PSID: 20114545 CUSID: 8651

VCP: NW3030

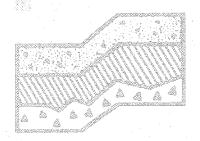
RECEIVED

DEPT OF SCOLOGY

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.

Ms. Heather Vick, WDOE NWRO

TABLE OF CONTENTS

			Page No
1.0	Execu	tive Summary	1
2.0		of Work	
3.0		onditions	
5.0	3.1	Surface	
	3.2	Subsurface	
	3.3	Groundwater	
4.0		Sampling	
5.0			
3.0	5.1	atory Testing	
		General	
	5.3	Groundwater	
6.0		sion	
	6.1	General	
	6.3	Recommendations	
7.0	Limita	tions	5
Tables			
Static W	ater Leve	el	Table 1
		Summary	
		esults-Petroleum Hydrocarbons	
		esults-Halogenated Volatiles	
		esults Lead	
		esults-ethylene Glycol	
7 thaiy the	our rest in	esuris-entyrene Grycor	Table 0
Figures			
rigures	ı		
37:-:-:-	14		T. 1
		nity Map	
Monitor	ing Well	Location Plan	Figure 3
Generali	ized Geol	ogic Section	Figure 4
General	Groundw	rater Conditions	Figures 5 through 7
Chart 1	•••••	***************************************	Figure 8
Propose		ring Well	
•			- -
Append	lices		
Monitor	ing Well	Logs	Annandiy A
		o- Groundwater	
CAHAIVIR	441 KGNIIII	v 11 voulti Walei	ADDENNIYI

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

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	Surface	MP	4-29	-2011	5-6-2	2011	5-10	-2011	6-29-	2011
Well	Elev.	Elev.	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							
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	Surface	MP	9-29-	2011	10-17	-2011	11-18	-2011	11-29-	2011
Well	Elev.	Elev.	Depth	Elev.	Depth	Elev.	Depth	Elev.	Depth	Elev.
MW-1	26.44	26.11	NM	NM						
MW-2	25.98	25.98	NM	NM						
MW-3	26.05	26.05	NM	NM						
MW-4	26.21	25.90	NM	NM						
MW-5	26.32	26.32	NM	NM						
MW-6	26.8	26.34	NM	NM						
MW-7	26.89	26.60	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						
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	Surface	MP	5-2-2	2012	8-14	-2012	7-11-	-2013	9-27	-13
Well	Elev.	Elev.	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	Surface	MP	2-26	5-14	9-2	4-14	11-	7-14
Well	Elev.	Elev.	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	<u></u>
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	Surface	MP	2/20/	2015	5/27	7/2015	6/17	//2015
Well	Elev.	Elev.	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	Surface	MP	5/27	7/15	6/1	17/15	7/14/	2015
Well	Elev.	Elev.	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		V 1
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
MANA	SWL Elev.	21.77	22.86	23.03	21.48	22.72	21.71	21.63	20.47
MW-6	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
U	^J nits	mg/liter	mg/liter	mg/liter	μg/liter	μg/liter	μg/liter	μg/liter	μg/liter
	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
MW-1	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		000
	10/10/00	1.1	0.95	410	1. 0 U	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
	11/14/03	11		18	5.0U	1,700	80	5,5	500
	6/21/06	0.5 U	0.5 U	NR	ND	240	1	2:	80
· •	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	2,5	500
	10/22/07	NR	ND	2.4	10U	825	10U	2,7	700
	3/19/08	ND	ND	2.7	10U	700	1 0U	1,5	000
MW-1	6/20/08	NT	NT	0.50	1.0U	40	1 .0 U	13	30
	12/30/08	NT	NT	312	0.56	27	2.0 U	47	2.6
	6/09	NT	NT	8.7	1.0U	460	1. 0 U	1,800	120
	10/09	NT	NT	11.3	10U	825	1 0 U	2,5	100
	2/2010	NT	NT	10.0	10U	700	1 0 U	1,9	100
-	7/27/10	0.5U	0.5 U	1.2	1.013	40	1. 0 U	 	30
	4/29/11	0.3 U	0.4 1U	1.1	0.56	27	2.0 U	47	2.6
	8/14/12	0.38U	0.41U	4.9	1,0U	460	1. 0 U	1,800	120
	7/11/13	1,4	0.41U	2.3	0.53	32	1. 0 U	210	1.3
		MW-1 a	abandoned due	to lower ground	water levels Sep	tember 2014, se	e replacement N	IW-204	

Well Number	Date	TPH Diesel Range	TPH Oil Range	TPH Gas Range	Benzene	Ethyl Benzene	Toluene	m,p Xylene	o Xylene	
	11/27/95	NT	NT	ND	ND	6.6	ND	2	7	
	6/20/96	NT	NT	1.1	NT	NT	NT	NT	NT	
	9/11/96	NT	NT	0.9	ND	79	23		79	
	12/10/96	NT	NT	0.9	ND	1.1	ND	2.		
	4/3/97	NT	NT	0.1U	ND	ND	3.2	N		
	1/31/98	NT	NT	ND	ND	ND	ND	N		
	10/10/00	NT	NT	0.13	1. 0 U	1. 0 U	36	1. 0 U	NT	
	9/25/02	NT	NT	0.5 U	5.0U	5. 0 U	5.0U	5.0)U	
MW-2	11/14/03	NT	NT	0.25 U	5.0U	5.0 U	5.0U	15	U	
	6/21/06	0.5U	X	0.25 U	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	N	D	
	7/27/10	0.47	1.2	0.2 U	NT	NT	NT	NT	NT	
	2/26/14	5.1U	16	0.1U	1. 0 U					
	MW-2 abandoned due to lower groundwater levels September 2014-see replacement well MW-203									

Well Number	Date	TPH Diesel Range	TPH Oil Range	TPH Gas Range	Benzene	Ethyl Benzene	Toluene	m,p Xylene	o Xylene
	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. 0 U	1 .0 U	1. 0 U	1.6
	9/25/02	NT	NT	0.05U	1.0U	1. 0 U	1. 0 U	1. 0 U	1. 0 U
	11/14/03	NT	NT	0.05U	1.0U	1 .0 U	1. 0 U	1. 0 U	3.0U
	6/26/06	0.5U	0.5 U	0.25U	NT	NT	NT	NT	NT
	12/15/06	0.65	ND	ND	NT	NT	NT	NT	NT
MW-3	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. 0 U	1. 0 U	1. 0 U	3.2	1.0U
	7/11/13			0.1U	0.5U	1. 0 U	1. 0 U	1.0U	1. 0 U
			MW-3 at	pandoned due to	lower groundwat	er levels Septem			· -

Well Number	Date	TPH Diesel Range	TPH Oil Range	TPH Gas Range	Benzene	Ethyl Benzene	Toluene	m,p Xylene	o Xylene
	11/27/95	NT	NT	78	4.0	4,600	40	20,	800
	1/31/98	NT	NT	14	ND	1,300	3.0	3,0	75
	10/10/00	NT	NT	0.68	1. 0 U	37	1. 0 U	30	NT
	9/25/02	NT	NT	0.11	1.0U	3.0	1. 0 U	1	6
	11/14/03	NT	NT	0.05 U	1.0U	1.0U	1. 0 U	3.0)U
MW-4	6/21/06	0.5 U	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	e	
	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	0.5 U	0.5 U	0.2U	NT	NT	NT	NT	NT
	7/11/13	0.38	0.41U	0.19	0.5U	1.3	1.0	12	1. 0 U
	9/27/13	0.32	0.41U	0.16	0.5U	1.0U	1. 0 U	1.1	1. 0 U
			MW-4 a	bandoned due to	lower groundwa	ter levels Septem	ber 2014		

Well Number	Date	TPH Diesel Range	TPH Oil Range	TPH Gas Range	Benzene	Ethyl Benzene	Toluene	m,p Xylene	o Xylene
	11/27/95	NT	NT	28	4.0	1,500	11	7,4	00
	1/31/98	NT	NT	1.1	ND	38	5.1	211	
	10/10/00	NT	NT	0.2	1.1	1	1 .0 U	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. 0 U	1. 0 U	1. 0 U	3.0U	
MW-5	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	0.5 U	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
•	1/29/96	NT	NT	0.68	3.5	2.5	ND	1	12
	1/31/98	NT	NT	NT	3.7	ND	ND	1	.7
	10/10/00	NT	NT	0.84	1.9	1. 0 U	1. 0 U	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. 0 U	1. 0 U	1.0U	3.0	OU
	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
1.6777.6	1/18/07	ND	ND	0.29	16	ND	69	1	6
MW-6	6/12/07	NR	ND	0.32	ND	ND	ND	N	D
	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. 0 U	1 .0 U	1. 0 U	3.0) U
	4/28/11	0.26 U	0.41U	0.16	0.2 U	0.2 U	1. 0 U	0.4 U	0.2U
	8/14/12	0.26 U	0.41U	0.1 U	1. 0 U	1.0U	1. 0 U	1. 0 U	1.0U
	7/11/13	0.37	0.41U	0.16	0.5U	2.3	1. 0 U	21	1. 0 U
	9/27/13	0.29	0.41U	0.1U	0.5U	1. 0 U	1. 0 U	1 .0 U	1.0U
	2/26/14	0.26 U	0. 41U	0.1U	1. 0 U	1. 0 U	1. 0 U	1. 0 U	1 .0 U
	5/27/15	0.27	0.41U	0.1U	0.5 U	1. 0 U	1. 0 U	1. 0 U	1. 0 U

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
	1/29/96	NT	NT	61	2.0	3,500	340	3,2	00
	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	1,6	500
}	10/10/00	NT	NT	4.3	190	1.0U	360	. 19	90
MW-7	9/25/02	NT	NT	0.89	140	5.0U	130	14	10
M W - /	11/14/03	NT	NT	0.72	130	5. 0 U	210		130
	6/21/06	0.5 U	0.5 U	0.25U	NT	NT	NT	NT	NT
	1/18/07	ND	ND	0.077	ND	4.0	ND	6	9
	6/12/07	ND	ND	ND	ND	ND	ND	N	D
	10/22/07	NR	ND	2.4	NT	NT	NT	NT	NT
	3/19/08	ND	ND	0.3	ND	ND	ND	N	D
	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	0.5 U	0.5U	0.2 U	NT	NT	NT	NT	NT
:	4/28/11	0.26 U	0.41U	0.1 U	0.2U	0.32	1. 0 U	0.4 U	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
U	J nits	mg/liter	mg/liter	mg/liter	μg/liter	μg/liter	μg/liter	μg/liter	μg/liter
	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	
1.007.0	10/10/00	NT	NT	0.1U	1. 0 U	1. 0 U	1 .0 U	1. 0 U	NT
MW-8	9/25/02	NT	NT	0.05U	1.0U	1. 0 U	1 .0 U	3	.0
	11/14/03	NT	NT	0.05U	1. 0 U	1. 0 U	1.0U	3.0	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
<u> </u>	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	H Oil Range	H Gas Range	Benzene	Ethyl Benzene	Toluene	m,p Xylene	o Xylene
\$			нал	TPH		A		=	·
	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	N	D ,
•	12/10/96	NT	NT	0.1U	NT	NT	NT	NT	NT
	4/3/97	NT	NT	0.1U	ND	ND	ND	ND	ND
ļ	1/31/98	NT	NT	ND	ND	ND	ND	ND	ND
MW-9	10/10/00	NT	NT	0.1U	1.0U	1.0U	1.0U	1.0U	1. 0 U
	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. 0 U	3.0)U
	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	0.2 U	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
	1/29/96	NT	NT	0.93	ND	62	ND	39.	7
	6/20/96	NT	NT	1.1	NT	NT	NT	NT	NT
1	9/11/96	NT	NT	0.58	ND	43	ND	17	1
•	12/10/96	NT	NT	0.1U	ND	ND	ND	1.2	2
	4/3/97	NT	NT	0.1U	ND	2.1	ND	5.2	2
	1/31/98	NT	NT	ND	ND	ND	ND	NI)
MW-10	10/10/00	NT	NT	ND	1. 0 U	1.0U	1. 0 U	1. 0 U	NT
	9/25/02	NT	NT	0.05 U	1 .0 U	1.0U	1 .0U	2.0)
Ì	11/14/03	NT	NT	0.05U	1. 0 U	1.0U	1. 0 U	3.01	U
	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
Ì	7/27/10	0.5U	0.5U	0.2U	NT	NT	NT	NT	NT
	7/11/13	NT	NT	0.1U	0.5 U	1.8	1. 0 U	16	1. 0 U
				ed due to lower	groundwater leve	els September 20	14		
MW-101	5/10/11	0.26U	0.41U	0.16	1.3	0.95	1. 0 U	1.5	0.2 U
171 47 = 101	9/29/11	0.26U	0.42U	0.29	2.8	1.2	1. 0 U	0.4U	0.2U
MW-102	5/10/11	0.27U	0.41U	0.5U	0.2 U	0.2 U	1. 0 U	0.4U	0.2U
1V1 VV -1 UZ	9/29/11	0.26 U	0.41U	0.59	0.2U	0.2U	1. 0 U	0.4U	0.2 U
MW-103	5/10/11	0.7U	0.42U	0.94	0.2 U	0.2 U	1. 0 U	0.4U	0.2U
141 44 - 103	9/29/11	0.26U	0.41U	0.27	0.2 U	0.2U	1. 0 U	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	0.26 U	0.1U	0.27	0.2 U	1.0U	0.4U	0.2U
1V1 W - 1U4	9/29/11	0.26 U	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 .0 U	1,100	4.5	4,000	1.100
	7/11/13	0.27	0.1U	0 .1U	0.5U	1.0U	1 .0 U	3.4	1. 0 U
	10/1/13	0.69	6.8	6.8	0.5U	1500	4.3	5300	6800
	2/28/14	0.28 U	0.84	0.32	1 .0 U	84	1. 0 U	150	39
	2/20/15	0.35	0.46U	0.1U	1. 0 U	1. 0 U	1. 0 U	1. 0 U	1.0U
	5/27/15	0.31	0.41U	0.1U	0.5U	1.0U	1. 0 U	1.0U	1.0U
MW-201	9/24/14	NT	NT	0.1U	0.5U	1.0U	1 .0 U	1.0U	1. 0 U
	2/20/15	0.26 U	0.41U	0.1U	0.5U	1. 0 U	1.0U	1. 0 U	1. 0 U
	5/27/15	NT	NT	0.1U	0.5U	1. 0 U	1. 0 U	1 .0 U	1. 0 U
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	0.26 U	0.42U	0.1U	0.5U	3.8	1 .0 U	1.7	1.0
	2/20/15	0.29U	0.47U	0.15	0.5 U	18	1. 0 U	20	1.4
	5/27/15	0.26 U	0.41U	0.1U	0.5U	21	1. 0 U	1. 0 U	1. 0 U
MW-204	9/24/14	0.47	0.41U	0.16	0.5U	1 .0 U	1. 0 U	1. 0 U	1 .0 U
	2/20/15	0.43	0.45U	0.17	0.5U	3.2	1. 0 U	8.5	1.5
	5/27/15	0.26U	0.41U	0.1U	0.5U	1. 0 U	1. 0 U	1. 0 U	1. 0 U
MW-205	11/25/14	NT	NT	0.1U	0.5U	1.0U	1. 0 U	1. 0 U	1. 0 U
	2/20/15	0.28 U	0.44U	0.1U	0.5U	1. 0 U	1. 0 U	1. 0 U	1. 0 U
***************************************	5/27/15	NT	NT	0.1U	0.5U	1. 0 U	1. 0 U	1. 0 U	1. 0 U
	rca ethod A	0.5	0.5	0.8 (1.0)	5.0	700	1,000	1,00	00

Well Number	Date	TPH Diesel Range	TPH Oil Range	TPH Gas Range	Benzene	Ethyl Benzene	Toluene	m,p Xylene	o Xylene
Pro Rei Lev	ject nediation els	0.5	0.5	0.20	0.795	800	640	1,60	00

Notes:

TPH values are reported in mg/liter, BETX values are reported in μ g/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	1 0 U	1 0 U	1 0 U	10U	1 0 U
141 44 - 1	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	0.2 U	0.2U	0.39	0.22	0.27
MW-101	5/10/11	0.2U	0.49	0.39	0.2 U	0.2U
MW-102	5/10/11	0.2 U	0.2 U	0.2 U	0.2 U	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

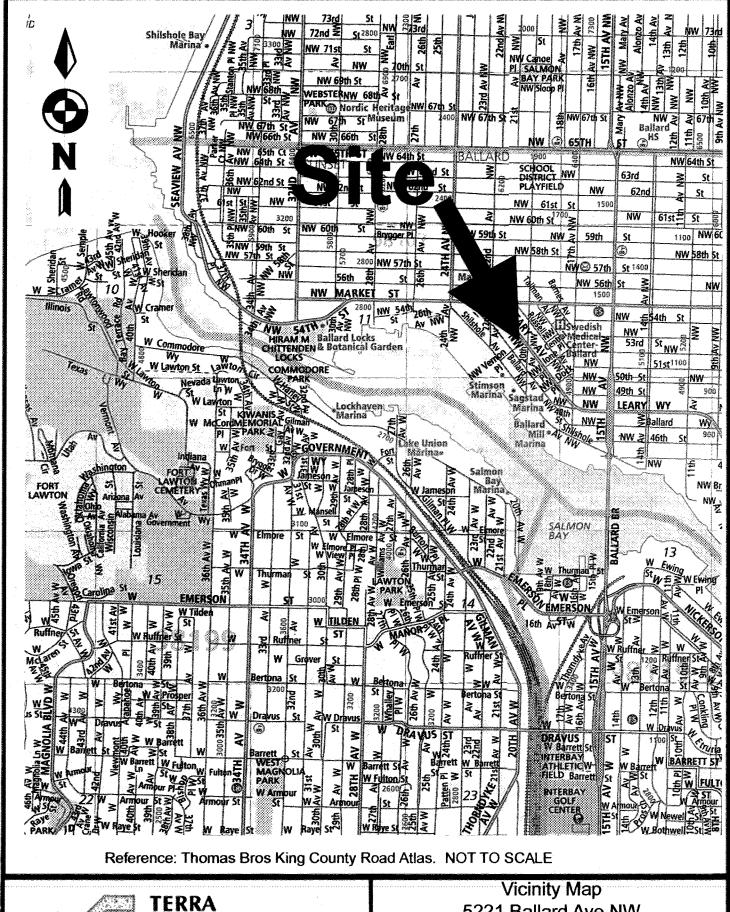
Well ID	Date	Total lead	Dissolved Lead
MW-107	2/20/15	13	1.0U
MW-201	2/20/15	1.1U	1.0U
MW-202	2/20/15	2.5	1.0U
MW-203	2/20/15	1.1U	1.0U
MW-204	2/20/15	1.1U	1.0U
MTCA Method A		15	15

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 M	fethod B	16





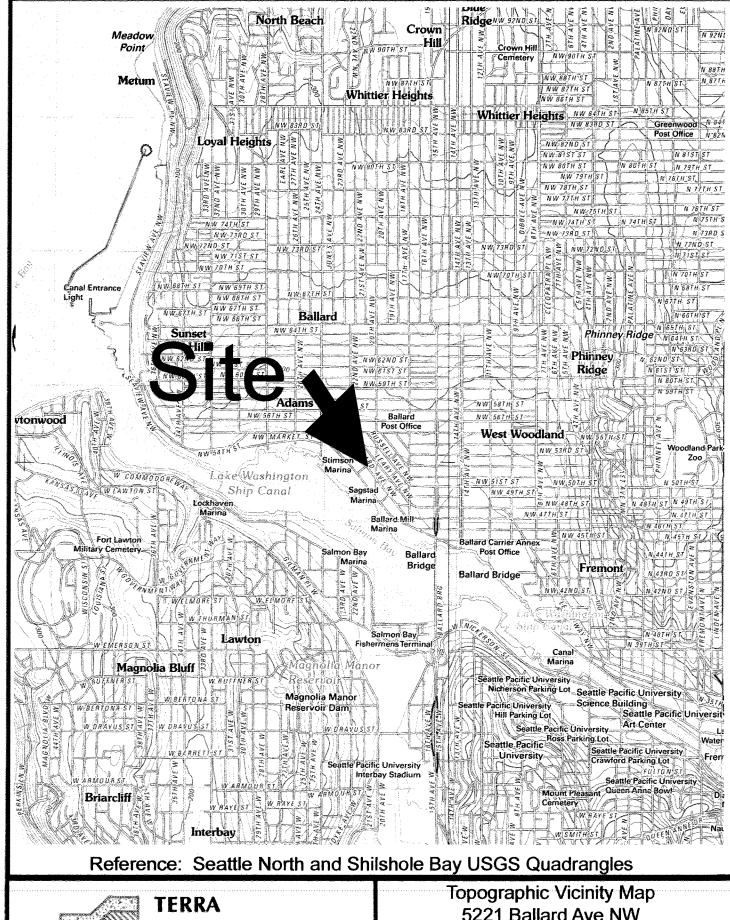
TERRA ASSOCIATES

Geotechnical Consultants

Vicinity Map 5221 Ballard Ave NW Seattle, Washington

Proj. No T-6552

Date Oct 2015



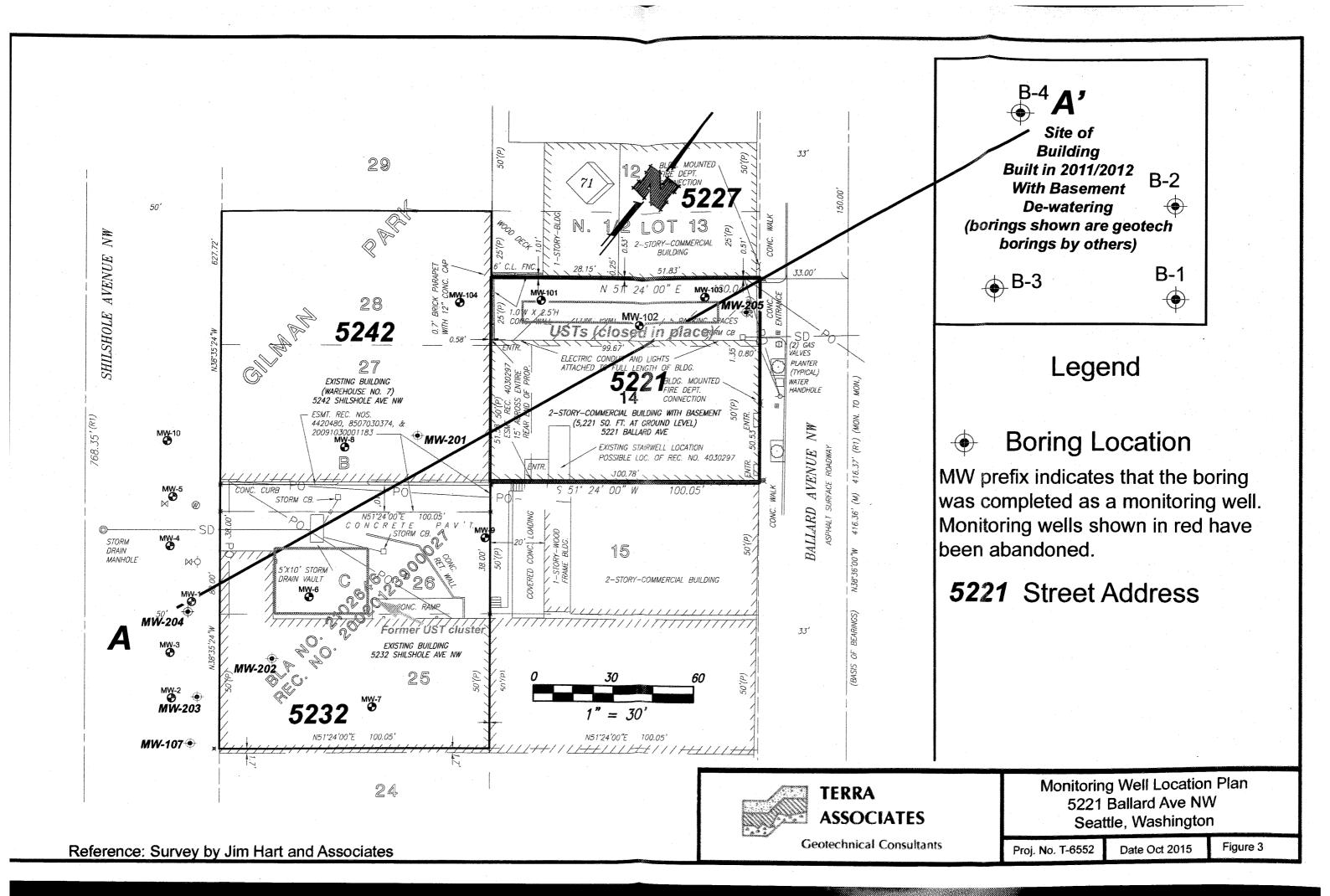
TERRA
ASSOCIATES

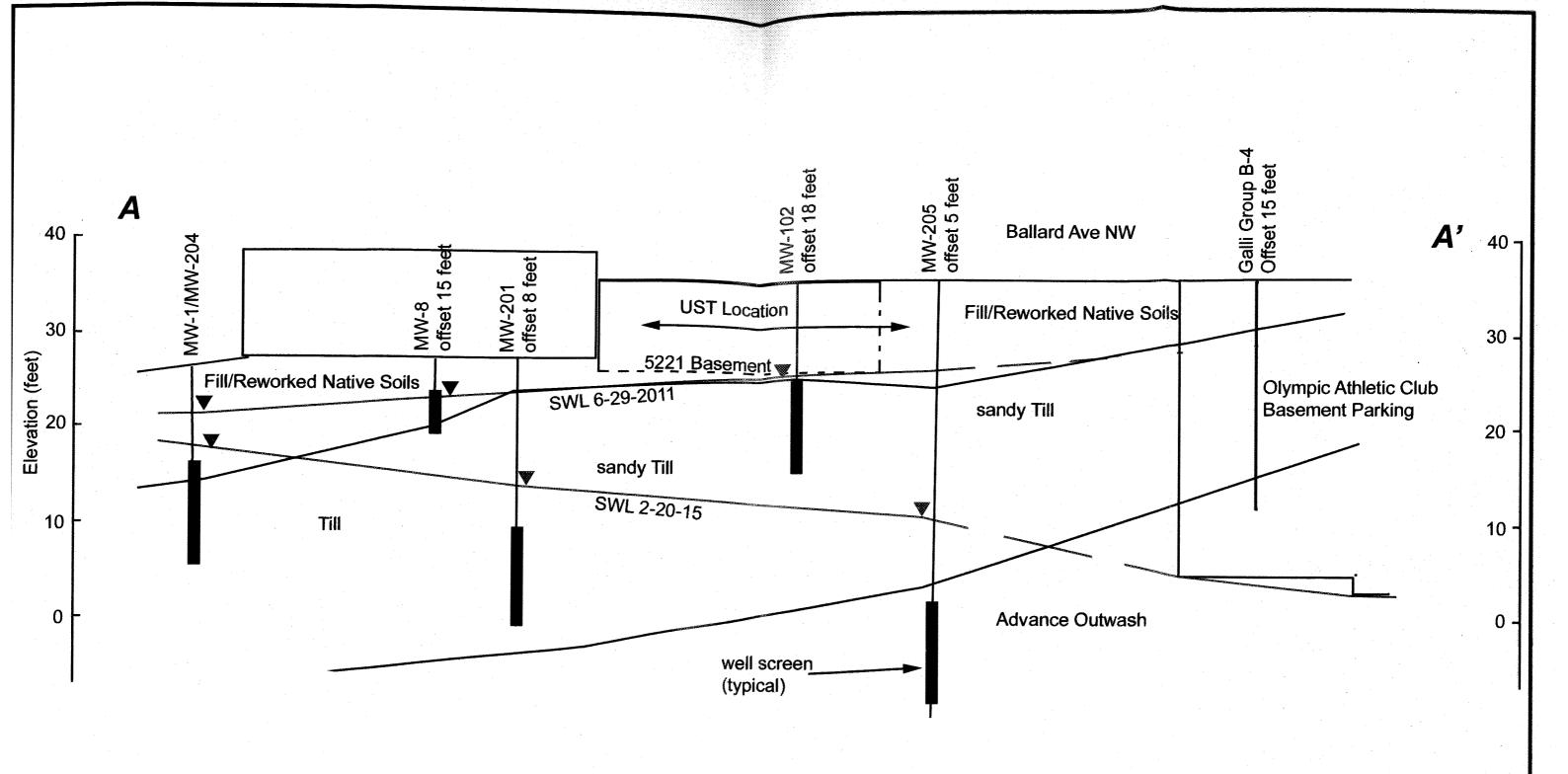
Geotechnical Consultants

5221 Ballard Ave NW
Seattle, Washington

Proj. No T-6552

Date Oct 2015





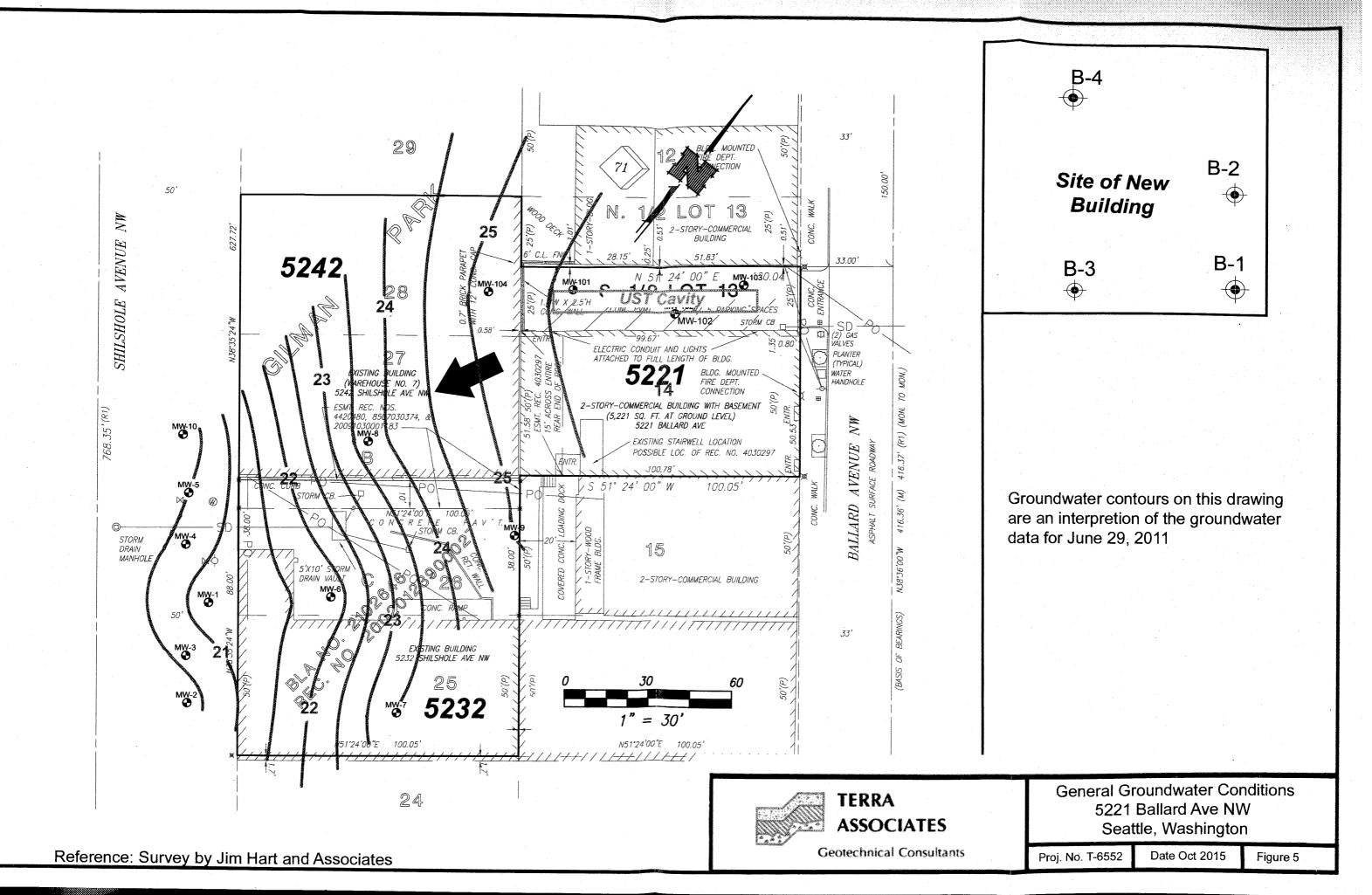
Scale 1"=30' Horizontal, 1'=10' Vertical

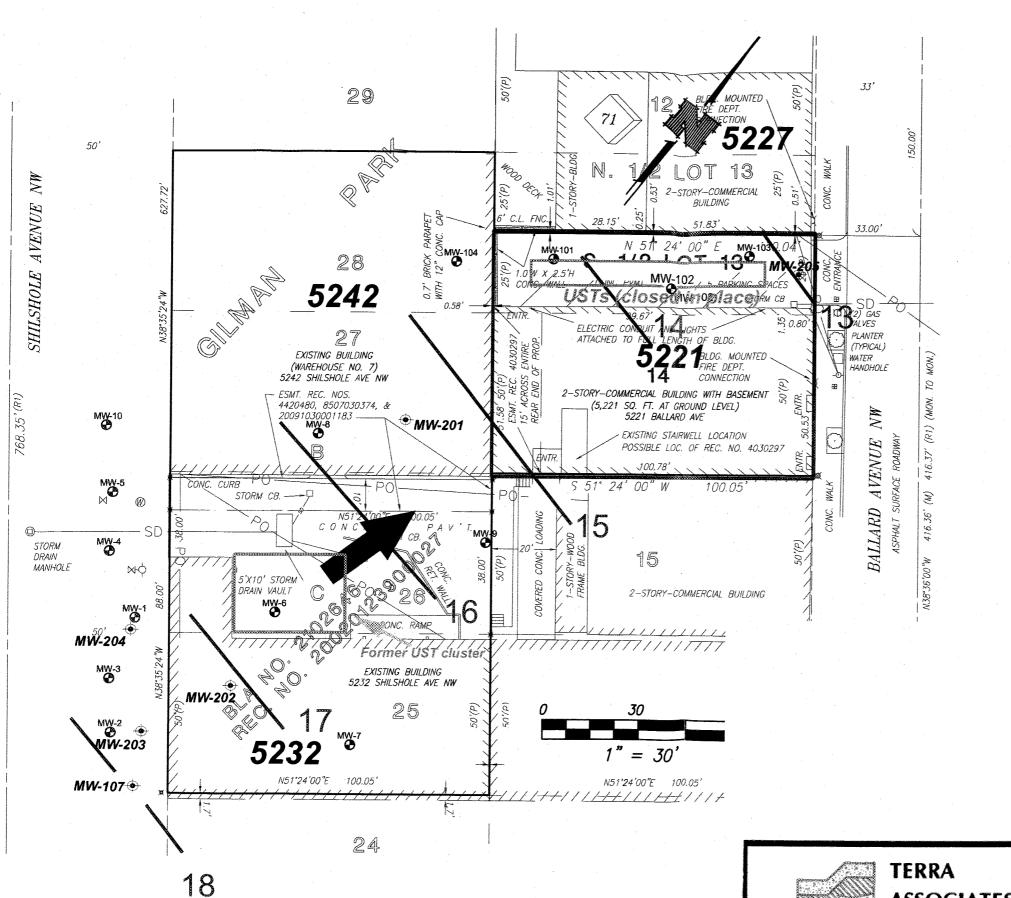


Generalized Geologic Section 5221 Ballard Ave NW Seattle, Washington

Proj. No. T-6552

Date Oct 2015





B-4

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

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

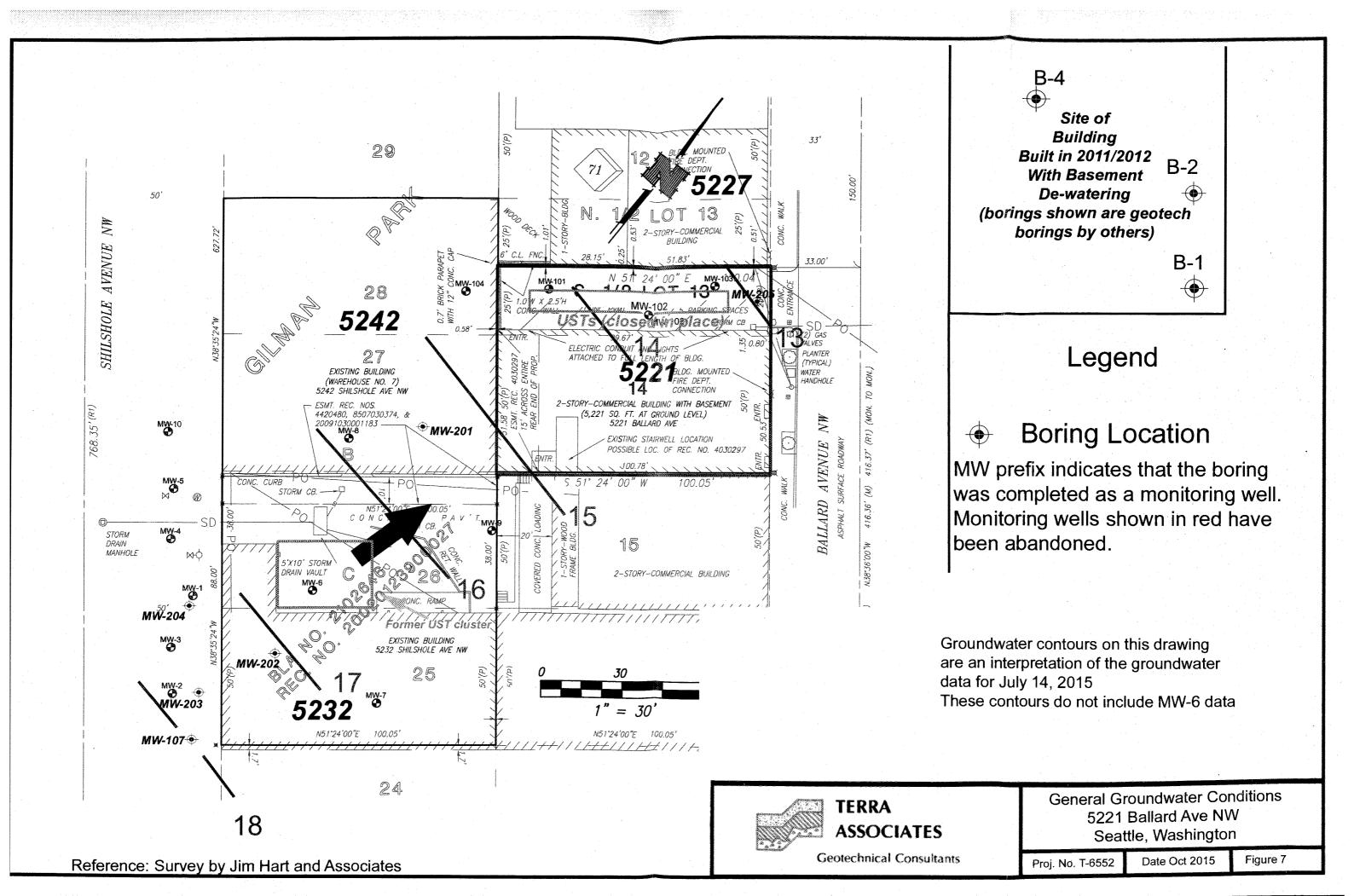
ASSOCIATES

Geotechnical Consultants

General Groundwater Conditions 5221 Ballard Ave NW Seattle, Washington

Proj. No. T-6552

Date Oct 2015



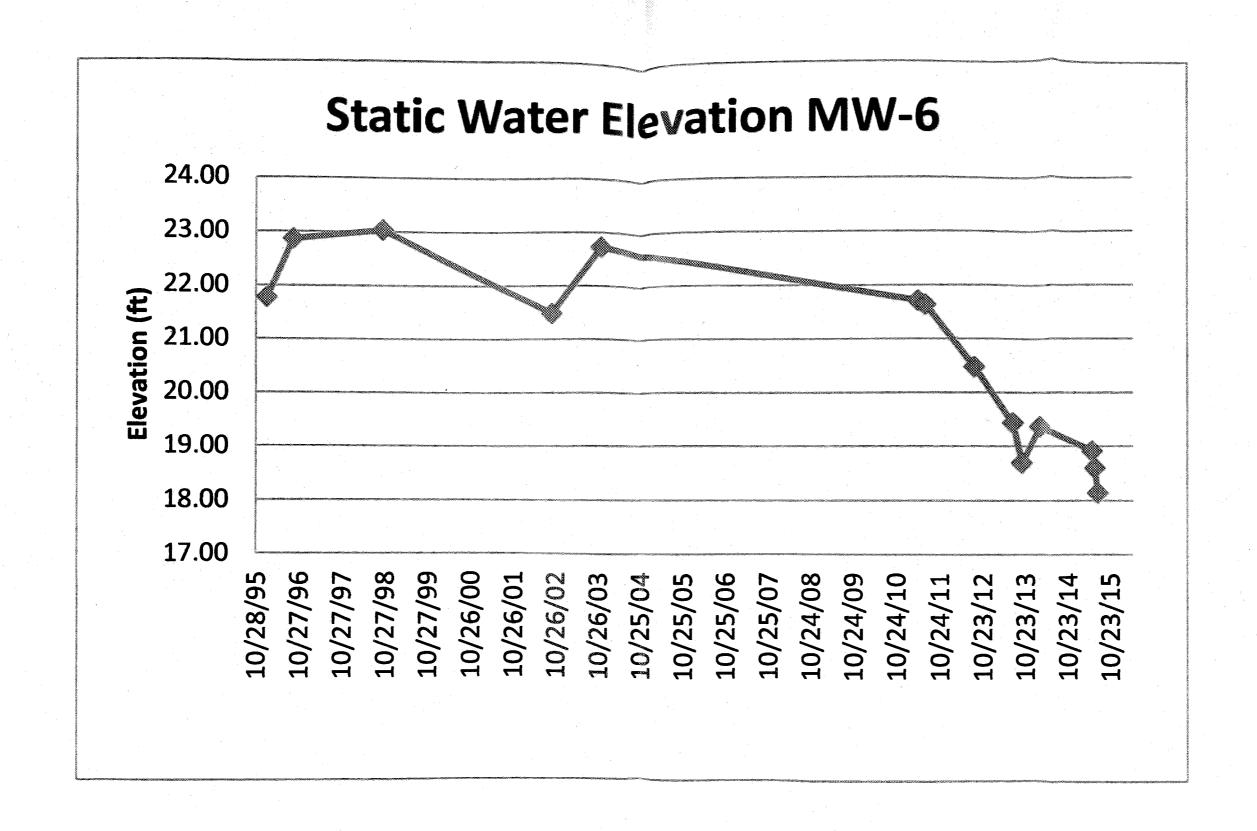
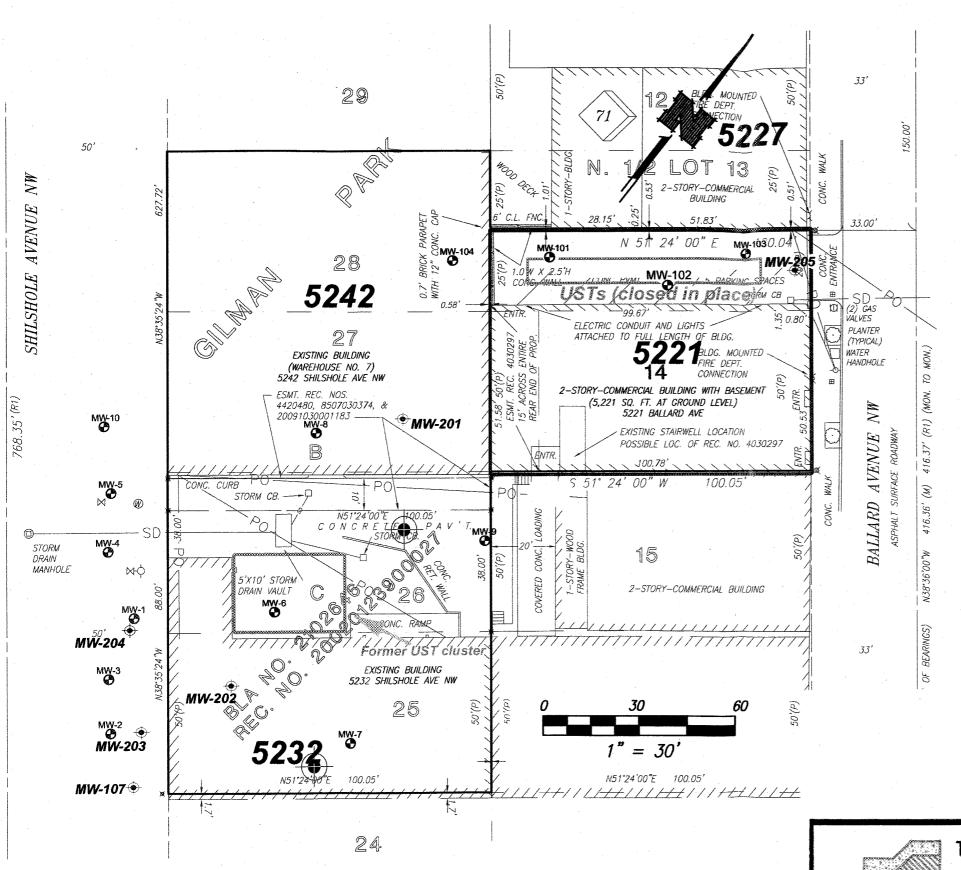




Chart 1 5221 Ballard Ave NW Seattle, Washington



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

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



Proposed Monitoring Wells 5221 Ballard Ave NW Seattle, Washington

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

LOG OF MONITORING WELL MW-102 Figure No. B-14 Project No: T-6552 Date Drilled: 5/6/11 Project: 5221 Ballard Avenue North Client: HALCO PROPERTIES, LLC Driller: Cascade Drilling Logged By: NRH Location: Seattle, Washington Approx. Elev: N/A Pocket Penetrometer Sample Interval TSF Consistency/ Observ. Soil Description Depth (ft) Well Relative Density SPT (N) Moisture Content % Wp |----x----| Wl 10 30 50 70 90 Blows/ft 20 30 40 (7 inches ASPHALT) 1-Loose/Soft Brown silty SAND with gravel, moist. 2-3 5 6 7 Pea gravel with silt and brick bits, 8 Loose moderate hydrocarbon odor. (Fill) 9 17 10 Gray silty SAND with gravel, moist, becomes wet by 12.5 feet. (Till) Medium Dense 11 50 12 13 Dense 50 14 Minor amount of silt by 15 feet. 15 16 50 Dense 17 18 19 50 20 Boring terminated at 20 feet. 21 2-inch PVC monitoring well installed as shown using 0.010 slotted screen from 22 10 to 20 feet. 23 24 25 **Terra** Note: This borehole log has been prepared for geotechnical purposes. This information pertains only to this boring location Associates, Inc. and should not be interpeted as being indicative of other areas Consultants in Geotechnical Engineering, Geology of the site. and Environmental Earth Sciences

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 Pocket Penetrometer Sample Interval **TSF** Consistency/ Observ. Soil Description Depth (ft) Relative Density Well Moisture Content % SPT (N) Wp |----x----| WI 10 30 50 70 90 Blows/ft 10 20 30 40 (5 inches ASPHALT SLAB) 1 Brown silty SAND/sandy SILT, small 2 brick bits, moist. (Fill) Loose/Soft 3 4 5 5 Light hydrocarbon odor. 6 7 8 9 Medium Dense 25 10 11 12 40 13 Gray silty SAND, moist, wet by 12.5 Dense feet, light to moderate hydrocarbon 14 odor, slight sheen from 10 to 14 feet. 50 (TIII) 15 16 50 17 18 19 50 20 Boring terminated at 20 feet. 21 2-inch PVC monitoring well installed as shown using 0.010 slotted screen from 22 10 to 20 feet. 23 24 25 **Terra** Note: This borehole log has been prepared for geotechnical purposes. This information pertains only to this boring location Associates, Inc. and should not be interpeted as being indicative of other areas Consultants in Geotechnical Engineering, Geology and Environmental Earth Sciences of the site.

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
uninal representation	1		7-inch thick concrete slab.		CONTRACTOR		
:	1- 2- 3-		Dark brown sandy SILT, moist. Becomes gray.	Light Odor/No	98.0 ⋉	0.0	
	4-		coomics gray.		100.0		
	5 <u> </u>			No/No	100.0 *	0.0	
	7-					0.0	
8	8-						
	9-			No/No			
	-						
12 12	-		Saturated gray silty SAND/sandy SILT. (SM-ML)				
13	3_					0.0	
	~	-				0.0	
14 15	-			No/No	100.0 ×		
16	3-		Terminated at 15 feet. 2-inch PVC monitoring well with .10 screen from 5 to 15 feet constructed as				
17	7-		shown.				
18	3						
19	1						
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

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-		(2 inches ASPHALT)				
2-		FILL: brown sand, moist.				
3-						
4-			Light Odor on Lower 8 Feet			1 1 1 1 1 1
5-			an makeusonyaannos, v	100.0 *	711	
6-		Ell I : grov and dark brown ailty and				
7-		FILL: gray and dark brown silty sand with gravel, moist, occasional brick chunks. 3/3/4				
8-		Churiss. 3/3/4				
9-			Moderate Odor	100.0		
10-	Т	Occasional arganica 0/49/44		*	474	
11-		Occasional organics. 9/18/44				
12-						
13-						
14-		Gray silty SAND with gravel, fine grained, moist, slightly mottled. (SM)		100.0		
15-		33/50 for 6	No/No	*	10.1	
16-						
17-						
18- 19-		Gray SAND, fine grained, moist. (SP)				
20-		y g.a., (o)	No/No	100.0 *	9.0	
21-				খ ন্ন ট	5.0	
22-						
23-		Boring terminated at 21.5 feet. 2-inch PVC monitoring well				
24 <i>-</i>	j	constructed with 20 slot screen from 10 to 20 feet.				
25 <i>-</i>		300 ib hammer.				
						<u> </u>

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

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

						T
Depth (ft)	Sample Interval	Soil Description	Odor/Sheen	Recovery % 20 40 60 80 100	PID (PPM)	Observ. Weli
1 2 3 4		(2 inches ASPHALT) FILL: brown sand and silty sand with gravel, moist.				
5- 6- 7- 8- 9-		FILL: gray and dark brown silt and silty sand with gravel, moist, mottled, occasional brick chunks.	Light Odor	100.0 *	655	
11 – 12 – 13 – 14 – 15 –		Gray and brown silty SAND with gravel, moist, mottled. (SM)	No/No	50.0 ×	1.6	
17- 17- . 18- . 19-		Gray SAND with gravel, moist. (SP)	No/No	33.0 *	0.0	
21 – 22 – 23 – 24 – 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.



Terra

Associates, Inc.
Consultants in Geotechnical Engineering, Geology
and Environmental Earth Sciences

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 Driller: Cascade Drilling Logged By: NRH Client: Location: Seattle, Washington Approx. Elev: N/A Sample Interval Observ. PID (PPM) Soil Description Odor/Sheen Depth (ft) Well Recovery % 20 40 60 80 100 1 FILL: brown sand, loose to medium dense, moist. 2 No/No 3-5 6 7 8 9 No/No Gray silty SAND, fine to medium grained, moist to wet. (SM) 10 80.0 0.0 11 12 100.0 13 0.0 14 15 80.0 0.0 No/No 16 Becomes fine grained. 17 100.0 0.0 18 19 Boring terminated at 18.5 feet in native silty SAND with gravel. 20 **Terra** Note: This borehole log has been prepared for geotechnical Associates, Inc. Consultants in Geotechnical Engineering, Geology and Environmental Earth Sciences purposes. This information pertains only to this boring location and should not be interpeted as being indicative of other areas of the site.

LOG OF MONITORING WELL MW-201 Figure No. Date Drilled: 9/10/14 Project: Halco Project No: T-6552 **Driller: BORETEC** Client: Halco Logged By: TB Location: Seattle, Washington Approx. Elev: 27.88 +/- Feet Sample interval Observ. Depth (ft) Soil Description Odor/Sheen PID (PPM) **Blow Count** Well 10 30 50 70 90 (6 inches CONCRETE) No/No 1-2 Gray silty fine SAND with gravel, moist. (Till) 3 0 4 78.0 5 No/No 6 7 8 9 67.0 With less gravel below 10 feet. 10 No/No 11 12 13 14 50.0 15 No/No 16 17 18 19 No/No 50.0 20 21 22 23 24 50.0 25 N/A 26 27 28 Boring terminated at 28 feet. 29 2-inch PVC monitoring well built as shown. 30 Terra 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 Associates, Inc. Consultants in Geotechnical Engineering, Geology and Environmental Earth Sciences of the site.

LOG OF MONITORING WELL MW-202 Figure No. Project No: T-6552 Project: Halco Date Drilled: 9/10/15 Driller: BORETEC Logged By: TB Client: Halco Location: Seattle, Washington Approx. Elev: 26.67 +/- Feet Sample Interval Observ. Depth (ft) Soil Description Odor/Sheen PID (PPM) **Blow Count** Well 10 30 50 70 90 (6 inches CONCRETE SLAB) Strong Odor 1-2 Dark gray silty fine SAND, moist. 3 30.0 163 5 6 7 8 9 50.0 10 No Odor 14 11 12 13 Becomes wet at 15 feet. 14 50.0 15 No Odor 2.4 16 17 18 19 50.0 20 No Odor 3.3 21 Boring terminated at 21 feet. 22 2-inch PVC monitoring well built as shown. 23 24 25 **Terra** Note: This borehole log has been prepared for geotechnical Associates, Inc. Consultants in Geotechnical Engineering, Geology purposes. This information pertains only to this boring location and should not be interpeted as being indicative of other areas of the site.

and Environmental Earth Sciences

LO	G	OF MONITORING WELL MY	V-203			Figure	No.
Projec	ct: S	Shilshole Parcels	Project N	No: <u>T-6552-1</u>	Date Drill	ed: 9/11/1	4
Client	t:	Driller: B	ORETEC		Logged B	y: NRH	
Locat	ion:	Seattle, Washington	-ty-dayyundami(1880-2000) hyb-andar(Da) tekharasin dan adalah ekephaybayla (sar	Approx. Elev:	N/A	angangaganan kanan k	
Depth (ft)	Sample Interval	Soil Description	Odor/Sheen	Blow Count 10 20 30 40		(РРМ)	Observ. Well
1- 2- 3- 4- 5- 6- 7- 8-		FILL: dark gray silty sand with gravel, fine grained, moist, wood and metal debris.	No/No	5.0 *		0.0	
10- 11- 12- 13- 14-		Gray silty SAND with gravel, fine grained, moist, thin sand lenses. (SM) Becomes wet.	No/No	35.0 *		0.0	
15 - 16 - 17 - 18 - 19 -			No/No		50.0 * 50.0	0.0	
21 - 22 - 23 - 24 - 25 -		Boring terminated at 21.5 feet. 2-inch PVC monitoring well installed with .010 screen from 10 to 20 feet.				0.0	
purpos	ses. Th hould r	orehole log has been prepared for geotechnical nis information pertains only to this boring location not be interpeted as being indicative of other areas		Consultants in	Ciates, Geotechnical E rironmental Earth	Engineering, Ge	eology

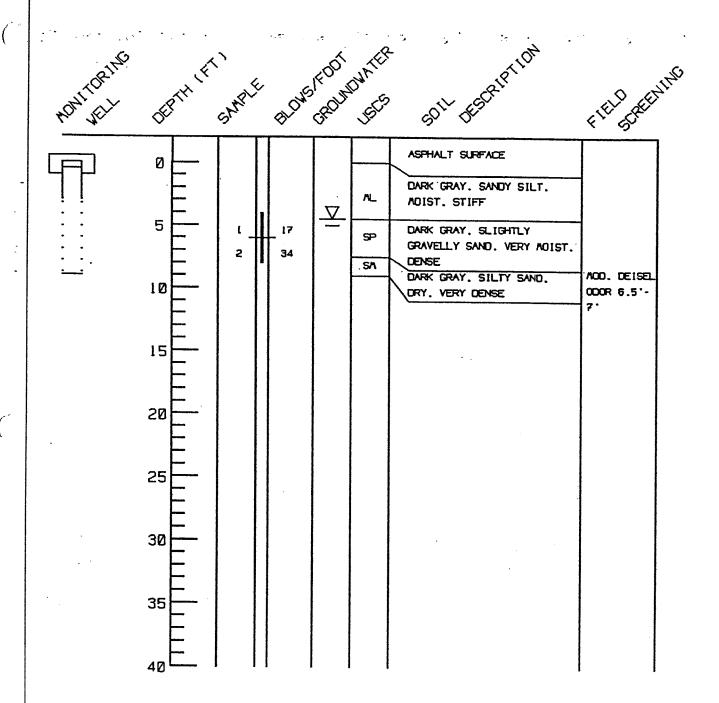
LO	G (OF MONITORING WELL MY	V-204			Figure	No.
Projec	et: S	Shilshole Parcels	Project N	No: T-6552-1	Date Drille	ed: 9/11/14	
Client		Driller: B	BORETEC		Logged By: NRH		
Locati	ion:	Seattle, Washington		Approx. Elev:	N/A	en-assassassassassassassassassassassassass	
Depth (ft)	Sample interval	Soil Description	Odor/Sheen	Blow Count 10 20 30 40	PID	(PPM)	Observ. Well
1- 2- 3- 4- 5- 6-		FILL: gray silty sand with gravel, fine grained, moist.	No/No	3.0 *		0.0 ppm	
8 - 9 - 10 - 11 - 12 - 13 -		Becomes wet.	No/No	7.0 *		0.0 ppm	
13 - 14 - 15 - 16 - 17 - 18 -			No/No		5 d .0	0.0 ppm	
19 - 20 - 21 - 22 -		Boring terminated at 21.5 feet.	No/No		50.0 *	0.0 ppm	
purpo:	ses. T nould i	2-inch PVC monitoring well installed with .010 screen from 10 to 20 feet. orehole log has been prepared for geotechnical his information pertains only to this boring location not be interpeted as being indicative of other areas		Consultants in	ciates,	Engineering, Ge	eology

LOG	OF BORING NO. MW-205				F	igure l	No.
Project:	5221 Ballard Avenue	Project No	: T-6552	Date Dr	illed:	11/3/14	
Client:	Driller:	Cascade Drilling		Logged	By: <u>N</u>	I RH	
Location:	Ballard, Washington		Approx. Elev:	N/A			
Depth (ft) Sample Interval	Soil Description	Consistency/ Relative Density	Moisture Content % Wp		Penetr TSF 2 3 SPT (N Blows/f 20 30	△ 4) t •	Observ. Well
1- 2- 3- 4-	(4 inches CONCRETE SLAB) FILL: tan/brown silt, moist.	Soft		5			
5	FILL: grayish-brown silty sand with gravel, moist.	Loose		3 • O •			
12- 13- 14- 15- 16- 17- 18- 19-	Gray silty SAND with gravel, fine to medium grained, moist. (SM)	Dense				50	16"
20 21 - 22 - 23 - 24 - 25 - Note: This is purposes.	*Continued on Next Page. orehole log has been prepared for geotechnical This information pertains only to this boring location not be interpeted as being indicative of other areas		Terra Assoc	ciates Geotechnic onmental E	al Engine	ering, Ge)6"

LO	G	OF BORING NO. MW-205				Figu	ıге No.
Projec		5221 Ballard Avenue	Project No	: <u>T-6552</u> [Date Drille	ed: <u>11/</u> 3	3/14
Client		Driller: Co	ascade Drilling	Log	ged By:	NRH	
Locati	ion:	Ballard, Washington		Approx. Elev:	N/A		mentenantanan oran maran dan seria seria seria seria
Depth (ft)	Sample Interval	Soil Description	Consistency/ Relative Density	Moisture Content % Wp x WI 10 20 30 40	1 2 SP		Observ. Well
26 - 27 - 28 - 29 - 30 - 31 - 32 - 33 - 33 - 34 - 34 - 34 - 34 - 34		Becomes wet to saturated.					50/6"
34 – 35 – 36 – 37 – 38 – 40 – 41 – 42 – 44 – 45 – 46 – 46 – 46 – 46 – 46 – 46		Gray SAND, fine to medium grained, wet, occasional gravel. (SP)	Dense				50/6"
47 – 48 – 49 – 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.		T	: : : : : : : : : : : : : : : : : : :		
purposes.	This	hole log has been prepared for geotechnical information pertains only to this boring location be interpeted as being indicative of other areas		Terra Associ Consultants in Ge and Environ		ngineering,	Geology

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



MOTES: - 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). ID denotes none detected.

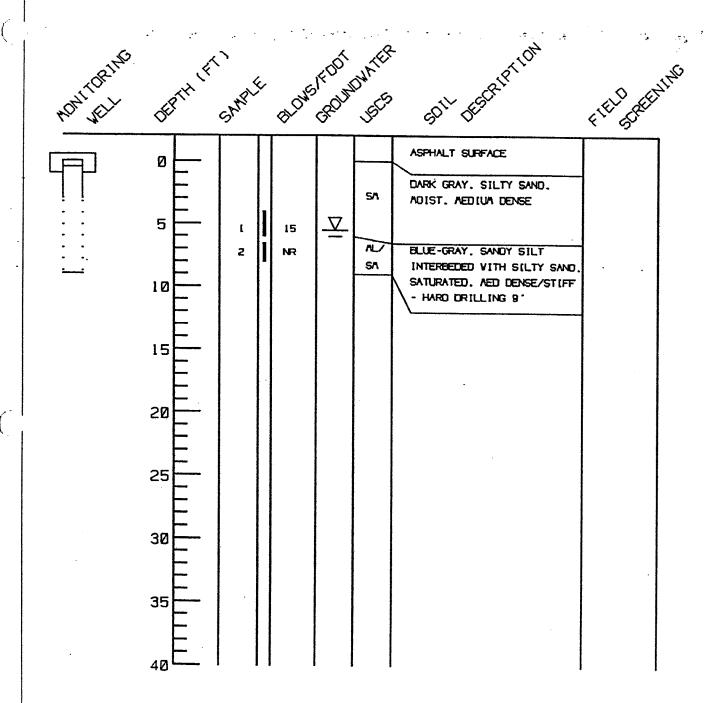
MONITORING WELL/BORING LOG C & C Paints Seattle, Washington

Columbia Environmental, Inc. Project Number 95603-1

February 1996 Logged by: WRS



MONITORING WELL MW3



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

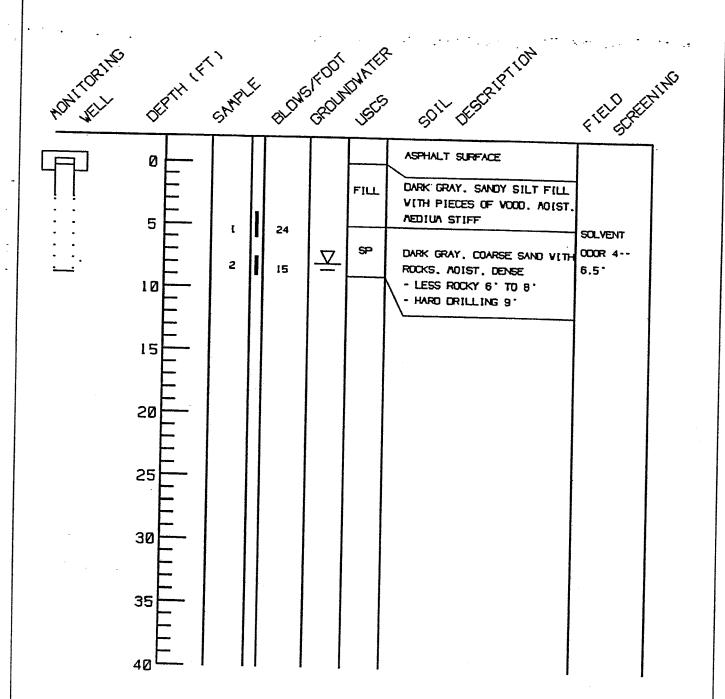
- HS indicates results of head space screening. Results in parts per million (ppm). HD denotes none detected.

MONITORING WELL/BORING LOG C & C Paints Seattle, Washington

Columbia Environmental, Inc.
Project Number 95603-1
February 1996
Logged by: WRS



MONITORING VELL MV4

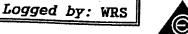


MOTES: - Sample numbering includes prefix indicating monitoring well or boring (e.g.: sample MV1-1 is sample 1 from monitoring well MV1).

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

MONITORING WELL/BORING LOG C & C Paints Seattle, Washington

Columbia Environmental, Inc. Project Number 95603-1 February 1996 Logged



MONITORING VELL MV5 ASPHALT SURFACE Ø FILL DARK GRAY. SANDY SILT FILL MOIST, SOFT V ROCK AND GRAVEL LENSE # 2º 5 ľ ı SOLVENT SP 000R 5.5'-DARK GRAY. FINE TO COARSE SAND, SATURATED, VERY LOOSE 6" 10 15 20 25 30

WOTES: - 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). HD denotes none detected.

MONITORING WELL/BORING LOG C & C Paints Seattle, Washington

35

Columbia Environmental, Inc. Project Number 95603-1

February 1996

Logged by: WRS



TEST BORING B6

DEFINITE ALDWS FEDDY WATER ASPHALT SURFACE Ø FILL OILY 000R DARK GRAY. SANDY SILT FILL MOIST, SOFT 13 BROWN AND GRAY FINE SAND. FAINT OOOR MOIST, MED DENSE AT 7.5.5 19 5" SILT LENSE 5.5" 10 15 20 25 30 35

NOTES: - Sample numbering includes prefix indicating monitoring well or boring (e.g.: sample MV1-1 is sample 1 from monitoring well MV1).

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

MONITORING WELL/BORING LOG C & C Paints Seattle, Washington

Columbia Environmental, Inc.
Project Number 95603-1
February 1996 Logged by: WRS



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 MY?

CONCRETE SURFACE 0 PT STRONG COOR BLACK. ORGANIC PEAT, ADIST HS - 300 L NA ITOPSOIL USED AS FILL S٨ 2.5 BLUE-GRAY, VERY SILTY FINE 5 ∇ SAND, MOIST, MED DENSE SOME ODOR SLIGHLTY GRAVELLY 2.5-3.5' HS . 20 2 NA 10 15 20 25 30 35

MOTES: - Sample numbering includes prefix indicating monitoring well or boring (e.g.: sample MV1-1 is sample 1 from monitoring well MV1).

- HS indicates results of head space screening. Results in parts per million (ppm). ID 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 VELL MV8 E ALCHE FEDERAL JEES CONCRETE SURFACE 0 TAN. SANDY SILT. MOIST. HS - NO ΛL MEDIUA STIFF LIGHT BROWN, SILTY FINE ∇ HS - NO NΛ 5 S٨ SAND, MOIST, MED DENSE 6" GRAVEL LENSE AT 6" 2 NA GRAY AND VERY SILTY AT 7" 10 15 20 25 30 35

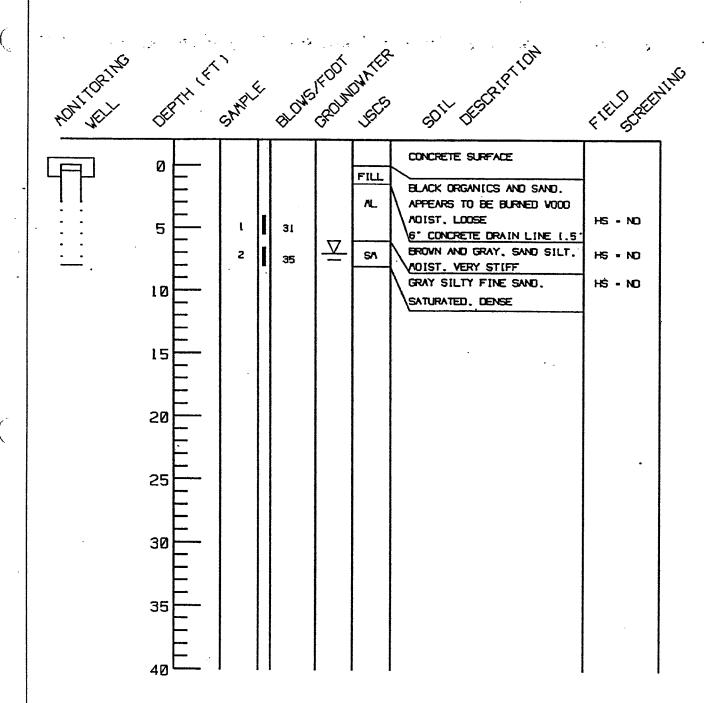
NOTES: - Sample numbering includes prefix indicating monitoring well or boring (e.g.: sample MV1-1 is sample 1 from monitoring well MV1).

- HS indicates results of head space screening. Results in parts per million (ppm). ID 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 MV9



WOTES: - Sample numbering includes prefix indicating monitoring well or boring (e.g.: sample MV1-1 is sample 1 from monitoring well MV1).

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

MONITORING WELL/BORING LOG C & C Paints Seattle, Washington

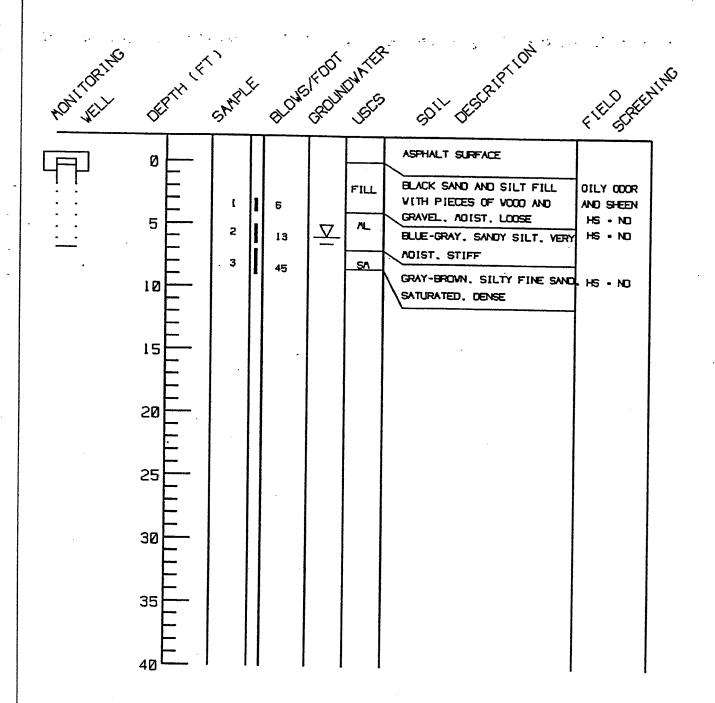
Columbia Environmental, Inc. Project Number 95603-1

February 1996

Logged by: HMP



MONITORING WELL MVIO



NOTES: - Sample numbering includes prefix indicating monitoring well or boring (e.g.: sample NW1-1 is sample 1 from monitoring well NW1).

- HS indicates results of head space screening. Results in parts per million (ppm). HD 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	Hd	Conductivity	00	ORP	Temp.
	6/21/06	6.19	600	NM	NM	NM
MW-1	12/15/06	6.97	NM	NM	NM	NM
	4/29/11	NM	NM	NM	NM	15.8
1477.0	6/21/06	6.97	249	NM	NM	NM
MW-2	12/15/06	6.9	NM	NM	NM	NM
MW-3	12/15/06	6.35	NM	NM	NM	NM
	6/21/06	6.3	484	NM	NM	NM
MW-4	12/15/06	6.9	NM	NM	NM	NM
1	9/27/13	6.5	654	0.57	-75	20.1
2007.5	6/21/06	6.05	430	NM	NM	NM
MW-5	12/15/06	6.85	NM	NM	NM	NM
	6/21/06	6.67	521	NM	NM	NM
	12/15/06	6.9	NM	NM	NM	NM
MW-6	4/29/11	NM	NM	NM	NM	12.6
	9/27/13	6.16	379	0	-2	19.24
1	5/27/15	6.27	316	1.82	-19.2	14.51
14337.7	6/21/06	6.7	511	NM	NM	NM
MW-7	4/29/11	NM	NM	NM	NM	14.4
) 4337 O	6/21/06	6.6	579	NM	NM	NM
MW-8	12/15/06	7.0	NM	NM	NM	NM
MW-10	12/15/06	6.9	NM	NM	NM	NM
NAWA 101	5/10/11	NM	NM	NM	NM	15.3
MW-101	7/6/11	6.55	148	0.32	-10	16.0
MW-102	5/10/11	NM	NM	NM	NM	15.2
MW 102	5/10/11	NM	NM	NM	NM	16.1
MW-103	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
ļ	2/20/15	6.91	NM	0.67	-92.2	14.32

Table B-2 (continued)
Groundwater Parameters

Well Number	Date	Hd	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.



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

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.

Project: 6552-1

NWTPH-Gx

Matrix: Water
Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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				

Project: 6552-1

NWTPH-Gx QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Wethod	Prepared	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				

					Source	Percent	Recovery		RPD	
Analyte	Res	Result		Spike Level	Result	Recovery	Limits	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

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	1 42	- Metrica	ricparcu	Alalyzed	ı ıayə	
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					
Oller M. ID.	5504/ 400						
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					

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

Matrix: Water Units: mg/L (ppm)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	<i>50-150</i>				

			Percent	Recovery		RPD	
Analyte	Result		Recovery	Limits	RPD	Limit	Flags
DUPLICATE			······································			nnovannihasainhadóifeanna	
Laboratory ID:	05-08	82-01					
	ORIG	DUP					
Diesel Range Organics	ND	ND			NA	NA	
Lube Oil Range Organics	ND	ND			NA	NA	
Surrocata:							

Surrogate:

o-Terphenyl

100 101 50-150

Project: 6552-1

VOLATILES by EPA 8260B page 1 of 2

Matrix: Water Units: ug/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	N D	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	

Project: 6552-1

VOLATILES by EPA 8260B page 2 of 2

Analyta	Danist	201		Date	Date	Para
Analyte Client ID:	Result MW-101	PQL	Method	Prepared	Analyzed	Flags
Laboratory ID:	05-082-01					
1,1,2-Trichloroethane	ND	0.20	EPA 8260	5-12-11	5-12-11	
Tetrachloroethene	ND	0.20		5-12-11 5-12-11		
1,3-Dichloropropane	ND	0.20	EPA 8260 EPA 8260	5-12-11 5-12-11	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	5-12-11 5-12-11	
1,2-Dibromoethane	ND 14D	0.20	EPA 8260	5-12-11 5-12-11	5-12-11 5-12-11	
Chlorobenzene	ND	0.20	EPA 8260	5-12-11 5-12-11	5-12-11 5-12-11	
1,1,1,2-Tetrachloroethane	ND ND	0.20	EPA 8260 EPA 8260	5-12-11 5-12-11	5-12-11 5-12-11	
Ethylbenzene	0.95	0.20	EPA 8260	5-12-11 5-12-11	5-12-11 5-12-11	
m,p-Xylene	1.5	0.40		5-12-11 5-12-11		
o-Xylene	ND	0.40	EPA 8260 EPA 8260	5-12-11 5-12-11	5-12-11 5-12-11	
Styrene	ND ND	0.20		5-12-11 5-12-11	5-12-11 5-12-11	
Sromoform	ND	1.0	EPA 8260			
sopropylbenzene	1.1	0.20	EPA 8260 EPA 8260	5-12-11 5-12-11	5-12-11 5-12-11	
sopropyloenzene Bromobenzene	ND	0.20	EPA 8260	5-12-11 5-12-11	5-12-11 5-12-11	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260	5-12-11 5-12-11	5-12-11 5-12-11	
1,2,3-Trichloropropane	ND	0.20	EPA 8260	5-12-11	5-12-11 5-12-11	
n-Propylbenzene	4. T	0.20	EPA 8260	5-12-11 5-12-11		
2-Chlorotoluene	ND	0.20	EPA 8260	5-12-11 5-12-11	5-12-11 5-12-11	
Chlorotoluene I-Chlorotoluene	ND ND	0.20	EPA 8260	5-12-11 5-12-11	5-12-11 5-12-11	
i,3,5-Trimethylbenzene	0.77	0.20		5-12-11 5-12-11		
ert-Butylbenzene	V.// ND	0.20	EPA 8260		5-12-11	
1,2,4-Trimethylbenzene	5.2	0.20	EPA 8260 EPA 8260	5-12-11 5-12-11	5-12-11 5-12-11	
ec-Butylbenzene	ND	0.20		5-12-11		
,3-Dichlorobenzene	ND	0.20	EPA 8260 EPA 8260	5-12-11 5-12-11	5-12-11 5-12-11	
-isopropyltoluene	ND	0.20	EPA 8260	5-12-11 5-12-11		
i,4-Dichlorobenzene	ND	0.20	EPA 8260	5-12-11 5-12-11	5-12-11	
,,4-Dichlorobenzene	ND	0.20	EPA 8260	5-12-11 5-12-11	5-12-11	
n-Butylbenzene	ND	0.20	EPA 8260	5-12-11	5-12-11	
,2-Dibromo-3-chloropropane		1.0	EPA 8260	5-12-11 5-12-11	5-12-11 5-12-11	
,2-Dibromo-3-Chloropropane	ND	0.20	EPA 8260			
lexachlorobutadiene	ND	0.20	EPA 8260	5-12-11 5-12-11	5-12-11 5-12-11	
iexaciliorobutadierie laphthalene	ND	1.0	EPA 8260	5-12-11 5-12-11	5-12-11 5-12-11	
,2,3-Trichlorobenzene	ND	0.20	EPA 8260	5-12-11 5-12-11		
	Percent Recovery	Control Limits	EFA OZUU	U-12-11	5-12-11	
surroyale. Dibromofluoromethane	88	68-107				
noromonuoromeurane Toluene-d8	90	73-102				
Ulueria-uo L-Bromofluomhenzene	90 88	75-102 65-104				
	an	13 m. 7 t t/d				

4-Bromofluorobenzene 88 65-104

Project: 6552-1

VOLATILES by EPA 8260B page 1 of 2

Matrix: Water Units: ug/L

Client ID:	-				Date	Date	
Dichlorodifluoromethane	Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
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 I,-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 1.0 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	Client ID:	MW-102					
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 Trichloroethene 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 Methylene Chloride ND 0.20 EPA 8260 5-12-11 5-12-11 Methylene Chloride ND 0.20 EPA 8260 5-12-11 5-12-11	Laboratory ID:	05-082-02					
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 Trichloroftuoromethane 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 Acetone ND 1.0 EPA 8260 5-12-11 5-12-11 Acetone ND 1.0 EPA 8260 5-12-11 5-12-11 Acetone ND 1.0 EPA 8260 5-12-11 5-12-11 Acetone ND 0.20 EPA 8260 5-12-11 5-12-11 Acetone ND 0.20 EPA 8260 5-12-11 5-12-11 Methylene Chloride ND 0.20 EPA 8260 5-12-11 5-12-11 Methyl EBuryl Ether	Dichlorodifluoromethane	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 Acetone ND 1.0 EPA 8260 5-12-11 5-12-11 Acetone ND 1.0 EPA 8260 5-12-11 5-12-11 Methylene Chloride ND 0.20 EPA 8260 5-12-11 5-12-11	Chloromethane	ND	1.0	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 1.0 EPA 8260 5-12-11 5-12-11 Methylene Chloride ND 1.0 EPA 8260 5-12-11 5-12-11 Methylene Chloride ND 1.0 EPA 8260 5-12-11 5-12-11 Methylene Chloride ND 0.20 EPA 8260 5-12-11 5-12-11 Methylene Chloride ND 0.20 EPA 8260 5-12-11 5-12-11 Methyle 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 Chloride	ND	0.20	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 Methyl EButyl Ether ND 0.20 EPA 8260 5-12-11 5-12-11 Methyl EButyl Ether ND 0.20 EPA 8260 5-12-11 5-12-11 Methyl EButyl Ether ND 0.20 EPA 8260 5-12-11 5-12-11 Methyl EButyl Ether ND 0.20 EPA 8260 5-12-11 5-12-11 Vinyl Acetate ND 0.20 EPA 8260 5-12-11 5-12-11 2,2-Dichloroethane ND 0.20 EPA 8260 5-12-11 5-12-11 <td>Bromomethane</td> <td>ND</td> <td>0.20</td> <td>EPA 8260</td> <td>5-12-11</td> <td>5-12-11</td> <td></td>	Bromomethane	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 Methylene Chloride ND 0.20 EPA 8260 5-12-11 5-12-11 Vinyl Acetate ND 0.20 EPA 8260 5-12-11 5-12-11 </td <td>Chloroethane</td> <td>ND</td> <td>1.0</td> <td>EPA 8260</td> <td>5-12-11</td> <td>5-12-11</td> <td></td>	Chloroethane	ND	1.0	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 Methylene Chloride 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 Chloroform ND 0.20 EPA 8260 5-12-11 5-12-11	Trichlorofluoromethane	ND	0.20	EPA 8260	5-12-11	5-12-11	
lodomethane 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 Methyl Endry Individual Partyl Ether ND 0.20 EPA 8260 5-12-11 5-12-11 Methyl 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 0.20 EPA 8260 5-12-11 5-12-11 2,2-Dichloropropane ND 0.20 EPA 8260 5-12-11 5-12-11 2,2-Dichloroethene ND 0.20 EPA 8260 5-12-11 5-12-11 2,2-Dichloroethene ND 0.20 EPA 8260 5-12-11 5-12-11 2,2-Dichloroethane ND 0.20 EPA 8260 5-12-11 5-12-11 2-Butanone ND 0.20 EPA 8260 5-12-11	1,1-Dichloroethene	ND	0.20	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 Methyl t-Butyl Ether 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 Methyl t-Butyl Ether 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 Methyl t-Butyl Ether 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 Methyl t-Butyl Ether 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 Methyl t-Butyl Ether ND 0.20 EPA 8260 5-12-11 5-12-11 2-Dichloroethene ND 0.20 EPA 8260 5-1	Acetone	ND	5.0	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 0.20 EPA 8260 5-12-11 5-12-11 <td>lodomethane</td> <td>ND</td> <td>1.0</td> <td>EPA 8260</td> <td>5-12-11</td> <td>5-12-11</td> <td></td>	lodomethane	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 2-Butanone ND 0.20 EPA 8260 5-12-11 5-12-11 2-Butanone ND 0.20 EPA 8260 5-12-11 5-12-11 2-Butanone 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 Disulfide	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 2,2-Dichloroethene ND 0.20 EPA 8260 5-12-11 5-12-11 2,2-Dichloroethane ND 0.20 EPA 8260 5-12-11 5-12-11 Bromochloromethane ND 0.20 EPA 8260 5-12-11 5-12-11 Carbon Tetrachloride ND 0.20 EPA 8260 5-12-11 5-12-11 Carbon Tetrachloride ND 0.20 EPA 8260 5-12-11	Methylene Chloride	ND	1.0	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 2,2-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 2-Butanone ND 0.20 EPA 8260 5-12-11 5-12-11 2-Butanone ND 0.20 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-Frichloroethane 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 1,2-Dichloroethane ND 0.20 EPA 8260 5-12-11 5-12-11	(trans) 1,2-Dichloroethene	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 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 1,2-Dichloropropene 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	Methyl t-Butyl Ether	ND	0.20	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 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 1,1-Dichloropropene 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 1,2-Dichloropropene 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 1,2-Dichloropropane ND 0.20 EPA 8260 5-12-11 5-12-11 1,2-Dichloromethane ND 0.20 EPA 8260	1,1-Dichloroethane	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 Carbon Tetrachloride 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 1,2-Dichloropropane ND 0.20 EPA 8260 5-12-11 5-	Vinyl Acetate	ND	2.0	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 1,2-Dichloropropane 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 Browning ND 0.20 EPA 8260 5-12-11 5-12-11	2,2-Dichloropropane	ND	0.20	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 1,2-Dichloropropane 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 1,2-Dichloromethane ND 0.20 EPA 8260 5-12-11 5-12-11 1,3-Dichloropropene ND 1.0 EPA 8260 5-12-11 5-12-11 1,3-Dichloropropene ND 0.20 EPA 8260 5-12-11	(cis) 1,2-Dichloroethene	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 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 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	2-Butanone	ND.	5.0	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 1,2-Dichloropropane 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 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 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	Bromochloromethane	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 1,2-Dichloropropane 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 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 1.0 EPA 8260 5-12-1	Chloroform	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	1,1,1-Trichloroethane	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	Carbon Tetrachloride	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	1,1-Dichloropropene	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	Benzene	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	1,2-Dichloroethane	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	Trichloroethene	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	1,2-Dichloropropane	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	Dibromomethane	ND.	0.20	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	Bromodichloromethane	ND	0.20	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	2-Chloroethyl Vinyl Ether	ND	1.0	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	(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260	5-12-11	5-12-11	
Toluene ND 1.0 EPA 8260 5-12-11 5-12-11	Methyl Isobutyl Ketone	ND	2.0	EPA 8260	5-12-11	5-12-11	
(trans) 1,3-Dichloropropene ND 0.20 EPA 8260 5-12-11 5-12-11	* *	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	

Project: 6552-1

VOLATILES by EPA 8260B page 2 of 2

Andrea	5°0 m 5.4	270 A70 E	25 _ 45 °	Date	Date	gen a
Analyte Client ID:	Result	PQL	Wethod	Prepared	Analyzed	Flags
	MW-102					
Laboratory ID:	05-082-02	0.20	EDA 0000	r 40 44	F 40 44	×
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	
sopropylbenzene	ND	0.20	EPA 8260	5-12-11	5-12-11	
3romobenzene	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	
ert-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	
o-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	
,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	
-lexachlorobutadiene	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	
~	Percent Recovery	Control Limits	<u></u>			
Dibromofluoromethane	88	68-107				
Toluene-d8	90	73-102				

Toluene-d8 90 73-102 4-Bromofluorobenzene 88 65-104

Project: 6552-1

VOLATILES by EPA 8260B page 1 of 2

Matrix: Water Units: ug/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	
lodomethane	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	
() He zicinoroproporto				J .=	Ţ . <u>-</u>	

Project: 6552-1

VOLATILES by EPA 8260B page 2 of 2

				Date	Date	
<u>Analyte</u>	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	MW-103					
_aboratory 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	
n,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	
sopropylbenzene	ND	0.20	EPA 8260	5-12-11	5-12-11	
3romobenzene	ND	0.20	EPA 8260	5-12-11	5-12-11	
,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260	5-12-11	5-12-11	
,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	
l-Chlorotoluene	ND	0.20	EPA 8260	5-12-11	5-12-11	
,3,5-Trimethylbenzene	ND	0.20	EPA 8260	5-12-11	5-12-11	
ert-Butylbenzene	ND	0.20	EPA 8260	5-12-11	5-12-11	
,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	
,3-Dichlorobenzene	ND	0.20	EPA 8260	5-12-11	5-12-11	
 Isopropyltoluene	ND	0.20	EPA 8260	5-12-11	5-12-11	
,4-Dichlorobenzene	ND	0.20	EPA 8260	5-12-11	5-12-11	
,2-Dichlorobenzene	ND	0.20	EPA 8260	5-12-11	5-12-11	
-Butylbenzene	ND	0.20	EPA 8260	5-12-11	5-12-11	
,2-Dibromo-3-chloropropane		1.0	EPA 8260	5-12-11	5-12-11	
,2,4-Trichlorobenzene	ND	0.20	EPA 8260	5-12-11	5-12-11	
lexachlorobutadiene	ND	0.20	EPA 8260	5-12-11	5-12-11	
iaphthalene	ND	1.0	EPA 8260	5-12-11	5-12-11	
,2,3-Trichlorobenzene	ND	0.20	EPA 8260	5-12-11	5-12-11	
Surrogate:	Percent Recovery	Control Limits				
Sibromoffuoromothana	9.4	69 107				

Surrogate: Percent Recovery Control Limits
Dibromofluoromethane 84 68-107
Toluene-d8 88 73-102
4-Bromofluorobenzene 86 65-104

Project: 6552-1

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

Matrix: Water Units: ug/L

•				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Laborator, ID:	MDOSAOVA					
Laboratory ID: Dichlorodifluoromethane	MB0512W1 ND	0.20	EPA 8260	5-12-11	5-12-11	
Chloromethane		1.0				
	ND		EPA 8260	5-12-11	5-12-11	
Vinyl Chloride	ND ND	0.20	EPA 8260	5-12-11	5-12-11	
Bromomethane Chloroethane	ND ND	0.20	EPA 8260	5-12-11	5-12-11	
	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	
lodomethane	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	

Project: 6552-1

4-Bromofluorobenzene

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

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	
Isopropyibenzene	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	
o-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				

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

65-104

80

Project: 6552-1

VOLATILES by EPA 8260B SB/SBD QUALITY CONTROL

Matrix: Water Units: ug/L

					Per	cent	Recovery		RPD	
Analyte	Re	sult	Spike	Level	Rece	overy	Limits	RPD	Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB05	12W1								
	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			



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



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

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.

Project: 6582

NWTPH-GX

Matrix: Water Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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				

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				

					Source	Percent	Recovery		RPD				
Analyte	Result		Result Spike Leve		Spike Level		Spike Level Result Recovery Limits R		Spike Level		RPD	Limit	Flags
DUPLICATE			•		-		W						
Laboratory ID:	06-25	51-02											
	ORIG	DUP											
Gasoline	ND	ND	NA	NA		NA	NA	NA	30				
Surrogate:													
Fluorobenzene						91 100	73-121						

Project: 6582

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

Matrix: Water
Units: mg/L (ppm)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	MW-201				3.5.00	
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	<i>50-150</i>				

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	<i>50-150</i>				

Analyte	Res	sult	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE							
Laboratory ID:	06-26	67-01					
	ORIG	DUP					
Diesel Range Organics	ND	ND			NA	NA	-
Lube Oil Range Organics	ND	ND			NA	NA	
Surrogate:							
- T			444 400	E0 4E0			

o-Terphenyl 103 111 50-150

Project: 6582

VOLATILES by EPA 8260B page 1 of 2

Matrix: Water Units: ug/L

& a & - d.o.	879 Jn	29.04	6.5 as	Date	Date	ize ii
Analyte Client ID:	Result MW-201	PQL	Method	Prepared	Analyzed	Flags
Laboratory ID:	06-252-01			= 4 44	=	
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	7-1-4	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	
lodomethane	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	
3enzene	0.27	0.20	EPA 8260	7-1-11	7-1-11	
I,2-Dichloroethane	ND	0.20	EPA 8260	7-1-11	7-4-44	
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	
3romodichloromethane	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	

Project: 6582

VOLATILES by EPA 8260B page 2 of 2

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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				
	- -	· · · -				

Project: 6582

VOLATILES by EPA 8260B METHOD BLANK QUALITY CONTROL

page 1 of 2

Matrix: Water Units: ug/L

	. Daniis Mil Makad			Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Laboratory ID:	MB0701W2	0.00				
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	
lodomethane	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	
3enzene	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	
Frichloroethene	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	
3romodichloromethane	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	7-4-m	7-1-11	
Wethyl Isobutyl Ketone	ND	2.0	EPA 8260	7-1-11	7-1-11	
Toluene	ND	1.0	EPA 8260	7-1-1-1	7-1-11	
THE PROPERTY SERVE	5 4 8-6	1 . U	L:::U5:UU	2 5 5 5	8 - R - B B	

Project: 6582

VOLATILES by EPA 8260B METHOD BLANK QUALITY CONTROL

page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Analyte	riesuit	, QL	Metriod	Fiepareu	Analyzeu	i iugs
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	<i>87</i>	68-110				
Toluene-d8	92	73-110				
4-Bromofluorobenzene	<i>82</i>	<i>65-110</i>				

VOLATILES by EPA 8260B SB/SBD QUALITY CONTROL

Matrix: Water Units: ug/L

					Per	Percent f Recovery			RPD	
Analyte	Re	sult	Spike	Level	Rec			RPD	Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB07	01W2								
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	10.9	11.4	10.0	10.0	109	114	70-130	4	44	
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	Ą	8	
Surrogate:										
Dibromofluoromethane					82	88	68-110			
Toluene-d8					90 91		73-110			
4-Bromofluorobenzene					82 82		65-110			



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

		on the Allendaria		1 8 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	21				
)nSite		Chain	Of	Gustody			Page .	ct	A -
invironmentai l	ic.	Turnaround Request		l shreten	Verreber	The second secon	mental annual design con 1997 to 1 to	06	~ 2 I

Chain of Gustody

14648 NE 95th Street • Redmond, WA 98052 Phone (425) 883-3881 • www.chsite-ery.com	furnaround Request (in working days) Laboratory Number:							P _u s	\$ B								01	22) *				
Company:	(Check One)						i,						8:	A.		ý.							
Project Number:	Same Day 2 Days	1 Day										4	WIS/DD/SIM	151A	ircle one)								
Project Name:	Standaro (7 Days	ı			1			9092	9	(AA)		35 805	ides 8	Ges 8	(c) SE		28						
Project Manager: Clark Class Sampled by: A Cold 5 Hoffman	(TPH analysis 5 [Amber of Containers	WWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8250B Halogenated Volatiles 8250B	olatifes 8270D/SIA	(with low-lovel PAHs) PAHs 8270D/SIM (low-level)	PCBs 8082	Organochlorine Pesticides 8081A	Organophosphorus Pesticides 8270D/SIM	Chiorinaled Acid Herbioides 8151A	lotal HCHA / MTCA Metals (circle one)	TCLP Metals	HEM (oil and grease) 1684						%. Moisture
so (D. Semple Identification	Date Fime Sampled Sampled	Matrix	2	NAME	NW	NWT	NWI	1	Semi diago	PAHS PAHS	PCBs	Organ	Organ	Chitori	le o		Ä						1 Mg
	6/23/11/12:30		6			X	X																
		ackaran wasangan marangan mengan mengan mengan	Lacentrononil	***************************************	protocomon de contra con de con-	augumente madato						a firm of the contraction		- State of the second	- Internation	ele e conservation				nan shirigin katheringa	da manamanana y		
Signature Relinquished Received Peceived Reminquished Received Received	Company S.S.S.S. C.S.R.	Avan			Date 5/2		an area and a fine occur	ime Vi	10		muner	ts/Sp	ectai	Instr	icties		anamaka araban ya sa an		annun i adherinen	ser fål av skildeliken ukann		in the section is a solid	Annabases 1 T T
Reviewed/Date	Reviewed/Da	\$ (F)			70814041111000	equation (equation)			III II III III II II II II II II II II	Ch	romaio	grams	with	linat re	sport		manager or or design at a rec	discours environment	CONTROL OF STREET AND A STREET	ARREST LA COMP		terri edu ce	
		CANTELLINE WASHINGTON OF THE PARTY OF THE PA	wan annung resonationet	III.	*********		With the last of the last	TOWNS IN CONTRACTOR	of a settlement desire.	Chromalograms with final report													

Invironmental Inc. 14648 NE 95th Street - Redmend, WA 98052 Phone. (425) 883-3881 - www.onsite-env.com

Chain of Gustody

	į,		g
	ž.		8
ren.	R		N .
Page	j j	01	8
		- 40 .	

14648 NE 95th Street • Redmond, WA 98052	Turnaround Request Laboratory Number:							er:	: U							U	<u>U6-252</u>								
Phone: (425) 883-3881 • www.onsite-env.com Company:		(Check One)													·				·····						
Project Number: 6587	San		1 Day							A CONTRACTOR OF THE PARTY OF TH				1A	Organophosphorus Pesticides 8270D/SIM	51A	Total RCRA / MTCA Metals (circle one)								
Project Name:		ndard (7 Days)								90B		(e)	-	s 808	des 82	les 81	als (cir		7.						
Project Manager:	(TP	idard (7 Days) H analysis 5 D	ays)	ners						es 82	NSIM	ow-ley		ificide	Pestici	arbicid	\ Meta		e) 166						
Chuck Co				ontai		EX			99	Volatii	8270I	SIM (e Peg	SUJOL	oid H	MTC/		greas						
Sampled by: Nicolas Haffman		(other)) 5 5	불	4-Gx/E	Ç	Ž Ž	s 826(nated	latiles w-leve	270D/	1082	chlorir	phospi	ated A	CRA/	Aetais	il and						sture
ab ID Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	WWTPH-DX	Volatiles 8260B	Halogenated Volatiles 8260B	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082	Organochlorine Pesticides 8081A	Organo	Chlorinated Acid Herbicides 8151A	Total R	TCLP Metals	HEM (oil and grease) 1664						% Moisture
1 MW-701	6/21/11	12:20	W	6			$X \mid$	X	X																
									***************************************	www.asaaaaa													_		
			and the state of t																						
							and the second		-																
							And an assessment of the last		ar ilmanamente		and the second														
				-																					
										***************************************		~===						-							
																									1
Signature 2000		ompany				Date			Time			Corr	meni	n/Sne	cial l	nstru	ction	\$							1
Relinquished		acco.	Λ.,			ند	2.1		s decisional statement dec	11	7			and the first	and distances			mana de la casa bassas.	Alfalogora en en en en el entre de 194	and the same of th	maga -Wasiidadaa		e sin easylvisie	one de la constitución de la con	Mine Court (with 1747)
Received	and the second		705-25 75	19/	22)	66	211 211		16	11	\ \														
Relinquished								-	1 10	£ 40	Al'														
Received	A CONTRACTOR OF THE PROPERTY O	ond should come have been supposed an object to the last of the				and a second second				.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,															
Relinquished		opgsspisonstatoritätatoribatori	### ### ##############################	Maria anno antigo est est de la conference					***************************************																
Received				novement of the state of the st		nagana pantidiriri	and and experience of the serve		nga apagangangan apagan											81 Taylor - Armin Ar			pp	ur an de skelennej Ellerkejelen	markky kylyd fan o'r
Reviewed/Date		Reviewed/Da	ite			***************************************	ARRANASTINA ŠI. AVVVI		, ang dipendent programme and an	es praces and section as	er e e e e e e e e e e e e e e e e e e	Chro	matog	rams	with fi	inal re	eport								
	to Dr.		0.011		***************************************	Dali		/ET	٠n,		***************************************							-			anna ances ferrit	AND THE STREET, SAN THE STREET		And the Control of th	



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

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.

Project: 6552-1

NWTPH-Gx/BTEX

Matrix: Water Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Wethod	Prepared	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

Project: 6552-1

NWTPH-Gx/BTEX QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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-Xyleпе	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				

	-			Source	Pe	rcent	Recovery		RPD		
Analyte	Res	sult	Spike	Level	Result	Rec	overy	Limits	RPD	Limit	Flags
DUPLICATE											
Laboratory ID:	04-1 ⁻	14-11									
	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:	04-1	14-10									
	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			

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

Project: 6552-1

NWTPH-Dx

Matrix: Water Units: mg/L (ppm)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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				

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	1:			
o-Terphenyl	75	50-150				

			Per	cent	Recovery		RPD	
Analyte	Res	sult	Rec	overy	Limits	RPD	Limit	Flags
DUPLICATE							*	
Laboratory ID:	04-08	37-06						
	ORIG	DUP			_			
Diesel Range Organics	ND	ND				NA	NA	
Lube Oil Range Organics	ND	ND				NA	NA	
Surrogate:					•			
o-Terphenyl			<i>7</i> 8	96	50-150			



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

AL OnSite Environmental Inc.

Chain of Custody

	á		E .
	ji.		g.
Page	Ø:	of	e e
	THE REAL PROPERTY AND ADDRESS OF THE PARTY AND	. 40	THE SECOND PROPERTY OF STREET,

Analytical Laboratory Testing Services 14648 NE 95th Street • Redmond, WA 98052		iround Requ working day			La	bor	rato	ry l	Vumi	ber:		()4	(See)	1 (0 1		72-22-11-11-11-11-11-11-11-11-11-11-11-11		Maria (Allennes		Elijah (no maliku iya wasa)		****************	
Phone: (425) 883-3881 • www.onsite-env.com	((Check One)			ļ _T		100 EZ 20 - 66, 100 PANET PER	T	·····T		T	T	,		-	Γ	T	T	1	T		igi.comulasi almayoty gyragoty	-	(apaute)(Makin)	1
Company: Tarria Associatas Inc. Project Number: 6552-1	Same D	Day [1 Day					-	e de la companyament de la compa	Application of the second	- Constitution			SIM		Total RCRA Metals/ MTCA Metals (circle one)	and in contract of the state of			-		-	niosabadiominista		
Project Name:	2 Days	Ε	3 Days			- 1	-						081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Aetals (c							a de la constanta		
1 TO JOSE S NOTIFIC.	Standa (TPH ar	rd (7 Days)	,						2800	S	(evel)		des 8	cides	sides	CAN		664A							
Project Manager:	(IPH ar	nalysis 5 Ua	iys)	2					illes 8	IS/QC	(low-		sticic	Pest	terbio	/s		grease) 1664A							
Sampled by:				8				٥	Solar Solar	827(VSIIV		ne Pe	horus	4cid F	Metal		grea							
Sampled by: Nicolas R. Hellman		(other)		Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWIPH-DX	voiailles 8260C Halogenated Volatiles 8260C	olatiles	8270D	PCBs 8082A	Organochlorine Pesticides 8081B	dsoudo	nated 4	RCRA I	TCLP Metals	(oil and					Prince Control of the		% Moisture
Lab ID Sample Identification	Oate Sampled	Time Sampled	Matrix	Mann	NWTF		E I	T T	Voiati Halog	Semis	PAHS 8270D/SIM (low-level)	PCBs	Organ	Organ	Sife	Total	TOLP	HEM							% Wc
1 MW-107	4/12/13	7130	Later			X		X							gal charge agent										
		en er eine kanken onder er er er eine er eine er			exemèrica di encon en			>>>idadaa							en vanamender						413.000	htaskunsinetssteepe			
		ATTO A SECURE OF THE SECURE OF	Green wat from the angelog madders to conference or service of the conference of the																						
			kannikas ayyanna ayya kumaha ayyi kacama kaya a ayahac												,									***************************************	

				and the boson of the same of t							· · · · · · · · · · · · · · · · · · ·		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~						ncon-relative to	na sujenspooren kerilane			ericken verse general gel	jetekan ji bira rivo	i Mariana marana marana
		10020000000000000000000000000000000000	enera a noncontrata e de un colonida (placenta l'alendro de escitor de	- Carpenonicona				.com enterent		***************************************		Augusta Wales Carro	wetsoon selectory		****		L. Block Corps (Novem		va.va.e.e.e.e.e.e.e.e.e.e					garennen og enson	
			MONTH OF THE SAME AND ADDRESS OF THE COMPANY OF THE												***********									***************	
	ALTERNATION OF THE PROPERTY OF			ļ																				***************************************	
Signature		illingarya dalikining pal aking arka masila				Dete	Palara seller kongo		Firms	jegus savinska najvorda			ts/Sps		in the same										
Relinquished Signature	Lott	npany TA	ette pirkt i seprenseininin sesi i kapinilara on helitiinin.			A	h		<u>K</u> (3	?<	- vu	181282304	too ergan	ipe.comos.n	eraner n	IO. SIASS	80			et unt stadio de la constitución de distribui					
Received		OSP	neces necessaries (1/4 class) (miles concessaries) and	M ANGANA MENENTANGAN		······································	2/1	4	<u>5:3</u>	<u>, </u>															
Relinquished			ved blooding and kan sold broken de the broken over anderen.	***************************************			ence /	\uparrow		ACASA AMBAR KASAANII															
Received	n marayan ayan ayan ayan ayan da dan da	M-49 (1977) - 4 (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (19	ом с Помоско в можения в можен	reproducent one ton.		***************************************	Overlight de de le construction		negani epikaja sarija kirjakja rano	ne element representative de la constantive della constantive dell															
Relinquished		AND THE RESIDENCE OF THE PROPERTY OF THE PROPE																							
Received			THE ANIMAL PROPERTY OF THE PRO							*************	***	**************************************	NO THE RESIDENCE OF THE		nhala tanggan ayana			RÜRBIN ANDERSA NORMA	wastenas areas				nnenaarni viikid ne	######################################	marrowless are an
Reviewed/Date	R	leviewed/Da	te	***************************************	hall my det prys de ad ann	Mar a so turno de plan	others promote the box	nunaaaas, nun	and the state of t	- C) C) -	Chro	omato	grams	with fi	inal re	port						iguly plantered accepted			un majoritus de la companya della companya della companya de la companya della co



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)

A contract of the second				Date	Date	
Analyte	Result	PQL	Method	Prepared	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					
3enzene	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					
_aboratory ID:	02-198-03					
3enzene	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	
π,p-Xylene	ND	1.0	EPA 8021B	3-3-14	3-3-14	
-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)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	Res	sult	Spike	Level	Source Result		cent overy	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	02-22	28-02									
	ORIG	DUP									
Benzene	ND	ND	NA	NA		1	VA AV	NA	NA	30	
Toluene	ND	ND	NA	NA		1	NΑ	NA	NA	30	
Ethyl Benzene	ND	ND	NA	NA		1	NΑ	NA	NA	30	
m,p-Xylene	ND	ND	NA	NA		1	NΑ	NA	NA	30	
o-Xylene	ND	ND	NA	NA		١	NA	NA	NA	30	
Gasoline	ND	ND	NA	NA		1	NA	NA	NA	30	
Surrogate:				*							
Fluorobenzene						99	96	71-112			
SPIKE BLANKS											
Laboratory ID:	SB03	03W1									
	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			

Samples Submitted: February 26, 2014 Laboratory Reference: 1402-198

Project: 6552

NWTPH-Dx

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	<i>50-150</i>				
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:	WW-2					
Laboratory ID:	02-198-03					
Diesel Range Organics	ND	5.1	NWTPH-Dx	2-27-14	2-27-14	
	16					
Lube Oil	· · · · · · · · · · · · · · · · · · ·	8.2	NWTPH-Dx	2-27-14	2-27-14	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	===	<i>50-150</i>				S

Samples Submitted: February 26, 2014 Laboratory Reference: 1402-198

Project: 6552

NWTPH-Dx QUALITY CONTROL

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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				

					Source	Percent	Recovery		RPD	
Analyte	Result		Spike Level		Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE										
Laboratory ID:	02-18	33-01				-				
	ORIG	DUP								
Diesel Range	ND	ND	NA	NA		NA	NA	NA	NA	X1
Lube Oil Range	ND	ND	NA	NA		NA	NA	NA	NA	X 1
Surrogate:										
o-Terphenyl						86 88	<i>50-150</i>			



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

MA OnSite Environmental Inc.

Chain of Custody

		Į.
Page	of	

Analytical Laboratory Testing Services 14648 NE 95th Street • Redmond, WA 98052	Turnaround Request (in working days)	L	aborator	y Number:		02-198	
Phone: (425) 883-3881 • www.orisite-env.com Company:	(Check One)						
A contraction	Same Day 1 Day				Nis	Chlorinated Acid Herbicides 8151A Total RCRA Metals/ MTCA Metals (circle one) TCLP Metals HEM (oil and grease) 1664A	
6557	2 Days 3 Days				11B	8151A Aetals (c	
10	Standard (7 Days) (TPH analysis 5 Days)			3260C	fevel) des 808 des 82	ATCA Me	
Project Manager: Chuck Lie	process,		<u>ا</u> ۵	olatities (M (low-	Aetals/ M7	
Sampled by: Nicolas R. Hoffman	(other)	Rumber of Compiners NWTPH-HCID	NWTPH-Gx/BTEX NWTPH-Gx NWTPH-Dx	Volatiles 8260C Halogenated Volatiles 8260C Semivolatiles 8270D/SIM	(Wirth Tow-level PAHS) PAHS 8270D/SIM (flow-level) PCBs 8082A Organochlorine Pesticides 8081B Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides Total RCPA Metals/ MTCA Is TCLP Metals HEM (oil and grease) 1664A	sture
ab ID Sample Identification §	Date Time Sampled Sampled Matrix	MW.TP.	NWTPH-Gx NWTPH-Gx NWTPH-Dx	Volatile Haloge Semivo	PCBs 8082A Organophosp	Chlorinated A Total RCRA N TCLP Metals HEM (oil and	% Moisture
1 MW-6 2	13/13 H100 Water	4	$ \chi /\chi$				
	29/13 14:40 Water	4	X				
3 MW-2	25/13 15:20 Water	3	IX IX				
	The first of the spirit of the	CONTRACTOR					
		London de Antonio de London de					

Signature , , , fi /	Company		Date	Time	Comments/Specia	48 Santakara and Campa	
Relinquished Wild III	TAT	······································	2/26/14	12:28	Committee of the contraction of	n mountaines	
Received	086	**************************************	Dalis	1228			
Relinquished			<u> </u>	15 2			
Received							
Relinquished		ECONOMIC PROPERTY AND ADDRESS	ATTENTION TO SHOULD SEE AND TO SHARE WE ARE TO				
Received		no anni de come e e e e e e e e e e e e e e e e e e	BO MAY STONE AND THE BEST STONE THE SECURITY OF SECURITY STONE SECURITY SEC	O CONTRACTOR OF THE PROPERTY O		эмжи ханын (,) үчлэн холон мэхэн хэр хэн хүн хүн хүр	
Reviewed/Date	Reviewed/Date				Chromatograms with	h final report []	



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

	Date	Date				
Flags	Analyzed	Prepared	Method	PQL	Result	Analyte
					MW-201	Client ID:
					09-242-01	Laboratory ID:
100-00000000000000000000000000000000000	9-25-14	9-25-14	EPA 8021B	0.50	ND	Benzene
	9-25-14	9-25-14	EPA 8021B	1.0	ND	Toluene
	9-25-14	9-25-14	EPA 8021B	1.0	ND	Ethyl Benzene
	9-25-14	9-25-14	EPA 8021B	1.0	ND	m,p-Xylene
	9-25-14	9-25-14	EPA 8021B	1.0	ND	o-Xylene
	9-25-14	9-25-14	NWTPH-Gx	100	ND	Gasoline
				Control Limits	Percent Recovery	Surrogate:
				71-112	92	Fluorobenzene
					MW-202	Client ID:
					09-242-02	Laboratory ID:
	9-25-14	9-25-14	EPA 8021B	0.50	ND	Benzene
	9-25-14	9-25-14	EPA 8021B	1.0	6.3	Toluene
	9-25-14	9-25-14	EPA 8021B	1.0	51	Ethyl Benzene
	9-25-14	9-25-14	EPA 8021B	1.0	46	m,p-Xylene
	9-25-14	9-25-14	EPA 8021B	1.0	44	o-Xylene
1	9-25-14	9-25-14	NWTPH-Gx	100	380	Gasoline
				Control Limits	Percent Recovery	Surrogate:
				71-112	91	Fluorobenzene
					MW-203	Client ID:
					09-242-03	Laboratory ID:
***************************************	9-25-14	9-25-14	EPA 8021B	0.50	ND	Benzene
	9-25-14	9-25-14	EPA 8021B	1.0	ND	Toluene
	9-25-14	9-25-14	EPA 8021B	1.0	3.8	Ethyl Benzene
	9-25-14	9-25-14	EPA 8021B	1.0	1.7	m,p-Xylene
	9-25-14	9-25-14	EPA 8021B	1.0	ND	o-Xylene
	9-25-14	9-25-14	NWTPH-Gx	100	ND	Gasoline
				Control Limits	Percent Recovery	Surrogate:
				71-112	87	Fluorobenzene
	9-25-14	9-25-14	EPA 8021B	1.0 100 Control Limits	ND ND Percent Recovery	o-Xylene Gasoline Surrogate: Fluorobenzene

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)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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: Fluorobenzene Percent Recovery

Control Limits

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

		•		Date	Date	
Analyte	Result	PQL	Method	Prepared	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				

					Source	Pe	rcent	Recovery		RPD	
Analyte	Res	suit	Spike	Level	Result	Rec	overy	Limits	RPD	Limit	Flags
DUPLICATE										-	
Laboratory ID:	09-24	46-02									
	ORIG	DUP									
Benzene	ND	ND	NA	NA		73000	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		Marylo	NA	NA	NA	30	
o-Xylene	ND	ND	NA	NA		-	AV	NA	NA	30	
Gasoline	ND	ND	NA	NA		ı	NA	NA	NA	30	
Surrogate:											
Fluorobenzene						92	92	71-112			
MATRIX SPIKES											
Laboratory ID:	09-24	\$6-01									
	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	444	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

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	<i>50-150</i>				

					Source	Percent	Recovery		RPD	
Analyte	Res	suit	Spike Level		Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE								***************************************		
Laboratory ID:	09-25	54-01								
	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			



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

Page 1 or 1

Analytical Laboratory Testing Services 14648 NE 95th Street • Redmond, WA 98052		1001-001-05 (\$70) 1. 0001-0010-0		L	.abor	atory	/ Nu	ımb	er:		ndanio se	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	<i>'</i>	7977 9 787	*******************************	0)	2	4/) ::::::::::::::::::::::::::::::::::::	er conserva	en caraca nos	overvevo.
Phone (425) 883-3881 • www.onsite-env.com Company Project Number: Collect Name. Project Manager: Sappler by	Sam 2 Da Stan	ys dard (? Days) i analysis 5 D ictheri	1 Day 3 Days	Authorities of Containers NVTPH-HOLD	NWTPH-Gx/BTEX	WYTPH-D:	Volatiles 8250C	Hatogenated Volatiles 8260C	Semirolautes 82700/Stt/k	Paths 82700/SIM (row-level) PCBs 80824	Organochlorine Pesticides 80818	Organophous Pesteides 8276D/SIM	Origination Acid Rehoodes & ISTA	Total RORA Metats	Total MTCA Metals	TOLF Metals	महोत् (को बाग वृष्टकस्त्र) विदिक्ष	And the second of the second o					Masture
2 MW-264 MW-264 MW-264	5.5.10 phre 4/24/14	1325 115¢ \$685 1665		3 3 5 5	AN I							26											
Received Received Received Received Received		I Reld		Make	Date	24-/	Tum	in la vinitazione marine		Commy													
Reviewed/Date		Reviewed/Di	316;		nat nærovinskræknik a klassof vokksa kink si	9.izmovijalji gravi nivonikla	rar - Manuaphna			Chrom	atogra	ins w	th fin	at rep	ort -		enterna rational	Breton Aluternate	anino mito supravajna	et remito o armir omonio	METEROLOGICA DOS	Programma and the contraction of	min dangkan sadas



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

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

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	Т
Surrogate:	Percent Recovery	Control Limits				0.000
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

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	MW-204					
_aboratory ID:	02-199-04					
3enzene	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					
_aboratory ID:	02-199-05					
3enzene	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	
n,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					
_aboratory 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	
n,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				

Samples Submitted: February 20, 2015 Laboratory Reference: 1502-199

Project: T-6552-1

NWTPH-Gx/BTEX METHOD BLANK QUALITY CONTROL

Amelida	Daniel 4	DOL	88 - 41 d	Date	Date	
Analyte	Result	PQL	Method	Prepared	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			.*	2
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

					Source	Per	cent	Recovery		RPD	
Analyte	Res	suit	Spike	Level	Result	Reco	overy	Limits	RPD	Limit	Flags
DUPLICATE											
Laboratory ID:	02-19	91-05									
	ORIG	DUP									
Benzene	ND	ND	NA	NA		N	IA	NA	NA	30	
Toluene	ND	ND	NA	NA		N	IA	NA	NA	30	
Ethyl Benzene	ND	ND	NA	NA		N	IA	NA	NA	30	
m,p-Xylene	ND	ND	NA	NA		N	IA	NA	NA	30	
o-Xylene	ND	ND	NA	NA		N	IA	NA	NA	30	
Gasoline	ND	ND	NA	NA		N	IA:	NA	NA	30	
Surrogate:											
Fluorobenzene						94	96	71-113			
Laboratory ID:	02-19	98-01									
	ORIG	DUP									
Benzene	ND	ND	NA	NA		N	A	NA	NA	30	
Toluene	ND	ND	NA	NA		N	A	NA	NA	30	
Ethyl Benzene	ND	ND	NA	NA		N	Α	NA	NA	30	
m,p-Xylene	ND	ND	NA	NA		N	Α	NA	NA	30	
o-Xylene	ND	ND	NA	NA		N	Α	NA	NA	30	
Gasoline	ND	ND	NA	NA		N	Α	NA	NA	30	
Surrogate:											
Fluorobenzene						104	105	71-113			
MATRIX SPIKES											
Laboratory ID:	02-19	98-01			· · · · · · · · · · · · · · · · · · ·						
	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	Apres	14	
Ethyl Benzene	51.2	50.8	50.0	50.0	ND	102	102	83-120	April 1	15	
m,p-Xylene	51.4	51.0	50.0	50.0	ND	103	102	81-123	and a	15	
o-Xylene	51.2	50.8	50.0	50.0	ND	102	102	80-120	4	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

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	2-23-15 2-23-15	
Surrogate:	Percent Recovery	Control Limits	INVVIETEDX	2-23-10	2-23-10	
o-Terphenyl	86	50-150				
о тогрнопуг	00	30-130				
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				
-						
011 415						
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 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	0.26 0.46	NWTPH-DX	2-23-15 2-23-15	2-23-15 2-23-15	
Surrogate:		Control Limits	INVVIENT	2-23-10	2-23-13	
o-Terphenyl	Percent Recovery 93	50-150				
o-reipilettyi	33	JU-13U				

Samples Submitted: February 20, 2015

Laboratory Reference: 1502-199

Project: T-6552-1

NWTPH-Dx QUALITY CONTROL

Matrix: Water
Units: mg/L (ppm)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	Res	3.L.Ž	Spike	Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	02-19	91-01								
	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)

J.m.o.	ug/= (PP2)			Date	Date	
Analyte	Result	PQL	EPA Method	Prepared	Analyzed	Flags
				11000.00	7 that, y 2.5 u	90_
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	

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

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 Duplicate
Result Result RPD PQL Flags

Lead ND ND NA 1.1

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	d demonstrated by the second	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)

Offics.	ug/L (ppb)					
				Date	Date	
Analyte	Result	PQL	EPA Method	Prepared	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	111.181
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:	02-199-06 MW-107					
Lead	ND	1.0	200.8		2-23-15	

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

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 Duplicate
Result Result RPD PQL Flags

Lead ND ND NA 1.0

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	



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



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

Client Identification

Sampling Date

15-A002431 MW-201

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

Client Identification

Sampling Date

15-A002432

MW-202

02/20/15, 10:00

Glycols

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

AMTEST Identification Number

Client Identification

Sampling Date

15-A002433 MW-204

02/20/15, 11:30

Glycols

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

On-Site Environmental Project Name: AmTest ID: 15-A002434

AMTEST Identification Number

Client Identification Sampling Date 15-A002434 MW-203

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



Professional Analytical Services

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

STANDARD	REFERENCE	MA	TERIALS
O I MIDMID			

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

			1
Page	8	of	8
n considera	HICKORY CHARGOS CONTRACTORS	400, 12	elikerum da samana manara ma

M	OnSite	
	Environmental	

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

Subcontract Laboratory: AmTest Laboratories

Attention: Aaron Young

13600 NE 126th Pl Kirkland, WA 98034

Phone Number: (425) 885-1664

Date/Time:

Tu	rnar	ound	Re	OUG	sí

1 Day

2 Day

3 Day

(Standard) Other:

Laboratory Reference #:

Project Manager: David Baumeister

email: dbaumeister@onsite-env.com

Project Number: T-6557-1

Project Name:

Lab ID Sample Identification	Date Sampled	Time Sampled	Matrix	#af Cont			Requested Analysis	
2431 MW-201	Zhok	0900	W	2	Etha	lene	Glyw	N 1664 44 14 14 14 14 14 14 14 14 14 14 14 14
2432 MW-202	1	LOW	1	1			The second secon	от стоит от ответствения в также в также в техновического
2433 MW-264		430			ANY SANGEN SING A STANFORD AND ANY SING AND AND ANY SING AND AND ANY SING AND AND ANY SING AND AND ANY SING AND	Atomistical remaining		
2434 MW-203	<u> </u>	1330	<u>J</u>				<u>U</u>	
	our september accompany of the processing of the first shirt from the		MATERIAL FEORES PROVINCES IN THE SERVICE BEING BOOK AND A BEING BOOK AND A BEING BOOK AND A BEING BOOK AND A B		· · · · · · · · · · · · · · · · · · ·	Afrikov vistornos valonski koja stali		
	ili ilik kanada kan	Personal review of the section of th	THE PROPERTY AND THE PROPERTY OF THE PROPERTY	NAME AND ASSOCIATION OF THE PROPERTY OF THE PR		(With third Wildowskie in line ration stands appearance	ndari ni ko opinaja nogljenje kalendu kopi o oblovana ni vejona komika polavak komiko komiko komiko komiko kom	
				****	100 S CS S d depologists of the Valley and the Valley and the Section of the Valley and the Vall	THE RESERVE SHEET AND THE PROPERTY OF THE PROP		
						ne emeny synesteries e sens syneste excheleurous-occor.	THE TOTAL STATE OF THE PROPERTY OF THE STATE	O CONTRACTOR OF A MAN AND AND AND AND AND AND AND AND AND A
	THE PARTY AND TH	- MARKANDAROKISA EMIYALIMAMANAANIN MENINGEN MENI	SALLAND BOLLOW BINNING WOOD HAVE PROOF	NAMES AND STREET OF THE STREET,		STATE OF THE STATE		
Signature		ipany		Date	Time		Comments/Special ins	
Relinquished by	X.	- angunaman		2/24/15		rom transportamente antico	1111111 We ter the control time and percentaged it end	AERA BERKA BEST TO THE TOTAL TOTAL TO THE TO
The second program of the second seco	MC21	and the second s	had an	2/24/5	A CONTRACTOR OF THE PARTY OF TH		10 - 0-	
Relinquished by:		AND THE RESERVE HERE I NOTE OF SOME MANAGEMENT CONTROL OF THE			ingenerate apon an industrial engineering and an anatomic terminal		12.5°C	adalas se de de la companion d
Received by:				A STATE OF THE STA	none may a challed the life Clark and discounting as			
Relinquished by:	28 40 kilj kield 1990 jale leid and imminime annas samene samuu. 200						,	
Received by:	NATAMIAN BEWAREN STATER PROGRESS OF STREET STATER.	KKINGSOREKION WIN PENEROKKIONKERDE	CICA I CATACONIO IN BUY I SPENIO IN A SECUNDA	Notes and the second state of the second state of the second seco	BORRESON CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CO	Okonomia Semplembela y kalabahan ya kenomban ya kenomban ya kenomban ya kenomban ya kenomban ya kenomban ya ke	PHERISANE PHERIOP PROPERD 2000 ENGINEERING AND AUGUSTUS HER STEELING AND AUGUSTUS A	on te effekkil kirin sne scholl birkelelman valan ava avaseenisco soos esecutora ayays paper avasasses



Chain of Custody

Page / of /

Analytical Laboratory Testing Services 14648 NE 95th Street • Redmond, WA 98052	Turnaround Request (in working days)		La	bora	ator	y Nu	ımb	er:		*********	n2-199												
Phone: (425) 883-3881 • www.onsite-env.com	(Check One)			- T				1	1	1			4 0 000 00 00 00 00 00 00 00 00 00 00 00	- T	1				1			T	4
Company: Terra Assoc.	Same Day 1 Day			moliteeriteer value								Silv				o accumulatival samuela	de impergratable (C) post	in in the second	The state of	70	adio es	A.A.C. Company of the	
Froject Name: 1 - 6552-1	2 Days 3 Days										081B	8270D	6151A			month description of the second			a)	77	7	a) yan yan mariji kali yan ya mariji kali ya mariji	
Hattie's Hat/Salmon Bay	Standard (7 Days) (TPH analysis 5 Days)	90 85			[b]		s 82600	/SIM	w-level		icides 8	Pesticides 8270D/SIM	Herbioldos			ayidayaana ahidahaa) 1664A	20	7	U		Application of the Control of the Co	
Chuck Lie		on term.		3TEX	NO.	20	Volatile	8270D	O) MIS/	i jaman de productiva de la companya	ne Pest		ACIG He	Wetals	Metals		grease	12	1	600			ACCUPATION OF THE PERSON OF TH
Sampled by: Pat-Reed	(other)	Mumber of Containers	NWTPH-HOLD	NWTPH-Gx/BTEX	NWTPH-DX	/olatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/ (with low-level PAHs)	PAHs 8270D/SIM (low-level)	8082A	Organochiorine Pesticides 8081B		Chlorinated	MCMA IVIETAIS	Total MTCA Metals	Metals	HEM (oil and grease) 1664A	73	N.	75	7	% Moisture	
Lab ID Sample Identification	Date Time Sampled Sampled Matrix		IL MIN	EWE EWE		Volati	Halog	Semin (with	PAHS	PCBs	Orga	Organ		og d	Total			1	9	<u>U</u>		8	
1 MW-205	2/20/150730 W	5			$\langle \rangle$		**************											Δ	\searrow				
2 mw-201	2/20/15 0900 W	8			$\stackrel{\checkmark}{\downarrow}$	\subseteq	-											Х	Χ,	X			-
7 MW-202	9/20/15/10.00 W	8				<u> </u>	_											X,	X	X			
4 mw-204	apals 1130 W	8			$\stackrel{\vee}{\mathcal{A}}$	\subseteq	-											X	X	$\langle \rangle$			
) MW-203	420/5/330 W	9		_	$\langle angle angle$	<u> </u>												X	$\langle X \rangle$	Δ			
6 MW-107	42415 1415 W	<u> </u>		_ <u> </u> }	$\langle \downarrow \rangle$	4_			integrandential									Δ	Х				
						namesaus chrismissions	-			den mark a hair armitala a										***************************************		•	44: ***
												_		wTerna (essay meth									Printerio
						Secretary dates with the									******************						mental productions particles		unne
Signature //	Company			Date	py coaphagen 201 of California	Tin	nee .		Con	men	ts/Spt	cial i	nstru	ction	S								
Relinquished Wattown Files	Q Terra Ass		e en galaine e d'authr la de	3/2	2/14		70	- 5)	T) i S	501	Ve	J	Lules	erd	Ļ	321	4	G	ter	ed.		(A) Since
Received	\leq 000	5		2/2		10	70	\oldots	m	W	90:	7	OV	1 C	VO	A		71	rit	1kr 5*	100	,	
Relinquished		***************************************							5.	es e Lang	ples	n	ا ندا	209	Ž. i	201	,2	02	a	ad 2	204	beauti	Co
Received		MARKET MA)	nameny a filipido di Imparti Sir		da vocady and Wisa	Ad milit special style property (special special speci	101	(z)	ikit	CJ,	i C.	5 <i>f</i> 3 ~ c	w 20	11 3	and	un. d 11	7	har	e f	ha in	
Relinquished		ccessively consideration where	***************************************		ng-ophysical decimal on the Party of		wybolkka wdansjęcyklasi	jan appropriesija septembris pro	7 G	ur Juli	Ti	Fel	r A	GJ	\$ 6	Figur	7	PH	Z)X				
Received	The same of the sa	NORMAL ANNIE BROOM PER WATER		onsekelenenekeleneten	opistanophikaski kasalasi	ppowerskownie	e nembersoni lelakushiri	an and the same and	-	VILLEANNERCOR	***************************************	Market and Address	ay ayor is an old in definition of party	Venezia i tentra	u description de la constante d	rinut/destaphy/com	mer ongover or dissipated	a companie de la comp	man	, ETYCOPE STEERING A VICENSE	narrani e Nase Inger	agler (artis) a republikani ili jes galer i	-arms-d
Reviewed/Date	Reviewed/Date				nagas i Parlament el Pelante	al a real least to the particular construction	******************************	and the contract of the contra	Chro	omato	ogram	s wit	n tina	ı rep	ort) 	england days a metra	ing) makani kili (gali) (i (ki) tr	umparate utysise	stand-authoritytenement	Mary LANGUAGE CONTROL OF THE PARTY OF THE PA		en exercise

File

: X:\BTEX\HOPE\DATA\H150223\0223027.D

Operator Acquired

: 24 Feb 2015

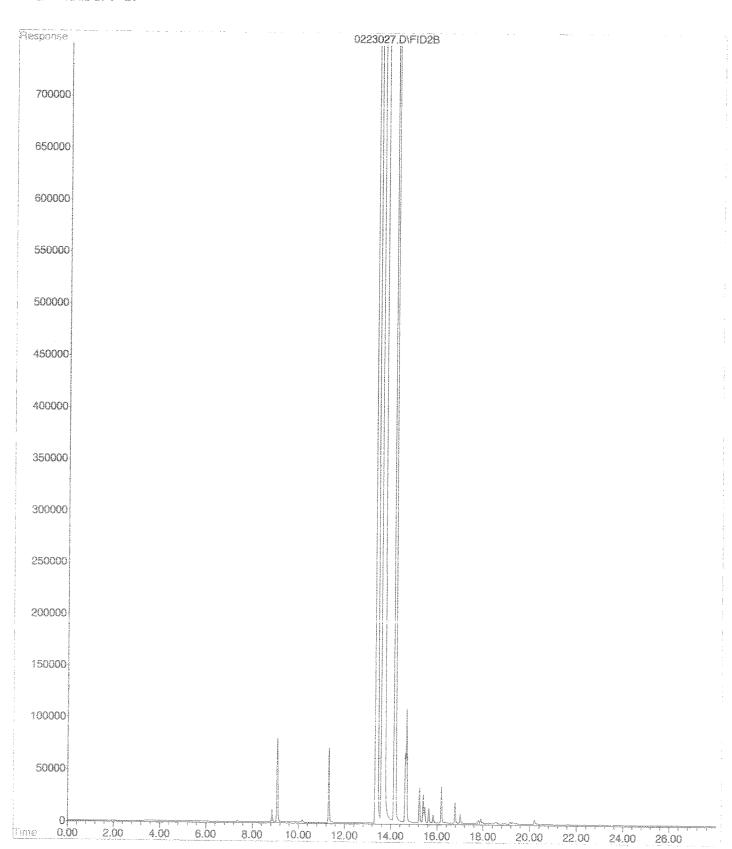
4:46

using AcqMethod 1502178.M

Instrument: Sample Name: 02-199-03d

HOPE

Misc Info : V2-36-17 Vial Number: 27



File

: X:\BTEX\HOPE\DATA\H150223\0223021.D

Operator Acquired

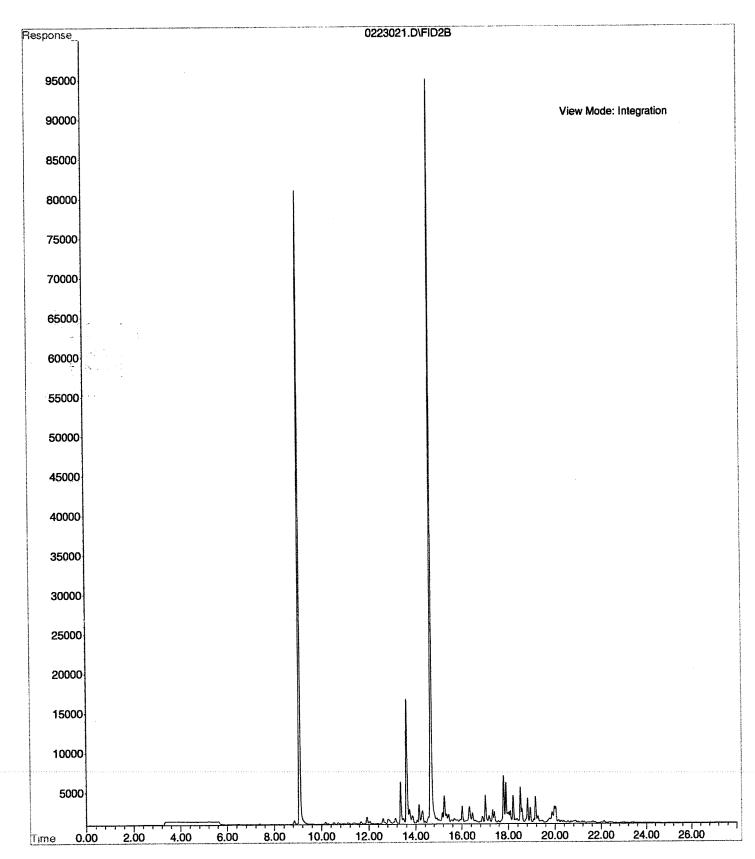
: 24 Feb 2015

1:28

using AcqMethod 150217B.M

Instrument : Sample Name: 02-199-04d Misc Info : V2-36-17 Vial Number: 21

HOPE



File

: X:\BTEX\HOPE\DATA\H150223\0223022.D

Operator Acquired

: 24 Feb 2015

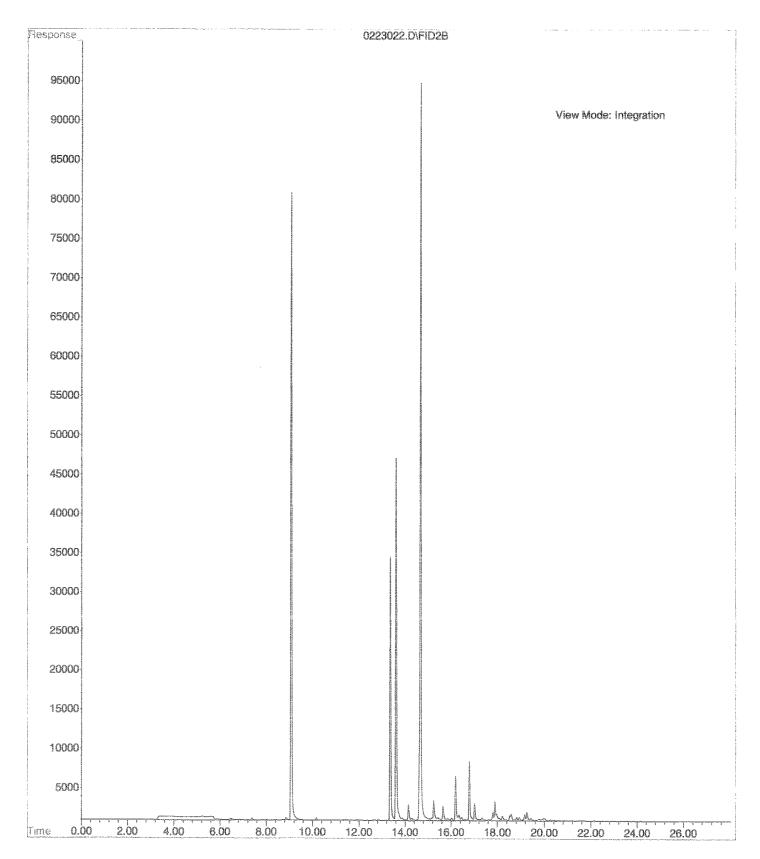
2:01

using AcqMethod 150217B.M

Instrument : Sample Name: 02-199-05e Misc Info : V2-36-17

HOPE

Vial Number: 22



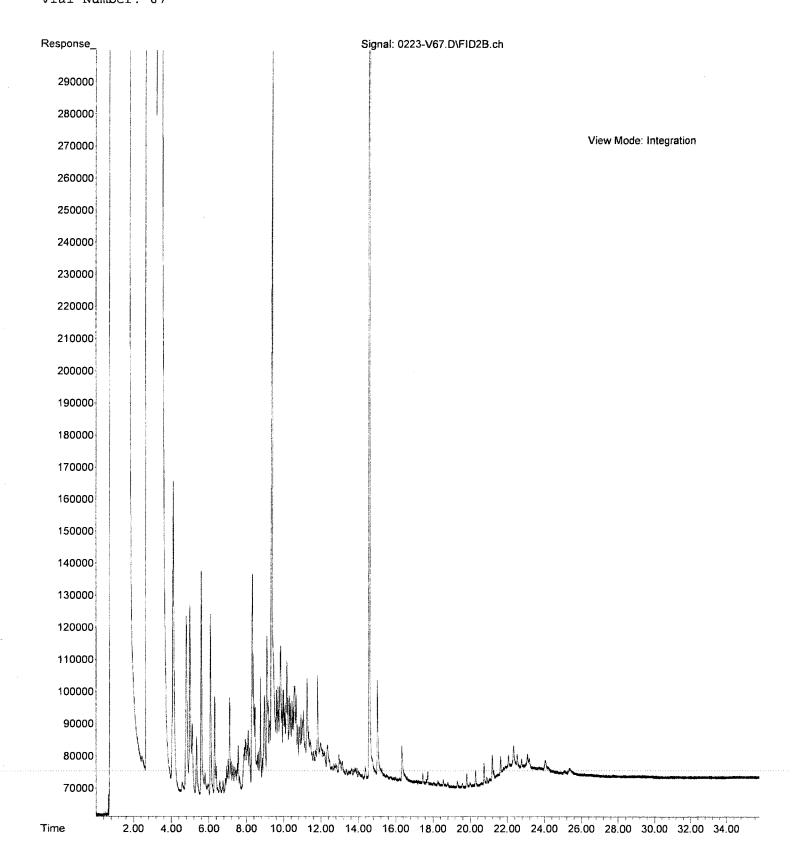
File :C:\msdchem\2\DATA\V150223.SEC\0223-V67.D

Operator

Acquired : 23 Feb 2015 20:31 using AcqMethod V150209F.M

Instrument : Vigo Sample Name: 02-199-03

Misc Info : Vial Number: 67



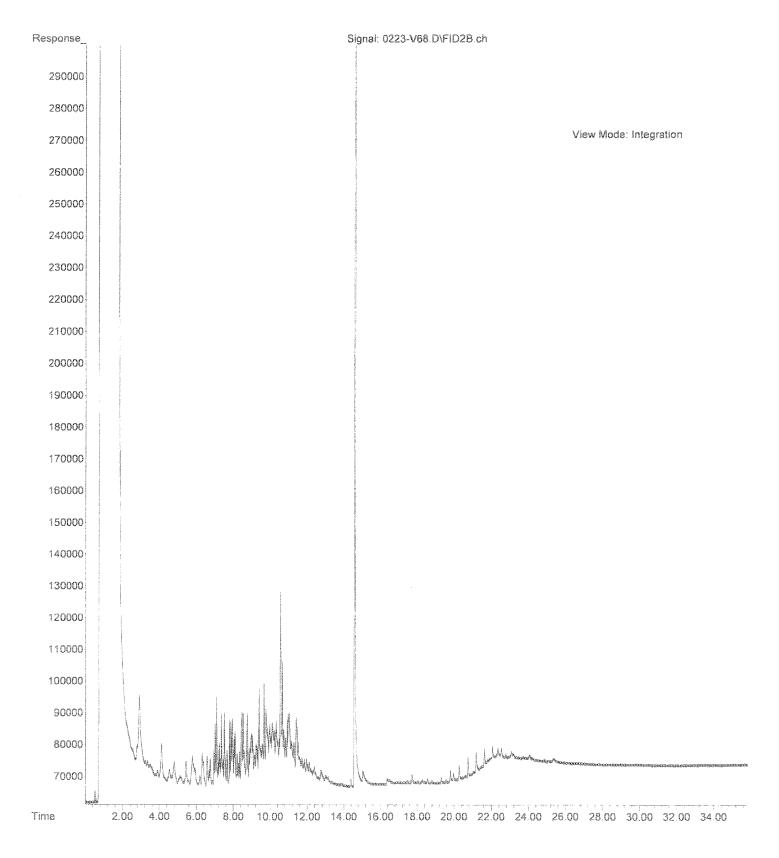
File :C:\msdchem\2\DATA\V150223.SEC\0223-V68.D

Operator

Acquired : 23 Feb 2015 21:12 using AcqMethod V150209F.M

Instrument : Vigo Sample Name: 02-199-04

Misc Info : Vial Number: 68



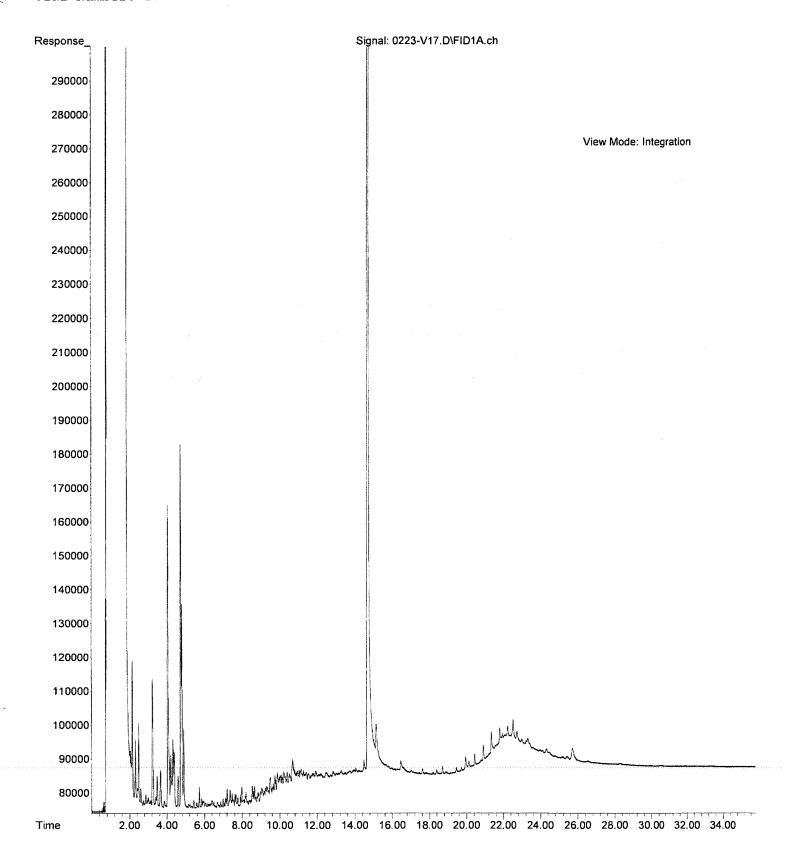
File :C:\msdchem\2\DATA\V150223\0223-V17.D

Operator

Acquired : 23 Feb 2015 20:31 using AcqMethod V150209F.M

Instrument : Vigo Sample Name: 02-199-06

Misc Info : Vial Number: 17





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)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	WW-301	MW-205 crl				
Laboratory ID:	11-259-01	IAIAA-SOO CII				
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)

				Date	Date	
Laboratory ID: Benzene Foluene Ethyl Benzene n,p-Xylene D-Xylene Gasoline Surrogate:	Result	PQL	Method	Prepared	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	Res	sult	Snike	Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE		7411	Opine	LCVCI	nesun	Hecovery	Liliiti	RFD	Lillit	riays
Laboratory ID:	11-25	57-01								
	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						<i>88 84</i>	71-113			

MATRIX SPIKES

Laboratory ID:	11-2	34-01								
	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



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

ÁL OnSite Environmental Inc.

Chain of Gustody

Page _____ of ____

Analytical Laboratory Testing Services 14648 NE 95th Street * Redmond, WA 98052		working da			Lé	abo	rato	ory	Nui	mb	er:	uwakana sama	*********	Charles Selected a secular states	++-040+*********************************	e Challen volgelinde graden kylin		entransperient and actual	mandan elektrikini	å		£) 💥	•	91/2000/09/00
Phone: (425) 883-3881 • www.onsite-env.com Company:	A MAKA KEDIGA PETIN DIANG PERINDON	(Check One)								ľ			T		mations part	olokana direkteken kontroloka					1	and parties also	T	n a para a mara a m	nggate corrigination
Tara Associator In	Same	e Day	1 Day											Mis											
Project Number: 6557	☐ 2 Da	vs.	3 Days											1B	A 48	Š.									
Project Name:		,							- Company	200		(e)		s 808 s	2 10	0			40	5					
Project Manager:	(TPH	dard (7 Days) analysis 5 Da	ays)	6/3 00:						s 826	/SIM	/ei-w/		dicide	1	5			N 1864A	8					
				200 000 000 000 000 000 000		X				olatile	270D PAHs	IM (Ic		Pesi Pesi	2 2	etals	etals	Cigin	03504	bops	and the same of th				
Sampled by:	PROGRAMMA WOMEN	(other)	CENSONICH PRODUCTION PRODUCTION	S	문	3x/B1	ĕ	š	3260(ted V	liles 8 level	3/Q0,	SZA	lloring psopy		Z X	A N	stais	pue	ā	g in the same				au
Nicolas R. Hothma	Date	Time		Amber of Consiness	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)	PUBS 8082A	Organochlorine Pesticides 8081B Organochlorine Pesticides 82700/SIM	4	Uniorinateo Acid merucues o oraz. Total RCBA Metals	Potal MTCA Metals	TOLP Metals	HEM foil and oreasol	5					% Moisture
Lab ID Sample Identification	Sampled	Sampled	Matrix	2	N.	Ĭ <u>Š</u>	<u> </u>	NN.	<u> </u>	Ĕ	Sem	PAF	2		3 2		ţŝ		Į.			_			8
Sampled by: Nicolas R. Hoffma Lab 10 Sample Identification MW-301	11/25/10	10.20	Water	4	-	X									-				-		imoriusimus		Control of the Contro		

		THE PERSON NAMED IN COLUMN 2 I		-	-	ļ	ļ				_				-					******************				-	+
					-	and demonstration of	-				ļ					NA CASTANTAN AND SECURIOR	_						_	-	-
	andropous and the section of section of section of section of the		THE CO. LEWIS TO WAR WAS ARRESTED AND A STATE OF THE CO.																						
	engilamen yang seleka at madagan Bi peptadang kecasa yang peratang selekularan			ļ	-	-	-		-	-	\dagger				_		_							1	
					ļ	ļ	-				ļ	-									_		+	+	
	17			-																					
				Company of the Compan																					
			an a	_	 	 				†					\dashv		\neg	***************************************			\top			<u>†</u>	
				-		+	ļ		-	 					_		_					-	+	_	
							- Compositor (vic		dernam)aan		J														
Signature		ompany				Date) T	7	Time	0		Com	men	ts/Spec	cial ir	istruc	ions		i de la companya de l		ELACOMORADOS	an and an annual state of the s	er anderstande en en	de o productivo de la constanta de la constant	
Relinquished		TA	- Comment				75	W	12	15	Ò														
Received		100	7-	,			l2s	1/4	1/2	15	0														
Relinquished			Mark Mary and a second a second and a second a second and	-		 	Grandler of	£																	
	ACTION OF THE PROPERTY OF THE		oda esen siamano estate (1820) esen	***************************************	ga/wilaningi (Tib)yogʻib (avance armonitorishi	NOODOO HENRANDO	 	(Aggerthau) called															
Received		· · · · · · · · · · · · · · · · · · ·	ERRORECTOR DE CONTROPENTACION SOCIOLO PROPERTORIO	eksektikiliye (Yeko		-	not come et description et con	~~~~	 	ggaranness glaticities	wantourrist sien														
Relinquished	and the state of t			······································	MASSA COMPANIENT				ļ	***************************************															
Received											Name of the latest of the late		parangonan Urre		mades a subject of the subject of th	NA COLUMNIA MINISTRATORIA	autoria estratores	desplotospilling den Anton		n, was a great land of the lan	una sire di tata di mana di ta				Nau Angra ni Ingerine di Pris
Reviewed/Date		Reviewed/C	ate		· CE CHICAGO SIGNATURE							Chro	mato	ogram	s with	h final	repo	ort 🗍				*******************************	ecesivased whileholds	elector a carefunita	iggsvanicus (even)
		·		MI AGOMAN PRINCE	- CONTRACTOR OF THE PARTY OF THE	tre	nnio.	۵	slivers		ופרור	,													



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

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	MW-301	84141000	3			
Laboratory ID:	01-053-01	MW-205	cri			
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

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	<i>39 - 109</i>				
Pyrene-d10	<i>92</i>	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

					Pei	cent	Recovery		RPD	
Analyte	Re	sult	Spike	Level	Rec	overy	Limits	RPD	Limit	Flags
SPIKE BLANKS							35.33%			
Laboratory ID:	SB01	13W1								
	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	44	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	<i>39 - 109</i>			
Pyrene-d10					85	95	53 - 131			
Terphenyl-d14					90	101	44 - 104			



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 i of

Analysical Laboratory Testing Services 14648 NE 95th Street • Recimond, WA 98052	(in working days)	Laboratory Number:	01-053
Phoas. (425) 883-3881 * www.onsite-ens.com Company. Project Number: Project Name Project Manager Avx & Color Research Sampled by: A section Research Color Research Avx & Color Research Avx	(Check One) Same Day 1 Day 2 Days 3 Days (X) Standard (7 Days) (TPH analysis 5 Days) (other) Cons Bay Samples Samples Matrix	NWTPH-HCID NWTPH-GA/BTEX NWTPH-GX NWTPH-DX Volatiles \$260C Halogenated Volatiles \$260C Semivolatiles \$270D/SIM With low-level Paris PCBs \$682A Organochlorine Pesticides \$081B Organochlorine Pesticides \$151A Chlorinated Acid Herbicides \$151A Total RCFIA Metals TOLP Metals	(564A
3000 Sample Hersting Sample He	Samples Same Same Same Same Same Same Same Same		
Reinquished Received Received Received Received Received Received Received Received Received	Company TA CSC Reviewed/Date	Sets Time Comments/Special/Instructions 1/12/15	



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)

, , , , , , , , , , , , , , , , , , ,				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0528W1				W 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
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

					Source	Pe	rcent	Recovery		RPD	
Analyte	Res	sult	Spike	Level	Result	Rec	overy	Limits	RPD	Limit	Flags
DUPLICATE											
Laboratory ID:	05-24	42-01									
	ORIG	DUP									
Benzene	ND	ND	NA	NA			NA	NA	NA	30	
Toluene	ND	ND	NA	NA		2	AV	NA	NA	30	
Ethyl Benzene	ND	ND	NA	NA		E STORY	AV	NA	NA	30	
m,p-Xylene	ND	ND	NA	NA		AM		NA	NA	30	
o-Xylene	ND	ND	NA	NA		NA		NA	NA	30	
Gasoline	ND	ND	NA	NA			AV	NA	NA	30	
Surrogate:											
Fluorobenzene						84	84	71-113			
MATRIX SPIKES											
Laboratory ID:	05-24	\$2-01									
	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	e de la companya de l	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			



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 of

	14648 NE 95th Street & Redmond, WA 98052		nergune Liverking de			B _{oo}	abc	orat	ory	Nu	mb	er:						0	S.	?	5	0			
Company	Phone: (425) 883-3881 • www.onsite-env.com	-	(Check One)			T	The second secon	T	***************	yardav ensens.			-	1		Paranta.			7		*	e days est v		entra esta esta esta esta esta esta esta est
Project No Project Ma Project Ma Sampled I	mber: 6552 mager: Chy. K. Lia	Same		□ 1 Day □ 3 Days ays)	Memotion on Landings		NEX		THE THE WAS ALL AS A CONTRACT OF THE	10	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs) PAHs 8270D/SIM (low-level)		Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Mounated And Herbinides 2151A	efats	kfals		gresse) 1564A					
Stories and a	Nicho R. Nothers	And the second statement of the second of th	(other)		8	ĮĢ.	1-Gx/6	ğ	ğ	\$ 826	nated	Variles W-leve	082A	chiorir	Hospit	\$ 600 g	JRA N	100 N	le lais	pue				orio la esta l	92
1.90 (0	Sample Identification	Sampled	Time Sampled	Matrix		WWTPH-HOLD	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	volatiles 8260C	faloge	with to	PCBs 8082A	rgano	rganop	Program	fotal PCRA Metals	fotal MTCA Metals	rou? Metats	HEM (oil and				i de la constantina della cons	% Woisture
		5/28/15	Periodicial Colonials delicite halos acceptances	HZ 0	lo de		X																		
Reimquis		i maga ta ga manamini sa manamini sa sa sa ga	MC2Dy		***************************************		Date	one was to to the town		Time	pan	CONTROL OF PLANTS AND PARTY AND PARTY	ERSTREAM	1875æ	M) S	as by	office				J				
Received		Contraction of the Contraction o	The second second	A STATE OF THE PARTY OF THE PAR	**************************************			6/		9	.)	San-													
Relinguis	and the second s	Jan San San San San San San San San San S		100	derenana Serenanan Serenanan		52	\$3/1	Sound	a Sary E	34	Sections													
relication marginal activities and produce and produced activities activities and produced activities activities and produced activities activities and produced activities	16 September 19 Se	hiteratura proprieta a de la composição	Committee and Committee (1974, 1977 Fig. 1977 Fig. 1978	The disput of the State of the	eli Moora wa kansa cida		The ST Description of		TOTAL BANK COM	TO SECURITORIUS PRANTICOS	neciente inicia	and the first stope													
Received Retinguis			Construction of the State Association and 1850	elektronomon proper gyarran na svet svet en e	Oversonia - e va messa		Sen ettigarindigeljoga	the Ad Walter Constitution on			neath in the Control	Promoven out													
Received		THE PROPERTY OF THE PROPERTY O	PREMISE and the studenth are according assessed assessed.	provident of PECO 13 Printfold Administry provides a September 1	Manta erritaria estada		The state of the s	MY STREET, MI QUARTE,			hrid rakhusuril asa sa	NAME AND DESCRIPTION OF THE PERSON OF THE PE													
Reviewec	//Date		Reviewed/Dai	(C	**************************************		n Bri Brian angara yang ya	**************************************		Soldin v nervensk opraces	nenengunggungg	Chro	omato	gram	s wit	h fine	l rep	ort F	I nichostomoren	to a file following and a compage	maja and Gillyenshapis	eredeli et en varione de la	dimensional state of a	entrolled at most strip plicable	***************************************
	Y ²⁶ 1 1 1 ² 5 1 1 ² 5 1 1 ² 5 1				Property of a special control of the	HEATTER STATE OF THE STATE OF T	*************		alphanic manage care area	magana sarangacan,atomara,	/PORPHINOLISM	mercente et e coderectorios servicio	and a particular of the second	HI Philosophography	173 TO 173 MALE & 4140	-		PT-111717 (TUDWAD)	· vorenii veine			ridra venusasa		Acres est to comme	