	Date	Property Covered
Site Assessment C&C Paint Company Report	Bison Environmental Northwest, Inc.	2/19/91	Shilshole
Ballard Avenue Landmark Letter	Ballard Avenue Landmark District Board	4/17/91	5221
Buried Tanks in Alley – Cracks in Ballard Hardware South Wall Letter	Pacific Testing Laboratories	4/19/91	5221
Underground Storage Tank Closure In Place Site Assessment Report C&C Paint Company	Bison Environmental Northwest, Inc.	11/30/92	5221
Groundwater Survey and Monitoring Well Installation – C&C Paint Company Property	Columbia Environmental, Inc.	12/11/95	Shilshole
Phase 2 Environmental Site Assessment – C&C Paint Company Property	Columbia Environmental, Inc.	2/12/96	Shilshole
Cleanup Proposal – C&C Paint Company Property	BPM	5/17/96	Shilshole
Quarterly Groundwater Monitoring Report – C&C Paint Company Property	BPM	7/26/96	Shilshole
Quarterly Groundwater Monitoring Report – C&C Paint Company Property	BPM	10/15/96	Shilshole
Quarterly Groundwater Monitoring Report – C&C Paint Company Property	Betts, Patterson & Mines, PS	1/21/97	Shilshole
Quarterly Groundwater Monitoring Report – C&C Paint Company Property	Betts, Patterson & Mines, PS	5/25/97	Shilshole
UST Closure in Place Site Assessment Report – C&C Paints	Nowicki & Aassociates	2/10/98	5221

Appendix A – Prior Reports with Sampling by Others

Title	Author	Date	Property Covered
October 2000 Annual Groundwater Monitoring – C&C Paints Site	Nowicki & Aassociates	10/28/00	Shilshole
300-Gallon Diesel Heating Oil UST Closure Site Assessment Report – C&C Paint	Nowicki & Aassociates	11/28/00	Shilshole
September 2002 Groundwater Annual Monitoring – C&C Paints Site	Nowicki & Aassociates	9/26/02	Shilshole
Ground Water Monitoring Quarterly Report 2ndQTR06	Morse Environmental	6/28/06	Shilshole
Ground Water Monitoring Quarterly Report 3rdQTR06	Morse Environmental	8/31/06	Shilshole
Ground Water Monitoring Quarterly Report 4thQTR06	Morse Environmental	12/12/06	Shilshole
Ground Water Monitoring Quarterly Report 1stQTR07	Morse Environmental	1/2007	Shilshole
Ground Water Monitoring Quarterly Report 2ndQTR07	Morse Environmental	7/7/07	Shilshole
Ground Water Monitoring Quarterly Report 4thQTR07	Morse Environmental	11/9/07	Shilshole
Ground Water Monitoring Quarterly Report 1stQTR08	Morse Environmental	3/27/08	Shilshole
Ground Water Monitoring Quarterly Report 2ndQTR08	Morse Environmental	7/9/08	Shilshole
Ground Water Monitoring Quarterly Report 3rdQTR08	Morse Environmental	11/13/08	Shilshole
Ground Water Monitoring Quarterly Report 4thQTR08	Morse Environmental	1/20/09	Shilshole
Ground Water Monitoring Quarterly Report 1stQTR09	Morse Environmental	3/24/09	Shilshole
Ground Water Monitoring Quarterly Report 2ndQTR09	Morse Environmental	7/2009	Shilshole
Ground Water Monitoring Quarterly Report 3rdQTR09	Morse Environmental	10/2009	Shilshole
Ground Water Monitoring Quarterly Report 4thQTR09	Morse Environmental	1/2010	Shilshole
Ground Water Monitoring Quarterly Report 1stQTR10	Morse Environmental	3/2010	Shilshole
Ground Water Monitoring Quarterly Report 3rdQTR10	Morse Environmental	8/19/10	Shilshole

APPENDIX B
SUBSURFACE EXPLORATION/FIELD SAMPLING

Shilshole Avenue NW Parcels
Seattle, Washington

Groundwater monitoring wells were constructed in each of the borings conducted for this study. The wells are built with two-inch diameter PVC well materials. Boring MW-104 was drilled using a limited access drill rig owned and operated by BoreTech from Spokane, Washington. Prior to drilling, the sample tools and the auger were pressure washed to reduce the potential for introducing cross contamination from prior borings. Standard environmental protocol was followed for all soil sampling. All groundwater sampling has been done with a peristaltic pump and low flow purging methodology. Parameters have been measured using a flow through cylinder.

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
	8/14/12					
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
	8/14/12					
MW-4	6/21/06	6.3	484	NM	NM	NM
	12/15/06	6.9	NM	NM	NM	NM
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
	8/14/12					
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

Table B-2 (continued)
Groundwater Parameters

Well Number	Date	pH	Conductivity	DO	ORP	Temp.
MW-101	5/10/11	NM	NM	NM	NM	15.3
	7/6/11	6.55	148	0.32	-10	16.0
	9/29/11	6.4	699	3.84	-115	16.7
MW-102	5/10/11	NM	NM	NM	NM	15.2
	9/29/11	6.44	483	1.7	-117	17.4
MW-103	5/10/11	NM	NM	NM	NM	16.1
	7/6/11	6.49	113	0.3	-45	16.6
	9/29/11	6.39	455	1.8	-120	18
MW-104	9/29/11	6.35	794	1.7	-99	17.4

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.
NM indicates that the parameter was not reported and/or measured for the specific date.

LOG OF MONITORING WELL MW-104

Figure No. B-1

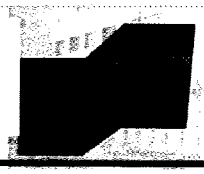
Project: 5221 Ballard Avenue North **Project No:** T-6552 **Date Drilled:** 6/13/11

Client: Halco **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
0		7-inch thick concrete slab.				
2		Dark brown sandy SILT, moist.	Light Odor/No	98.0	0.0	
3		Becomes gray.				
4				100.0		
5			No/No		0.0	
7					0.0	
9			No/No			
10		Saturated gray silty SAND/sandy SILT. (SM-ML)				
13					0.0	
14			No/No	100.0		
15		Terminated at 15 feet. 2-inch PVC monitoring well with .10 screen from 5 to 15 feet constructed as shown.				
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.



Terra Associates, Inc.

Consultants in Geotechnical Engineering, Geology and Environmental Earth Sciences

APPENDIX C
ANALYTICAL TESTING
SOIL AND GROUNDWATER

Shilshole Avenue NW Parcels
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.

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

May 9, 2011

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

Re: Analytical Data for Project 6552
Laboratory Reference No. 1104-219

Dear Chuck:

Enclosed are the analytical results and associated quality control data for samples submitted on April 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: May 9, 2011
Samples Submitted: April 29, 2011
Laboratory Reference: 1104-219
Project: 6552

Case Narrative

Samples were collected on April 29, 2011 and received by the laboratory on April 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: May 9, 2011
Samples Submitted: April 29, 2011
Laboratory Reference: 1104-219
Project: 6552

NWTPH-Gx

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW1**					
Laboratory ID:	04-219-01					
Gasoline	**1100**	100	NWTPH-Gx	5-2-11	5-2-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*76*	*73-121*				
Client ID:	**MW7**					
Laboratory ID:	04-219-02					
Gasoline	**ND**	100	NWTPH-Gx	5-2-11	5-2-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*79*	*73-121*				
Client ID:	**MW6**					
Laboratory ID:	04-219-03					
Gasoline	**160**	100	NWTPH-Gx	5-2-11	5-2-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*75*	*73-121*				

Date of Report: May 9, 2011
Samples Submitted: April 29, 2011
Laboratory Reference: 1104-219
Project: 6552

NWTPH-Gx
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0502W1					
Gasoline	**ND**	100	NWTPH-Gx	5-2-11	5-2-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*77*	*73-121*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	04-206-02										
	ORIG	DUP									
Gasoline	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Surrogate:											
Fluorobenzene						*77*	*77*	*73-121*			

Date of Report: May 9, 2011
Samples Submitted: April 29, 2011
Laboratory Reference: 1104-219
Project: 6552

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:	**MW1**					
Laboratory ID:	04-219-01					
Diesel Range Organics	**ND**	0.30	NWTPH-Dx	5-5-11	5-5-11	U1
Lube Oil Range Organics	**ND**	0.41	NWTPH-Dx	5-5-11	5-5-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*90*	*50-150*				
Client ID:	**MW7**					
Laboratory ID:	04-219-02					
Diesel Range Organics	**ND**	0.26	NWTPH-Dx	5-5-11	5-5-11	
Lube Oil Range Organics	**ND**	0.41	NWTPH-Dx	5-5-11	5-5-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*99*	*50-150*				
Client ID:	**MW6**					
Laboratory ID:	04-219-03					
Diesel Range Organics	**ND**	0.26	NWTPH-Dx	5-5-11	5-5-11	
Lube Oil Range Organics	**ND**	0.41	NWTPH-Dx	5-5-11	5-5-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*97*	*50-150*				

Date of Report: May 9, 2011
Samples Submitted: April 29, 2011
Laboratory Reference: 1104-219
Project: 6552

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:	MB0505W1					
Diesel Range Organics	**ND**	0.25	NWTPH-Dx	5-5-11	5-5-11	
Lube Oil Range Organics	**ND**	0.40	NWTPH-Dx	5-5-11	5-5-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*87*	*50-150*				

Analyte	Result		Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE							
Laboratory ID:	04-219-01						
	ORIG	DUP					
Diesel Range Organics	**ND**	**ND**			NA	NA	U1
Lube Oil Range Organics	**ND**	**ND**			NA	NA	
Surrogate:							
o-Terphenyl			*90* *97*	*50-150*			

Date of Report: May 9, 2011
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Project: 6552

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Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW1**					
Laboratory ID:	04-219-01					
Dichlorodifluoromethane	ND	0.40	EPA 8260	5-5-11	5-5-11	
Chloromethane	ND	2.0	EPA 8260	5-5-11	5-5-11	
Vinyl Chloride	ND	0.40	EPA 8260	5-5-11	5-5-11	
Bromomethane	ND	0.40	EPA 8260	5-5-11	5-5-11	
Chloroethane	ND	2.0	EPA 8260	5-5-11	5-5-11	
Trichlorofluoromethane	ND	0.40	EPA 8260	5-5-11	5-5-11	
1,1-Dichloroethene	ND	0.40	EPA 8260	5-5-11	5-5-11	
Acetone	ND	10	EPA 8260	5-5-11	5-5-11	
Iodomethane	ND	2.0	EPA 8260	5-5-11	5-5-11	
Carbon Disulfide	ND	0.40	EPA 8260	5-5-11	5-5-11	
Methylene Chloride	ND	2.0	EPA 8260	5-5-11	5-5-11	
(trans) 1,2-Dichloroethene	ND	0.40	EPA 8260	5-5-11	5-5-11	
Methyl t-Butyl Ether	ND	0.40	EPA 8260	5-5-11	5-5-11	
1,1-Dichloroethane	ND	0.40	EPA 8260	5-5-11	5-5-11	
Vinyl Acetate	ND	4.0	EPA 8260	5-5-11	5-5-11	
2,2-Dichloropropane	ND	0.40	EPA 8260	5-5-11	5-5-11	
(cis) 1,2-Dichloroethene	ND	0.40	EPA 8260	5-5-11	5-5-11	
2-Butanone	ND	10	EPA 8260	5-5-11	5-5-11	
Bromochloromethane	ND	0.40	EPA 8260	5-5-11	5-5-11	
Chloroform	ND	0.40	EPA 8260	5-5-11	5-5-11	
1,1,1-Trichloroethane	ND	0.40	EPA 8260	5-5-11	5-5-11	
Carbon Tetrachloride	ND	0.40	EPA 8260	5-5-11	5-5-11	
1,1-Dichloropropene	ND	0.40	EPA 8260	5-5-11	5-5-11	
Benzene	0.56	0.40	EPA 8260	5-5-11	5-5-11	
1,2-Dichloroethane	ND	0.40	EPA 8260	5-5-11	5-5-11	
Trichloroethene	ND	0.40	EPA 8260	5-5-11	5-5-11	
1,2-Dichloropropane	ND	0.40	EPA 8260	5-5-11	5-5-11	
Dibromomethane	ND	0.40	EPA 8260	5-5-11	5-5-11	
Bromodichloromethane	ND	0.40	EPA 8260	5-5-11	5-5-11	
2-Chloroethyl Vinyl Ether	ND	2.0	EPA 8260	5-5-11	5-5-11	
(cis) 1,3-Dichloropropene	ND	0.40	EPA 8260	5-5-11	5-5-11	
Methyl Isobutyl Ketone	ND	4.0	EPA 8260	5-5-11	5-5-11	
Toluene	ND	2.0	EPA 8260	5-5-11	5-5-11	
(trans) 1,3-Dichloropropene	ND	0.40	EPA 8260	5-5-11	5-5-11	

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW1**					
Laboratory ID:	04-219-01					
1,1,2-Trichloroethane	ND	0.40	EPA 8260	5-5-11	5-5-11	
Tetrachloroethene	ND	0.40	EPA 8260	5-5-11	5-5-11	
1,3-Dichloropropane	ND	0.40	EPA 8260	5-5-11	5-5-11	
2-Hexanone	ND	4.0	EPA 8260	5-5-11	5-5-11	
Dibromochloromethane	ND	0.40	EPA 8260	5-5-11	5-5-11	
1,2-Dibromoethane	ND	0.40	EPA 8260	5-5-11	5-5-11	
Chlorobenzene	ND	0.40	EPA 8260	5-5-11	5-5-11	
1,1,1,2-Tetrachloroethane	ND	0.40	EPA 8260	5-5-11	5-5-11	
Ethylbenzene	27	0.40	EPA 8260	5-5-11	5-5-11	
m,p-Xylene	47	0.80	EPA 8260	5-5-11	5-5-11	
o-Xylene	2.6	0.40	EPA 8260	5-5-11	5-5-11	
Styrene	ND	0.40	EPA 8260	5-5-11	5-5-11	
Bromoform	ND	2.0	EPA 8260	5-5-11	5-5-11	
Isopropylbenzene	92	0.40	EPA 8260	5-5-11	5-5-11	
Bromobenzene	ND	0.40	EPA 8260	5-5-11	5-5-11	
1,1,2,2-Tetrachloroethane	ND	0.40	EPA 8260	5-5-11	5-5-11	
1,2,3-Trichloropropane	ND	0.40	EPA 8260	5-5-11	5-5-11	
n-Propylbenzene	63	0.40	EPA 8260	5-5-11	5-5-11	
2-Chlorotoluene	ND	0.40	EPA 8260	5-5-11	5-5-11	
4-Chlorotoluene	ND	0.40	EPA 8260	5-5-11	5-5-11	
1,3,5-Trimethylbenzene	0.66	0.40	EPA 8260	5-5-11	5-5-11	
tert-Butylbenzene	0.52	0.40	EPA 8260	5-5-11	5-5-11	
1,2,4-Trimethylbenzene	3.7	0.40	EPA 8260	5-5-11	5-5-11	
sec-Butylbenzene	5.6	0.40	EPA 8260	5-5-11	5-5-11	
1,3-Dichlorobenzene	ND	0.40	EPA 8260	5-5-11	5-5-11	
p-Isopropyltoluene	ND	0.40	EPA 8260	5-5-11	5-5-11	
1,4-Dichlorobenzene	ND	0.40	EPA 8260	5-5-11	5-5-11	
1,2-Dichlorobenzene	ND	0.40	EPA 8260	5-5-11	5-5-11	
n-Butylbenzene	3.7	0.40	EPA 8260	5-5-11	5-5-11	
1,2-Dibromo-3-chloropropane	ND	2.0	EPA 8260	5-5-11	5-5-11	
1,2,4-Trichlorobenzene	ND	0.40	EPA 8260	5-5-11	5-5-11	
Hexachlorobutadiene	ND	0.40	EPA 8260	5-5-11	5-5-11	
Naphthalene	ND	2.0	EPA 8260	5-5-11	5-5-11	
1,2,3-Trichlorobenzene	ND	0.40	EPA 8260	5-5-11	5-5-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*82*	*68-107*				
Toluene-d8	*87*	*73-102*				
4-Bromofluorobenzene	*88*	*65-104*				

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Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW7**					
Laboratory ID:	04-219-02					
Dichlorodifluoromethane	ND	0.20	EPA 8260	5-5-11	5-5-11	
Chloromethane	ND	1.0	EPA 8260	5-5-11	5-5-11	
Vinyl Chloride	ND	0.20	EPA 8260	5-5-11	5-5-11	
Bromomethane	ND	0.20	EPA 8260	5-5-11	5-5-11	
Chloroethane	ND	1.0	EPA 8260	5-5-11	5-5-11	
Trichlorofluoromethane	ND	0.20	EPA 8260	5-5-11	5-5-11	
1,1-Dichloroethene	ND	0.20	EPA 8260	5-5-11	5-5-11	
Acetone	ND	5.0	EPA 8260	5-5-11	5-5-11	
Iodomethane	ND	1.0	EPA 8260	5-5-11	5-5-11	
Carbon Disulfide	ND	0.20	EPA 8260	5-5-11	5-5-11	
Methylene Chloride	ND	1.0	EPA 8260	5-5-11	5-5-11	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260	5-5-11	5-5-11	
Methyl t-Butyl Ether	ND	0.20	EPA 8260	5-5-11	5-5-11	
1,1-Dichloroethane	ND	0.20	EPA 8260	5-5-11	5-5-11	
Vinyl Acetate	ND	2.0	EPA 8260	5-5-11	5-5-11	
2,2-Dichloropropane	ND	0.20	EPA 8260	5-5-11	5-5-11	
(cis) 1,2-Dichloroethene	0.39	0.20	EPA 8260	5-5-11	5-5-11	
2-Butanone	ND	5.0	EPA 8260	5-5-11	5-5-11	
Bromochloromethane	ND	0.20	EPA 8260	5-5-11	5-5-11	
Chloroform	ND	0.20	EPA 8260	5-5-11	5-5-11	
1,1,1-Trichloroethane	ND	0.20	EPA 8260	5-5-11	5-5-11	
Carbon Tetrachloride	ND	0.20	EPA 8260	5-5-11	5-5-11	
1,1-Dichloropropene	ND	0.20	EPA 8260	5-5-11	5-5-11	
Benzene	ND	0.20	EPA 8260	5-5-11	5-5-11	
1,2-Dichloroethane	ND	0.20	EPA 8260	5-5-11	5-5-11	
Trichloroethene	0.22	0.20	EPA 8260	5-5-11	5-5-11	
1,2-Dichloropropane	ND	0.20	EPA 8260	5-5-11	5-5-11	
Dibromomethane	ND	0.20	EPA 8260	5-5-11	5-5-11	
Bromodichloromethane	ND	0.20	EPA 8260	5-5-11	5-5-11	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260	5-5-11	5-5-11	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260	5-5-11	5-5-11	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260	5-5-11	5-5-11	
Toluene	ND	1.0	EPA 8260	5-5-11	5-5-11	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260	5-5-11	5-5-11	

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW7**					
Laboratory ID:	04-219-02					
1,1,2-Trichloroethane	ND	0.20	EPA 8260	5-5-11	5-5-11	
Tetrachloroethene	0.27	0.20	EPA 8260	5-5-11	5-5-11	
1,3-Dichloropropane	ND	0.20	EPA 8260	5-5-11	5-5-11	
2-Hexanone	ND	2.0	EPA 8260	5-5-11	5-5-11	
Dibromochloromethane	ND	0.20	EPA 8260	5-5-11	5-5-11	
1,2-Dibromoethane	ND	0.20	EPA 8260	5-5-11	5-5-11	
Chlorobenzene	ND	0.20	EPA 8260	5-5-11	5-5-11	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260	5-5-11	5-5-11	
Ethylbenzene	0.32	0.20	EPA 8260	5-5-11	5-5-11	
m,p-Xylene	ND	0.40	EPA 8260	5-5-11	5-5-11	
o-Xylene	ND	0.20	EPA 8260	5-5-11	5-5-11	
Styrene	ND	0.20	EPA 8260	5-5-11	5-5-11	
Bromoform	ND	1.0	EPA 8260	5-5-11	5-5-11	
Isopropylbenzene	0.38	0.20	EPA 8260	5-5-11	5-5-11	
Bromobenzene	ND	0.20	EPA 8260	5-5-11	5-5-11	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260	5-5-11	5-5-11	
1,2,3-Trichloropropane	ND	0.20	EPA 8260	5-5-11	5-5-11	
n-Propylbenzene	0.26	0.20	EPA 8260	5-5-11	5-5-11	
2-Chlorotoluene	ND	0.20	EPA 8260	5-5-11	5-5-11	
4-Chlorotoluene	ND	0.20	EPA 8260	5-5-11	5-5-11	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260	5-5-11	5-5-11	
tert-Butylbenzene	ND	0.20	EPA 8260	5-5-11	5-5-11	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260	5-5-11	5-5-11	
sec-Butylbenzene	ND	0.20	EPA 8260	5-5-11	5-5-11	
1,3-Dichlorobenzene	ND	0.20	EPA 8260	5-5-11	5-5-11	
p-Isopropyltoluene	ND	0.20	EPA 8260	5-5-11	5-5-11	
1,4-Dichlorobenzene	ND	0.20	EPA 8260	5-5-11	5-5-11	
1,2-Dichlorobenzene	ND	0.20	EPA 8260	5-5-11	5-5-11	
n-Butylbenzene	ND	0.20	EPA 8260	5-5-11	5-5-11	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260	5-5-11	5-5-11	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260	5-5-11	5-5-11	
Hexachlorobutadiene	ND	0.20	EPA 8260	5-5-11	5-5-11	
Naphthalene	ND	1.0	EPA 8260	5-5-11	5-5-11	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260	5-5-11	5-5-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*81*	*68-107*				
Toluene-d8	*85*	*73-102*				
4-Bromofluorobenzene	*81*	*65-104*				

Date of Report: May 9, 2011
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Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW6**					
Laboratory ID:	04-219-03					
Dichlorodifluoromethane	ND	0.20	EPA 8260	5-5-11	5-5-11	
Chloromethane	ND	1.0	EPA 8260	5-5-11	5-5-11	
Vinyl Chloride	ND	0.20	EPA 8260	5-5-11	5-5-11	
Bromomethane	ND	0.20	EPA 8260	5-5-11	5-5-11	
Chloroethane	ND	1.0	EPA 8260	5-5-11	5-5-11	
Trichlorofluoromethane	ND	0.20	EPA 8260	5-5-11	5-5-11	
1,1-Dichloroethene	ND	0.20	EPA 8260	5-5-11	5-5-11	
Acetone	ND	5.0	EPA 8260	5-5-11	5-5-11	
Iodomethane	ND	1.0	EPA 8260	5-5-11	5-5-11	
Carbon Disulfide	ND	0.20	EPA 8260	5-5-11	5-5-11	
Methylene Chloride	ND	1.0	EPA 8260	5-5-11	5-5-11	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260	5-5-11	5-5-11	
Methyl t-Butyl Ether	ND	0.20	EPA 8260	5-5-11	5-5-11	
1,1-Dichloroethane	0.20	0.20	EPA 8260	5-5-11	5-5-11	
Vinyl Acetate	ND	2.0	EPA 8260	5-5-11	5-5-11	
2,2-Dichloropropane	ND	0.20	EPA 8260	5-5-11	5-5-11	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260	5-5-11	5-5-11	
2-Butanone	ND	5.0	EPA 8260	5-5-11	5-5-11	
Bromochloromethane	ND	0.20	EPA 8260	5-5-11	5-5-11	
Chloroform	ND	0.20	EPA 8260	5-5-11	5-5-11	
1,1,1-Trichloroethane	ND	0.20	EPA 8260	5-5-11	5-5-11	
Carbon Tetrachloride	ND	0.20	EPA 8260	5-5-11	5-5-11	
1,1-Dichloropropene	ND	0.20	EPA 8260	5-5-11	5-5-11	
Benzene	ND	0.20	EPA 8260	5-5-11	5-5-11	
1,2-Dichloroethane	ND	0.20	EPA 8260	5-5-11	5-5-11	
Trichloroethene	ND	0.20	EPA 8260	5-5-11	5-5-11	
1,2-Dichloropropane	ND	0.20	EPA 8260	5-5-11	5-5-11	
Dibromomethane	ND	0.20	EPA 8260	5-5-11	5-5-11	
Bromodichloromethane	ND	0.20	EPA 8260	5-5-11	5-5-11	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260	5-5-11	5-5-11	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260	5-5-11	5-5-11	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260	5-5-11	5-5-11	
Toluene	ND	1.0	EPA 8260	5-5-11	5-5-11	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260	5-5-11	5-5-11	

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW6**					
Laboratory ID:	04-219-03					
1,1,2-Trichloroethane	ND	0.20	EPA 8260	5-5-11	5-5-11	
Tetrachloroethene	0.22	0.20	EPA 8260	5-5-11	5-5-11	
1,3-Dichloropropane	ND	0.20	EPA 8260	5-5-11	5-5-11	
2-Hexanone	ND	2.0	EPA 8260	5-5-11	5-5-11	
Dibromochloromethane	ND	0.20	EPA 8260	5-5-11	5-5-11	
1,2-Dibromoethane	ND	0.20	EPA 8260	5-5-11	5-5-11	
Chlorobenzene	ND	0.20	EPA 8260	5-5-11	5-5-11	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260	5-5-11	5-5-11	
Ethylbenzene	ND	0.20	EPA 8260	5-5-11	5-5-11	
m,p-Xylene	ND	0.40	EPA 8260	5-5-11	5-5-11	
o-Xylene	ND	0.20	EPA 8260	5-5-11	5-5-11	
Styrene	ND	0.20	EPA 8260	5-5-11	5-5-11	
Bromoform	ND	1.0	EPA 8260	5-5-11	5-5-11	
Isopropylbenzene	3.5	0.20	EPA 8260	5-5-11	5-5-11	
Bromobenzene	ND	0.20	EPA 8260	5-5-11	5-5-11	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260	5-5-11	5-5-11	
1,2,3-Trichloropropane	ND	0.20	EPA 8260	5-5-11	5-5-11	
n-Propylbenzene	2.2	0.20	EPA 8260	5-5-11	5-5-11	
2-Chlorotoluene	ND	0.20	EPA 8260	5-5-11	5-5-11	
4-Chlorotoluene	ND	0.20	EPA 8260	5-5-11	5-5-11	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260	5-5-11	5-5-11	
tert-Butylbenzene	0.38	0.20	EPA 8260	5-5-11	5-5-11	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260	5-5-11	5-5-11	
sec-Butylbenzene	1.1	0.20	EPA 8260	5-5-11	5-5-11	
1,3-Dichlorobenzene	ND	0.20	EPA 8260	5-5-11	5-5-11	
p-Isopropyltoluene	ND	0.20	EPA 8260	5-5-11	5-5-11	
1,4-Dichlorobenzene	ND	0.20	EPA 8260	5-5-11	5-5-11	
1,2-Dichlorobenzene	ND	0.20	EPA 8260	5-5-11	5-5-11	
n-Butylbenzene	ND	0.20	EPA 8260	5-5-11	5-5-11	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260	5-5-11	5-5-11	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260	5-5-11	5-5-11	
Hexachlorobutadiene	ND	0.20	EPA 8260	5-5-11	5-5-11	
Naphthalene	ND	1.0	EPA 8260	5-5-11	5-5-11	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260	5-5-11	5-5-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*83*	*68-107*				
Toluene-d8	*86*	*73-102*				
4-Bromofluorobenzene	*82*	*65-104*				

Date of Report: May 9, 2011
Samples Submitted: April 29, 2011
Laboratory Reference: 1104-219
Project: 6552

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:	MB0505W1					
Dichlorodifluoromethane	ND	0.20	EPA 8260	5-5-11	5-5-11	
Chloromethane	ND	1.0	EPA 8260	5-5-11	5-5-11	
Vinyl Chloride	ND	0.20	EPA 8260	5-5-11	5-5-11	
Bromomethane	ND	0.20	EPA 8260	5-5-11	5-5-11	
Chloroethane	ND	1.0	EPA 8260	5-5-11	5-5-11	
Trichlorofluoromethane	ND	0.20	EPA 8260	5-5-11	5-5-11	
1,1-Dichloroethene	ND	0.20	EPA 8260	5-5-11	5-5-11	
Acetone	ND	5.0	EPA 8260	5-5-11	5-5-11	
Iodomethane	ND	1.0	EPA 8260	5-5-11	5-5-11	
Carbon Disulfide	ND	0.20	EPA 8260	5-5-11	5-5-11	
Methylene Chloride	ND	1.0	EPA 8260	5-5-11	5-5-11	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260	5-5-11	5-5-11	
Methyl t-Butyl Ether	ND	0.20	EPA 8260	5-5-11	5-5-11	
1,1-Dichloroethane	ND	0.20	EPA 8260	5-5-11	5-5-11	
Vinyl Acetate	ND	2.0	EPA 8260	5-5-11	5-5-11	
2,2-Dichloropropane	ND	0.20	EPA 8260	5-5-11	5-5-11	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260	5-5-11	5-5-11	
2-Butanone	ND	5.0	EPA 8260	5-5-11	5-5-11	
Bromochloromethane	ND	0.20	EPA 8260	5-5-11	5-5-11	
Chloroform	ND	0.20	EPA 8260	5-5-11	5-5-11	
1,1,1-Trichloroethane	ND	0.20	EPA 8260	5-5-11	5-5-11	
Carbon Tetrachloride	ND	0.20	EPA 8260	5-5-11	5-5-11	
1,1-Dichloropropene	ND	0.20	EPA 8260	5-5-11	5-5-11	
Benzene	ND	0.20	EPA 8260	5-5-11	5-5-11	
1,2-Dichloroethane	ND	0.20	EPA 8260	5-5-11	5-5-11	
Trichloroethene	ND	0.20	EPA 8260	5-5-11	5-5-11	
1,2-Dichloropropane	ND	0.20	EPA 8260	5-5-11	5-5-11	
Dibromomethane	ND	0.20	EPA 8260	5-5-11	5-5-11	
Bromodichloromethane	ND	0.20	EPA 8260	5-5-11	5-5-11	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260	5-5-11	5-5-11	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260	5-5-11	5-5-11	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260	5-5-11	5-5-11	
Toluene	ND	1.0	EPA 8260	5-5-11	5-5-11	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260	5-5-11	5-5-11	

Date of Report: May 9, 2011
Samples Submitted: April 29, 2011
Laboratory Reference: 1104-219
Project: 6552

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

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0505W1					
1,1,2-Trichloroethane	ND	0.20	EPA 8260	5-5-11	5-5-11	
Tetrachloroethene	ND	0.20	EPA 8260	5-5-11	5-5-11	
1,3-Dichloropropane	ND	0.20	EPA 8260	5-5-11	5-5-11	
2-Hexanone	ND	2.0	EPA 8260	5-5-11	5-5-11	
Dibromochloromethane	ND	0.20	EPA 8260	5-5-11	5-5-11	
1,2-Dibromoethane	ND	0.20	EPA 8260	5-5-11	5-5-11	
Chlorobenzene	ND	0.20	EPA 8260	5-5-11	5-5-11	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260	5-5-11	5-5-11	
Ethylbenzene	ND	0.20	EPA 8260	5-5-11	5-5-11	
m,p-Xylene	ND	0.40	EPA 8260	5-5-11	5-5-11	
o-Xylene	ND	0.20	EPA 8260	5-5-11	5-5-11	
Styrene	ND	0.20	EPA 8260	5-5-11	5-5-11	
Bromoform	ND	1.0	EPA 8260	5-5-11	5-5-11	
Isopropylbenzene	ND	0.20	EPA 8260	5-5-11	5-5-11	
Bromobenzene	ND	0.20	EPA 8260	5-5-11	5-5-11	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260	5-5-11	5-5-11	
1,2,3-Trichloropropane	ND	0.20	EPA 8260	5-5-11	5-5-11	
n-Propylbenzene	ND	0.20	EPA 8260	5-5-11	5-5-11	
2-Chlorotoluene	ND	0.20	EPA 8260	5-5-11	5-5-11	
4-Chlorotoluene	ND	0.20	EPA 8260	5-5-11	5-5-11	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260	5-5-11	5-5-11	
tert-Butylbenzene	ND	0.20	EPA 8260	5-5-11	5-5-11	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260	5-5-11	5-5-11	
sec-Butylbenzene	ND	0.20	EPA 8260	5-5-11	5-5-11	
1,3-Dichlorobenzene	ND	0.20	EPA 8260	5-5-11	5-5-11	
p-Isopropyltoluene	ND	0.20	EPA 8260	5-5-11	5-5-11	
1,4-Dichlorobenzene	ND	0.20	EPA 8260	5-5-11	5-5-11	
1,2-Dichlorobenzene	ND	0.20	EPA 8260	5-5-11	5-5-11	
n-Butylbenzene	ND	0.20	EPA 8260	5-5-11	5-5-11	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260	5-5-11	5-5-11	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260	5-5-11	5-5-11	
Hexachlorobutadiene	ND	0.20	EPA 8260	5-5-11	5-5-11	
Naphthalene	ND	1.0	EPA 8260	5-5-11	5-5-11	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260	5-5-11	5-5-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*80*	*68-107*				
Toluene-d8	*85*	*73-102*				
4-Bromofluorobenzene	*83*	*65-104*				

Date of Report: May 9, 2011
Samples Submitted: April 29, 2011
Laboratory Reference: 1104-219
Project: 6552

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:	SB0505W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**10.5**	**10.7**	10.0	10.0	105	107	70-130	2	11	
Benzene	**10.2**	**10.2**	10.0	10.0	102	102	79-123	0	8	
Trichloroethene	**9.91**	**9.91**	10.0	10.0	99	99	82-113	0	9	
Toluene	**10.4**	**10.3**	10.0	10.0	104	103	84-113	1	8	
Chlorobenzene	**10.5**	**10.4**	10.0	10.0	105	104	89-111	1	8	
Surrogate:										
Dibromofluoromethane					*81*	*78*	*68-107*			
Toluene-d8					*86*	*84*	*73-102*			
4-Bromofluorobenzene					*83*	*84*	*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

Chain of Custody

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

Company: Terra Associates
Project Number: 6552
Project Name: _____
Project Manager: Chuck Lie
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: 04-219

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	MW1	4/29/11	11:40	W	7			X	X	X											
2	MW7	↓	12:40	↓	↓			X	X	X											
3	MW6	↓	13:44	↓	↓			X	X	X											

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished	[signature]	Terra Associates	4/29/11	15:57	~~[illegible]~~
Received	[signature]	[signature]	4/29/11	1557	
Relinquished					
Received					
Relinquished					
Received					
Reviewed/Date		Reviewed/Date			Chromatograms with final report ☐

Data Package: Level III ☐ Level IV ☐ Electronic Data Deliverables (EDDs) ☐ _____

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

June 20, 2011

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

Re: Analytical Data for Project 6552
Laboratory Reference No. 1106-112

Dear Chuck:

Enclosed are the analytical results and associated quality control data for samples submitted on June 13, 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: June 20, 2011
Samples Submitted: June 13, 2011
Laboratory Reference: 1106-112
Project: 6552

Case Narrative

Samples were collected on June 13, 2011 and received by the laboratory on June 13, 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.

NWTPH Gx and Volatiles EPA 8260B Analysis

Per EPA Method 5035A, samples were received by the laboratory in pre-weighed 40 mL VOA vials within 48 hours of sample collection. They were stored in a freezer at between -7°C and -20°C until extraction or analysis.

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: June 20, 2011
Samples Submitted: June 13, 2011
Laboratory Reference: 1106-112
Project: 6552

NWTPH-Gx

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**VP-1-18'**					
Laboratory ID:	06-112-01					
Gasoline	**ND**	5.8	NWTPH-Gx	6-14-11	6-17-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*80*	*68-124*				
Client ID:	**MW-201-2.5'**					
Laboratory ID:	06-112-03					
Gasoline	**15**	6.9	NWTPH-Gx	6-14-11	6-17-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*81*	*68-124*				
Client ID:	**MW-201-5'**					
Laboratory ID:	06-112-04					
Gasoline	**10**	6.0	NWTPH-Gx	6-14-11	6-17-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*81*	*68-124*				
Client ID:	**VP-2-18"**					
Laboratory ID:	06-112-07					
Gasoline	**140**	13	NWTPH-Gx	6-14-11	6-17-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*83*	*68-124*				
Client ID:	**VP-2-3.5'**					
Laboratory ID:	06-112-08					
Gasoline	**9.7**	6.6	NWTPH-Gx	6-14-11	6-17-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*78*	*68-124*				
Client ID:	**VP-3-18"**					
Laboratory ID:	06-112-09					
Gasoline	**ND**	5.5	NWTPH-Gx	6-14-11	6-17-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*80*	*68-124*				

Date of Report: June 20, 2011
Samples Submitted: June 13, 2011
Laboratory Reference: 1106-112
Project: 6552

NWTPH-Gx

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**VP-3-4'**					
Laboratory ID:	06-112-10					
Gasoline	**ND**	5.7	NWTPH-Gx	6-14-11	6-17-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*81*	*68-124*				

Date of Report: June 20, 2011
Samples Submitted: June 13, 2011
Laboratory Reference: 1106-112
Project: 6552

NWTPH-Gx
QUALITY CONTROL

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0614S1					
Gasoline	**ND**	5.0	NWTPH-Gx	6-14-11	6-15-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*87*	*68-124*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	06-106-01										
	ORIG	DUP									
Gasoline	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Surrogate:											
Fluorobenzene						*86*	*86*	*68-124*			

Date of Report: June 20, 2011
Samples Submitted: June 13, 2011
Laboratory Reference: 1106-112
Project: 6552

VOLATILES by EPA 8260B
page 1 of 2

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-201-2.5'**					
Laboratory ID:	06-112-03					
Dichlorodifluoromethane	ND	0.0013	EPA 8260	6-14-11	6-14-11	
Chloromethane	ND	0.0065	EPA 8260	6-14-11	6-14-11	
Vinyl Chloride	ND	0.0013	EPA 8260	6-14-11	6-14-11	
Bromomethane	ND	0.0013	EPA 8260	6-14-11	6-14-11	
Chloroethane	ND	0.0065	EPA 8260	6-14-11	6-14-11	
Trichlorofluoromethane	ND	0.0013	EPA 8260	6-14-11	6-14-11	
1,1-Dichloroethene	ND	0.0013	EPA 8260	6-14-11	6-14-11	
Acetone	0.037	0.0065	EPA 8260	6-14-11	6-14-11	
Iodomethane	ND	0.0065	EPA 8260	6-14-11	6-14-11	
Carbon Disulfide	ND	0.0013	EPA 8260	6-14-11	6-14-11	
Methylene Chloride	ND	0.0065	EPA 8260	6-14-11	6-14-11	
(trans) 1,2-Dichloroethene	ND	0.0013	EPA 8260	6-14-11	6-14-11	
Methyl t-Butyl Ether	ND	0.0013	EPA 8260	6-14-11	6-14-11	
1,1-Dichloroethane	ND	0.0013	EPA 8260	6-14-11	6-14-11	
Vinyl Acetate	ND	0.0065	EPA 8260	6-14-11	6-14-11	
2,2-Dichloropropane	ND	0.0013	EPA 8260	6-14-11	6-14-11	
(cis) 1,2-Dichloroethene	ND	0.0013	EPA 8260	6-14-11	6-14-11	
2-Butanone	ND	0.0065	EPA 8260	6-14-11	6-14-11	
Bromochloromethane	ND	0.0013	EPA 8260	6-14-11	6-14-11	
Chloroform	ND	0.0013	EPA 8260	6-14-11	6-14-11	
1,1,1-Trichloroethane	ND	0.0013	EPA 8260	6-14-11	6-14-11	
Carbon Tetrachloride	ND	0.0013	EPA 8260	6-14-11	6-14-11	
1,1-Dichloropropene	ND	0.0013	EPA 8260	6-14-11	6-14-11	
Benzene	ND	0.0013	EPA 8260	6-14-11	6-14-11	
1,2-Dichloroethane	ND	0.0013	EPA 8260	6-14-11	6-14-11	
Trichloroethene	ND	0.0013	EPA 8260	6-14-11	6-14-11	
1,2-Dichloropropane	ND	0.0013	EPA 8260	6-14-11	6-14-11	
Dibromomethane	ND	0.0013	EPA 8260	6-14-11	6-14-11	
Bromodichloromethane	ND	0.0013	EPA 8260	6-14-11	6-14-11	
2-Chloroethyl Vinyl Ether	ND	0.0065	EPA 8260	6-14-11	6-14-11	
(cis) 1,3-Dichloropropene	ND	0.0013	EPA 8260	6-14-11	6-14-11	
Methyl Isobutyl Ketone	ND	0.0065	EPA 8260	6-14-11	6-14-11	
Toluene	ND	0.0065	EPA 8260	6-14-11	6-14-11	
(trans) 1,3-Dichloropropene	ND	0.0013	EPA 8260	6-14-11	6-14-11	

Date of Report: June 20, 2011
Samples Submitted: June 13, 2011
Laboratory Reference: 1106-112
Project: 6552

VOLATILES by EPA 8260B
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-201-2.5'**					
Laboratory ID:	06-112-03					
1,1,2-Trichloroethane	ND	0.0013	EPA 8260	6-14-11	6-14-11	
Tetrachloroethene	ND	0.0013	EPA 8260	6-14-11	6-14-11	
1,3-Dichloropropane	ND	0.0013	EPA 8260	6-14-11	6-14-11	
2-Hexanone	ND	0.0065	EPA 8260	6-14-11	6-14-11	
Dibromochloromethane	ND	0.0013	EPA 8260	6-14-11	6-14-11	
1,2-Dibromoethane	ND	0.0013	EPA 8260	6-14-11	6-14-11	
Chlorobenzene	ND	0.0013	EPA 8260	6-14-11	6-14-11	
1,1,1,2-Tetrachloroethane	ND	0.0013	EPA 8260	6-14-11	6-14-11	
Ethylbenzene	ND	0.0013	EPA 8260	6-14-11	6-14-11	
m,p-Xylene	ND	0.0026	EPA 8260	6-14-11	6-14-11	
o-Xylene	ND	0.0013	EPA 8260	6-14-11	6-14-11	
Styrene	ND	0.0013	EPA 8260	6-14-11	6-14-11	
Bromoform	ND	0.0013	EPA 8260	6-14-11	6-14-11	
Isopropylbenzene	ND	0.0013	EPA 8260	6-14-11	6-14-11	
Bromobenzene	ND	0.0013	EPA 8260	6-14-11	6-14-11	
1,1,2,2-Tetrachloroethane	ND	0.0013	EPA 8260	6-14-11	6-14-11	
1,2,3-Trichloropropane	ND	0.0013	EPA 8260	6-14-11	6-14-11	
n-Propylbenzene	ND	0.0013	EPA 8260	6-14-11	6-14-11	
2-Chlorotoluene	ND	0.0013	EPA 8260	6-14-11	6-14-11	
4-Chlorotoluene	ND	0.0013	EPA 8260	6-14-11	6-14-11	
1,3,5-Trimethylbenzene	ND	0.0013	EPA 8260	6-14-11	6-14-11	
tert-Butylbenzene	ND	0.0013	EPA 8260	6-14-11	6-14-11	
1,2,4-Trimethylbenzene	ND	0.0013	EPA 8260	6-14-11	6-14-11	
sec-Butylbenzene	ND	0.0013	EPA 8260	6-14-11	6-14-11	
1,3-Dichlorobenzene	ND	0.0013	EPA 8260	6-14-11	6-14-11	
p-Isopropyltoluene	ND	0.0013	EPA 8260	6-14-11	6-14-11	
1,4-Dichlorobenzene	ND	0.0013	EPA 8260	6-14-11	6-14-11	
1,2-Dichlorobenzene	ND	0.0013	EPA 8260	6-14-11	6-14-11	
n-Butylbenzene	ND	0.0013	EPA 8260	6-14-11	6-14-11	
1,2-Dibromo-3-chloropropane	ND	0.0065	EPA 8260	6-14-11	6-14-11	
1,2,4-Trichlorobenzene	ND	0.0013	EPA 8260	6-14-11	6-14-11	
Hexachlorobutadiene	ND	0.0065	EPA 8260	6-14-11	6-14-11	
Naphthalene	ND	0.0013	EPA 8260	6-14-11	6-14-11	
1,2,3-Trichlorobenzene	ND	0.0013	EPA 8260	6-14-11	6-14-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*77*	*63-127*				
Toluene-d8	*85*	*65-129*				
4-Bromofluorobenzene	*85*	*55-121*				

Date of Report: June 20, 2011
Samples Submitted: June 13, 2011
Laboratory Reference: 1106-112
Project: 6552

VOLATILES by EPA 8260B
page 1 of 2

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**VP-2-18"**					
Laboratory ID:	06-112-07					
Dichlorodifluoromethane	ND	0.0011	EPA 8260	6-14-11	6-14-11	
Chloromethane	ND	0.0055	EPA 8260	6-14-11	6-14-11	
Vinyl Chloride	ND	0.0011	EPA 8260	6-14-11	6-14-11	
Bromomethane	ND	0.0011	EPA 8260	6-14-11	6-14-11	
Chloroethane	ND	0.0055	EPA 8260	6-14-11	6-14-11	
Trichlorofluoromethane	ND	0.0011	EPA 8260	6-14-11	6-14-11	
1,1-Dichloroethene	ND	0.0011	EPA 8260	6-14-11	6-14-11	
Acetone	0.0056	0.0055	EPA 8260	6-14-11	6-14-11	
Iodomethane	ND	0.0055	EPA 8260	6-14-11	6-14-11	
Carbon Disulfide	ND	0.0011	EPA 8260	6-14-11	6-14-11	
Methylene Chloride	ND	0.0055	EPA 8260	6-14-11	6-14-11	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260	6-14-11	6-14-11	
Methyl t-Butyl Ether	ND	0.0011	EPA 8260	6-14-11	6-14-11	
1,1-Dichloroethane	ND	0.0011	EPA 8260	6-14-11	6-14-11	
Vinyl Acetate	ND	0.0055	EPA 8260	6-14-11	6-14-11	
2,2-Dichloropropane	ND	0.0011	EPA 8260	6-14-11	6-14-11	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260	6-14-11	6-14-11	
2-Butanone	ND	0.0055	EPA 8260	6-14-11	6-14-11	
Bromochloromethane	ND	0.0011	EPA 8260	6-14-11	6-14-11	
Chloroform	ND	0.0011	EPA 8260	6-14-11	6-14-11	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260	6-14-11	6-14-11	
Carbon Tetrachloride	ND	0.0011	EPA 8260	6-14-11	6-14-11	
1,1-Dichloropropene	ND	0.0011	EPA 8260	6-14-11	6-14-11	
Benzene	ND	0.0011	EPA 8260	6-14-11	6-14-11	
1,2-Dichloroethane	ND	0.0011	EPA 8260	6-14-11	6-14-11	
Trichloroethene	ND	0.0011	EPA 8260	6-14-11	6-14-11	
1,2-Dichloropropane	ND	0.0011	EPA 8260	6-14-11	6-14-11	
Dibromomethane	ND	0.0011	EPA 8260	6-14-11	6-14-11	
Bromodichloromethane	ND	0.0011	EPA 8260	6-14-11	6-14-11	
2-Chloroethyl Vinyl Ether	ND	0.0055	EPA 8260	6-14-11	6-14-11	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260	6-14-11	6-14-11	
Methyl Isobutyl Ketone	ND	0.0055	EPA 8260	6-14-11	6-14-11	
Toluene	ND	0.0055	EPA 8260	6-14-11	6-14-11	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260	6-14-11	6-14-11	

Date of Report: June 20, 2011
Samples Submitted: June 13, 2011
Laboratory Reference: 1106-112
Project: 6552

VOLATILES by EPA 8260B
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**VP-2-18"**					
Laboratory ID:	06-112-07					
1,1,2-Trichloroethane	ND	0.0011	EPA 8260	6-14-11	6-14-11	
Tetrachloroethene	ND	0.0011	EPA 8260	6-14-11	6-14-11	
1,3-Dichloropropane	ND	0.0011	EPA 8260	6-14-11	6-14-11	
2-Hexanone	ND	0.0055	EPA 8260	6-14-11	6-14-11	
Dibromochloromethane	ND	0.0011	EPA 8260	6-14-11	6-14-11	
1,2-Dibromoethane	ND	0.0011	EPA 8260	6-14-11	6-14-11	
Chlorobenzene	ND	0.0011	EPA 8260	6-14-11	6-14-11	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260	6-14-11	6-14-11	
Ethylbenzene	ND	0.0011	EPA 8260	6-14-11	6-14-11	
m,p-Xylene	ND	0.0022	EPA 8260	6-14-11	6-14-11	
o-Xylene	ND	0.0011	EPA 8260	6-14-11	6-14-11	
Styrene	ND	0.0011	EPA 8260	6-14-11	6-14-11	
Bromoform	ND	0.0011	EPA 8260	6-14-11	6-14-11	
Isopropylbenzene	0.0034	0.0011	EPA 8260	6-14-11	6-14-11	
Bromobenzene	ND	0.0011	EPA 8260	6-14-11	6-14-11	
1,1,2,2-Tetrachloroethane	ND	0.0011	EPA 8260	6-14-11	6-14-11	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260	6-14-11	6-14-11	
n-Propylbenzene	0.0040	0.0011	EPA 8260	6-14-11	6-14-11	
2-Chlorotoluene	ND	0.0011	EPA 8260	6-14-11	6-14-11	
4-Chlorotoluene	ND	0.0011	EPA 8260	6-14-11	6-14-11	
1,3,5-Trimethylbenzene	ND	0.0011	EPA 8260	6-14-11	6-14-11	
tert-Butylbenzene	ND	0.0011	EPA 8260	6-14-11	6-14-11	
1,2,4-Trimethylbenzene	ND	0.0011	EPA 8260	6-14-11	6-14-11	
sec-Butylbenzene	0.0048	0.0011	EPA 8260	6-14-11	6-14-11	
1,3-Dichlorobenzene	ND	0.0011	EPA 8260	6-14-11	6-14-11	
p-Isopropyltoluene	ND	0.0011	EPA 8260	6-14-11	6-14-11	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260	6-14-11	6-14-11	
1,2-Dichlorobenzene	ND	0.0011	EPA 8260	6-14-11	6-14-11	
n-Butylbenzene	ND	0.0011	EPA 8260	6-14-11	6-14-11	
1,2-Dibromo-3-chloropropane	ND	0.0055	EPA 8260	6-14-11	6-14-11	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260	6-14-11	6-14-11	
Hexachlorobutadiene	ND	0.0055	EPA 8260	6-14-11	6-14-11	
Naphthalene	ND	0.0011	EPA 8260	6-14-11	6-14-11	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260	6-14-11	6-14-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*76*	*63-127*				
Toluene-d8	*81*	*65-129*				
4-Bromofluorobenzene	*78*	*55-121*				

Date of Report: June 20, 2011
Samples Submitted: June 13, 2011
Laboratory Reference: 1106-112
Project: 6552

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

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB6014S1					
Dichlorodifluoromethane	ND	0.0010	EPA 8260	6-14-11	6-14-11	
Chloromethane	ND	0.0050	EPA 8260	6-14-11	6-14-11	
Vinyl Chloride	ND	0.0010	EPA 8260	6-14-11	6-14-11	
Bromomethane	ND	0.0010	EPA 8260	6-14-11	6-14-11	
Chloroethane	ND	0.0050	EPA 8260	6-14-11	6-14-11	
Trichlorofluoromethane	ND	0.0010	EPA 8260	6-14-11	6-14-11	
1,1-Dichloroethene	ND	0.0010	EPA 8260	6-14-11	6-14-11	
Acetone	ND	0.0050	EPA 8260	6-14-11	6-14-11	
Iodomethane	ND	0.0050	EPA 8260	6-14-11	6-14-11	
Carbon Disulfide	ND	0.0010	EPA 8260	6-14-11	6-14-11	
Methylene Chloride	ND	0.0050	EPA 8260	6-14-11	6-14-11	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260	6-14-11	6-14-11	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260	6-14-11	6-14-11	
1,1-Dichloroethane	ND	0.0010	EPA 8260	6-14-11	6-14-11	
Vinyl Acetate	ND	0.0050	EPA 8260	6-14-11	6-14-11	
2,2-Dichloropropane	ND	0.0010	EPA 8260	6-14-11	6-14-11	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260	6-14-11	6-14-11	
2-Butanone	ND	0.0050	EPA 8260	6-14-11	6-14-11	
Bromochloromethane	ND	0.0010	EPA 8260	6-14-11	6-14-11	
Chloroform	ND	0.0010	EPA 8260	6-14-11	6-14-11	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260	6-14-11	6-14-11	
Carbon Tetrachloride	ND	0.0010	EPA 8260	6-14-11	6-14-11	
1,1-Dichloropropene	ND	0.0010	EPA 8260	6-14-11	6-14-11	
Benzene	ND	0.0010	EPA 8260	6-14-11	6-14-11	
1,2-Dichloroethane	ND	0.0010	EPA 8260	6-14-11	6-14-11	
Trichloroethene	ND	0.0010	EPA 8260	6-14-11	6-14-11	
1,2-Dichloropropane	ND	0.0010	EPA 8260	6-14-11	6-14-11	
Dibromomethane	ND	0.0010	EPA 8260	6-14-11	6-14-11	
Bromodichloromethane	ND	0.0010	EPA 8260	6-14-11	6-14-11	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260	6-14-11	6-14-11	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260	6-14-11	6-14-11	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260	6-14-11	6-14-11	
Toluene	ND	0.0050	EPA 8260	6-14-11	6-14-11	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260	6-14-11	6-14-11	

Date of Report: June 20, 2011
Samples Submitted: June 13, 2011
Laboratory Reference: 1106-112
Project: 6552

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

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB6014S1					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260	6-14-11	6-14-11	
Tetrachloroethene	ND	0.0010	EPA 8260	6-14-11	6-14-11	
1,3-Dichloropropane	ND	0.0010	EPA 8260	6-14-11	6-14-11	
2-Hexanone	ND	0.0050	EPA 8260	6-14-11	6-14-11	
Dibromochloromethane	ND	0.0010	EPA 8260	6-14-11	6-14-11	
1,2-Dibromoethane	ND	0.0010	EPA 8260	6-14-11	6-14-11	
Chlorobenzene	ND	0.0010	EPA 8260	6-14-11	6-14-11	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260	6-14-11	6-14-11	
Ethylbenzene	ND	0.0010	EPA 8260	6-14-11	6-14-11	
m,p-Xylene	ND	0.0020	EPA 8260	6-14-11	6-14-11	
o-Xylene	ND	0.0010	EPA 8260	6-14-11	6-14-11	
Styrene	ND	0.0010	EPA 8260	6-14-11	6-14-11	
Bromoform	ND	0.0010	EPA 8260	6-14-11	6-14-11	
Isopropylbenzene	ND	0.0010	EPA 8260	6-14-11	6-14-11	
Bromobenzene	ND	0.0010	EPA 8260	6-14-11	6-14-11	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260	6-14-11	6-14-11	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260	6-14-11	6-14-11	
n-Propylbenzene	ND	0.0010	EPA 8260	6-14-11	6-14-11	
2-Chlorotoluene	ND	0.0010	EPA 8260	6-14-11	6-14-11	
4-Chlorotoluene	ND	0.0010	EPA 8260	6-14-11	6-14-11	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260	6-14-11	6-14-11	
tert-Butylbenzene	ND	0.0010	EPA 8260	6-14-11	6-14-11	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260	6-14-11	6-14-11	
sec-Butylbenzene	ND	0.0010	EPA 8260	6-14-11	6-14-11	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260	6-14-11	6-14-11	
p-Isopropyltoluene	ND	0.0010	EPA 8260	6-14-11	6-14-11	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260	6-14-11	6-14-11	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260	6-14-11	6-14-11	
n-Butylbenzene	ND	0.0010	EPA 8260	6-14-11	6-14-11	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260	6-14-11	6-14-11	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260	6-14-11	6-14-11	
Hexachlorobutadiene	ND	0.0050	EPA 8260	6-14-11	6-14-11	
Naphthalene	ND	0.0010	EPA 8260	6-14-11	6-14-11	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260	6-14-11	6-14-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*79*	*63-127*				
Toluene-d8	*86*	*65-129*				
4-Bromofluorobenzene	*87*	*55-121*				

Date of Report: June 20, 2011
Samples Submitted: June 13, 2011
Laboratory Reference: 1106-112
Project: 6552

VOLATILES by EPA 8260B
SB/SBD QUALITY CONTROL

Matrix: Soil
Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB6014S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**0.0536**	**0.0524**	0.0500	0.0500	107	105	70-130	2	19	
Benzene	**0.0478**	**0.0476**	0.0500	0.0500	96	95	70-125	0	15	
Trichloroethene	**0.0514**	**0.0490**	0.0500	0.0500	103	98	70-122	5	14	
Toluene	**0.0498**	**0.0486**	0.0500	0.0500	100	97	73-120	2	16	
Chlorobenzene	**0.0467**	**0.0459**	0.0500	0.0500	93	92	74-109	2	12	
Surrogate:										
Dibromofluoromethane					*74*	*71*	*63-127*			
Toluene-d8					*81*	*79*	*65-129*			
4-Bromofluorobenzene					*80*	*78*	*55-121*			

Date of Report: June 20, 2011
Samples Submitted: June 13, 2011
Laboratory Reference: 1106-112
Project: 6552

% MOISTURE

Date Analyzed: 6-14-11

Client ID	Lab ID	% Moisture
VP-1-18"	06-112-01	12
MW-201-2.5'	06-112-03	16
MW-201-5'	06-112-04	14
VP-2-18"	06-112-07	15
VP-2-3.5'	06-112-08	14
VP-3-18"	06-112-09	11
VP-3-4'	06-112-10	13

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

Page 1 of 1

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

Company: Terra Associates
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: 06-112

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	VP-1 -18'	6/13/11	9:15	S	5			X													X
2	VP-1 -4.5'		9:40																		
3	MW-201 -2.5'		10:40					X		X											X
4	MW-201 -5'		10:47					X													X
5	MW-201 -10'		10:55																		
6	MW-201 -15'		11:05																		
7	VP-2 -18"		12:12					X		X											X
8	VP-2 -3.5'		12:40					X													
9	VP-3 -18"		13:00					X													
10	VP-3 -4'		13:15					X													

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished		TAI	6/13/11	15:25	
Received		CSE	6/13/11	1525	
Relinquished					
Received					
Relinquished					
Received					
Reviewed/Date		Reviewed/Date			Chromatograms with final report ☐

Data Package: Level III ☐ Level IV ☐ Electronic Data Deliverables (EDDs) ☐ _____

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

August 22, 2012

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

Re: Analytical Data for Project 6552
Laboratory Reference No. 1208-106

Dear Chuck:

Enclosed are the analytical results and associated quality control data for samples submitted on August 14, 2012.

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: August 22, 2012
Samples Submitted: August 14, 2012
Laboratory Reference: 1208-106
Project: 6552

Case Narrative

Samples were collected on August 14, 2012 and received by the laboratory on August 14, 2012. 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: August 22, 2012
Samples Submitted: August 14, 2012
Laboratory Reference: 1208-106
Project: 6552

NWTPH-Gx/BTEX

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-1**					
Laboratory ID:	08-106-01					
Benzene	**ND**	1.0	EPA 8021	8-15-12	8-15-12	
Toluene	**ND**	1.0	EPA 8021	8-15-12	8-15-12	
Ethyl Benzene	**460**	20	EPA 8021	8-16-12	8-16-12	
m,p-Xylene	**1800**	20	EPA 8021	8-16-12	8-16-12	
o-Xylene	**120**	20	EPA 8021	8-16-12	8-16-12	
Gasoline	**4900**	100	NWTPH-Gx	8-15-12	8-15-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*85*	*71-116*				
Client ID:	**MW-3**					
Laboratory ID:	08-106-02					
Benzene	**ND**	1.0	EPA 8021	8-15-12	8-15-12	
Toluene	**ND**	1.0	EPA 8021	8-15-12	8-15-12	
Ethyl Benzene	**ND**	1.0	EPA 8021	8-15-12	8-15-12	
m,p-Xylene	**3.2**	1.0	EPA 8021	8-15-12	8-15-12	
o-Xylene	**ND**	1.0	EPA 8021	8-15-12	8-15-12	
Gasoline	**ND**	100	NWTPH-Gx	8-15-12	8-15-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*84*	*71-116*				
Client ID:	**MW-6**					
Laboratory ID:	08-106-03					
Benzene	**ND**	1.0	EPA 8021	8-15-12	8-15-12	
Toluene	**ND**	1.0	EPA 8021	8-15-12	8-15-12	
Ethyl Benzene	**ND**	1.0	EPA 8021	8-15-12	8-15-12	
m,p-Xylene	**ND**	1.0	EPA 8021	8-15-12	8-15-12	
o-Xylene	**ND**	1.0	EPA 8021	8-15-12	8-15-12	
Gasoline	**ND**	100	NWTPH-Gx	8-15-12	8-15-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*84*	*71-116*				

Date of Report: August 22, 2012
Samples Submitted: August 14, 2012
Laboratory Reference: 1208-106
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:	MB0815W1					
Benzene	**ND**	1.0	EPA 8021	8-15-12	8-15-12	
Toluene	**ND**	1.0	EPA 8021	8-15-12	8-15-12	
Ethyl Benzene	**ND**	1.0	EPA 8021	8-15-12	8-15-12	
m,p-Xylene	**ND**	1.0	EPA 8021	8-15-12	8-15-12	
o-Xylene	**ND**	1.0	EPA 8021	8-15-12	8-15-12	
Gasoline	**ND**	100	NWTPH-Gx	8-15-12	8-15-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*86*	*71-116*				
Laboratory ID:	MB0816W1					
Benzene	**ND**	1.0	EPA 8021	8-16-12	8-16-12	
Toluene	**ND**	1.0	EPA 8021	8-16-12	8-16-12	
Ethyl Benzene	**ND**	1.0	EPA 8021	8-16-12	8-16-12	
m,p-Xylene	**ND**	1.0	EPA 8021	8-16-12	8-16-12	
o-Xylene	**ND**	1.0	EPA 8021	8-16-12	8-16-12	
Gasoline	**ND**	100	NWTPH-Gx	8-16-12	8-16-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*84*	*71-116*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	08-102-07										
	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						*86*	*84*	*71-116*			
MATRIX SPIKES											
Laboratory ID:	08-102-07										
	MS	MSD	MS	MSD		MS	MSD				
Benzene	**45.7**	**45.2**	50.0	50.0	ND	**91**	**90**	81-121	1	11	
Toluene	**46.5**	**45.9**	50.0	50.0	ND	**93**	**92**	83-122	1	13	
Ethyl Benzene	**46.6**	**46.3**	50.0	50.0	ND	**93**	**93**	81-121	1	15	
m,p-Xylene	**46.8**	**46.2**	50.0	50.0	ND	**94**	**92**	80-119	1	16	
o-Xylene	**47.4**	**46.6**	50.0	50.0	ND	**95**	**93**	80-119	2	15	
Surrogate:											
Fluorobenzene						*96*	*96*	*71-116*			

Date of Report: August 22, 2012
Samples Submitted: August 14, 2012
Laboratory Reference: 1208-106
Project: 6552

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-1**					
Laboratory ID:	08-106-01					
Diesel Range Organics	**ND**	0.38	NWTPH-Dx	8-21-12	8-21-12	U1
Lube Oil Range Organics	**ND**	0.41	NWTPH-Dx	8-21-12	8-21-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*108*	*50-150*				
Client ID:	**MW-3**					
Laboratory ID:	08-106-02					
Diesel Range Organics	**ND**	0.26	NWTPH-Dx	8-21-12	8-21-12	
Lube Oil Range Organics	**ND**	0.41	NWTPH-Dx	8-21-12	8-21-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*107*	*50-150*				
Client ID:	**MW-6**					
Laboratory ID:	08-106-03					
Diesel Range Organics	**ND**	0.26	NWTPH-Dx	8-21-12	8-22-12	
Lube Oil Range Organics	**ND**	0.41	NWTPH-Dx	8-21-12	8-22-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*98*	*50-150*				

Date of Report: August 22, 2012
Samples Submitted: August 14, 2012
Laboratory Reference: 1208-106
Project: 6552

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:	MB0821W1					
Diesel Range Organics	**ND**	0.25	NWTPH-Dx	8-21-12	8-21-12	
Lube Oil Range Organics	**ND**	0.40	NWTPH-Dx	8-21-12	8-21-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*101*	*50-150*				

Analyte	Result		Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE							
Laboratory ID:	08-106-01						
	ORIG	DUP					
Diesel Range Organics	**ND**	**ND**			NA	NA	U1
Lube Oil Range Organics	**ND**	**ND**			NA	NA	
Surrogate:							
o-Terphenyl			*108* *102*	*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.

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

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: 08-106

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	No. of Cont.	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 Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664	% Moisture
1	MW-1	8/14/12	13:00	Water	5		X		X													
2	MW-3	8/14/12	13:40	Water	5		X		X													
3	MW-6	8/14/12	15:00	Water	5		X		X													

	Signature	Company	Date	Time
Relinquished		TAT	8/14/12	16:06
Received			8/14/12	1606
Relinquished				
Received				
Relinquished				
Received				

Comments/Special Instructions

Reviewed/Date

Reviewed/Date

Chromatograms with final report ☐

Data Package: Level III ☐ Level IV ☐ Electronic Data Deliverables (EDDs) ☐ _____