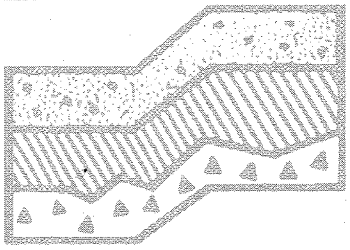
Environmental Services
Remedial Investigation/ Feasibility Study/Remedial Action Summary
5221 Ballard Avenue NW
Seattle, Washington
VCP NW2496

Project No. T-6552



Terra Associates, Inc.

Prepared for:

HALCO PROPERTIES, LLC
Seattle, Washington

July 24, 2013

TERRA ASSOCIATES, Inc.

Consultants in Geotechnical Engineering, Geology
and
Environmental Earth Sciences

July 24, 2013
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: Environmental Services
Remedial Investigation/Feasibility Study/Remedial Action Summary
5221 Ballard Avenue NW
Seattle, Washington
VCP NW2496

Dear Mr. Cowman:

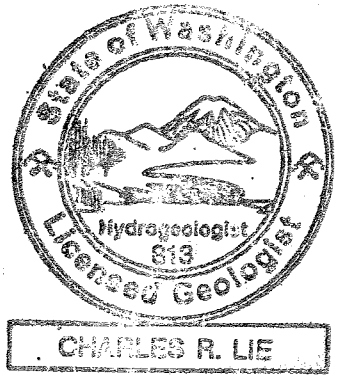
This report documents our observations and the results of analytical testing of representative soil and vapor samples on the subject site. We have provided environmental services on this project starting since 2011.

The attached report describes the evaluation of the site and remedial measures in detail. We trust the information presented is sufficient for your current needs. If you have any questions or require additional information, please call. We will request that the Washington State Department of Ecology review the report and offer their opinion of the proposed remedial action.

Sincerely yours,
TERRA ASSOCIATES, INC.

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

cc: Mr. Livingston Wernecke, BP and M
Ms. Heather Vick, WDOE NWRO



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Environmental Services
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Seattle, Washington
VCP NW2496

1.0 INTRODUCTION

This report presents a summary of our environmental services at 5221 Ballard Avenue NW. The site has been accepted into the voluntary cleanup program and is a portion of a larger site listed under the name of C and C Paints. The voluntary cleanup number for the site is NW2496.

Site Name: A portion of the former C and C Paint site
Site Address: 5221 Ballard Avenue NW
Seattle Washington 98199
Tax Parcel: 2767702565

Owner: 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

Consultant: Terra Associates, Inc.
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A Phase II ESA for the site was prepared by Terra Associates Inc. Prior to our involvement with the site, UST assessments and closure observations had been done by others. A list of the prior reports is presented in Appendix A attached to this report. The results of the prior assessments and of our Phase II ESA showed that there had been releases from one or more of the USTs on-site that were used to store paint thinner. The paint thinner was used in an adjacent building that fronts on Shilshole Avenue NW to mix paints. No actual paint mixing occurred on the site at 5221 Ballard Avenue NW.

Tables attached to this report summarize all soils, groundwater, VES exhaust samples, and sub slab vapor samples taken by Terra Associates, Inc. on or immediately adjacent to 5221 Ballard Avenue NW.

Interim Remedial Action

As summarized in our Phase II ESA for the site, the residual contamination was found to be primarily in the capillary fringe zone alongside the UST cavities. The initial interim remedial action was intended to consist of enhanced in situ bio remediation through the use of calcium peroxide injected into the capillary fringe. One episode of the injections occurred in November of 2011. Subsequently, dewatering of a construction site north of the site lowered the groundwater by about 20 to 25 feet beneath the property. This left the former capillary fringe zone within the new vadose zone. The interim remedial action was changed to consist of a vacuum extraction system that would both remove the paint thinner through volatilization and enhance natural in place degradation by increasing the active flow of air with oxygen through the zone of contaminated soils. The vacuum system has operated since May of 2012 and remains in operation at this time. One set of performance soil samples has been taken since the initial operation of the vacuums system. The testing is discussed in more detail in the body of this report.

Scope of Work

Our scope of our work for this project included:

- Review of the Ecology file for the project site.
- Review of prior work by others on-site.
- Preparation of a Phase II ESA.
- Assistance in joining the Voluntary Cleanup Program.
- Development of an injection program and coordination of the injection with the Underground Injection Control office of Ecology.
- Observation of the injection of calcium peroxide in November of 2011.
- Development of an alternate interim action plan using vacuum extraction.
- Observation and field screening of soils during supplemental performance soil sampling.
- Collection of representative samples from supplemental explorations analytical testing.
- Monthly sampling of vapors from the Vacuum System.
- Preparation of periodic technical memos documenting project progress.
- Preparation of this report.

The following sections of this report detail our site observations and the results of analytical testing.

2.0 SITE DESCRIPTION

2.1 Surface

The site is located at 5221 Ballard Avenue NW in Seattle, Washington. The site location is shown on Figures 1 and 2. Figure 3 is an ALTA map prepared for the site and adjacent parcels that comprise the C and C Paint facility. Figure 4 shows former groundwater conditions beneath the site. Figure 5 is a generalized geologic section through the site. Figure 6 shows the locations of the former USTs.

In general, the site consists of two elements, the parking lot and the building. The parking lot is relatively level at an elevation close to the elevation of Ballard Avenue NW. The building is a two-story brick building with a full basement. The basement level is about nine feet below the level of Ballard Avenue NW. There is a catch basin in the parking lot that drains to the combined stormwater/sewer system present in Ballard Avenue NW. There are no plumbing fixtures in the basement of the building. The plumbing fixtures in the building on-site all drain towards the sanitary sewer in Ballard Avenue NW. The sewer extends out through the northern wall of the building.

The USTs are present in the parking area. A pipe chase extends from the USTs towards the south and enters the northern retaining wall that forms the northern wall of the building north of the site. No pump islands or other dispensers for the USTs are present on the site. The distribution pipes are about one-foot below the ground surface in the parking lot adjacent to the USTs.

The site is completely covered with impervious surfaces consisting of either roof or paved surface. There are no surface water bodies on the site.

The adjacent land uses are all commercial and retail in nature. There are apartments located above the street level retail spaces in the buildings located north of the site across Ballard Avenue NW from the site.

2.2 Subsurface

Subsurface conditions at the site consist of glacially derived sediments. Soil conditions have been explored and documented by Terra Associates, Inc. through explorations. The upper nine to ten feet of the soils consist of fills placed to raise site grades to match Ballard Avenue NW. Beneath the fills, our explorations encountered and were terminated within sands that appear to be till-like in nature or is an intercalated till. Deeper borings for an adjacent construction boring encountered and were terminated within soils that appear to be Advance outwash present beneath the till. Figure 5 is a generalized geologic cross section that extends through the site.

2.3 Geology

The site is located in a glacial drift upland area. The Geologic Map of Northwest I, 2005, by Booth D. B. et al, shows the site as being underlain by map unit Qvt, till. The cross section for the Geologic Map shows the till being underlain by Advance outwash. This is consistent with our on-site observations.

2.4 Groundwater

Groundwater was present beneath the site at a depth of about ten feet below existing grade with a gradient towards Salmon Bay. Static water levels that have been measured on-site are presented in Table 1. Table 1 follows the text of this report. The current groundwater gradient is currently towards the north-east, inconsistent with the previous measurements. The gradient has reversed due to active dewatering at a new construction project northeast of the site. The dewatering at the new construction project is reported to consist of a permanent dewatering sump. It is not expected that the groundwater beneath the site will return to the prior conditions. The former groundwater conditions are illustrated on Figures 4 and 5.

3.0 PRIOR REPORTS BY OTHERS

Appendix A lists prior reports that cover the C and C Paints facility. As discussed earlier, the former C and C Paint facility included additional parcels that front on Shilshole Avenue NW. The reports that specifically address 5221 Ballard Avenue NW are identified in the summary table. The following reports address 5221 Ballard Avenue NW specifically.

3.1 Ballard Avenue Landmark Letter, dated April 17, 1991

This letter prepared by the Ballard Avenue Landmarks District Board discusses the landmark status of the buildings. This letter reports that no permit from the board is needed to remove the USTs; however, if the UST removal operations were to damage or require changes to the buildings, the board approval would be needed.

3.2 Buried Tanks in Alley, dated April 19, 1991

This letter prepared by Pacific Testing Laboratories suggested that the USTs should be closed in place to avoid damage to the existing adjacent Ballard hardware building. No copy of this letter has been found in the current files at Terra Associates, Inc.

3.3 UST Closure in Place Letter, dated November 3, 1992

This letter prepared by Bison Environmental discusses the closure in place of the northern two USTs on-site. The USTs are identified as UST 6-P and 8-P, both reported to have contained mineral spirits. An assessment was done on November 5, 1992 using a drill rig to obtain soil sample from alongside UST 6-P. A total petroleum hydrocarbon content of 2,600 parts per million (ppm) was reported at a depth of 12 feet below existing grade. No groundwater was reported to have been present at the time of drilling. The report identified a release from a leaking seal of a turbine pump manifold in UST 8-P. The USTs were filled with controlled density fill (CDF).

3.4 UST Closure Letter, dated February 10, 1998

This letter prepared by Nowicki and Associates discusses the closure in place of the southern UST on-site. Samples were taken from holes cut into the base of the UST. No release was documented in the samples taken through the sample ports cut into the base of the UST. The samples taken from the access ports were all below the MTCA cleanup levels.

4.0 EXPOSURE ROUTE ANALYSIS-EXISTING CONDITIONS

4.1 Terrestrial Ecological Evaluation

The site is located in a densely developed commercial area adjacent to a water body. The adjacent parcels south of the site are industrial in nature. No undeveloped land is present within a 500-foot radius. Thus, as allowed in WAC 173-340-7491 (1)I (i) the site is excluded from a terrestrial ecological evaluation. The impacts to surface water are discussed later in the groundwater element of the site.

4.2 Direct Contact

Direct contact was the exposure route for soils.

4.3 Vapor Pathway

The chemical of greatest concern with gasoline is benzene. While the paint thinner did not contain benzene as an intentional constituent, incidental levels of benzene may have been present within the paint thinner. As shown in the data collected on-site, the vapor pathway is being addressed by the vacuum extraction operations.

4.4 Groundwater

The groundwater pathway did not include any drinking water resources. The groundwater beneath the site discharges to Salmon Bay through the adjacent basement dewatering sump. Salmon Bay is not considered a potential drinking water resource. Salmon Bay is part of the Lake Union body of water.

5.0 CLEANUP OPTIONS

5.1 General

It is the goal of HALCO to obtain a No Further Action Determination for the site. The purpose of the NFA is to allow conventional bank financing of the real estate. The current analytical data shows that the soils that exceeded MTCA cleanup levels were addressed through the operation of the VES. Three samples exceeded the MTCA cleanup requirements. This is discussed in Section 5.2.1. The points of compliance for soils are at all locations on-site. The points of compliance for the groundwater are the northern end of the proposed mixing zone that is discussed in Section 5.2.2 of this report.

The contaminants of concern are total petroleum hydrocarbons in the gasoline range, paint thinner. It appears that benzene was a contaminant of the paint thinner and was formerly present slightly above the cleanup values. Polycyclic aromatic hydrocarbons (PAHs) were also part of the initial analysis to assist in evaluating site specific cleanup calculations. The PAHs did not exceed MTCA Method A cleanup values.

5.2 Remediation/Cleanup Levels

5.2.1 Soils

The remediation and cleanup goal of the remedial action is the Method A cleanup values of the MTCA for BETX and poly cyclic aromatic hydrocarbons (PAHs). The only analyte that has been found to exceed the MTCA Method A cleanup value in final confirmation samples has been TPH in the gasoline range. We propose the use of a site specific cleanup value for gasoline range TPH. Method B levels for soil cleanup are shown in parenthesis for BETX and cPAHs. These values are shown in the following table:

Table 5.2.1
Soil Remediation/Cleanup Levels
5221 Ballard Avenue NW

Compounds of Concern	MTCA Cleanup Level parts per million (ppm)	Notes
TPH gasoline range	2,000	Site Specific Value for direct contact from MTCA TPH macro
Benzene	0.03 (18)	Method A value (Method B value)

Table 5.2.1
Soil Remediation/Cleanup Levels
5221 Ballard Avenue NW

Compounds of Concern	MTCA Cleanup Level parts per million (ppm)	Notes
Ethyl Benzene	6.0 (8,000)	Method A value (Method B value)
Toluene	7.0 (640)	Method A value (Method B value)
Xylenes	9.0 (1,600)	Method A value (Method B value)
cPAHs	0.1 (0.14)	See Table 708-2 in the MTCA for TEF values (Method B value)

5.2.2 Groundwater

The remediation and cleanup goal for the remediation action are surface water quality standards. The groundwater beneath the site is being withdrawn through a dewatering system installed on a neighboring property. The dewatering system discharges to the municipal stormwater drainage system and then to Salmon Bay. The site is not in an area that influences drinking water resources. Salmon Bay is not considered to be a drinking water resource.

Table 5.2.2
Groundwater Remediation/Cleanup Levels
5221 Ballard Avenue NW

Compounds of Concern	MTCA Cleanup Level parts per million (ppm)	Notes
TPH gasoline range	No visible sheen	Surface water standards (no MTCA Method B value published)

Table 5.2.2 (continued)
Groundwater Remediation/Cleanup Levels
5221 Ballard Avenue NW

Compounds of Concern	MTCA Cleanup Level parts per million (ppm)	Notes
Benzene	23 (1.2)	MTCA B surface water ((National Toxics Rule)
Ethyl Benzene	6,900	MTCA B surface water
Toluene	19,000	MTCA B surface water
Xylenes	1,600	MTCA B surface water

5.2.3 Sub Slab Vapor

The remediation and cleanup goal for sub slab vapors is for the basement areas of the two adjacent buildings. The adjacent warehouse building is not continuously occupied, has large doors that are usually open to the ambient air, and forklifts powered by internal combustion engines are used in the warehouses. The proposed cleanup goals are taken from the existing draft guidance for vapor intrusion.

The vacuum system was shut off 3 full days prior to the sampling on January 29, 2013 to allow the sub slab vapor conditions to equalize prior to sampling. No negative pressures were present in the sub slab vapor points at the time the samples were taken on January 29, 2013.

Table 5.2.3
Sub Slab Vapor Remediation/Cleanup Values

Compounds of Concern	MTCA Cleanup Level Micro Grams per cubic meter ($\mu g/M^3$)	Notes
TPHv (C5-C8) Aliphatic	27,000	Ecology Draft Publication Guidance For Evaluating Soil Vapor Intrusion in Washington State, Ecology Publication 09-09-047
TPHv (C9-C12) Aliphatic	1,400	
TPHv (C9-C10) Aromatic	1,800	
Benzene	3.2	
Ethyl Benzene	4,600	
Toluene	22,000	
m,p Xylene	460	
o-Xylene	460	
Methylene Chloride	53	

5.3 Options Reviewed For This Project

We have reviewed the following options for remedial action at this site:

Table 5.3
Remedial Options

Option	Advantage	Disadvantage
1. Capping	*Expedient and least expensive solution.*	*Will require institutional controls and a restrictive covenant. A disproportionate cost analysis would be required.*
2. In situ treatment with oxidizing agents	*Reduces the quantity of waste generated.*	*With the loss of the groundwater as a media to deliver increased oxygen to the capillary fringe, this option became unsuitable for the site.*
3. In situ enhanced bio degradation	*Reduces the quantity of waste generated.*	*This option is partially in use in combination with vacuum extraction, Option 5.*
4. Bio venting	*Reduces the quantity of waste generated.*	*This option is partially in use in combination with vacuum extraction, Option 5.*
5. Vapor extraction	*Reduces the quantity of waste generated.*	*A vacuum extraction system has been used on site since May of 2012. The VES system is also working as bio venting and in situ enhanced bio degradation.*
6. Excavation and off-site disposal or treatment	*Provides a permanent solution.*	*This option was not feasible due to the limited work space on-site, the presence of three USTS that are within the zone that requires remediation, and the presence of historic structures on the west and east sides of the contamination zone.*
7. Excavation and on-site treatment	*Reuses material and reduces export of wastes.*	*There is insufficient room on-site or the neighborhood to perform land farming. Costs would exceed the cost of excavation and off-site treatment. Would require closing traffic lanes and sidewalks and the shoring of the temporary excavation. Not considered to be viable for this site.*
8. No action	*No immediate costs.*	*Will require cleanup at a later date. Will not satisfy the owners need for a No Further Action Determination. Will not allow conventional financing of the real estate.*

5.4 Enhanced Bio Degradation/Bio Venting/Vacuum Extraction Option – Expanded Discussion

The initial interim remedial effort for enhanced biodegradation is summarized in our letter dated December 11, 2011. The subsequent change in static water levels required that the interim remedial operation switch to an active Vapor Extraction System that would physically remove paint thinner through volatilization as well as enhance bio degradation through the creation of air flows through the subsurface soils. The VES operation is outlined in our report dated May 3, 2012. The initial operation of the VES unit was focused on Monitoring Well 101. On June 14, 2012, the valves were turned on to draw from all 3 of the monitoring wells. The system operated in this manner until January 26, 2013. On January 26, 2013, the vacuum system was turned off. After sub slab sampling on January 29, 2013, the system was turned back on.

Based on the results of the performance soils sampling summarized in Table 2F, on January 13, 2013, the valve to Monitoring Well MW-101 was shut off. The system operated with a vacuum on Monitoring Wells MW-101 and MW-102 until February 28, 2013. Two new vapor extraction wells were built to enhance the recovery of vapors from the location of confirmation sample exploration DPT-4 at a depth of 9 feet. The new wells were plumbed into the existing system and turned on February 28, 2013. The system has operated drawing a vacuum on MW-101, MW-102, MW-105, and MW-106 since February 28, 2013.

The vacuum operated with a vacuum of 40 to 50 inches of water and a flow of about 80 cubic feet per minute. Due to Seattle Noise Ordinance requirements, the system operates 12 hours per day. The exhaust is sampled on a monthly basis. The lab reports are attached in Appendix E. Chart 1 attached to Appendix E shows the estimated total amount of paint thinner that has been removed. The prominent break in slope in early July of 2012 reflects the change in operating time from 24 hours a day to 12 hours per day. The monthly recovery data for the VES system is shown on Chart 2. Based on the data from the VES unit, about 180 gallons of paint thinner have been removed from the subsurface.

6.0 DISCUSSION/CONCLUSIONS

Based on the performance soil sampling and the sub slab vapor readings, the interim remedial option chosen for this site is effective at reducing the contaminant levels in the site soils and has been chosen as the final remedial action. Additional soil and sub slab vapor performance samples will be taken to verify the system. The results of groundwater sampling prior to the enhanced bio degradation showed that the groundwater met the cleanup requirements proposed for this site. The letter from Ecology dated February 12, 2012 stated that Benzene would be a contaminant of concern. However, no subsequent testing has found benzene in soils from this site.

Based on our observations and performance testing documented in this report, it is our opinion that the project may be given a No Further Action Determination when the sub slab vapor samples and performance soil samples demonstrate that the target TPH in soils and subs slab air and benzene levels in sub slab air have been reached. Based on the performance testing done in 2013, there is no indication that any measurable levels of hydrocarbons were transported down as the static water level decreased as a result of the adjacent dewatering project. With the residual soil contamination remaining well above the static water level, it is our opinion that the proposed remediation level that is suitable for direct contact is the appropriate cleanup level. Even in the time prior to the decreased static water level when the groundwater was in contact with the residual contamination in the capillary fringe, the groundwater generally met Method A cleanup criteria for groundwater. Hence, it is our opinion that the leaching pathway can be ignored for this project. The groundwater is not expected to return to its former levels in the foreseeable future. Ongoing degradation of the residual paint thinner will continue into the future even after the vacuum system is removed.

7.0 LIMITATIONS

The findings, conclusions, and recommendations presented in this report are based on our documented site observations, review of historical and regulatory information, interviews, and review of the referenced historic resources. Other information related to past site uses or current site conditions may exist. Our conclusions in part are based on information provided or prepared by others.

If the existing site uses change, or if further information on the site becomes available, Terra Associates, Inc. should review the information, as it may affect our conclusions.

We prepared our conclusions and recommendations in accordance with generally accepted professional engineering practices. This report is the copyrighted property of Terra Associates, Inc. and is intended for specific application to the 5221 Ballard Avenue Northwest project in Seattle, Washington. This report is for the exclusive use of HALCO PROPERTIES, LLC and their authorized representatives.

Table 1
Groundwater Measurements

Monitoring Well	Surface Elev.	MP Elev.	5/6/2011		5/10/2011		6/29/2011		9/29/2011	
			Depth	Elev.	Depth	Elev.	Depth	Elev.	Depth	Elev.
MW-101	36.77	36.37	10.3	26.07	10.45	25.92	10.78	25.59	11.63	24.74
MW-102	36.35	35.93	10.25	25.68	9.81	26.12	10.08	25.85	11	24.93
MW-103	36.13	35.79	10.25	25.54	9.38	26.41	9.74	26.05	10.86	24.93
MW-104	28.23	27.98					2.76	25.22	3.55	24.43

Table 1
(continued)
Groundwater Measurements

Monitoring Well	Surface Elev.	MP Elev.	10/17/2011		11/18/2011		11/29/2011		5/2/2012	
			Depth	Elev.	Depth	Elev.	Depth	Elev.	Depth	Elev.
MW-101	36.77	36.37	11.50	24.87	15.68	20.69	17.19	19.18	>20	<16.37
MW-102	36.35	35.93	10.86	25.07	15.78	20.15	17.32	18.61	>20	<15.93
MW-103	36.13	35.79	10.54	25.25	16.83	18.96	18.54	17.25	>20	<15.79
MW-104	28.23	27.98			6.83	21.15			>15	<12.98
MW-8	27.97	27.51			5.22	22.29			>8	<18.60
MW-9	30.24	29.99			7.39	22.60			>8	<19.51

Table 1
(continued)
Groundwater Measurements

Monitoring Well	Surface Elev.	MP Elev.	8/22/2012	
			Depth	Elev.
MW-101	36.77	36.37	NM	N/A
MW-102	36.35	35.93	NM	N/A
MW-103	36.13	35.79	NM	N/A
MW-104	28.23	27.98	>15	<12.98
MW-8	27.97	27.51	>8	<18.60
MW-9	30.24	29.99	>8	<19.51

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 the well was not measured due to the use of the well in the VES system on-site.

Table 2A
Petroleum Hydrocarbons
Soil-Initial Samples

Well Number	Date	Depth (feet)	TPH Gasoline Range
B-101 (MW-101)	5/6/11	9.0	82
		14	4.8U
B-102 (MW-102)	5/6/11	10	**3,900**
		15	5.7U
B-103 (MW-103)	5/6/11	10	**1,400**
		15	5.1U
B-104 (MW-104)	6/13/11	2.5	15
		5	10
VP-1	6/13/11	1.5	5.8U
VP-2	6/13/11	1.5	140
		3.5	9.7
VP-3	6/13/11	1.5	5.5U
MTCA Method A			100
Site Specific Value			2,000

Table 2B
Volatile Organic Compounds
Soil-Initial Samples 2011

Well Number	Depth	Benzene	Ethyl Benzene	Toluene	m,p Xylene	o-Xylene
B-101 (MW-101)	9	0.0012U	0.0012U	0.006U	0.0024U	0.0012U
	14	0.00083U	0.00083U	0.0042U	0.0017U	0.00083U
B-102 (MW-102)	10	0.058U	0.058U	0.29U	0.12U	0.058U
	15	0.00095U	0.00095U	0.0047U	0.0019U	0.00095U
B-103 (MW-103)	10	0.056U	0.056U	0.28U	0.11U	0.056U
	15	0.00092U	0.00092U	0.0046U	0.0018U	0.00092U
B-104 (MW-104)	2.5	0.0013U	0.0013U	0.0065U	0.0026U	0.0013U
MTCA A		0.03	6.0	7.0	9.0	
MTCA B		18	8,000	6,400	16,000	

Table 2B (continued)
Volatile Organic Compounds
Soil-Initial Samples 2011

Well Number	Depth	Acetone	isopropyl benzene	n-Propylbenzene	Sec-Butyl benzene
B-101 (MW-101)	9	0.022	0.0035	0.0049	0.0012U
	14	0.013	0.00083U	0.00083U	0.00083U
B-102 (MW-102)	10	0.29U	0.058U	0.058U	0.058U
	15	0.0084	0.00095U	0.00095U	0.00095U
B-103 (MW-103)	10	0.28U	0.056U	0.056U	0.056U
	15	0.0082	0.0092U	0.0092U	0.0092U
B-104 (MW-104)	2.5	0.037	0.0013U	0.0013U	0.0013U
VP-2	1.5	0.0056	0.0034	0.0040	0.0048
MTCA		(72,000)	np	(8,000)	np

Notes for Tables 1 and 2:

All levels are reported in parts per million (ppm).
Modifier of U indicates that the compound was not present at the numerical PQL value.
PQL varies with the moisture content of the sample.
PQL in bold for benzene exceeds Method A cleanup value.
PQL elevated due to elevated TPH in the individual samples.
MTCA Method A cleanup values are shown for reference purposes.
Values in parenthesis are Method B cleanup values.

Table 2C
cPAH Summary
Soil Samples-Initial Sampling
MW-102 at 10 Feet

Compound	Test Result	TEF	Adjusted Value
benzo(a)pyrene	0.014	1	0.014
benzo(a)anthracene	0.0093	0.1	0.00093
benzo(b)fluoranthene	0.0084	0.1	0.00084
benzo(k)fluoranthene	0.0087	0.1	0.00087
chrysene	0.011	0.01	0.00011
dibenz(a,h)anthracene	0.0078	0.1	0.00078
indeno(1,2,3-cd)pyrene	0.0078	0.1	0.00078
TOTAL CPAH	0.067		**0.01831**

Table 2C
(continued)
cPAH Summary
MW-102 at 8 Feet

Compound	Test Result	TEF	Adjusted Value
benzo(a)pyrene	0.067	1	0.067
benzo(a)anthracene	0.035	0.1	0.0035
benzo(b)fluoranthene	0.039	0.1	0.0039
benzo(k)fluoranthene	0.035	0.1	0.0035
chrysene	0.046	0.01	0.00046
dibenz(a,h)anthracene	0.0092	0.1	0.00092
indeno(1,2,3-cd)pyrene	0.0.3	0.1	0.003
TOTAL CPAH	0.2612		**0.08228**

Notes: All units are parts per million (ppm).
TEF is from Table 708-2.
MTCA Method A cleanup value is 0.1 ppm for the sum of the cPAHs.
MTCA Method B cleanup value is 0.14 for Benzo (a) Pyrene and for the sum of the cPAHs.

Table 2D
Petroleum Hydrocarbons and BETX
Soil-Performance Samples 2013

Exploration Number	Depth	Total Petroleum Hydrocarbons-Gasoline Range	Benzene	Ethyl Benzene	Toluene	m,p Xylene	o-Xylene
DPT 1	14	7.7U	0.02U	0.077U	0.077U	0.077U	0.077U
	19	5.4U	0.02U	0.054U	0.054U	0.054U	0.054U
DPT 2	14	4.8U	0.02U	0.048U	0.048U	0.048U	0.048U
	19	4.9U	0.02U	0.049U	0.049U	0.049U	0.049U
DPT 3	9	250	0.02U	0.065U	0.065U	0.093	0.065U
	14	5.6	0.02U	0.051U	0.051U	0.051U	0.051U
	19	4.8U	0.02U	0.048U	0.048U	0.048U	0.048U
DPT 4	9	5,100	0.022U	0.11U	0.11U	0.6	0.55U
	14	5.5U	0.02U	0.055U	0.055U	0.055U	0.055U
	19	4.5U	0.02U	0.045U	0.045U	0.045U	0.045U
DPT 5	9	37	0.02U	0.045U	0.045U	0.045U	0.045U
	14	4.8	0.02U	0.048U	0.048U	0.048U	0.048U
DPT 6	9	5.3U	0.02U	0.053U	0.053U	0.053U	0.053U
	14	11	0.02U	0.057U	0.057U	0.057U	0.057U
	19	5.7U	0.02U	0.057U	0.057U	0.057U	0.057U

Table 2D (continued)
Petroleum Hydrocarbons and BETX
Soil-Performance Samples 2013

Exploration Number	Depth	Total Petroleum Hydrocarbons-Gasoline Range	Benzene	Ethyl Benzene	Toluene	m,p Xylene	o-Xylene
DPT 7	9	920	0.02U	0.059U	0.059U	0.059U	0.059U
	14	5.1U	0.02U	0.051U	0.051U	0.051U	0.051U
	19	5.3U	0.02U	0.053U	0.053U	0.053U	0.053U
DPT 8	9	6.1U	0.02U	0.061U	0.061U	0.061U	0.061U
	14	4.7U	0.02U	0.047U	0.047U	0.047U	0.047U
DPT 9	9	5.6U	0.02U	0.056U	0.056U	0.056U	0.056U
	14	5.2U	0.02U	0.052U	0.052U	0.052U	0.052U
	19	4.9U	0.02U	0.049U	0.049U	0.049U	0.049U
DPT 10	9	5.4U	0.2U	0.054U	0.054U	0.054U	0.054U
	14	4.7U	0.02U	0.047U	0.047U	0.047U	0.047U
	19	5.4U	0.02U	0.054U	0.054U	0.054U	0.054U
DPT 11	4	4.9U	0.02U	0.049U	0.049U	0.049U	0.049U
MW-105	5	7,300	0.03U	0.23	0.15U	1.3	0.39
	10	1,000	0.02U	0.1U	0.1U	0.15	0.1U
	15	4.8U	0.02U	0.048U	0.048U	0.048U	0.048U
	20	14	0.02U	0.056U	0.056U	0.056U	0.056U
MW-106	7.5	3,300	0.02U	0.15U	0.15U	0.65	0.27
	12.5	5.6U	0.02U	0.056U	0.056U	0.056U	0.056U
	17.5	5.5U	0.02U	0.055U	0.055U	0.055U	0.055U
25-14	4	1,000	0.02U	0.38	0.051U	2.5	0.051U
	11	67	0.02U	0.049U	0.049U	0.049U	0.049U
	14	4.8U	0.02U	0.048U	0.048U	0.048U	0.048U
Cleanup Goals		2,000	18	8,000	6,400	16,000	

Table 3
Total Petroleum Hydrocarbons
Groundwater

Well Number	Date	TPH Gas Range	TPH Diesel Range	TPH Oil Range
MW-101	5/10/11	0.16	0.26U	0.41U
	9/29/11	0.29	0.26U	0.42U
MW-102	5/10/11	0.5U	0.27U	0.41U
	9/29/11	0.59	0.26U	0.41U
MW-103	5/10/11	**0.94**	**0.7U**	0.42U
	9/29/11	0.27	0.26U	0.41U
MW-104	6/29/11	0.1U	0.41U	0.26U
	9/29/11	0.1U	0.26U	0.41U
MTCA Method A		0.8 (1.0)	0.5	0.5
Surface Water Standard		No visible sheet		

Notes: All units are ppm.
U modifier indicates that the compound was not present at the PQL.
Cleanup value of 1.0 for TPHG is applicable when no BETX is present.

Table 4
Volatile Organic Compounds
Groundwater

Well Number	Date	Benzene	Ethyl benzene	Toluene	m,p-Xylene	o-Xylene
MW-101	5/10/11	1.3	0.95	1.0U	1.5	0.2U
	9/29/11	2.8	1.2	1.0U	0.4U	0.2U
MW-102	5/10/11	0.2U	0.2U	1.0U	0.4U	0.2U
	9/29/11	0.2U	0.2U	1.0U	0.4U	0.2U
MW-103	5/10/11	0.2U	0.2U	1.0U	0.4U	0.2U
	9/29/11	0.2U	0.2U	1.0U	0.4U	0.2U
MW-104	6/29/11	0.27	0.2U	1.0U	0.4U	0.2U
	9/29/11	0.21	0.2U	1.0U	0.4U	0.2U
MTCA A		5.0	700	1,000	1,000	
Method B Surface Water		23	6,900	19,000	16,000	

Table 4 (continued)
Volatile Organic Compounds
Groundwater

Well Number	Date	Vinyl Chloride	1,1-Dichlroethane	(cis) 1,2-Dichloroehtene	Trichloroethylene	Tetrachloroethylene
MW-101	5/10/11	0.2U	0.49	0.39	0.2U	0.2U
	9/29/11	0.2U	0.46	0.31	0.2U	0.2U
MW-102	5/10/11	0.2U	0.2U	0.2U	0.2U	0.2U
	9/29/11	0.2U	0.2U	0.2U	0.2U	0.2U
MW-103	5/10/11	0.2U	0.2U	0.2U	0.2U	0.2U
	9/29/11	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
	9/29/11	0.2U	0.2U	0.2U	0.2U	0.2U
MTCA	Method A	0.2	*1,600*	*16*	5.0	5.0

Well Number	Date	Isopropyl benzene	n-Propylbenzene	1,3,5-Trimehylbenzene	1,2,4-Trimethylbenzene
MW-101	5/10/11	1.1	1.1	0.77	5.2
	9/29/11	3.2	3.4	0.2U	0.9
MW-102	5/10/11	0.2U	0.2U	0.2U	0.2U
	9/29/11	0.22	0.2U	0.2U	0.2U
MW-103	5/10/11	0.2U	0.2U	0.2U	0.2U
	9/29/11	0.2U	0.2U	0.2U	0.2U
MW-104	6/29/11	0.2U	0.2U	0.2U	0.2U
	9/29/11	0.2U	0.2U	0.2U	0.2U
MTCA		NP	*800*	*80*	*15*

Notes: All units are parts per billion, ppb.
Cleanup values are Method A; values in italics are Method B groundwater or EPA PRG Region 9 values.
U modifier indicates that the analyte was not present at the numerical practical quantitation limit.
NP indicates that there is no screening level of cleanup level posted for the individual compound.

Table 5
Vapor Samples
TPH Results

Sample Designation	Date Sampled	TPHv (C5-C8) Aliphatic	TPHv (C9-C12) Aliphatic	TPHv (C9-C10) Aromatic
VP-1	1/29/13	150,000	520	100U
VP-2	6/29/11	5,500	90,000	500U
	1/29/13	4,600	120	100U
VP-3	6/29/11	2,200	55,000	500U
	1/29/13	2,400	180	100U
Ambient Basement Air	6/29/11	560	710	100U
Method B Sub slab Cleanup Value		27,000	1,400	1,800
Method B Indoor Air Cleanup Value		2,700	140	180

Table 6
Vapor Samples
Volatile Organic Compound Results

Sample Designation	Date	Acetone	Methylene Chloride	Benzene	Ethyl Benzene	Toluene	m,p-Xylene	o-xylene	Styrene	1,2,4-Trimethylbenzene	Chloroform
VP-1	1/29/13	24U	4.4	4.3	4.8	62	15	5.2	4.3U	5.0U	4.9U
VP-2	6/29/11	850	18U	16U	23	67	51	25	22U	25U	25U
	1/29/13	24U	5.1	3.2U	4.4U	47	12	4.4U	4.3U	5.0U	8.6
VP-3	6/29/11	570	18U	16U	22U	48	44U	22U	22U	25U	25U
	1/29/13	24U	5.2U	3.2U	4.4U	47	12	4.4U	4.3U	5.0U	4.9U
Ambient Basement Air	6/29/11	40	10	4.5	14	48	36	13	4.7	13	
Method B Sub slab Cleanup Value		NP	53	3.2	4,600	22,000	460	460	44	NP	1.1
Method B Indoor Air Cleanup Value		NP	5.3	0.32	460	2,200	46	46	4.4	NP	0.11

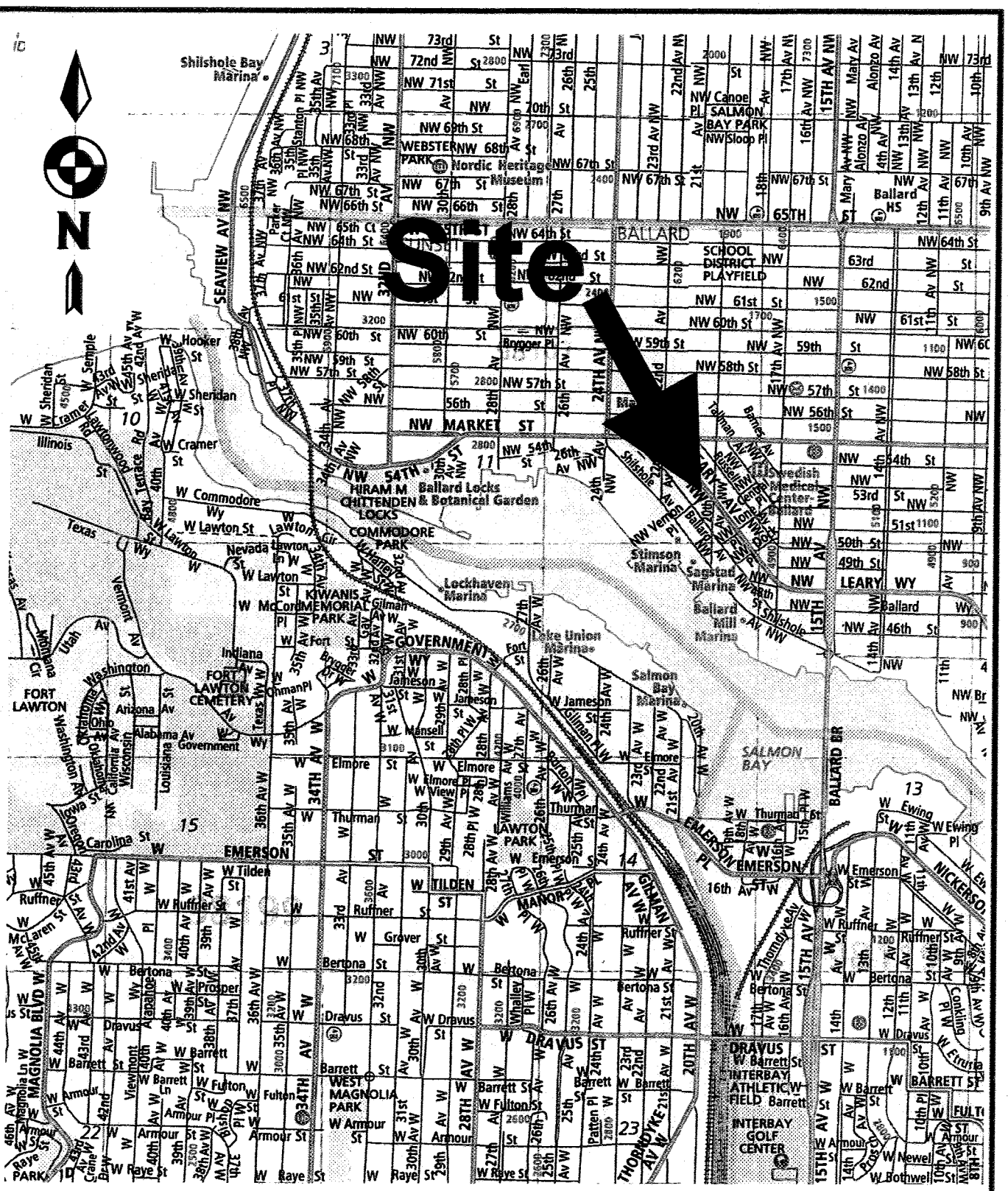
Notes for Table 5 and 6:

All values are $\mu g/m^3$.

U indicates that the analyte was not present at the numerical reporting limit.

Cleanup levels are from Ecology draft publication No. 09-09-047, dated October 2009.

Chloroform is attributed to leaks from city water supply system.



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

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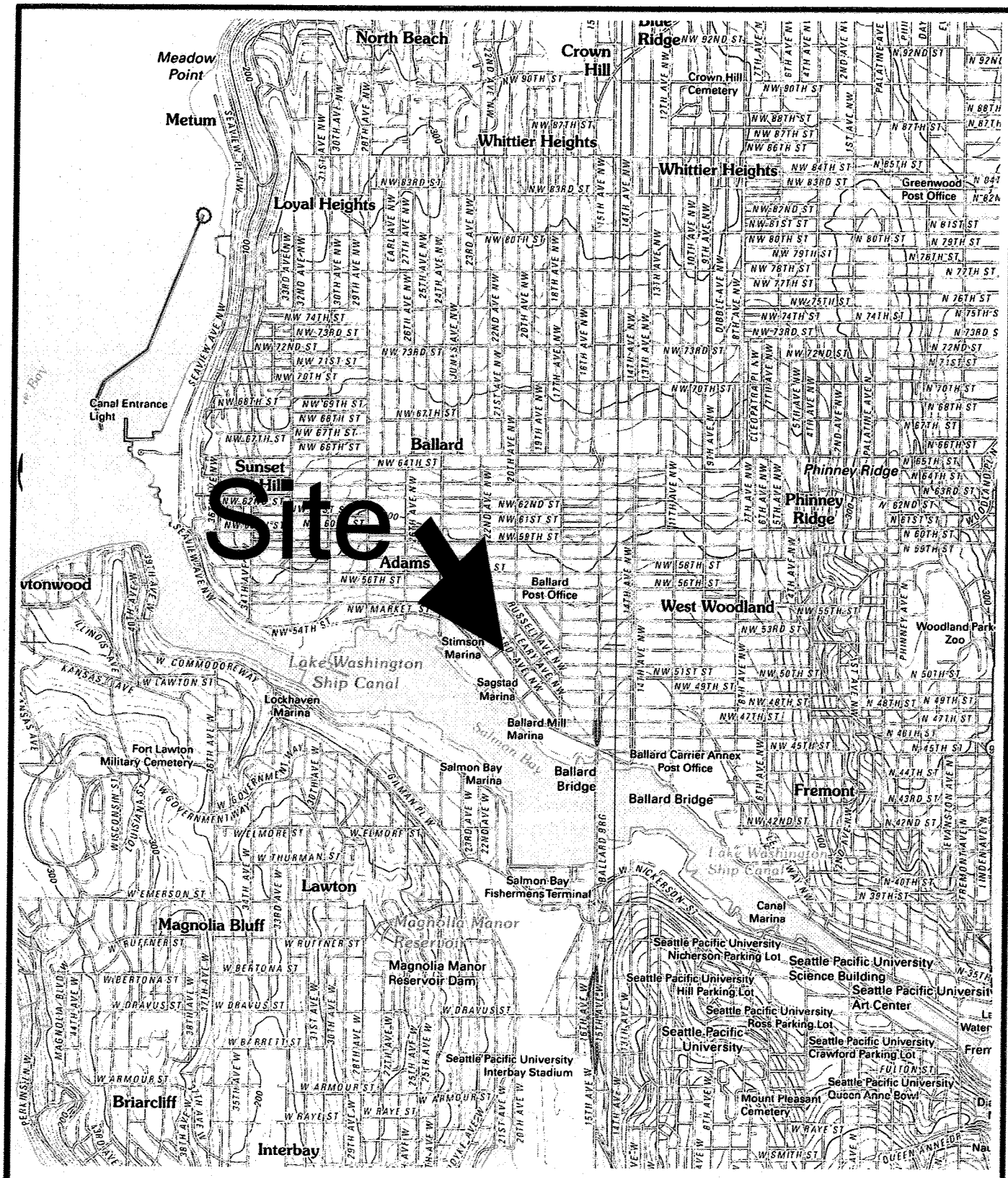
Vicinity Map
5221 Ballard Ave NW
Seattle, Washington

Proj. No T-6552	Date July 2013	Figure 1



Reference: Seattle North and Shilshole Bay USGS Quadrangles

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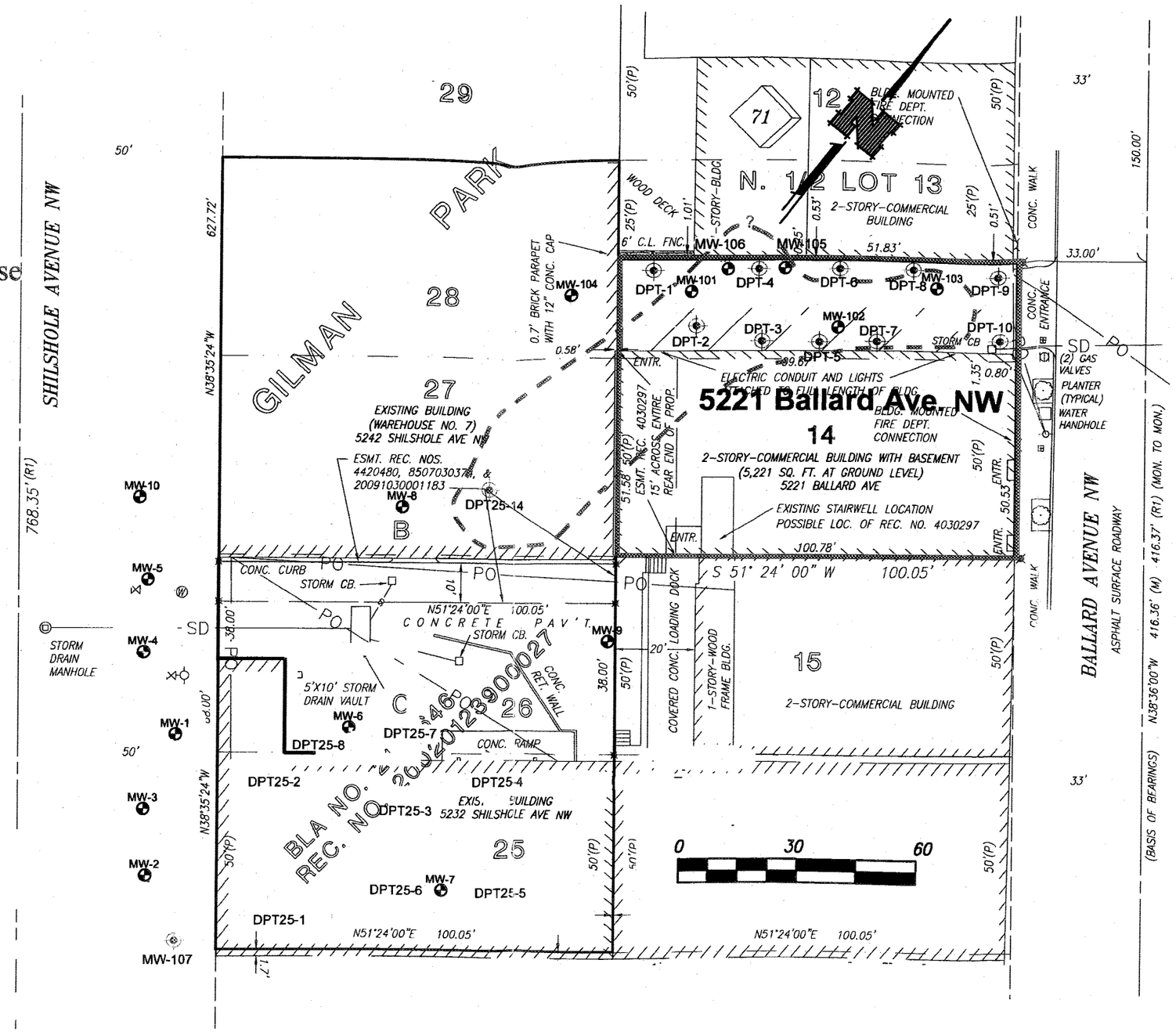
Topographic Vicinity Map
5221 Ballard Ave NW
Seattle, Washington

Proj. No T-6552	Date July 2013	Figure 2

Red outline shows tax parcel for 5221 Ballard Ave NW.

Dashed red line shows extent of soil impacts from past release at 5221 Ballard Ave NW



Location of new monitoring well

Locations of DPT's March 2013

Location of DPT's January 2013

Reference: Survey by Jim Hart and Associates

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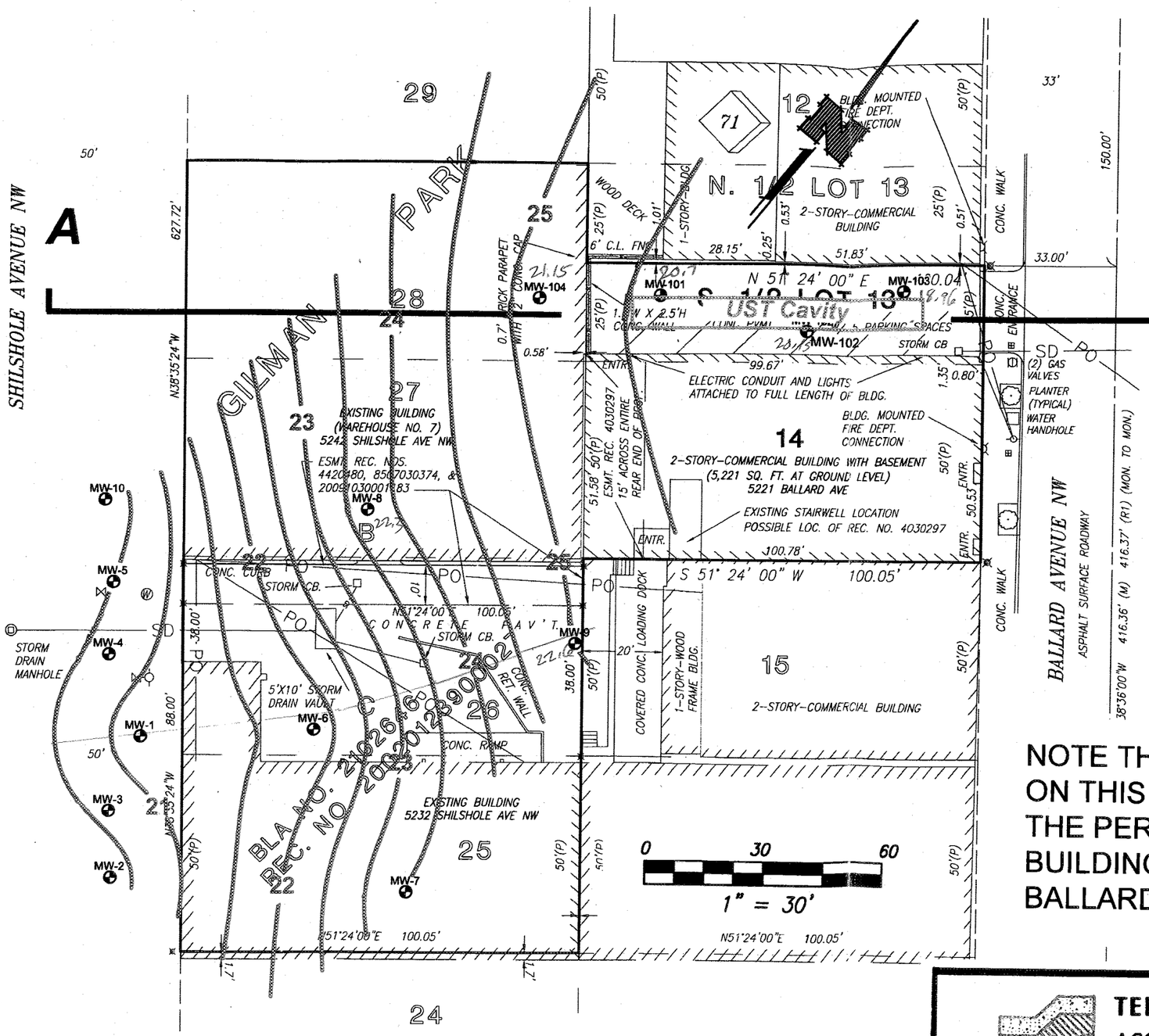
Index Location Plan
5221 Ballard Ave NW
Seattle, Washington

Proj. No. T-6552	Date July 2013	Figure 3



See figure 5 for generalized geologic section

LEGEND

MW-9 — Surveyed Location of Monitoring Well

B-3 — Approx. Location of Geotechnical Boring by others

NOTE THAT THE STATIC WATER LEVELS SHOWN ON THIS MAP ARE HISTORIC LEVELS THAT PREDATE THE PERMANENT DEWATERING AT THE NEW BUILDING ON THE NORTHEAST SIDE OF BALLARD AVE NW.

Reference: Survey by Jim Hart and Associates

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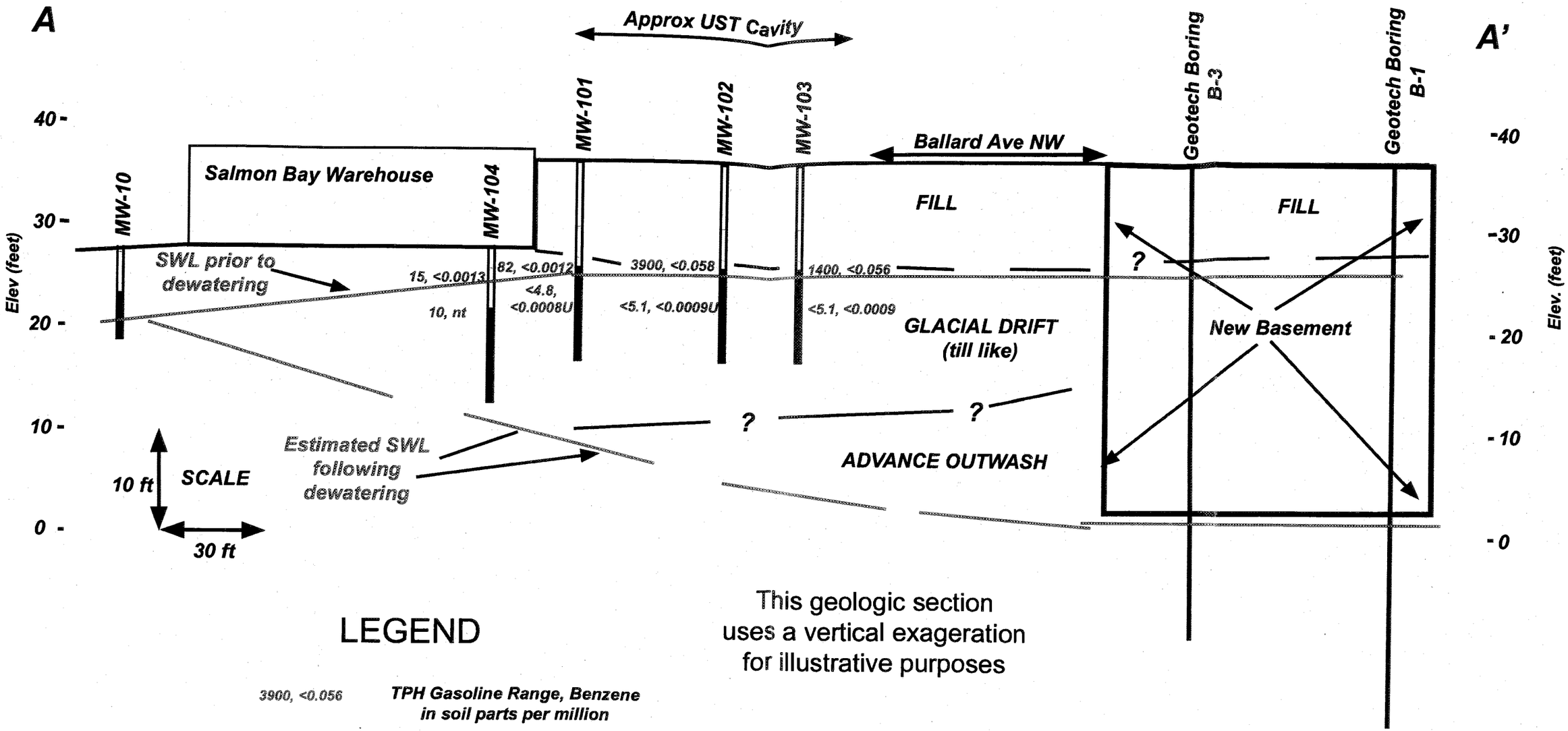
Groundwater Summary Plan
5221 Ballard Ave NW
Seattle, Washington

Proj. No. T-6552	Date July 2013	Figure 4



This geologic section uses a vertical exageration for illustrative purposes

LEGEND

3900, <0.056 — **TPH Gasoline Range, Benzene in soil parts per million**

Reference: Locations from Survey by Jim Hart and Associates

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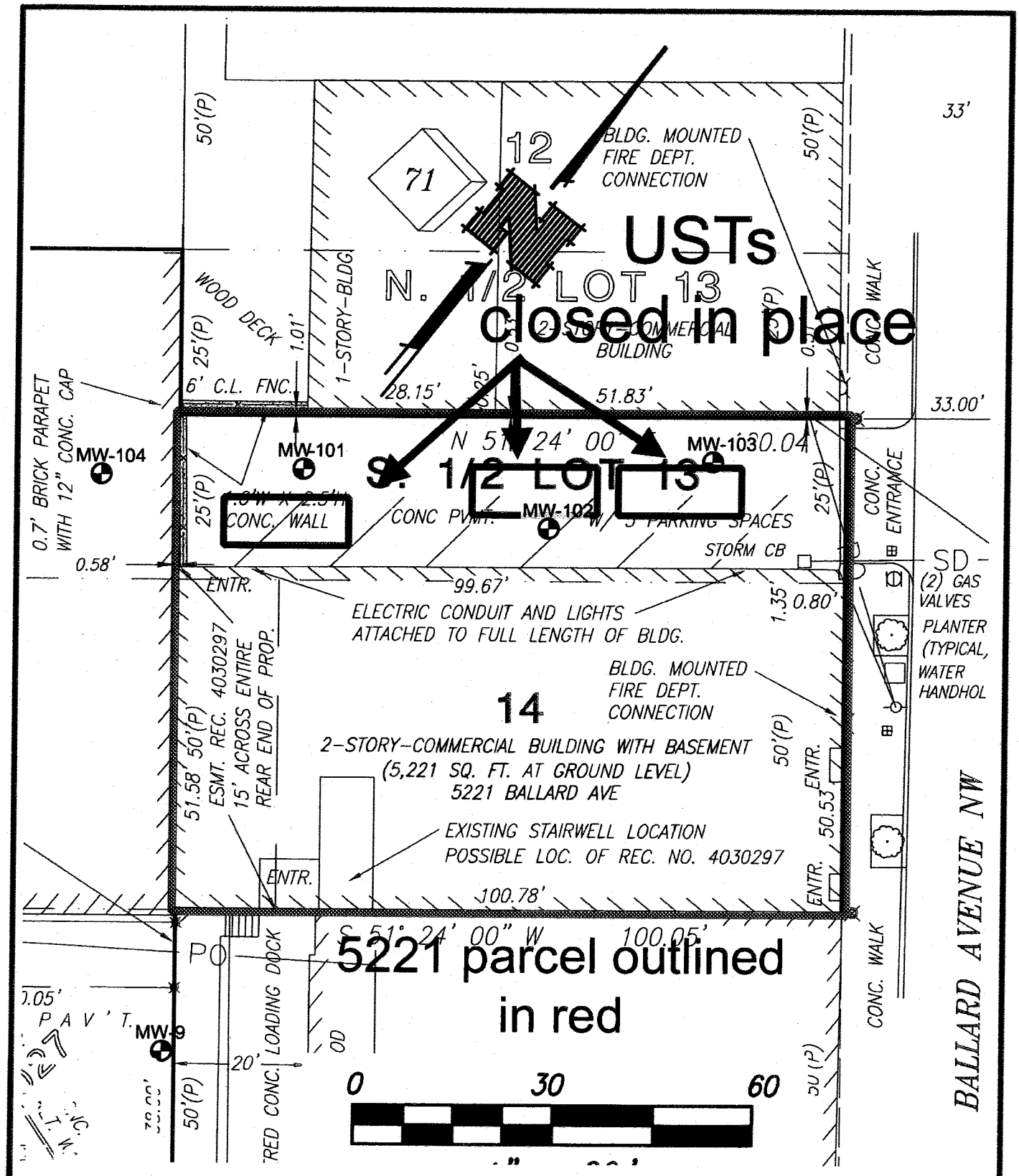
Generalized Geologic Section
5221 Ballard Ave NW
Seattle, Washington

Proj. No. T-6552	Date July 2013	Figure 5



Reference: Site Survey by Hart Associates and Terra Associates field notes

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UST Location Sketch
5221 Ballard Ave NW
Seattle, Washington

Proj. No T-6552	Date July 2013	Figure 6

APPENDIX A

PRIOR REPORT LIST

APPENDIX A – PRIOR REPORTS WITH SAMPLING BY OTHERS

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

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

These reports include information regarding the adjacent parcel identified as Shilshole Parcel.

APPENDIX B
SUBSURFACE EXPLORATION/FIELD SAMPLING

5221 Ballard Avenue NW
Seattle, Washington

Explorations MW-101, MW-102, and MW-103 were advanced using a drill rig owned and operated by Cascade Drilling. MW-104 was drilled using a limited access drill rig owned and operated by BoreTech. All drilling was done using hollow stem augers. In MW-101, MW-102, and MW-103, the samples were taken using a 2-inch ID sampler driven using a 300 pound hammer dropping 30 inches. Due to low overhead in the warehouse, the boom could not be raised to allow SPT samples to be taken. Soil samples were taken from the open hole using a hand auger at selected depths. Prior to taking soil samples, the drill tools were removed from the hole.

The test pits in the basement of 5221 were hand excavated using a post hole digger and a hand auger.

Explorations DPT 1 through 11 were advanced using a Geoprobe Rig owned and operated by Cascade Drilling. The sampling system consists of steel rods that are driven into the ground using a pneumatic hammer. The rods have a length of five feet and are provided with a PVC liner to contain the soil sample within the tooling. In each Geo Probe, the lower one-foot of the recovered core was sampled for analytical testing. The new vacuum extraction wells, MW-105 and MW-106 were drilled using hollow stem augers and a drill rig owned and operated by Cascade Drilling. Samples were taken on five-foot intervals.

All drilling tools were cleaned prior to starting explorations and in between explorations to reduce the potential for cross contamination.

A representative of our firm continuously monitored the drilling and kept a detailed log of each test exploration. Samples recovered during drilling were logged by our representative and placed into laboratory-prepared glassware. All samples were refrigerated pending delivery to OnSite Environmental Inc. in Redmond, Washington. We followed chain of custody protocols for all samples.

Samples were screened in the field using the headspace and sheen methods. For the headspace screening, a sub sample of the soil is placed in a plastic bag and allowed to reach ambient temperatures. The probe from a handheld Photo Ionization Device is then inserted to measure the air in the headspace of the bag. The sheen test consists of placing a subsample into a pan with clean water to see if sheen develops.

Groundwater monitoring wells were constructed in each of the borings conducted for this study. The wells are built with two-inch diameter PVC well materials. The screens are factory slotted with 0.01 inch openings. The screen segments were backfilled with silica sand. All wells were constructed in accordance with Washington State well construction requirements. The vapor probes were hand excavated. The logs for the vapor probes are below in Table B-1.

MAJOR DIVISIONS			LETTER SYMBOL	TYPICAL DESCRIPTION
COARSE GRAINED SOILS More than 50% material larger than No. 200 sieve size	**GRAVELS** More than 50% of coarse fraction is larger than No. 4 sieve	Clean Gravels (less than 5% fines)	GW	Well-graded gravels, gravel-sand mixtures, little or no fines.
			GP	Poorly-graded gravels, gravel-sand mixtures, little or no fines.
		Gravels with fines	GM	Silty gravels, gravel-sand-silt mixtures, non-plastic fines.
			GC	Clayey gravels, gravel-sand-clay mixtures, plastic fines.
	SANDS More than 50% of coarse fraction is smaller than No. 4 sieve	Clean Sands (less than 5% fines)	SW	Well-graded sands, sands with gravel, little or no fines.
			SP	Poorly-graded sands, sands with gravel, little or no fines.
		Sands with fines	SM	Silty sands, sand-silt mixtures, non-plastic fines.
			SC	Clayey sands, sand-clay mixtures, plastic fines.
FINE GRAINED SOILS More than 50% material smaller than No. 200 sieve size	**SILTS AND CLAYS** Liquid Limit is less than 50%		ML	Inorganic silts, rock flour, clayey silts with slight plasticity.
			CL	Inorganic clays of low to medium plasticity. (Lean clay)
			OL	Organic silts and organic clays of low plasticity.
	SILTS AND CLAYS Liquid Limit is greater than 50%		MH	Inorganic silts, elastic.
			CH	Inorganic clays of high plasticity. (Fat clay)
			OH	Organic clays of high plasticity.
HIGHLY ORGANIC SOILS			PT	Peat.

DEFINITION OF TERMS AND SYMBOLS

COHESIONLESS

Density	Standard Penetration Resistance In Blows/Foot
Very Loose	0-4
Loose	4-10
Medium Dense	10-30
Dense	30-50
Very Dense	>50

COHESIVE

Consistancy	Standard Penetration Resistance In Blows/Foot
Very Soft	0-2
Soft	2-4
Medium Stiff	4-8
Stiff	8-16
Very Stiff	16-32
Hard	>32

I	2" OUTSIDE DIAMETER SPILT SPOON SAMPLER
II	2.4" INSIDE DIAMETER RING SAMPLER OR SHELBY TUBE SAMPLER
▼	WATER LEVEL (Date)
Tr	TORVANE READINGS, tsf
Pp	PENETROMETER READING, tsf
DD	DRY DENSITY, pounds per cubic foot
LL	LIQUID LIMIT, percent
PI	PLASTIC INDEX
N	STANDARD PENETRATION, blows per foot

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

Unified Soil Classification System
5221 Ballard Ave NW
Seattle, Washington

Proj. No. T-6552	Date May 2013	Figure B-1

LOG OF DPT NO. DPT-1

Figure No. B-2

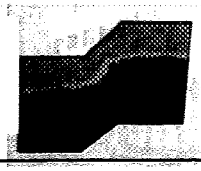
Project: 5221 Ballard Avenue **Project No:** T-6552 **Date Drilled:** 1/28/13

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

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

Depth (ft)	Sample Interval	Soil Description	Odor/Sheen	Recovery % (20 40 60 80 120)	PID (PPM)	Observ. Well
0		(4 inches CONCRETE SLAB)				
1		4 inches SAND, moist. (Fill)				
2–4		Gray and dark brown silty SAND with organics, moist.	No/No	50	0.0	
5–9		Gray and brown silty SAND, fine grained, moist. (SM)	No/No	80	3.2	
10–13			Light Odor		14.4	
14–19		Gray and brown SAND with gravel and medium to fine grained SAND, moist. (SP)	No/No	80	0.0	
20		Probe terminated at 20 feet. All collected from the lower foot of recovered sample.		80	0.0	
21–25						

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



Terra Associates, Inc.

Consultants in Geotechnical Engineering, Geology and Environmental Earth Sciences

LOG OF DPT NO. DPT-2

Figure No. B-3

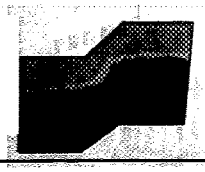
Project: 5221 Ballard Avenue **Project No:** T-6552 **Date Drilled:** 1/28/13

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

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

Depth (ft)	Sample Interval	Soil Description	Odor/Sheen	Recovery % (20 40 60 80 120)	PID (PPM)	Observ. Well
1–8		(4 inches CONCRETE SLAB) FILL: brown silty sand with gravel, moist, occasional brick chunks.	No/No	30	0.0	
9				40	56.0	
10–18		Brown becoming gray silty SAND, moist. (SM) Mottled in places. Occasional gravel.	Light Odor/ Light Sheen No/No	100	415.0 0.0 3.1	
19–20		Gray fine grained SAND, moist. (SP)	No/No	100	0.0	
21–25		Probe terminated at 20 feet. All samples collected from lower foot of recovered sample.				

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



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LOG OF DPT NO. DPT-3

Figure No. B-4

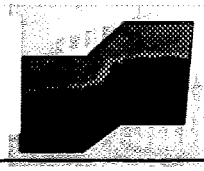
Project: 5221 Ballard Avenue **Project No:** T-6552 **Date Drilled:** 1/28/13

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

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

Depth (ft)	Sample Interval	Soil Description	Odor/Sheen	Recovery % (20 40 60 80 120)	PID (PPM)	Observ. Well
1–8		(5 inches CONCRETE SLAB, sand, moist. (Fill) FILL: gray and brown silty sand, moist, mottled, occasional brick chunks.	No/No	50	0.0	
9–14		Gray silty SAND, fine grained, moist. (SM)	Moderate Odor and Sheen	100 100	1067.0	
15–20		Gray SAND with gravel, fine grained, moist. (SP) Becomes medium grained.	Light Odor No/No	80	160 0.0	
21–25		Probe terminated at 20 feet. All samples collected from lower foot of recovered sample.				

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



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LOG OF DPT NO. DPT-4

Figure No. B-5

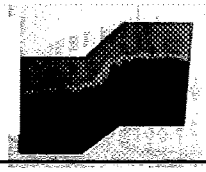
Project: 5221 Ballard Avenue **Project No:** T-6552 **Date Drilled:** 1/28/13

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

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

Depth (ft)	Sample Interval	Soil Description	Odor/Sheen	Recovery % (20 40 60 80 120)	PID (PPM)	Observ. Well
1		(4 inches CONCRETE SLAB)	No/No			
2		FILL: gray and brown silty sand with some organics, moist.				
3						
4		Occasional brick chunks.	Light Odor/ No Sheen	70	23.5	
5						
6						
7			Moderate Sheen			
8						
9						
10				80	289	
11						
12		Gray silty SAND with gravel, moist. (SM)				
13			No/No			
14						
15				100	0.0	
16						
17						
18		Gray SAND, fine to medium grained, moist. (SP)	No/No			
19						
20				100	0.0	
21		Probe terminated at 20 feet. All samples collected from lower foot of recovered sample.				
22						
23						
24						
25						

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



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LOG OF DPT NO. DPT-5

Figure No. B-6

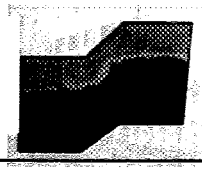
Project: 5221 Ballard Avenue **Project No:** T-6552 **Date Drilled:** 1/28/13

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

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

Depth (ft)	Sample Interval	Soil Description	Odor/Sheen	Recovery % (20 40 60 80 120)	PID (PPM)	Observ. Well
1–7		FILL: gray, black, and brown silty sand, small brick chunks, moist.	No/No	60	0.0	
8–13		Gray silty SAND, moist. (SM)	Light Odor/ No Sheen; No/No	80	153	
14–19		Gray SAND, medium grained, moist. (SP)	No/No	100	3.4	
20–25		Probe terminated at 20 feet. All samples taken from lower foot of recovered sample.		100	0.0	

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



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LOG OF DPT NO. DPT-6

Figure No. B-7

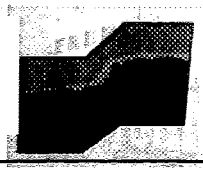
Project: 5221 Ballard Avenue **Project No:** T-6552 **Date Drilled:** 1/28/13

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

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

Depth (ft)	Sample Interval	Soil Description	Odor/Sheen	Recovery % (20 40 60 80 120)	PID (PPM)	Observ. Well
1–8		(4 inches CONCRETE SLAB) 3 inches SAND, moist. (Fill) FILL: gray and brown silty sand/sandy silt, moist.	No/No	80	0.0	
9–17		SAND with silt, fine grained, moist. (SP-SM)	No/No No/No	80 100	0.0 0.0	
18–20		Gray SAND, fine to medium grained, moist. (SP)	No/No	50	11.5	
21–25		Probe terminated at 20 feet. All samples taken from lower foot of recovered sample.				

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



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LOG OF DPT NO. DPT-7

Figure No. B-8

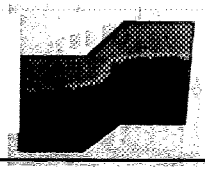
Project: 5221 Ballard Avenue **Project No:** T-6552 **Date Drilled:** 1/28/13

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

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

Depth (ft)	Sample Interval	Soil Description	Odor/Sheen	Recovery % (20 40 60 80 120)	PID (PPM)	Observ. Well
1–7		FILL: gray and brown silty sand, brick chunks, moist.	No/No	60	0.0	
8–9		Gray silty SAND, moist. (SM)	Light Odor/ Sheen	80	969	
10–19		Gray SAND, moist, medium grained with small gravel. (SP)	No/No No/No	60 100	2.1 0.0	
20–25		Probe terminated at 20 feet. All samples taken from lower foot of recovered sample.				

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



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LOG OF DPT NO. DPT-8

Figure No. B-9

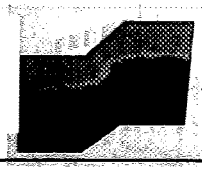
Project: 5221 Ballard Avenue **Project No:** T-6552 **Date Drilled:** 1/28/13

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

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

Depth (ft)	Sample Interval	Soil Description	Odor/Sheen	Recovery % (20 40 60 80 120)	PID (PPM)	Observ. Well
1–7		(4 inches CONCRETE SLAB) FILL: gray and brown silty sand, brick chunks, moist.	No/No	60	0.0	
8–13		Gray silty SAND with gravel, moist. (SM)	No/No	100	15.0	
14–20		Gray SAND, fine to medium grained, moist. (SP)	No/No No/No	80 100	0.0 0.0	
21–25		Probe terminated at 20 feet. All samples taken from lower foot of recovered sample.				

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



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LOG OF DPT NO. DPT-9

Figure No. B-10

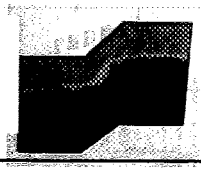
Project: 5221 Ballard Avenue **Project No:** T-6552 **Date Drilled:** 1/28/13

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

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

Depth (ft)	Sample Interval	Soil Description	Odor/Sheen	Recovery % (20 40 60 80 120)	PID (PPM)	Observ. Well
1–8		(4 inches CONCRETE SLAB) FILL: gray and brown silty sand with gravel, brick chunks, moist.	No/No	90	0.0	
9–10		Gray silty SAND with gravel, moist. (SM)	No/No	60	0.0	
11–19		Gray SAND, fine to medium grained, moist. (SP) Becomes fine grained.	No/No No/No	80 60	0.0 0.0	
20–25		Probe terminated at 20 feet. All samples taken from lower foot of recovered sample.				

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



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LOG OF DPT NO. DPT-10

Figure No. B-11

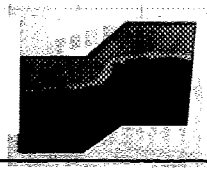
Project: 5221 Ballard Avenue **Project No:** T-6552 **Date Drilled:** 1/28/13

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

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

Depth (ft)	Sample Interval	Soil Description	Odor/Sheen	Recovery % (20 40 60 80 120)	PID (PPM)	Observ. Well
1–8		FILL: brown silty sand with gravel, brick chunks, moist.	No/No	40	0.0	
9–10		Gray SAND with silt, medium to fine grained, moist. (SP-SM)	No/No	70	0.0	
11–17		Gray SAND, medium to coarse grained. (SP)	No/No	70	0.0	
17–19		Becomes fine grained. Mottled	No/No	100	0.0	
20–25		Probe terminated at 20 feet. All samples taken from lower foot of recovered sample.				

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



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LOG OF DPT NO. DPT-11

Figure No. B-12

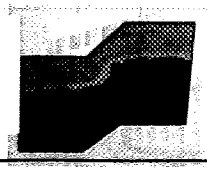
Project: 5221 Ballard Avenue **Project No:** T-6552 **Date Drilled:** 1/28/13

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

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

Depth (ft)	Sample Interval	Soil Description	Odor/Sheen	Recovery % (20 40 60 80 120)	PID (PPM)	Observ. Well
0		(10 inches CONCRETE SLAB)				
1		Brown SILT, moist. (ML)				
2						
3		Gray silty SAND, moist. (SM)	Light Odor/ Light Sheen			
4						
5		Probe terminated at 5 feet due to equipment access restrictions.		100	514	
6						
7						
8						
9						
10						

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



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LOG OF MONITORING WELL MW-101

Figure No. B-13

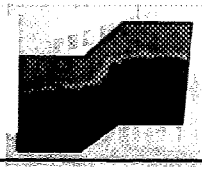
Project: 5221 Ballard Avenue North **Project No:** T-6552 **Date Drilled:** 5/6/11

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

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

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

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



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LOG OF MONITORING WELL MW-102

Figure No. B-14

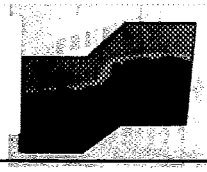
Project: 5221 Ballard Avenue North **Project No:** T-6552 **Date Drilled:** 5/6/11

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

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

Depth (ft)	Sample Interval	Soil Description	Consistency/ Relative Density	Moisture Content % Wp |-----x-----| Wl 10 30 50 70 90	Pocket Penetrometer △ TSF △ 1 2 3 4 SPT (N) • Blows/ft • 10 20 30 40	Observ. Well
1–7		(7 inches ASPHALT) Brown silty SAND with gravel, moist. (Till)	Loose/Soft		4	
8–9		Pea gravel with silt and brick bits, moderate hydrocarbon odor. (Fill)	Loose			
10–11		Gray silty SAND with gravel, moist, becomes wet by 12.5 feet. (Till)	Medium Dense		17	
12–13			Dense		50	
14–15		Minor amount of silt by 15 feet.			50	
16–17			Dense		50	
18–20					50	
21–22		Boring terminated at 20 feet. 2-inch PVC monitoring well installed as shown using 0.010 slotted screen from 10 to 20 feet.				
23–25						

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



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LOG OF MONITORING WELL MW-103

Figure No. B-15

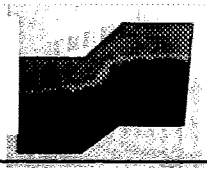
Project: 5221 Ballard Avenue North **Project No:** T-6552 **Date Drilled:** 5/6/11

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

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

Depth (ft)	Sample Interval	Soil Description	Consistency/ Relative Density	Moisture Content % Wp |-----x-----| Wl 10 30 50 70 90	Pocket Penetrometer △ TSF △ 1 2 3 4 / SPT (N) • Blows/ft • 10 20 30 40	Observ. Well
1		(5 inches ASPHALT SLAB)				
2		Brown silty SAND/sandy SILT, small brick bits, moist. (Fill)	Loose/Soft			
3						
4						
5					5	
6		Light hydrocarbon odor.				
7						
8						
9			Medium Dense			
10					25	
11						
12						
13		Gray silty SAND, moist, wet by 12.5 feet, light to moderate hydrocarbon odor, slight sheen from 10 to 14 feet. (TIII)	Dense		40	
14						
15					50	
16						
17					50	
18						
19						
20					50	
21		Boring terminated at 20 feet. 2-inch PVC monitoring well installed as shown using 0.010 slotted screen from 10 to 20 feet.				
22						
23						
24						
25						

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



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LOG OF MONITORING WELL MW-104

Figure No. B-16

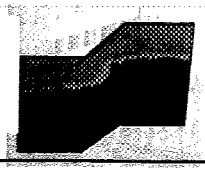
Project: 5221 Ballard Avenue North **Project No:** T-6552 **Date Drilled:** 6/13/11

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
0		7-inch thick concrete slab.				
1–3		Dark brown sandy SILT, moist. Becomes gray.	Light Odor/No	98.0	0.0	
4–5			No/No	100.0	0.0	
6–9					0.0	
10			No/No			
11–14		Saturated gray silty SAND/sandy SILT. (SM-ML)			0.0	
14–15			No/No	100.0		
16–20		Terminated at 15 feet. 2-inch PVC monitoring well with .10 screen from 5 to 15 feet constructed as shown.				

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



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LOG OF MONITORING WELL MW-105

Figure No. B-17

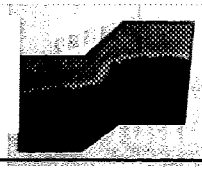
Project: 5221 Ballard Avenue **Project No:** T-6552 **Date Drilled:** 2/18/13

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

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

Depth (ft)	Sample Interval	Soil Description	Odor/Sheen	Recovery % (20 40 60 80 100)	PID (PPM)	Observ. Well
1–4		(2 inches ASPHALT) FILL: brown sand, moist.	Light Odor on Lower 8 Feet			
5				100.0 *	711	
6–9		FILL: gray and dark brown silty sand with gravel, moist, occasional brick chunks. 3/3/4	Moderate Odor			
10				100.0 *	474	
11–13		Occasional organics. 9/18/44				
14–16		Gray silty SAND with gravel, fine grained, moist, slightly mottled. (SM) 33/50 for 6	No/No	100.0 *	10.1	
17–19		Gray SAND, fine grained, moist. (SP)	No/No	100.0 *	9.0	
20–21						
22–25		Boring terminated at 21.5 feet. 2-inch PVC monitoring well constructed with 20 slot screen from 10 to 20 feet. 300 ib hammer.				

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



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LOG OF MONITORING WELL MW-106

Figure No. B-18

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

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

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

Depth (ft)	Sample Interval	Soil Description	Odor/Sheen	Recovery % (20 40 60 80 100)	PID (PPM)	Observ. Well
1–5		(2 inches ASPHALT) FILL: brown sand and silty sand with gravel, moist.				
6–9		FILL: gray and dark brown silt and silty sand with gravel, moist, mottled, occasional brick chunks.	Light Odor	100.0	655	
10–12				50.0		
13–17		Gray and brown silty SAND with gravel, moist, mottled. (SM)	No/No		1.6	
18–20		Gray SAND with gravel, moist. (SP)	No/No	33.0	0.0	
21–25		Boring terminated at 20 feet. 2-inch PVC monitoring well constructed with 20 slot screen from 10 to 20 feet. 300 ib hammer.				

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

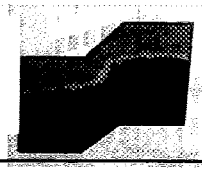

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TABLE B-1
Vapor Probe Logs
VP-1

Depth (Below Top of Slab)	Soils Encountered	Sheen/Odor/PID
0-4"	Concrete slab	
4-12"	1-inch minus clean round rock	No/No/0.0
12-18"	Mottled gray and brown silty sand with gravel, moist, loose to medium dense. (SM)	No//No/0.0
18-54"	Brown silty sand with gravel sandy gravels lenses. (SM) Seepage at 3 feet.	No/No/0.0

VP-2

Depth (Below Top of Slab)	Soils Encountered	Sheen/Odor/PID
0-4"	Concrete slab	
4-12"	Brown sandy gravel, moist.	Light odor
12-48"	Gray/brown sandy silt with gravel, wet by 3.5 feet.	659 ppm @ 18" 45.4 ppm @ 4'

VP-3

Depth (Below Top of Slab)	Soils Encountered	Sheen/Odor/PID
0-5"	Concrete slab	
5-13"	Brown gravelly sand, moist.	No/No/0.0
13-54"	Gray silty sand with gravel, moist becoming wet with depth. (SM)	Light odor 24.7ppm @ 18" 0.0 ppm @ 48"

During groundwater sampling, some basic parameters were monitored. The recent and archived groundwater parameters are summarized below in Table B-2.

Table B-2
Groundwater Parameters

Well Number	Date	pH	Conductivity	DO	ORP	Temp.
MW-101	5/10/11	NM	NM	NM	NM	15.3
	7/6/11	6.55	148	0.32	-10	16.0
	9/29/11	6.4	699	3.84	-115	16.7
	11/18/11	7.28	929	5.09	-65	15.19

Table B-2 (continued)
Groundwater Parameters

Well Number	Date	pH	Conductivity	DO	ORP	Temp.
MW-102	5/10/11	NM	NM	NM	NM	15.2
	9/29/11	6.44	483	1.7	-117	17.4
	11/18/11	7.09	889	1.59	-62.6	15.23
MW-103	5/10/11	NM	NM	NM	NM	16.1
	7/6/11	6.49	113	0.3	-45	16.6
	9/29/11	6.39	455	1.8	-120	18
	11/18/11	6.34	962	6.32	59.4	15.53
MW-104	9/29/11	6.35	794	1.7	-99	17.4
	11/18/11	7.11	941	4.93	-37.5	14.44

Notes: DO is measured in ppm.
ORP is measured in mille volts.
Conductivity is measured in micro Siemens.
pH is in standard units.
Temperature is in degrees Celsius.
Readings for MW-101 on November 18, 2011 are prior to full purging of well, well MW-101 pumped dry due to decreased water level in well.

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

February 19, 2013

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

Re: Analytical Data for Project 6552
Laboratory Reference No. 1301-194

Dear Chuck:

Enclosed are the analytical results and associated quality control data for samples submitted on January 29, 2013.

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

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

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: February 19, 2013
Samples Submitted: January 29, 2013
Laboratory Reference: 1301-194
Project: 6552

Case Narrative

Samples were collected on January 28, 2013 and received by the laboratory on January 29, 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

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

The chromatograms for samples DPT-3 5-10, DPT-3 10-15, DPT-4 5-10, DPT-5 5-10, DPT-6 10-15 and DPT-7 5-10 are similar to mineral spirits.

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.

Volatile Petroleum Hydrocarbons Analysis

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

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

Date of Report: February 19, 2013
Samples Submitted: January 29, 2013
Laboratory Reference: 1301-194
Project: 6552

NWTPH-Gx/BTEX

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**DPT-1 10-15**					
Laboratory ID:	01-194-03					
Benzene	**ND**	0.020	EPA 8021B	1-30-13	2-1-13	
Toluene	**ND**	0.077	EPA 8021B	1-30-13	2-1-13	
Ethyl Benzene	**ND**	0.077	EPA 8021B	1-30-13	2-1-13	
m,p-Xylene	**ND**	0.077	EPA 8021B	1-30-13	2-1-13	
o-Xylene	**ND**	0.077	EPA 8021B	1-30-13	2-1-13	
Gasoline	**ND**	7.7	NWTPH-Gx	1-30-13	2-1-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*120*	*70-132*				
Client ID:	**DPT-1 15-20**					
Laboratory ID:	01-194-04					
Benzene	**ND**	0.020	EPA 8021B	1-30-13	2-1-13	
Toluene	**ND**	0.054	EPA 8021B	1-30-13	2-1-13	
Ethyl Benzene	**ND**	0.054	EPA 8021B	1-30-13	2-1-13	
m,p-Xylene	**ND**	0.054	EPA 8021B	1-30-13	2-1-13	
o-Xylene	**ND**	0.054	EPA 8021B	1-30-13	2-1-13	
Gasoline	**ND**	5.4	NWTPH-Gx	1-30-13	2-1-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*102*	*70-132*				
Client ID:	**DPT-2 10-15**					
Laboratory ID:	01-194-07					
Benzene	**ND**	0.020	EPA 8021B	1-30-13	2-1-13	
Toluene	**ND**	0.048	EPA 8021B	1-30-13	2-1-13	
Ethyl Benzene	**ND**	0.048	EPA 8021B	1-30-13	2-1-13	
m,p-Xylene	**ND**	0.048	EPA 8021B	1-30-13	2-1-13	
o-Xylene	**ND**	0.048	EPA 8021B	1-30-13	2-1-13	
Gasoline	**ND**	4.8	NWTPH-Gx	1-30-13	2-1-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*99*	*70-132*				

Date of Report: February 19, 2013
Samples Submitted: January 29, 2013
Laboratory Reference: 1301-194
Project: 6552

NWTPH-Gx/BTEX

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**DPT-2 15-20**					
Laboratory ID:	01-194-08					
Benzene	ND	0.020	EPA 8021B	1-30-13	2-1-13	
Toluene	ND	0.049	EPA 8021B	1-30-13	2-1-13	
Ethyl Benzene	ND	0.049	EPA 8021B	1-30-13	2-1-13	
m,p-Xylene	ND	0.049	EPA 8021B	1-30-13	2-1-13	
o-Xylene	ND	0.049	EPA 8021B	1-30-13	2-1-13	
Gasoline	ND	4.9	NWTPH-Gx	1-30-13	2-1-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*102*	*70-132*				
Client ID:	**DPT-3 5-10**					
Laboratory ID:	01-194-10					
Benzene	ND	0.020	EPA 8021B	1-30-13	2-4-13	
Toluene	ND	0.065	EPA 8021B	1-30-13	2-4-13	
Ethyl Benzene	ND	0.065	EPA 8021B	1-30-13	2-4-13	
m,p-Xylene	0.093	0.065	EPA 8021B	1-30-13	2-4-13	
o-Xylene	ND	0.065	EPA 8021B	1-30-13	2-4-13	
Gasoline	250	13	NWTPH-Gx	1-30-13	2-1-13	Z
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*93*	*70-132*				
Client ID:	**DPT-3 10-15**					
Laboratory ID:	01-194-11					
Benzene	ND	0.020	EPA 8021B	1-30-13	2-1-13	
Toluene	ND	0.051	EPA 8021B	1-30-13	2-1-13	
Ethyl Benzene	ND	0.051	EPA 8021B	1-30-13	2-1-13	
m,p-Xylene	ND	0.051	EPA 8021B	1-30-13	2-1-13	
o-Xylene	ND	0.051	EPA 8021B	1-30-13	2-1-13	
Gasoline	5.6	5.1	NWTPH-Gx	1-30-13	2-1-13	Z
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*99*	*70-132*				

Date of Report: February 19, 2013
Samples Submitted: January 29, 2013
Laboratory Reference: 1301-194
Project: 6552

NWTPH-Gx/BTEX

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**DPT-3 15-20**					
Laboratory ID:	01-194-12					
Benzene	**ND**	0.020	EPA 8021B	1-30-13	2-1-13	
Toluene	**ND**	0.048	EPA 8021B	1-30-13	2-1-13	
Ethyl Benzene	**ND**	0.048	EPA 8021B	1-30-13	2-1-13	
m,p-Xylene	**ND**	0.048	EPA 8021B	1-30-13	2-1-13	
o-Xylene	**ND**	0.048	EPA 8021B	1-30-13	2-1-13	
Gasoline	**ND**	4.8	NWTPH-Gx	1-30-13	2-1-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*94*	*70-132*				
Client ID:	**DPT-4 5-10**					
Laboratory ID:	01-194-14					
Benzene	**ND**	0.022	EPA 8021B	1-30-13	2-1-13	
Toluene	**ND**	0.11	EPA 8021B	1-30-13	2-1-13	
Ethyl Benzene	**ND**	0.11	EPA 8021B	1-30-13	2-1-13	
m,p-Xylene	**0.60**	0.11	EPA 8021B	1-30-13	2-1-13	
o-Xylene	**ND**	0.55	EPA 8021B	1-30-13	2-1-13	U1
Gasoline	**5100**	280	NWTPH-Gx	1-30-13	2-4-13	Z
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*104*	*70-132*				
Client ID:	**DPT-4 10-15**					
Laboratory ID:	01-194-15					
Benzene	**ND**	0.020	EPA 8021B	2-1-13	2-1-13	
Toluene	**ND**	0.055	EPA 8021B	2-1-13	2-1-13	
Ethyl Benzene	**ND**	0.055	EPA 8021B	2-1-13	2-1-13	
m,p-Xylene	**ND**	0.055	EPA 8021B	2-1-13	2-1-13	
o-Xylene	**ND**	0.055	EPA 8021B	2-1-13	2-1-13	
Gasoline	**ND**	5.5	NWTPH-Gx	2-1-13	2-1-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*104*	*70-132*				

Date of Report: February 19, 2013
Samples Submitted: January 29, 2013
Laboratory Reference: 1301-194
Project: 6552

NWTPH-Gx/BTEX

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**DPT-4 15-20**					
Laboratory ID:	01-194-16					
Benzene	ND	0.020	EPA 8021B	2-1-13	2-1-13	
Toluene	ND	0.045	EPA 8021B	2-1-13	2-1-13	
Ethyl Benzene	ND	0.045	EPA 8021B	2-1-13	2-1-13	
m,p-Xylene	ND	0.045	EPA 8021B	2-1-13	2-1-13	
o-Xylene	ND	0.045	EPA 8021B	2-1-13	2-1-13	
Gasoline	ND	4.5	NWTPH-Gx	2-1-13	2-1-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*97*	*70-132*				
Client ID:	**DPT-5 5-10**					
Laboratory ID:	01-194-18					
Benzene	ND	0.020	EPA 8021B	1-30-13	2-1-13	
Toluene	ND	0.058	EPA 8021B	1-30-13	2-1-13	
Ethyl Benzene	ND	0.058	EPA 8021B	1-30-13	2-1-13	
m,p-Xylene	ND	0.058	EPA 8021B	1-30-13	2-1-13	
o-Xylene	ND	0.058	EPA 8021B	1-30-13	2-1-13	
Gasoline	37	5.8	NWTPH-Gx	1-30-13	2-1-13	Z
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*94*	*70-132*				
Client ID:	**DPT-5 10-15**					
Laboratory ID:	01-194-19					
Benzene	ND	0.020	EPA 8021B	1-30-13	2-1-13	
Toluene	ND	0.048	EPA 8021B	1-30-13	2-1-13	
Ethyl Benzene	ND	0.048	EPA 8021B	1-30-13	2-1-13	
m,p-Xylene	ND	0.048	EPA 8021B	1-30-13	2-1-13	
o-Xylene	ND	0.048	EPA 8021B	1-30-13	2-1-13	
Gasoline	ND	4.8	NWTPH-Gx	1-30-13	2-1-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*99*	*70-132*				

Date of Report: February 19, 2013
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Project: 6552

NWTPH-Gx/BTEX

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**DPT-6 5-10**					
Laboratory ID:	01-194-22					
Benzene	**ND**	0.020	EPA 8021B	1-30-13	2-1-13	
Toluene	**ND**	0.053	EPA 8021B	1-30-13	2-1-13	
Ethyl Benzene	**ND**	0.053	EPA 8021B	1-30-13	2-1-13	
m,p-Xylene	**ND**	0.053	EPA 8021B	1-30-13	2-1-13	
o-Xylene	**ND**	0.053	EPA 8021B	1-30-13	2-1-13	
Gasoline	**ND**	5.3	NWTPH-Gx	1-30-13	2-1-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*100*	*70-132*				
Client ID:	**DPT-6 10-15**					
Laboratory ID:	01-194-23					
Benzene	**ND**	0.020	EPA 8021B	1-30-13	2-1-13	
Toluene	**ND**	0.057	EPA 8021B	1-30-13	2-1-13	
Ethyl Benzene	**ND**	0.057	EPA 8021B	1-30-13	2-1-13	
m,p-Xylene	**ND**	0.057	EPA 8021B	1-30-13	2-1-13	
o-Xylene	**ND**	0.057	EPA 8021B	1-30-13	2-1-13	
Gasoline	**11**	5.7	NWTPH-Gx	1-30-13	2-1-13	Z
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*108*	*70-132*				
Client ID:	**DPT-6 15-20**					
Laboratory ID:	01-194-24					
Benzene	**ND**	0.020	EPA 8021B	2-1-13	2-1-13	
Toluene	**ND**	0.057	EPA 8021B	2-1-13	2-1-13	
Ethyl Benzene	**ND**	0.057	EPA 8021B	2-1-13	2-1-13	
m,p-Xylene	**ND**	0.057	EPA 8021B	2-1-13	2-1-13	
o-Xylene	**ND**	0.057	EPA 8021B	2-1-13	2-1-13	
Gasoline	**ND**	5.7	NWTPH-Gx	2-1-13	2-1-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*102*	*70-132*				

Date of Report: February 19, 2013
Samples Submitted: January 29, 2013
Laboratory Reference: 1301-194
Project: 6552

NWTPH-Gx/BTEX

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**DPT-7 5-10**					
Laboratory ID:	01-194-26					
Benzene	ND	0.020	EPA 8021B	2-1-13	2-1-13	
Toluene	ND	0.059	EPA 8021B	2-1-13	2-1-13	
Ethyl Benzene	ND	0.059	EPA 8021B	2-1-13	2-1-13	
m,p-Xylene	ND	0.059	EPA 8021B	2-1-13	2-1-13	
o-Xylene	ND	0.059	EPA 8021B	2-1-13	2-1-13	
Gasoline	920	59	NWTPH-Gx	2-1-13	2-4-13	Z
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*112*	*70-132*				
Client ID:	**DPT-7 10-15**					
Laboratory ID:	01-194-27					
Benzene	ND	0.020	EPA 8021B	2-1-13	2-1-13	
Toluene	ND	0.051	EPA 8021B	2-1-13	2-1-13	
Ethyl Benzene	ND	0.051	EPA 8021B	2-1-13	2-1-13	
m,p-Xylene	ND	0.051	EPA 8021B	2-1-13	2-1-13	
o-Xylene	ND	0.051	EPA 8021B	2-1-13	2-1-13	
Gasoline	ND	5.1	NWTPH-Gx	2-1-13	2-1-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*97*	*70-132*				
Client ID:	**DPT-7 15-20**					
Laboratory ID:	01-194-28					
Benzene	ND	0.020	EPA 8021B	2-1-13	2-1-13	
Toluene	ND	0.053	EPA 8021B	2-1-13	2-1-13	
Ethyl Benzene	ND	0.053	EPA 8021B	2-1-13	2-1-13	
m,p-Xylene	ND	0.053	EPA 8021B	2-1-13	2-1-13	
o-Xylene	ND	0.053	EPA 8021B	2-1-13	2-1-13	
Gasoline	ND	5.3	NWTPH-Gx	2-1-13	2-1-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*98*	*70-132*				

Date of Report: February 19, 2013
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NWTPH-Gx/BTEX

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**DPT-8 5-10**					
Laboratory ID:	01-194-30					
Benzene	**ND**	0.020	EPA 8021B	2-1-13	2-1-13	
Toluene	**ND**	0.061	EPA 8021B	2-1-13	2-1-13	
Ethyl Benzene	**ND**	0.061	EPA 8021B	2-1-13	2-1-13	
m,p-Xylene	**ND**	0.061	EPA 8021B	2-1-13	2-1-13	
o-Xylene	**ND**	0.061	EPA 8021B	2-1-13	2-1-13	
Gasoline	**ND**	6.1	NWTPH-Gx	2-1-13	2-1-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*107*	*70-132*				
Client ID:	**DPT-8 10-15**					
Laboratory ID:	01-194-31					
Benzene	**ND**	0.020	EPA 8021B	2-1-13	2-1-13	
Toluene	**ND**	0.047	EPA 8021B	2-1-13	2-1-13	
Ethyl Benzene	**ND**	0.047	EPA 8021B	2-1-13	2-1-13	
m,p-Xylene	**ND**	0.047	EPA 8021B	2-1-13	2-1-13	
o-Xylene	**ND**	0.047	EPA 8021B	2-1-13	2-1-13	
Gasoline	**ND**	4.7	NWTPH-Gx	2-1-13	2-1-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*94*	*70-132*				
Client ID:	**DPT-9 5-10**					
Laboratory ID:	01-194-34					
Benzene	**ND**	0.020	EPA 8021B	2-1-13	2-1-13	
Toluene	**ND**	0.056	EPA 8021B	2-1-13	2-1-13	
Ethyl Benzene	**ND**	0.056	EPA 8021B	2-1-13	2-1-13	
m,p-Xylene	**ND**	0.056	EPA 8021B	2-1-13	2-1-13	
o-Xylene	**ND**	0.056	EPA 8021B	2-1-13	2-1-13	
Gasoline	**ND**	5.6	NWTPH-Gx	2-1-13	2-1-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*102*	*70-132*				

Date of Report: February 19, 2013
Samples Submitted: January 29, 2013
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Project: 6552

NWTPH-Gx/BTEX

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**DPT-9 10-15**					
Laboratory ID:	01-194-35					
Benzene	ND	0.020	EPA 8021B	2-1-13	2-1-13	
Toluene	ND	0.052	EPA 8021B	2-1-13	2-1-13	
Ethyl Benzene	ND	0.052	EPA 8021B	2-1-13	2-1-13	
m,p-Xylene	ND	0.052	EPA 8021B	2-1-13	2-1-13	
o-Xylene	ND	0.052	EPA 8021B	2-1-13	2-1-13	
Gasoline	ND	5.2	NWTPH-Gx	2-1-13	2-1-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*96*	*70-132*				
Client ID:	**DPT-9 15-20**					
Laboratory ID:	01-194-36					
Benzene	ND	0.020	EPA 8021B	2-1-13	2-4-13	
Toluene	ND	0.049	EPA 8021B	2-1-13	2-4-13	
Ethyl Benzene	ND	0.049	EPA 8021B	2-1-13	2-4-13	
m,p-Xylene	ND	0.049	EPA 8021B	2-1-13	2-4-13	
o-Xylene	ND	0.049	EPA 8021B	2-1-13	2-4-13	
Gasoline	ND	4.9	NWTPH-Gx	2-1-13	2-4-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*96*	*70-132*				
Client ID:	**DPT-10 5-10**					
Laboratory ID:	01-194-38					
Benzene	ND	0.020	EPA 8021B	2-1-13	2-1-13	
Toluene	ND	0.054	EPA 8021B	2-1-13	2-1-13	
Ethyl Benzene	ND	0.054	EPA 8021B	2-1-13	2-1-13	
m,p-Xylene	ND	0.054	EPA 8021B	2-1-13	2-1-13	
o-Xylene	ND	0.054	EPA 8021B	2-1-13	2-1-13	
Gasoline	ND	5.4	NWTPH-Gx	2-1-13	2-1-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*103*	*70-132*				

Date of Report: February 19, 2013
Samples Submitted: January 29, 2013
Laboratory Reference: 1301-194
Project: 6552

NWTPH-Gx/BTEX

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**DPT-10 10-15**					
Laboratory ID:	01-194-39					
Benzene	**ND**	0.020	EPA 8021B	2-1-13	2-1-13	
Toluene	**ND**	0.047	EPA 8021B	2-1-13	2-1-13	
Ethyl Benzene	**ND**	0.047	EPA 8021B	2-1-13	2-1-13	
m,p-Xylene	**ND**	0.047	EPA 8021B	2-1-13	2-1-13	
o-Xylene	**ND**	0.047	EPA 8021B	2-1-13	2-1-13	
Gasoline	**ND**	4.7	NWTPH-Gx	2-1-13	2-1-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*100*	*70-132*				
Client ID:	**DPT-10 15-20**					
Laboratory ID:	01-194-40					
Benzene	**ND**	0.020	EPA 8021B	2-1-13	2-1-13	
Toluene	**ND**	0.054	EPA 8021B	2-1-13	2-1-13	
Ethyl Benzene	**ND**	0.054	EPA 8021B	2-1-13	2-1-13	
m,p-Xylene	**ND**	0.054	EPA 8021B	2-1-13	2-1-13	
o-Xylene	**ND**	0.054	EPA 8021B	2-1-13	2-1-13	
Gasoline	**ND**	5.4	NWTPH-Gx	2-1-13	2-1-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*104*	*70-132*				
Client ID:	**DPT-11 0-5**					
Laboratory ID:	01-194-41					
Benzene	**ND**	0.020	EPA 8021B	2-1-13	2-1-13	
Toluene	**ND**	0.049	EPA 8021B	2-1-13	2-1-13	
Ethyl Benzene	**ND**	0.049	EPA 8021B	2-1-13	2-1-13	
m,p-Xylene	**ND**	0.049	EPA 8021B	2-1-13	2-1-13	
o-Xylene	**ND**	0.049	EPA 8021B	2-1-13	2-1-13	
Gasoline	**ND**	4.9	NWTPH-Gx	2-1-13	2-1-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*104*	*70-132*				

Date of Report: February 19, 2013
Samples Submitted: January 29, 2013
Laboratory Reference: 1301-194
Project: 6552

NWTPH-Gx/BTEX
METHOD BLANK QUALITY CONTROL

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0130S1					
Benzene	ND	0.020	EPA 8021B	1-30-13	1-30-13	
Toluene	ND	0.050	EPA 8021B	1-30-13	1-30-13	
Ethyl Benzene	ND	0.050	EPA 8021B	1-30-13	1-30-13	
m,p-Xylene	ND	0.050	EPA 8021B	1-30-13	1-30-13	
o-Xylene	ND	0.050	EPA 8021B	1-30-13	1-30-13	
Gasoline	ND	5.0	NWTPH-Gx	1-30-13	1-30-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*102*	*70-132*				
Laboratory ID:	MB0130S2					
Benzene	ND	0.020	EPA 8021B	1-30-13	2-1-13	
Toluene	ND	0.050	EPA 8021B	1-30-13	2-1-13	
Ethyl Benzene	ND	0.050	EPA 8021B	1-30-13	2-1-13	
m,p-Xylene	ND	0.050	EPA 8021B	1-30-13	2-1-13	
o-Xylene	ND	0.050	EPA 8021B	1-30-13	2-1-13	
Gasoline	ND	5.0	NWTPH-Gx	1-30-13	2-1-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*100*	*70-132*				
Laboratory ID:	MB0201S1					
Benzene	ND	0.020	EPA 8021B	2-1-13	2-1-13	
Toluene	ND	0.050	EPA 8021B	2-1-13	2-1-13	
Ethyl Benzene	ND	0.050	EPA 8021B	2-1-13	2-1-13	
m,p-Xylene	ND	0.050	EPA 8021B	2-1-13	2-1-13	
o-Xylene	ND	0.050	EPA 8021B	2-1-13	2-1-13	
Gasoline	ND	5.0	NWTPH-Gx	2-1-13	2-1-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*97*	*70-132*				
Laboratory ID:	MB0201S2					
Benzene	ND	0.020	EPA 8021B	2-1-13	2-1-13	
Toluene	ND	0.050	EPA 8021B	2-1-13	2-1-13	
Ethyl Benzene	ND	0.050	EPA 8021B	2-1-13	2-1-13	
m,p-Xylene	ND	0.050	EPA 8021B	2-1-13	2-1-13	
o-Xylene	ND	0.050	EPA 8021B	2-1-13	2-1-13	
Gasoline	ND	5.0	NWTPH-Gx	2-1-13	2-1-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*103*	*70-132*				

Date of Report: February 19, 2013
Samples Submitted: January 29, 2013
Laboratory Reference: 1301-194
Project: 6552

NWTPH-Gx/BTEX
DUPLICATE QUALITY CONTROL

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	01-207-01									
	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						*105*	*105*	*70-132*		
Laboratory ID:	01-194-03									
	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						*120*	*114*	*70-132*		
Laboratory ID:	01-194-41									
	ORIG	DUP								
Benzene	**ND**	**ND**	NA	NA		NA	NA	NA	30	
Toluene	**ND**	**ND**	NA	NA		NA	NA	NA	30	
Ethyl Benzene	**ND**	**ND**	NA	NA		NA	NA	NA	30	
m,p-Xylene	**ND**	**ND**	NA	NA		NA	NA	NA	30	
o-Xylene	**ND**	**ND**	NA	NA		NA	NA	NA	30	
Gasoline	**ND**	**ND**	NA	NA		NA	NA	NA	30	
Surrogate:										
Fluorobenzene						*104*	*100*	*70-132*		
Laboratory ID:	01-220-01									
	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						*100*	*93*	*70-132*		

Date of Report: February 19, 2013
Samples Submitted: January 29, 2013
Laboratory Reference: 1301-194
Project: 6552

NWTPH-Gx/BTEX
SB/SBD QUALITY CONTROL

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS											
Laboratory ID:	SB0130S1										
	SB	SBD	SB	SBD		SB	SBD				
Benzene	0.977	1.00	1.00	1.00		98	100	71-125	2	11	
Toluene	1.01	1.03	1.00	1.00		101	103	77-125	2	11	
Ethyl Benzene	0.990	0.991	1.00	1.00		99	99	76-125	0	10	
m,p-Xylene	0.999	0.987	1.00	1.00		100	99	78-124	1	9	
o-Xylene	0.955	0.914	1.00	1.00		96	91	77-123	4	9	
Surrogate:											
Fluorobenzene						*97*	*100*	*70-132*			
Laboratory ID:	SB0201S1										
	SB	SBD	SB	SBD		SB	SBD				
Benzene	0.949	0.966	1.00	1.00		95	97	71-125	2	11	
Toluene	0.979	0.992	1.00	1.00		98	99	77-125	1	11	
Ethyl Benzene	0.981	0.967	1.00	1.00		98	97	76-125	1	10	
m,p-Xylene	0.985	0.971	1.00	1.00		99	97	78-124	1	9	
o-Xylene	0.957	0.914	1.00	1.00		96	91	77-123	5	9	
Surrogate:											
Fluorobenzene						*98*	*97*	*70-132*			

Date of Report: February 19, 2013
Samples Submitted: January 29, 2013
Laboratory Reference: 1301-194
Project: 6552

VOLATILE PETROLEUM HYDROCARBONS

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**DPT-3 5-10**					
Laboratory ID:	01-194-10					
Aliphatic C5-C6	**ND**	5.0	NWTPH-VPH	1-30-13	2-11-13	
Aliphatic C6-C8	**ND**	5.0	NWTPH-VPH	1-30-13	2-11-13	
Aliphatic C8-C10	**ND**	5.0	NWTPH-VPH	1-30-13	2-11-13	
Aliphatic C10-C12	**200**	5.0	NWTPH-VPH	1-30-13	2-11-13	
Total Aliphatic:	**200**		NWTPH-VPH	1-30-13	2-11-13	
Aromatic C8-C10	**20**	5.0	NWTPH-VPH	1-30-13	2-11-13	
Aromatic C10-C12	**85**	5.0	NWTPH-VPH	1-30-13	2-11-13	
Aromatic C12-C13	**9.7**	5.0	NWTPH-VPH	1-30-13	2-11-13	
Total Aromatic:	**110**		NWTPH-VPH	1-30-13	2-11-13	
Methyl t-butyl ether	**ND**	0.026	EPA 8021B	1-30-13	2-11-13	

Surrogate:	*Percent Recovery*	*Control Limits*
Fluorobenzene	*84*	*70-132*

Date of Report: February 19, 2013
Samples Submitted: January 29, 2013
Laboratory Reference: 1301-194
Project: 6552

VOLATILE PETROLEUM HYDROCARBONS

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**DPT-4 5-10**					
Laboratory ID:	01-194-14					
Aliphatic C5-C6	**ND**	5.0	NWTPH-VPH	1-30-13	2-11-13	
Aliphatic C6-C8	**ND**	5.0	NWTPH-VPH	1-30-13	2-11-13	
Aliphatic C8-C10	**ND**	5.0	NWTPH-VPH	1-30-13	2-11-13	
Aliphatic C10-C12	**4600**	14	NWTPH-VPH	1-30-13	2-11-13	
Total Aliphatic:	**4600**		NWTPH-VPH	1-30-13	2-11-13	
Aromatic C8-C10	**360**	5.0	NWTPH-VPH	1-30-13	2-11-13	
Aromatic C10-C12	**2100**	14	NWTPH-VPH	1-30-13	2-11-13	
Aromatic C12-C13	**100**	5.0	NWTPH-VPH	1-30-13	2-11-13	
Total Aromatic:	**2600**		NWTPH-VPH	1-30-13	2-11-13	
Methyl t-butyl ether	**ND**	0.056	EPA 8021B	1-30-13	2-11-13	

Surrogate:	*Percent Recovery*	*Control Limits*
Fluorobenzene	*99*	*70-132*

Date of Report: February 19, 2013
Samples Submitted: January 29, 2013
Laboratory Reference: 1301-194
Project: 6552

VOLATILE PETROLEUM HYDROCARBONS

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**DPT-7 5-10**					
Laboratory ID:	01-194-26					
Aliphatic C5-C6	**ND**	5.0	NWTPH-VPH	2-1-13	2-11-13	
Aliphatic C6-C8	**ND**	5.0	NWTPH-VPH	2-1-13	2-11-13	
Aliphatic C8-C10	**ND**	5.0	NWTPH-VPH	2-1-13	2-11-13	
Aliphatic C10-C12	**640**	5.0	NWTPH-VPH	2-1-13	2-11-13	
Total Aliphatic:	**640**		NWTPH-VPH	2-1-13	2-11-13	
Aromatic C8-C10	**40**	5.0	NWTPH-VPH	2-1-13	2-11-13	
Aromatic C10-C12	**330**	5.0	NWTPH-VPH	2-1-13	2-11-13	
Aromatic C12-C13	**62**	5.0	NWTPH-VPH	2-1-13	2-11-13	
Total Aromatic:	**430**		NWTPH-VPH	2-1-13	2-11-13	
Methyl t-butyl ether	**ND**	0.059	EPA 8021B	2-1-13	2-11-13	

Surrogate:	*Percent Recovery*	*Control Limits*
Fluorobenzene	*90*	*70-132*

Date of Report: February 19, 2013
Samples Submitted: January 29, 2013
Laboratory Reference: 1301-194
Project: 6552

VOLATILE PETROLEUM HYDROCARBONS
METHOD BLANK QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0130S1					
Aliphatic C5-C6	ND	5.0	NWTPH-VPH	1-30-13	2-11-13	
Aliphatic C6-C8	ND	5.0	NWTPH-VPH	1-30-13	2-11-13	
Aliphatic C8-C10	ND	5.0	NWTPH-VPH	1-30-13	2-11-13	
Aliphatic C10-C12	ND	5.0	NWTPH-VPH	1-30-13	2-11-13	
Total Aliphatic:	NA		NWTPH-VPH	1-30-13	2-11-13	
Aromatic C8-C10	ND	5.0	NWTPH-VPH	1-30-13	2-11-13	
Aromatic C10-C12	ND	5.0	NWTPH-VPH	1-30-13	2-11-13	
Aromatic C12-C13	ND	5.0	NWTPH-VPH	1-30-13	2-11-13	
Total Aromatic:	NA		NWTPH-VPH	1-30-13	2-11-13	
Methyl t-butyl ether	ND	0.050	EPA 8021B	1-30-13	2-11-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*104*	*70-132*				
Laboratory ID:	MB0201S1					
Aliphatic C5-C6	ND	5.0	NWTPH-VPH	2-1-13	2-11-13	
Aliphatic C6-C8	ND	5.0	NWTPH-VPH	2-1-13	2-11-13	
Aliphatic C8-C10	ND	5.0	NWTPH-VPH	2-1-13	2-11-13	
Aliphatic C10-C12	ND	5.0	NWTPH-VPH	2-1-13	2-11-13	
Total Aliphatic:	NA		NWTPH-VPH	2-1-13	2-11-13	
Aromatic C8-C10	ND	5.0	NWTPH-VPH	2-1-13	2-11-13	
Aromatic C10-C12	ND	5.0	NWTPH-VPH	2-1-13	2-11-13	
Aromatic C12-C13	ND	5.0	NWTPH-VPH	2-1-13	2-11-13	
Total Aromatic:	NA		NWTPH-VPH	2-1-13	2-11-13	
Methyl t-butyl ether	ND	0.050	EPA 8021B	2-1-13	2-11-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*104*	*70-132*				

Date of Report: February 19, 2013
Samples Submitted: January 29, 2013
Laboratory Reference: 1301-194
Project: 6552

VOLATILE PETROLEUM HYDROCARBONS
DUPLICATE QUALITY CONTROL

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	01-194-03									
	ORIG	DUP								
Aliphatic C5-C6	**ND**	**ND**	NA	NA		NA	NA	NA	30	
Aliphatic C6-C8	**ND**	**ND**	NA	NA		NA	NA	NA	30	
Aliphatic C8-C10	**ND**	**ND**	NA	NA		NA	NA	NA	30	
Aliphatic C10-C12	**ND**	**ND**	NA	NA		NA	NA	NA	30	
Total Aliphatic:	**NA**	**NA**	NA	NA		NA	NA	NA	30	
Aromatic C8-C10	**ND**	**ND**	NA	NA		NA	NA	NA	30	
Aromatic C10-C12	**ND**	**ND**	NA	NA		NA	NA	NA	30	
Aromatic C12-C13	**ND**	**ND**	NA	NA		NA	NA	NA	30	
Total Aromatic:	**NA**	**NA**	NA	NA		NA	NA	NA	30	
MTBE	**ND**	**ND**	NA	NA		NA	NA	NA	30	
Surrogate:										
Fluorobenzene						*113*	*112*	*70-132*		
Laboratory ID:	01-194-41									
	ORIG	DUP								
Aliphatic C5-C6	**ND**	**ND**	NA	NA		NA	NA	NA	30	
Aliphatic C6-C8	**ND**	**ND**	NA	NA		NA	NA	NA	30	
Aliphatic C8-C10	**ND**	**ND**	NA	NA		NA	NA	NA	30	
Aliphatic C10-C12	**ND**	**ND**	NA	NA		NA	NA	NA	30	
Total Aliphatic:	**NA**	**NA**	NA	NA		NA	NA	NA	30	
Aromatic C8-C10	**ND**	**ND**	NA	NA		NA	NA	NA	30	
Aromatic C10-C12	**ND**	**ND**	NA	NA		NA	NA	NA	30	
Aromatic C12-C13	**ND**	**ND**	NA	NA		NA	NA	NA	30	
Total Aromatic:	**NA**	**NA**	NA	NA		NA	NA	NA	30	
MTBE	**ND**	**ND**	NA	NA		NA	NA	NA	30	
Surrogate:										
Fluorobenzene						*89*	*90*	*70-132*		

Date of Report: February 19, 2013
Samples Submitted: January 29, 2013
Laboratory Reference: 1301-194
Project: 6552

TOC by EPA 9060

Matrix: Soil
Units: % Carbon

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**DPT-1 5-10**					
Laboratory ID:	01-194-02					
Total Organic Carbon	2.9	0.076	EPA 9060	2-11-13	2-11-13	
Client ID:	**DPT-9 5-10**					
Laboratory ID:	01-194-34					
Total Organic Carbon	0.066	0.044	EPA 9060	2-11-13	2-11-13	
Client ID:	**DPT-10 5-10**					
Laboratory ID:	01-194-38					
Total Organic Carbon	0.094	0.042	EPA 9060	2-11-13	2-11-13	

Date of Report: February 19, 2013
Samples Submitted: January 29, 2013
Laboratory Reference: 1301-194
Project: 6552

TOC by EPA 9060
QUALITY CONTROL

Matrix: Soil
Units: % Carbon

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0211S1					
Total Organic Carbon	**ND**	0.042	EPA 9060	2-11-13	2-11-13	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	01-207-01								
	ORIG	DUP							
Total Organic Carbon	**ND**	**ND**	NA	NA	NA	NA	NA	20	
SPIKE BLANK									
Laboratory ID:	SB0211S1								
	SB		SB		SB				
Total Organic Carbon	**48.2**		42.1	NA	114	80-120	NA	NA	

Date of Report: February 19, 2013
Samples Submitted: January 29, 2013
Laboratory Reference: 1301-194
Project: 6552

% MOISTURE

Date Analyzed: 2-1-13

Client ID	Lab ID	% Moisture
DPT-1 10-15	01-194-03	24
DPT-1 15-20	01-194-04	7
DPT-2 10-15	01-194-07	10
DPT-2 15-20	01-194-08	8
DPT-3 5-10	01-194-10	14
DPT-3 10-15	01-194-11	6
DPT-3 15-20	01-194-12	8
DPT-4 5-10	01-194-14	15
DPT-4 10-15	01-194-15	15
DPT-4 15-20	01-194-16	4
DPT-5 5-10	01-194-18	15
DPT-5 10-15	01-194-19	5
DPT-6 5-10	01-194-22	13
DPT-6 10-15	01-194-23	15
DPT-6 15-20	01-194-24	13
DPT-7 5-10	01-194-26	14
DPT-7 10-15	01-194-27	6
DPT-7 15-20	01-194-28	9
DPT-8 5-10	01-194-30	17
DPT-8 10-15	01-194-31	8
DPT-9 5-10	01-194-34	13
DPT-9 10-15	01-194-35	10
DPT-9 15-20	01-194-36	11
DPT-10 5-10	01-194-38	13
DPT-10 10-15	01-194-39	9
DPT-10 15-20	01-194-40	8
DPT-11 0-5	01-194-41	9

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

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

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

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

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

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

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

Y - 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 similar to mineral spirits.

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

February 18, 2013

Mr. David Baumeister
OnSite Environmental Inc.
14648 NE 95th Street
Redmond, WA 98052

Dear Mr. Baumeister,

On February 6th, 3 samples were received by our laboratory and assigned our laboratory project number EV13020024. The project was identified as your Lab Ref #01-194 / Proj #6552. The sample identification and requested analyses are outlined on the attached chain of custody record.

QC sample results for this data met laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Rick Bagan
Laboratory Director

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 PHONE 425-356-2600 FAX 425-356-2626
ALS Laboratory Group A Campbell Brothers Limited Company
www.alsglobal.com

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	OnSite Environmental Inc.	DATE:	2/18/2013
	14648 NE 95th Street	ALS JOB#:	EV13020024
	Redmond, WA 98052	WDOE ACCREDITATION:	C601
CLIENT CONTACT:	David Baumeister		
CLIENT PROJECT:	Lab Ref #01-194 / Proj #6552		

CASE NARRATIVE

No sample abnormalities were qualified in this report.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Laboratory Group A Campbell Brothers Limited Company

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	OnSite Environmental Inc. 14648 NE 95th Street Redmond, WA 98052	DATE:	2/18/2013
		ALS JOB#:	EV13020024
		ALS SAMPLE#:	-01
CLIENT CONTACT:	David Baumeister	DATE RECEIVED:	2/6/2013
CLIENT PROJECT:	Lab Ref #01-194 / Proj #6552	COLLECTION DATE:	1/28/2013 10:12:00 AM
CLIENT SAMPLE ID	DPT-3 5-10	WDOE ACCREDITATION:	C601

DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
>C8-C10 Aliphatics	NWEPH	89	5.0	1	MG/KG	02/11/2013	EBS
>C10-C12 Aliphatics	NWEPH	430	5.0	1	MG/KG	02/11/2013	EBS
>C12-C16 Aliphatics	NWEPH	44	5.0	1	MG/KG	02/11/2013	EBS
>C16-C21 Aliphatics	NWEPH	U	5.0	1	MG/KG	02/11/2013	EBS
>C21-C34 Aliphatics	NWEPH	U	5.0	1	MG/KG	02/11/2013	EBS
>C8-C10 Aromatics	NWEPH	U	5.0	1	MG/KG	02/09/2013	EBS
>C10-C12 Aromatics	NWEPH	U	5.0	1	MG/KG	02/09/2013	EBS
>C12-C16 Aromatics	NWEPH	U	5.0	1	MG/KG	02/09/2013	EBS
>C16-C21 Aromatics	NWEPH	U	5.0	1	MG/KG	02/09/2013	EBS
>C21-C34 Aromatics	NWEPH	U	5.0	1	MG/KG	02/09/2013	EBS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
C25	NWEPH	77.0	02/11/2013	EBS
p-Terphenyl	NWEPH	105	02/09/2013	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 PHONE 425-356-2600 FAX 425-356-2626
ALS Laboratory Group A Campbell Brothers Limited Company

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	OnSite Environmental Inc. 14648 NE 95th Street Redmond, WA 98052	DATE: ALS JOB#: ALS SAMPLE#:	2/18/2013 EV13020024 -02
CLIENT CONTACT:	David Baumeister	DATE RECEIVED:	2/6/2013
CLIENT PROJECT:	Lab Ref #01-194 / Proj #6552	COLLECTION DATE:	1/28/2013 10:58:00 AM
CLIENT SAMPLE ID	DPT-4 5-10	WDOE ACCREDITATION:	C601

DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
>C8-C10 Aliphatics	NWEPH	**11**	5.0	1	MG/KG	02/11/2013	EBS
>C10-C12 Aliphatics	NWEPH	**320**	5.0	1	MG/KG	02/11/2013	EBS
>C12-C16 Aliphatics	NWEPH	**71**	5.0	1	MG/KG	02/11/2013	EBS
>C16-C21 Aliphatics	NWEPH	U	5.0	1	MG/KG	02/11/2013	EBS
>C21-C34 Aliphatics	NWEPH	U	5.0	1	MG/KG	02/11/2013	EBS
>C8-C10 Aromatics	NWEPH	U	5.0	1	MG/KG	02/09/2013	EBS
>C10-C12 Aromatics	NWEPH	**15**	5.0	1	MG/KG	02/09/2013	EBS
>C12-C16 Aromatics	NWEPH	**9.3**	5.0	1	MG/KG	02/09/2013	EBS
>C16-C21 Aromatics	NWEPH	U	5.0	1	MG/KG	02/09/2013	EBS
>C21-C34 Aromatics	NWEPH	U	5.0	1	MG/KG	02/09/2013	EBS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
C25	NWEPH	**104**	02/11/2013	EBS
p-Terphenyl	NWEPH	**126**	02/09/2013	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

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ALS Laboratory Group A Campbell Brothers Limited Company

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	OnSite Environmental Inc. 14648 NE 95th Street Redmond, WA 98052	DATE:	2/18/2013
		ALS JOB#:	EV13020024
		ALS SAMPLE#:	-03
CLIENT CONTACT:	David Baumeister	DATE RECEIVED:	2/6/2013
CLIENT PROJECT:	Lab Ref #01-194 / Proj #6552	COLLECTION DATE:	1/28/2013 12:45:00 PM
CLIENT SAMPLE ID	DPT-7 5-10	WDOE ACCREDITATION:	C601

DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
>C8-C10 Aliphatics	NWEPH	9.4	5.0	1	MG/KG	02/11/2013	EBS
>C10-C12 Aliphatics	NWEPH	370	5.0	1	MG/KG	02/11/2013	EBS
>C12-C16 Aliphatics	NWEPH	95	5.0	1	MG/KG	02/11/2013	EBS
>C16-C21 Aliphatics	NWEPH	U	5.0	1	MG/KG	02/11/2013	EBS
>C21-C34 Aliphatics	NWEPH	U	5.0	1	MG/KG	02/11/2013	EBS
>C8-C10 Aromatics	NWEPH	U	5.0	1	MG/KG	02/09/2013	EBS
>C10-C12 Aromatics	NWEPH	12	5.0	1	MG/KG	02/09/2013	EBS
>C12-C16 Aromatics	NWEPH	7.0	5.0	1	MG/KG	02/09/2013	EBS
>C16-C21 Aromatics	NWEPH	U	5.0	1	MG/KG	02/09/2013	EBS
>C21-C34 Aromatics	NWEPH	U	5.0	1	MG/KG	02/09/2013	EBS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
C25	NWEPH	97.0	02/11/2013	EBS
p-Terphenyl	NWEPH	108	02/09/2013	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

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ALS Laboratory Group A Campbell Brothers Limited Company

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	OnSite Environmental Inc. 14648 NE 95th Street Redmond, WA 98052	DATE: ALS SDG#: WDOE ACCREDITATION:	2/18/2013 EV13020024 C601
CLIENT CONTACT:	David Baumeister		
CLIENT PROJECT:	Lab Ref #01-194 / Proj #6552		

LABORATORY BLANK RESULTS

MBLK-2112013 - Batch R80236 - Soil by NWEPH

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
>C8-C10 Aliphatics	NWEPH	U	5.0	1	MG/KG	02/11/2013	EBS
>C10-C12 Aliphatics	NWEPH	U	5.0	1	MG/KG	02/11/2013	EBS
>C12-C16 Aliphatics	NWEPH	U	5.0	1	MG/KG	02/11/2013	EBS
>C16-C21 Aliphatics	NWEPH	U	5.0	1	MG/KG	02/11/2013	EBS
>C21-C34 Aliphatics	NWEPH	U	5.0	1	MG/KG	02/11/2013	EBS

MBLK-292013 - Batch R80237 - Soil by NWEPH

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
>C8-C10 Aromatics	NWEPH	U	5.0	1	MG/KG	02/09/2013	EBS
>C10-C12 Aromatics	NWEPH	U	5.0	1	MG/KG	02/09/2013	EBS
>C12-C16 Aromatics	NWEPH	U	5.0	1	MG/KG	02/09/2013	EBS
>C16-C21 Aromatics	NWEPH	U	5.0	1	MG/KG	02/09/2013	EBS
>C21-C34 Aromatics	NWEPH	U	5.0	1	MG/KG	02/09/2013	EBS

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ALS Laboratory Group A Campbell Brothers Limited Company

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	OnSite Environmental Inc. 14648 NE 95th Street Redmond, WA 98052	DATE:	2/18/2013
		ALS SDG#:	EV13020024
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	David Baumeister		
CLIENT PROJECT:	Lab Ref #01-194 / Proj #6552		

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: R80236 - Soil by NWEPH

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS DATE	ANALYSIS BY
>C8-C10 Aliphatics - BS	NWEPH	90.0			02/11/2013	EBS
>C8-C10 Aliphatics - BSD	NWEPH	74.0	20		02/11/2013	EBS
>C10-C12 Aliphatics - BS	NWEPH	94.0			02/11/2013	EBS
>C10-C12 Aliphatics - BSD	NWEPH	79.0	17		02/11/2013	EBS
>C12-C16 Aliphatics - BS	NWEPH	94.0			02/11/2013	EBS
>C12-C16 Aliphatics - BSD	NWEPH	81.0	15		02/11/2013	EBS
>C16-C21 Aliphatics - BS	NWEPH	94.0			02/11/2013	EBS
>C16-C21 Aliphatics - BSD	NWEPH	82.0	14		02/11/2013	EBS
>C21-C34 Aliphatics - BS	NWEPH	89.0			02/11/2013	EBS
>C21-C34 Aliphatics - BSD	NWEPH	73.0	20		02/11/2013	EBS

ALS Test Batch ID: R80237 - Soil by NWEPH

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS DATE	ANALYSIS BY
>C8-C10 Aromatics - BS	NWEPH	98.0			02/09/2013	EBS
>C8-C10 Aromatics - BSD	NWEPH	90.0	9		02/09/2013	EBS
>C10-C12 Aromatics - BS	NWEPH	98.0			02/09/2013	EBS
>C10-C12 Aromatics - BSD	NWEPH	91.0	7		02/09/2013	EBS
>C12-C16 Aromatics - BS	NWEPH	100			02/09/2013	EBS
>C12-C16 Aromatics - BSD	NWEPH	93.0	7		02/09/2013	EBS
>C16-C21 Aromatics - BS	NWEPH	100			02/09/2013	EBS
>C16-C21 Aromatics - BSD	NWEPH	95.0	5		02/09/2013	EBS
>C21-C34 Aromatics - BS	NWEPH	82.0			02/09/2013	EBS
>C21-C34 Aromatics - BSD	NWEPH	78.0	5		02/09/2013	EBS

APPROVED BY

Laboratory Director

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
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www.alsglobal.com

EV1302 0024

OnSite Environmental Inc.

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

Laboratory Reference #: 01-194

Subcontract Laboratory: ALS Environmental

Attention: Rick Bagan

8620 Holly Drive Everett, WA 98208

Phone Number: (425) 356-2600

Date/Time: _____

Turnaround Request:

1 Day 2 Day 3 Day

Standard

Other: _____

Project Manager: David Baumeister

email: dbaumeister@onsite-env.com

Project Number: 6552

Project Name: _____

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	Requested Analysis
1	DPT-3 5-10	1/28/13	1012	S	1	EPH
2	DPT-4 5-10	↓	1058	↓	↓	↓
3	DPT-7 5-10	↓	1245	↓	↓	↓

Signature	Company	Date	Time	Comments/Special Instructions
Relinquished by:	OSE	2/6/13	1200	
Received by:	SPEEDY	2-6-13	1200A	
Relinquished by:	SPEEDY	2-6-13	100P	
Received by: Shawn Roberson	ALS	2/6/13	1:00p.	
Relinquished by:				
Received by:				

Chain of Custody

Page 1 of 5

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

Laboratory Number: 01-194

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

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

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals/ MTCA Metals (circle one)	TCLP Metals	HEM (oil and grease) 1664A		EPH	VPH	TOC		% Moisture
1	DPT-1 0-5	1/28/13	8:15	Soil	3																					
2	DPT-1 5-10		8:35																					X		
3	DPT-1 10-15		8:30				X																			
4	DPT-1 15-20		8:45				X																			
5	DPT-2 0-5		9:25																							
6	DPT-2 5-10		9:30																							
7	DPT-2 10-15		9:45				X																			
8	DPT-2 15-20		9:55				X																			
9	DPT-3 0-5		10:05																							
10	DPT-3 5-10	↓	10:12	↓	↓		X						X	NO D3								X	X			

	Signature	Company	Date	Time
Relinquished		TAI	1/29/13	16:35
Received			1/30/13	10:35
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions
X Added 2/5/13. DB (STA)

Chromatograms with final report ☐

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

Chain of Custody

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

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

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

Laboratory Number: 01-194

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals/ MTCA Metals (circle one)	TCLP Metals	HEM (oil and grease) 1664A		EPH	VPH				% Moisture
11	DPT-3 10-15	1/28/13	10:20	Soil	3		X																				16
12	DPT-3 15-20		10:30				X																				16
13	DPT-4 0-5		10:50																								
14	DPT-4 5-10		10:58				X						X									X	X				16
15	DPT-4 10-15		11:06				X																				16
16	DPT-4 15-20		11:15				X																				16
17	DPT-5 0-5		11:30																								
18	DPT-5 5-10		11:38				X																				16
19	DPT-5 10-15		11:45				X																				16
20	DPT-5 15-20		11:52																								

NO 2/5

	Signature	Company	Date	Time
Relinquished	[signature]	TAI	1/29/13	16:35
Received	[signature]	OSE Inc	1/29/13	1635
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions
X Added 2/5/13. DB (STA)

Chromatograms with final report ☐

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

Chain of Custody

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

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

Turnaround Request (in working days)

(Check One)

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

Laboratory Number: 01-194

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals/ MTCA Metals (circle one)	TCLP Metals	HEM (oil and grease) 1664A		EPH	VPH				% Moisture
21	DPT-6 0-5	1/28/13	12:02	Soil	3																						
22	DPT-6 5-10		12:10				X																				8.5
23	DPT-6 10-15		12:18				X																				8.7
24	DPT-6 15-20		12:25				X																				8.0
25	DPT-7 0-5		12:29																								
26	DPT-7 5-10		12:45				X						X	X, D8								X	X				8.0
27	DPT-7 10-15		12:53				X																				9.0
28	DPT-7 15-20		13:01				X																				10
29	DPT-8 0-5		13:15																								
30	DPT-8 5-10	↓	13:20	↓	↓		X																				9.0

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished		TAI	1/29/13	16:35	(X) Added 2/6/13. D8 (STA)
Received			1/29/13	16:35	
Relinquished					
Received					
Relinquished					
Received					
Reviewed/Date		Reviewed/Date			Chromatograms with final report ☐

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

Chain of Custody

Page 4 of 5

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

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

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

Laboratory Number: 01-194

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals/ MTCA Metals (circle one)	TCLP Metals	HEM (oil and grease) 1664A		TOC				% Moisture
31	DPT-8 10-15	1/28/13	13:30	Soil	3		X																			X
32	DPT-8 15-20	"	13:35	"	"																					
33	DPT-9 0-5		13:40				X	←	NO																	
34	DPT-9 5-10		13:48				X															X				X
35	DPT-9 10-15		13:55				X																			X
36	DPT-9 15-20		14:02				X																			X
37	DPT-10 0-5		14:12				X	←	NO																	
38	DPT-10 5-10		14:20				X															X				X
39	DPT-10 10-15		14:28				X																			X
40	DPT-10 15-20		14:35				X																			X

	Signature	Company	Date	Time
Relinquished		TAI	1/29/13	16:35
Received		OnSite Env	1/29/13	1635
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions
(X) Added 2/6/13. DB (STA)

Chromatograms with final report ☐

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

Chain of Custody

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

Laboratory Number: 01-194

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

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

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals/ MTCA Metals (circle one)	TCLP Metals	HEM (oil and grease) 1664A	% Moisture
01	DPT-11 0-5	1/28/13	15:20	Soil	3		X														Y

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished		TAI	1/29/13	16135	
Received		OnSite Env.	1/29/13	1635	
Relinquished					
Received					
Relinquished					
Received					
Reviewed/Date		Reviewed/Date			Chromatograms with final report ☐

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

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

February 26, 2013

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

Re: Analytical Data for Project 6552
Laboratory Reference No. 1302-112

Dear Chuck:

Enclosed are the analytical results and associated quality control data for samples submitted on February 19, 2013.

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

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

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: February 26, 2013
Samples Submitted: February 19, 2013
Laboratory Reference: 1302-112
Project: 6552

Case Narrative

Samples were collected on February 18, 2013 and received by the laboratory on February 19, 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

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

The chromatograms for samples MW-105-5', MW-105-10', MW-105-20' and MW-106-7.5' are similar to mineral spirits.

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: February 26, 2013
Samples Submitted: February 19, 2013
Laboratory Reference: 1302-112
Project: 6552

NWTPH-Gx/BTEX

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-105-5'**					
Laboratory ID:	02-112-01					
Benzene	**ND**	0.030	EPA 8021B	2-19-13	2-19-13	
Toluene	**ND**	0.15	EPA 8021B	2-19-13	2-19-13	
Ethyl Benzene	**0.23**	0.15	EPA 8021B	2-19-13	2-19-13	
m,p-Xylene	**1.3**	0.15	EPA 8021B	2-19-13	2-19-13	
o-Xylene	**0.39**	0.15	EPA 8021B	2-19-13	2-19-13	
Gasoline	**7300**	380	NWTPH-Gx	2-19-13	2-22-13	Z
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*102*	*70-132*				
Client ID:	**MW-105-10'**					
Laboratory ID:	02-112-02					
Benzene	**ND**	0.020	EPA 8021B	2-19-13	2-19-13	
Toluene	**ND**	0.10	EPA 8021B	2-19-13	2-19-13	
Ethyl Benzene	**ND**	0.10	EPA 8021B	2-19-13	2-19-13	
m,p-Xylene	**0.15**	0.10	EPA 8021B	2-19-13	2-19-13	
o-Xylene	**ND**	0.10	EPA 8021B	2-19-13	2-19-13	
Gasoline	**1000**	100	NWTPH-Gx	2-19-13	2-22-13	Z
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*94*	*70-132*				
Client ID:	**MW-105-15'**					
Laboratory ID:	02-112-03					
Benzene	**ND**	0.020	EPA 8021B	2-19-13	2-19-13	
Toluene	**ND**	0.048	EPA 8021B	2-19-13	2-19-13	
Ethyl Benzene	**ND**	0.048	EPA 8021B	2-19-13	2-19-13	
m,p-Xylene	**ND**	0.048	EPA 8021B	2-19-13	2-19-13	
o-Xylene	**ND**	0.048	EPA 8021B	2-19-13	2-19-13	
Gasoline	**ND**	4.8	NWTPH-Gx	2-19-13	2-19-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*98*	*70-132*				

Date of Report: February 26, 2013
Samples Submitted: February 19, 2013
Laboratory Reference: 1302-112
Project: 6552

NWTPH-Gx/BTEX

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-105-20'**					
Laboratory ID:	02-112-04					
Benzene	ND	0.020	EPA 8021B	2-19-13	2-19-13	
Toluene	ND	0.056	EPA 8021B	2-19-13	2-19-13	
Ethyl Benzene	ND	0.056	EPA 8021B	2-19-13	2-19-13	
m,p-Xylene	ND	0.056	EPA 8021B	2-19-13	2-19-13	
o-Xylene	ND	0.056	EPA 8021B	2-19-13	2-19-13	
Gasoline	14	5.6	NWTPH-Gx	2-19-13	2-19-13	Z
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*98*	*70-132*				
Client ID:	**MW-106-7.5'**					
Laboratory ID:	02-112-05					
Benzene	ND	0.029	EPA 8021B	2-19-13	2-19-13	
Toluene	ND	0.15	EPA 8021B	2-19-13	2-19-13	
Ethyl Benzene	ND	0.15	EPA 8021B	2-19-13	2-19-13	
m,p-Xylene	0.65	0.15	EPA 8021B	2-19-13	2-19-13	
o-Xylene	0.27	0.15	EPA 8021B	2-19-13	2-19-13	
Gasoline	3300	360	NWTPH-Gx	2-19-13	2-22-13	Z
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*95*	*70-132*				
Client ID:	**MW-106-12.5'**					
Laboratory ID:	02-112-06					
Benzene	ND	0.020	EPA 8021B	2-19-13	2-19-13	
Toluene	ND	0.056	EPA 8021B	2-19-13	2-19-13	
Ethyl Benzene	ND	0.056	EPA 8021B	2-19-13	2-19-13	
m,p-Xylene	ND	0.056	EPA 8021B	2-19-13	2-19-13	
o-Xylene	ND	0.056	EPA 8021B	2-19-13	2-19-13	
Gasoline	ND	5.6	NWTPH-Gx	2-19-13	2-19-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*108*	*70-132*				

Date of Report: February 26, 2013
Samples Submitted: February 19, 2013
Laboratory Reference: 1302-112
Project: 6552

NWTPH-Gx/BTEX

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-106-17.5'**					
Laboratory ID:	02-112-07					
Benzene	**ND**	0.020	EPA 8021B	2-19-13	2-19-13	
Toluene	**ND**	0.055	EPA 8021B	2-19-13	2-19-13	
Ethyl Benzene	**ND**	0.055	EPA 8021B	2-19-13	2-19-13	
m,p-Xylene	**ND**	0.055	EPA 8021B	2-19-13	2-19-13	
o-Xylene	**ND**	0.055	EPA 8021B	2-19-13	2-19-13	
Gasoline	**ND**	5.5	NWTPH-Gx	2-19-13	2-19-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*102*	*70-132*				

Date of Report: February 26, 2013
Samples Submitted: February 19, 2013
Laboratory Reference: 1302-112
Project: 6552

NWTPH-Gx/BTEX
QUALITY CONTROL

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0219S1					
Benzene	ND	0.020	EPA 8021B	2-19-13	2-19-13	
Toluene	ND	0.050	EPA 8021B	2-19-13	2-19-13	
Ethyl Benzene	ND	0.050	EPA 8021B	2-19-13	2-19-13	
m,p-Xylene	ND	0.050	EPA 8021B	2-19-13	2-19-13	
o-Xylene	ND	0.050	EPA 8021B	2-19-13	2-19-13	
Gasoline	ND	5.0	NWTPH-Gx	2-19-13	2-19-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*100*	*70-132*				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	02-061-05									
	ORIG	DUP								
Benzene	ND	ND	NA	NA		NA	NA	NA	30	
Toluene	ND	ND	NA	NA		NA	NA	NA	30	
Ethyl Benzene	ND	ND	NA	NA		NA	NA	NA	30	
m,p-Xylene	ND	ND	NA	NA		NA	NA	NA	30	
o-Xylene	ND	ND	NA	NA		NA	NA	NA	30	
Gasoline	25.9	23.8	NA	NA		NA	NA	8	30	
Surrogate:										
Fluorobenzene						*94*	*97*	*70-132*		
SPIKE BLANKS										
Laboratory ID:	SB0219S1									
	SB	SBD	SB	SBD		SB	SBD			
Benzene	0.945	0.952	1.00	1.00		95	95	71-125	1	11
Toluene	1.04	1.07	1.00	1.00		104	107	77-125	3	11
Ethyl Benzene	1.07	1.08	1.00	1.00		107	108	76-125	1	10
m,p-Xylene	1.09	1.13	1.00	1.00		109	113	78-124	4	9
o-Xylene	1.08	1.10	1.00	1.00		108	110	77-123	2	9
Surrogate:										
Fluorobenzene						*98*	*97*	*70-132*		

Date of Report: February 26, 2013
Samples Submitted: February 19, 2013
Laboratory Reference: 1302-112
Project: 6552

% MOISTURE

Date Analyzed: 2-19-13

Client ID	Lab ID	% Moisture
MW-105-5'	02-112-01	21
MW-105-10'	02-112-02	14
MW-105-15'	02-112-03	8
MW-105-20'	02-112-04	8
MW-106-7.5'	02-112-05	19
MW-106-12.5'	02-112-06	14
MW-106-17.5'	02-112-07	5

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

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

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

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

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

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

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

Y - 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 similar to mineral spirits.

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

Chain of Custody

Page 1 of 1

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

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

Turnaround Request (in working days)
(Check One)
NO ☒ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days)
(TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 02-112

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals/ MTCA Metals (circle one)	TCLP Metals	HEM (oil and grease) 1664A	% Moisture
1	MW-105 -5'	2/18/13	8:54	Soil	3		X														X
2	MW-105 -10'	2/18/13	910	Soil	2		X														X
3	MW-105 -15'	2/18/13	9:20	Soil	1		X														X
4	MW-105 -20'	2/18/13	9:28	Soil			X														X
5	MW-106 -7.5'	2/18/13	10:25	Soil			X														X
6	MW-106 -12.5'	2/18/13	10:35	Soil			X														X
7	MW-106 -17.5'	2/18/13	10:45	Soil	↓		X														X
																					X

	Signature	Company	Date	Time
Relinquished		TAI	2/18/13	9:05
Received			2/19/13	0905
Relinquished				
Received				
Relinquished				
Received				

Reviewed/Date

Reviewed/Date

Comments/Special Instructions

Chromatograms with final report ☐

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

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

April 4, 2013

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

Re: Analytical Data for Project 6552
Laboratory Reference No. 1303-237

Dear Chuck:

Enclosed are the analytical results and associated quality control data for samples submitted on March 26, 2013.

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

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

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: April 4, 2013
Samples Submitted: March 26, 2013
Laboratory Reference: 1303-237
Project: 6552

Case Narrative

Samples were collected on March 26, 2013 and received by the laboratory on March 26, 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

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

The chromatograms for samples 25-14 0-5 lower and 25-14 10-15 upper are similar to mineral spirits.

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

Date of Report: April 4, 2013
Samples Submitted: March 26, 2013
Laboratory Reference: 1303-237
Project: 6552

NWTPH-Gx/BTEX

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**25-14 0-5 lower**					
Laboratory ID:	03-237-02					
Benzene	ND	0.020	EPA 8021B	3-28-13	3-28-13	
Toluene	ND	0.051	EPA 8021B	3-28-13	3-28-13	
Ethyl Benzene	0.38	0.051	EPA 8021B	3-28-13	3-28-13	
m,p-Xylene	2.5	0.051	EPA 8021B	3-28-13	3-28-13	
o-Xylene	ND	0.051	EPA 8021B	3-28-13	3-28-13	U1
Gasoline	1000	100	NWTPH-Gx	3-28-13	3-29-13	Z
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*89*	*70-132*				
Client ID:	**25-14 10-15 upper**					
Laboratory ID:	03-237-05					
Benzene	ND	0.020	EPA 8021B	3-28-13	3-29-13	
Toluene	ND	0.049	EPA 8021B	3-28-13	3-29-13	
Ethyl Benzene	ND	0.049	EPA 8021B	3-28-13	3-29-13	
m,p-Xylene	0.10	0.049	EPA 8021B	3-28-13	3-29-13	
o-Xylene	ND	0.049	EPA 8021B	3-28-13	3-29-13	
Gasoline	67	4.9	NWTPH-Gx	3-28-13	3-29-13	Z
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*103*	*70-132*				
Client ID:	**25-14 10-15 lower**					
Laboratory ID:	03-237-06					
Benzene	ND	0.020	EPA 8021B	3-28-13	3-28-13	
Toluene	ND	0.048	EPA 8021B	3-28-13	3-28-13	
Ethyl Benzene	ND	0.048	EPA 8021B	3-28-13	3-28-13	
m,p-Xylene	ND	0.048	EPA 8021B	3-28-13	3-28-13	
o-Xylene	ND	0.048	EPA 8021B	3-28-13	3-28-13	
Gasoline	ND	4.8	NWTPH-Gx	3-28-13	3-28-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*79*	*70-132*				

Date of Report: April 4, 2013
Samples Submitted: March 26, 2013
Laboratory Reference: 1303-237
Project: 6552

NWTPH-Gx/BTEX
QUALITY CONTROL

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0328S1					
Benzene	**ND**	0.020	EPA 8021B	3-28-13	3-28-13	
Toluene	**ND**	0.050	EPA 8021B	3-28-13	3-28-13	
Ethyl Benzene	**ND**	0.050	EPA 8021B	3-28-13	3-28-13	
m,p-Xylene	**ND**	0.050	EPA 8021B	3-28-13	3-28-13	
o-Xylene	**ND**	0.050	EPA 8021B	3-28-13	3-28-13	
Gasoline	**ND**	5.0	NWTPH-Gx	3-28-13	3-28-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*96*	*70-132*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	03-245-01										
	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						*99*	*96*	*70-132*			
MATRIX SPIKES											
Laboratory ID:	03-235-01										
	MS	MSD	MS	MSD		MS	MSD				
Benzene	**0.981**	**0.991**	1.00	1.00	ND	**98**	**99**	68-125	1	12	
Toluene	**1.02**	**1.02**	1.00	1.00	ND	**102**	**102**	65-139	0	13	
Ethyl Benzene	**0.972**	**0.968**	1.00	1.00	ND	**97**	**97**	74-128	0	12	
m,p-Xylene	**0.989**	**0.990**	1.00	1.00	ND	**99**	**99**	75-128	0	13	
o-Xylene	**0.973**	**0.932**	1.00	1.00	ND	**97**	**93**	74-127	4	12	
Surrogate:											
Fluorobenzene						*92*	*97*	*70-132*			

Date of Report: April 4, 2013
Samples Submitted: March 26, 2013
Laboratory Reference: 1303-237
Project: 6552

% MOISTURE

Date Analyzed: 4-2-13

Client ID	Lab ID	% Moisture
25-14 0-5 lower	03-237-02	7
25-14 10-15 upper	03-237-05	9
25-14 10-15 lower	03-237-06	9

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

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

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

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

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

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

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

Y - 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 similar to mineral spirits.

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

Chain of Custody

Page 1 of 1

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

Laboratory Number: 03-237

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

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

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals/ MTCA Metals (circle one)	TCLP Metals	HEM (oil and grease) 1664A	% Moisture
1	25-14 0-5 upper	3/26/13	12:30																		
2	25-14 0-5 lower		12:35				X														X
3	25-14 5-10 upper		12:40																		
4	25-14 5-10 lower		12:45																		
5	25-14 10-15 upper		12:50				X														X
6	25-14 10-15 lower	↓	12:55				X														X

	Signature	Company	Date	Time
Relinquished		TAI	3/26/13	15:30
Received		OnSite	3/26/13	1530
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Chromatograms with final report ☐

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

APPENDIX D
SAMPLING AND ANALYTICAL TESTING
VAPOR SAMPLES

5221 Ballard Avenue NW
Seattle, Washington

Vapor probes were installed in the 3 hand excavated test pits in the basement of 5221. The vapor probes consisted of a 6-inch length of 12-inch diameter pipe attached to a sampling barb. The test holes were backfilled with pea gravel. The pipes were placed with the top of the sampling barb just below the top of the existing slab. The pea gravel extended up to the base of the existing slab. The holes were patched with concrete. A metal electrical junction service box was placed in the concrete patch to provide a flush access box for the sampling barb. Prior to sampling, a vacuum pump was used to develop the probes.

Vapor samples were placed into laboratory-prepared 400 ml summa canisters. The canisters were provided with a flow control to limit sampling to a rate of 500 ml per minute. Each sample was given unique sample identification. All samples were delivered to H and P Mobile Geochemistry of Carlsbad, California. Chain of custody protocols were followed for all samples.

All testing was performed within the designated holding times. At the laboratory, standard quality control procedures were followed. 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.

Mobile Geochemistry Inc.

14 February 2013

Mr. Chuck Lie
Terra Associates
12525 Willows Rd. #101
Kirkland, WA 98034

H&P Project: MC020413-10
Client Project: T-6552

Dear Mr. Chuck Lie:

Enclosed is the analytical report for the above referenced project. The data herein applies to samples as received by H&P Mobile Geochemistry, Inc. on 04-Feb-13 which were analyzed in accordance with the attached Chain of Custody record(s).

The results for all sample analyses and required QA/QC analyses are presented in the following sections and summarized in the documents:

- Sample Summary
- Case Narrative (if applicable)
- Sample Results
- Quality Control Summary
- Notes and Definitions / Appendix
- Chain of Custody

Unless otherwise noted, all analyses were performed and reviewed in compliance with our Quality Systems Manual and Standard Operating Procedures. This report shall not be reproduced, except in full, without the written approval of H&P Mobile Geochemistry, Inc.

We at H&P Mobile Geochemistry, Inc. sincerely appreciate the opportunity to provide analytical services to you on this project. If you have any questions or concerns regarding this analytical report, please contact me at your convenience at 760-804-9678.

Sincerely,

Janis Villarreal

Janis Villarreal
Laboratory Director

H&P Mobile Geochemistry, Inc. operates under CA Environmental Lab Accreditation Program Numbers 2579, 2740, 2741, 2742, 2743, 2745 and 2754. National Environmental Laboratory Accreditation Conference (NELAC) Standards Lab #11845

H&P Mobile
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760-804-9159 Fax

Terra Associates	Project: MC020413-10	
12525 Willows Rd. #101	Project Number: T-6552	Reported:
Kirkland, WA 98034	Project Manager: Mr. Chuck Lie	14-Feb-13 08:36

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
VP-1	E302016-01	Vapor	29-Jan-13	04-Feb-13
VP-2	E302016-02	Vapor	29-Jan-13	04-Feb-13
VP-3	E302016-03	Vapor	29-Jan-13	04-Feb-13

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Kirkland, WA 98034	Project Manager: Mr. Chuck Lie	14-Feb-13 08:36

Volatile Organic Compounds by EPA TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
VP-1 (E302016-01) Vapor Sampled: 29-Jan-13 Received: 04-Feb-13									
Dichlorodifluoromethane (F12)	ND	5.0	ug/m3	1	EB31107	08-Feb-13	08-Feb-13	EPA TO-15	
Chloromethane	ND	2.1	"	"	"	"	"	"	
Dichlorotetrafluoroethane (F114)	ND	7.1	"	"	"	"	"	"	
Vinyl chloride	ND	2.6	"	"	"	"	"	"	
Bromomethane	ND	16	"	"	"	"	"	"	
Chloroethane	ND	8.0	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	5.6	"	"	"	"	"	"	
Acetone	ND	24	"	"	"	"	"	"	
1,1-Dichloroethene	ND	4.0	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane (F113)	ND	7.7	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	**4.4**	3.5	"	"	"	"	"	"	
Carbon disulfide	ND	6.3	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	8.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	4.1	"	"	"	"	"	"	
2-Butanone (MEK)	ND	30	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	4.0	"	"	"	"	"	"	
Chloroform	ND	4.9	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	5.5	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	4.1	"	"	"	"	"	"	
Benzene	**4.3**	3.2	"	"	"	"	"	"	
Carbon tetrachloride	ND	6.4	"	"	"	"	"	"	
Trichloroethene	ND	5.5	"	"	"	"	"	"	
1,2-Dichloropropane	ND	9.4	"	"	"	"	"	"	
Bromodichloromethane	ND	6.8	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	4.6	"	"	"	"	"	"	
4-Methyl-2-pentanone (MIBK)	ND	8.3	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	4.6	"	"	"	"	"	"	
Toluene	**62**	3.8	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.5	"	"	"	"	"	"	
2-Hexanone (MBK)	ND	8.3	"	"	"	"	"	"	
Dibromochloromethane	ND	8.6	"	"	"	"	"	"	
Tetrachloroethene	ND	6.9	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	7.8	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	7.0	"	"	"	"	"	"	
Chlorobenzene	ND	4.7	"	"	"	"	"	"	
Ethylbenzene	**4.8**	4.4	"	"	"	"	"	"	
m,p-Xylene	**15**	8.8	"	"	"	"	"	"	
Styrene	ND	4.3	"	"	"	"	"	"	

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Terra Associates	Project: MC020413-10	
12525 Willows Rd. #101	Project Number: T-6552	Reported:
Kirkland, WA 98034	Project Manager: Mr. Chuck Lie	14-Feb-13 08:36

Volatile Organic Compounds by EPA TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
VP-1 (E302016-01) Vapor Sampled: 29-Jan-13 Received: 04-Feb-13									
o-Xylene	**5.2**	4.4	ug/m3	1	EB31107	08-Feb-13	08-Feb-13	EPA TO-15	
Bromoform	ND	10	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	7.0	"	"	"	"	"	"	
4-Ethyltoluene	ND	5.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	12	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	12	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	12	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	7.5	"	"	"	"	"	"	
Hexachlorobutadiene	ND	11	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*127 %*		*76-134*	"	"	"	"	
Surrogate: Toluene-d8		*110 %*		*78-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*97.2 %*		*77-127*	"	"	"	"	
VP-2 (E302016-02) Vapor Sampled: 29-Jan-13 Received: 04-Feb-13									
Dichlorodifluoromethane (F12)	ND	5.0	ug/m3	1	EB31107	08-Feb-13	08-Feb-13	EPA TO-15	
Chloromethane	ND	2.1	"	"	"	"	"	"	
Dichlorotetrafluoroethane (F114)	ND	7.1	"	"	"	"	"	"	
Vinyl chloride	ND	2.6	"	"	"	"	"	"	
Bromomethane	ND	16	"	"	"	"	"	"	
Chloroethane	ND	8.0	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	5.6	"	"	"	"	"	"	
Acetone	ND	24	"	"	"	"	"	"	
1,1-Dichloroethene	ND	4.0	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane (F113)	ND	7.7	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	**5.1**	3.5	"	"	"	"	"	"	
Carbon disulfide	ND	6.3	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	8.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	4.1	"	"	"	"	"	"	
2-Butanone (MEK)	ND	30	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	4.0	"	"	"	"	"	"	
Chloroform	**8.6**	4.9	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	5.5	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	4.1	"	"	"	"	"	"	
Benzene	ND	3.2	"	"	"	"	"	"	
Carbon tetrachloride	ND	6.4	"	"	"	"	"	"	

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Kirkland, WA 98034	Project Manager: Mr. Chuck Lie	14-Feb-13 08:36

Volatile Organic Compounds by EPA TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
VP-2 (E302016-02) Vapor Sampled: 29-Jan-13 Received: 04-Feb-13									
Trichloroethene	ND	5.5	ug/m3	1	EB31107	08-Feb-13	08-Feb-13	EPA TO-15	
1,2-Dichloropropane	ND	9.4	"	"	"	"	"	"	
Bromodichloromethane	ND	6.8	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	4.6	"	"	"	"	"	"	
4-Methyl-2-pentanone (MIBK)	ND	8.3	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	4.6	"	"	"	"	"	"	
Toluene	**42**	3.8	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.5	"	"	"	"	"	"	
2-Hexanone (MBK)	ND	8.3	"	"	"	"	"	"	
Dibromochloromethane	ND	8.6	"	"	"	"	"	"	
Tetrachloroethene	ND	6.9	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	7.8	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	7.0	"	"	"	"	"	"	
Chlorobenzene	ND	4.7	"	"	"	"	"	"	
Ethylbenzene	ND	4.4	"	"	"	"	"	"	
m,p-Xylene	**12**	8.8	"	"	"	"	"	"	
Styrene	ND	4.3	"	"	"	"	"	"	
o-Xylene	ND	4.4	"	"	"	"	"	"	
Bromoform	ND	10	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	7.0	"	"	"	"	"	"	
4-Ethyltoluene	ND	5.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	12	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	12	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	12	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	7.5	"	"	"	"	"	"	
Hexachlorobutadiene	ND	11	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*115 %*		*76-134*	"	"	"	"	
Surrogate: Toluene-d8		*98.6 %*		*78-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*88.2 %*		*77-127*	"	"	"	"	

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Kirkland, WA 98034	Project Manager: Mr. Chuck Lie	14-Feb-13 08:36

Volatile Organic Compounds by EPA TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
VP-3 (E302016-03) Vapor Sampled: 29-Jan-13 Received: 04-Feb-13									
Dichlorodifluoromethane (F12)	ND	5.0	ug/m3	1	EB31107	08-Feb-13	08-Feb-13	EPA TO-15	
Chloromethane	ND	2.1	"	"	"	"	"	"	
Dichlorotetrafluoroethane (F114)	ND	7.1	"	"	"	"	"	"	
Vinyl chloride	ND	2.6	"	"	"	"	"	"	
Bromomethane	ND	16	"	"	"	"	"	"	
Chloroethane	ND	8.0	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	5.6	"	"	"	"	"	"	
Acetone	ND	24	"	"	"	"	"	"	
1,1-Dichloroethene	ND	4.0	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane (F113)	ND	7.7	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	**6.2**	3.5	"	"	"	"	"	"	
Carbon disulfide	ND	6.3	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	8.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	4.1	"	"	"	"	"	"	
2-Butanone (MEK)	ND	30	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	4.0	"	"	"	"	"	"	
Chloroform	ND	4.9	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	5.5	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	4.1	"	"	"	"	"	"	
Benzene	ND	3.2	"	"	"	"	"	"	
Carbon tetrachloride	ND	6.4	"	"	"	"	"	"	
Trichloroethene	ND	5.5	"	"	"	"	"	"	
1,2-Dichloropropane	ND	9.4	"	"	"	"	"	"	
Bromodichloromethane	ND	6.8	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	4.6	"	"	"	"	"	"	
4-Methyl-2-pentanone (MIBK)	ND	8.3	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	4.6	"	"	"	"	"	"	
Toluene	**47**	3.8	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.5	"	"	"	"	"	"	
2-Hexanone (MBK)	ND	8.3	"	"	"	"	"	"	
Dibromochloromethane	ND	8.6	"	"	"	"	"	"	
Tetrachloroethene	ND	6.9	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	7.8	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	7.0	"	"	"	"	"	"	
Chlorobenzene	ND	4.7	"	"	"	"	"	"	
Ethylbenzene	ND	4.4	"	"	"	"	"	"	
m,p-Xylene	**12**	8.8	"	"	"	"	"	"	
Styrene	ND	4.3	"	"	"	"	"	"	

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12525 Willows Rd. #101	Project Number: T-6552	Reported:
Kirkland, WA 98034	Project Manager: Mr. Chuck Lie	14-Feb-13 08:36

Volatile Organic Compounds by EPA TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
VP-3 (E302016-03) Vapor Sampled: 29-Jan-13 Received: 04-Feb-13									
o-Xylene	ND	4.4	ug/m3	1	EB31107	08-Feb-13	08-Feb-13	EPA TO-15	
Bromoform	ND	10	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	7.0	"	"	"	"	"	"	
4-Ethyltoluene	ND	5.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	12	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	12	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	12	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	7.5	"	"	"	"	"	"	
Hexachlorobutadiene	ND	11	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*115 %*		*76-134*	"	"	"	"	
Surrogate: Toluene-d8		*97.6 %*		*78-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*92.3 %*		*77-127*	"	"	"	"	

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Terra Associates 12525 Willows Rd. #101 Kirkland, WA 98034	Project: MC020413-10 Project Number: T-6552 Project Manager: Mr. Chuck Lie	Reported: 14-Feb-13 08:36

TPHv / APH on Vapors by EPA Method TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
VP-1 (E302016-01) Vapor Sampled: 29-Jan-13 Received: 04-Feb-13									
TPHv (C5 - C8) aliphatic	**150000**	2500	ug/m3	25	EB31107	08-Feb-13	11-Feb-13	MA APHm	
TPHv (C9 - C12) aliphatic	**520**	100	"	1	"	"	08-Feb-13	"	
TPHv (C9 - C10) aromatic	ND	100	"	"	"	"	"	"	
VP-2 (E302016-02) Vapor Sampled: 29-Jan-13 Received: 04-Feb-13									
TPHv (C5 - C8) aliphatic	**4600**	100	ug/m3	1	EB31107	08-Feb-13	08-Feb-13	MA APHm	
TPHv (C9 - C12) aliphatic	**120**	100	"	"	"	"	"	"	
TPHv (C9 - C10) aromatic	ND	100	"	"	"	"	"	"	
VP-3 (E302016-03) Vapor Sampled: 29-Jan-13 Received: 04-Feb-13									
TPHv (C5 - C8) aliphatic	**2400**	100	ug/m3	1	EB31107	08-Feb-13	08-Feb-13	MA APHm	
TPHv (C9 - C12) aliphatic	**180**	100	"	"	"	"	"	"	
TPHv (C9 - C10) aromatic	ND	100	"	"	"	"	"	"	

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Kirkland, WA 98034	Project Manager: Mr. Chuck Lie	14-Feb-13 08:36

Volatile Organic Compounds by EPA TO-15 - Quality Control

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EB31107 - TO-15										
Blank (EB31107-BLK1)				Prepared & Analyzed: 08-Feb-13						
Dichlorodifluoromethane (F12)	ND	5.0	ug/m3							
Chloromethane	ND	2.1	"							
Dichlorotetrafluoroethane (F114)	ND	7.1	"							
Vinyl chloride	ND	2.6	"							
Bromomethane	ND	16	"							
Chloroethane	ND	8.0	"							
Trichlorofluoromethane (F11)	ND	5.6	"							
Acetone	ND	24	"							
1,1-Dichloroethene	ND	4.0	"							
1,1,2-Trichlorotrifluoroethane (F113)	ND	7.7	"							
Methylene chloride (Dichloromethane)	ND	3.5	"							
Carbon disulfide	ND	6.3	"							
trans-1,2-Dichloroethene	ND	8.0	"							
1,1-Dichloroethane	ND	4.1	"							
2-Butanone (MEK)	ND	30	"							
cis-1,2-Dichloroethene	ND	4.0	"							
Chloroform	ND	4.9	"							
1,1,1-Trichloroethane	ND	5.5	"							
1,2-Dichloroethane (EDC)	ND	4.1	"							
Benzene	ND	3.2	"							
Carbon tetrachloride	ND	6.4	"							
Trichloroethene	ND	5.5	"							
1,2-Dichloropropane	ND	9.4	"							
Bromodichloromethane	ND	6.8	"							
cis-1,3-Dichloropropene	ND	4.6	"							
4-Methyl-2-pentanone (MIBK)	ND	8.3	"							
trans-1,3-Dichloropropene	ND	4.6	"							
Toluene	ND	3.8	"							
1,1,2-Trichloroethane	ND	5.5	"							
2-Hexanone (MBK)	ND	8.3	"							
Dibromochloromethane	ND	8.6	"							
Tetrachloroethene	ND	6.9	"							
1,2-Dibromoethane (EDB)	ND	7.8	"							
1,1,1,2-Tetrachloroethane	ND	7.0	"							

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Terra Associates 12525 Willows Rd. #101 Kirkland, WA 98034	Project: MC020413-10 Project Number: T-6552 Project Manager: Mr. Chuck Lie	Reported: 14-Feb-13 08:36

Volatile Organic Compounds by EPA TO-15 - Quality Control

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EB31107 - TO-15										
Blank (EB31107-BLK1)				Prepared & Analyzed: 08-Feb-13						
Chlorobenzene	ND	4.7	ug/m3							
Ethylbenzene	ND	4.4	"							
m,p-Xylene	ND	8.8	"							
Styrene	ND	4.3	"							
o-Xylene	ND	4.4	"							
Bromoform	ND	10	"							
1,1,2,2-Tetrachloroethane	ND	7.0	"							
4-Ethyltoluene	ND	5.0	"							
1,3,5-Trimethylbenzene	ND	5.0	"							
1,2,4-Trimethylbenzene	ND	5.0	"							
1,3-Dichlorobenzene	ND	12	"							
1,4-Dichlorobenzene	ND	12	"							
1,2-Dichlorobenzene	ND	12	"							
1,2,4-Trichlorobenzene	ND	7.5	"							
Hexachlorobutadiene	ND	11	"							
Surrogate: 1,2-Dichloroethane-d4	*278*		"	*214*		*130*	*76-134*			
Surrogate: Toluene-d8	*209*		"	*207*		*101*	*78-125*			
Surrogate: 4-Bromofluorobenzene	*329*		"	*364*		*90.2*	*77-127*			
LCS (EB31107-BS1)				Prepared & Analyzed: 08-Feb-13						
Dichlorodifluoromethane (F12)	120	5.0	ug/m3	101		117	65-135			
Vinyl chloride	50	2.6	"	52.0		95.3	65-135			
Chloroethane	47	8.0	"	53.6		87.6	65-135			
Trichlorofluoromethane (F11)	120	5.6	"	113		105	65-135			
1,1-Dichloroethene	79	4.0	"	80.8		97.9	65-135			
1,1,2-Trichlorotrifluoroethane (F113)	140	7.7	"	155		90.3	65-135			
Methylene chloride (Dichloromethane)	55	3.5	"	70.8		78.1	65-135			
trans-1,2-Dichloroethene	72	8.0	"	80.8		89.3	65-135			
1,1-Dichloroethane	77	4.1	"	82.4		93.8	65-135			
cis-1,2-Dichloroethene	73	4.0	"	80.0		91.6	65-135			
Chloroform	97	4.9	"	99.2		97.4	65-135			
1,1,1-Trichloroethane	100	5.5	"	111		89.9	65-135			
1,2-Dichloroethane (EDC)	87	4.1	"	82.4		105	65-135			

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Terra Associates	Project: MC020413-10	
12525 Willows Rd. #101	Project Number: T-6552	Reported:
Kirkland, WA 98034	Project Manager: Mr. Chuck Lie	14-Feb-13 08:36

Volatile Organic Compounds by EPA TO-15 - Quality Control

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EB31107 - TO-15										
LCS (EB31107-BS1)				Prepared & Analyzed: 08-Feb-13						
Benzene	53	3.2	ug/m3	64.8		82.1	65-135			
Carbon tetrachloride	110	6.4	"	128		87.0	65-135			
Trichloroethene	100	5.5	"	110		93.3	65-135			
Toluene	66	3.8	"	76.8		85.9	65-135			
1,1,2-Trichloroethane	94	5.5	"	111		84.1	65-135			
Tetrachloroethene	120	6.9	"	138		84.1	65-135			
1,1,1,2-Tetrachloroethane	110	7.0	"	140		79.8	65-135			
Ethylbenzene	67	4.4	"	88.4		76.1	65-135			
m,p-Xylene	140	8.8	"	177		81.9	65-135			
o-Xylene	74	4.4	"	88.4		84.1	65-135			
1,1,2,2-Tetrachloroethane	130	7.0	"	140		93.0	65-135			
Surrogate: 1,2-Dichloroethane-d4	*280*		"	*214*		*131*	*76-134*			
Surrogate: Toluene-d8	*206*		"	*207*		*99.6*	*78-125*			
Surrogate: 4-Bromofluorobenzene	*349*		"	*364*		*95.7*	*77-127*			
LCS Dup (EB31107-BSD1)				Prepared & Analyzed: 08-Feb-13						
Dichlorodifluoromethane (F12)	120	5.0	ug/m3	101		119	65-135	1.27	35	
Vinyl chloride	52	2.6	"	52.0		101	65-135	5.50	35	
Chloroethane	47	8.0	"	53.6		87.4	65-135	0.228	35	
Trichlorofluoromethane (F11)	90	5.6	"	113		79.9	65-135	27.4	35	
1,1-Dichloroethene	77	4.0	"	80.8		95.3	65-135	2.73	35	
1,1,2-Trichlorotrifluoroethane (F113)	140	7.7	"	155		90.2	65-135	0.0551	35	
Methylene chloride (Dichloromethane)	55	3.5	"	70.8		77.1	65-135	1.28	35	
trans-1,2-Dichloroethene	73	8.0	"	80.8		90.1	65-135	0.944	35	
1,1-Dichloroethane	76	4.1	"	82.4		91.8	65-135	2.15	35	
cis-1,2-Dichloroethene	74	4.0	"	80.0		92.6	65-135	1.04	35	
Chloroform	94	4.9	"	99.2		94.5	65-135	3.01	35	
1,1,1-Trichloroethane	98	5.5	"	111		88.5	65-135	1.61	35	
1,2-Dichloroethane (EDC)	86	4.1	"	82.4		104	65-135	1.62	35	
Benzene	53	3.2	"	64.8		81.5	65-135	0.671	35	
Carbon tetrachloride	110	6.4	"	128		85.0	65-135	2.38	35	
Trichloroethene	100	5.5	"	110		91.7	65-135	1.72	35	
Toluene	65	3.8	"	76.8		85.3	65-135	0.697	35	

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Terra Associates 12525 Willows Rd. #101 Kirkland, WA 98034	Project: MC020413-10 Project Number: T-6552 Project Manager: Mr. Chuck Lie	Reported: 14-Feb-13 08:36

Volatile Organic Compounds by EPA TO-15 - Quality Control

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EB31107 - TO-15										
LCS Dup (EB31107-BSD1)				Prepared & Analyzed: 08-Feb-13						
1,1,2-Trichloroethane	95	5.5	ug/m3	111		85.4	65-135	1.58	35	
Tetrachloroethene	120	6.9	"	138		83.7	65-135	0.475	35	
1,1,1,2-Tetrachloroethane	110	7.0	"	140		80.3	65-135	0.622	35	
Ethylbenzene	68	4.4	"	88.4		77.4	65-135	1.62	35	
m,p-Xylene	140	8.8	"	177		81.7	65-135	0.182	35	
o-Xylene	75	4.4	"	88.4		85.2	65-135	1.41	35	
1,1,2,2-Tetrachloroethane	130	7.0	"	140		94.2	65-135	1.28	35	
Surrogate: 1,2-Dichloroethane-d4	*276*		"	*214*		*129*	*76-134*			
Surrogate: Toluene-d8	*206*		"	*207*		*99.5*	*78-125*			
Surrogate: 4-Bromofluorobenzene	*359*		"	*364*		*98.6*	*77-127*			

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Terra Associates	Project: MC020413-10	
12525 Willows Rd. #101	Project Number: T-6552	Reported:
Kirkland, WA 98034	Project Manager: Mr. Chuck Lie	14-Feb-13 08:36

TPHv / APH on Vapors by EPA Method TO-15 - Quality Control

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EB31107 - TO-15										
Blank (EB31107-BLK1)				Prepared & Analyzed: 08-Feb-13						
TPHv (C5 - C8) aliphatic	ND	100	ug/m3							
TPHv (C9 - C12) aliphatic	ND	100	"							
TPHv (C9 - C10) aromatic	ND	100	"							

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760-804-9678 Phone
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Terra Associates 12525 Willows Rd. #101 Kirkland, WA 98034	Project: MC020413-10 Project Number: T-6552 Project Manager: Mr. Chuck Lie	Reported: 14-Feb-13 08:36

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Appendix

H&P Mobile Geochemistry, Inc. is approved as an Environmental Laboratory in conformance with the Environmental Laboratory Accreditation Program (CA) for the category of Volatile and Semi-Volatile Organic Chemistry of Hazardous Waste for the following methods:

Certificate# 2741, 2743, 2579, 2754 & 2740 approved for EPA 8260 and LUFT GC/MS
Certificate# 2742, 2745, & 2741 approved for LUFT
Certificate# 2745 & 2742 approved for EPA 418.1

H&P Mobile Geochemistry, Inc. is approved as an Environmental Laboratory in conformance with the National Environmental Accreditation Conference Standards for the category Environmental Analysis Air and Emissions for the following analytes and methods.

1,2,4-Trichlorobenzene by EPA TO-15 & TO-14A
Hexachlorobutadiene by EPA TO-15 & TO-14A
Bromodichloromethane by EPA TO-15 & TO-14A
1,2-Dichlorobenzene by EPA TO-15 & TO-14A
Dichlorotetrafluoroethane by EPA TO-14A
1,4-Dichlorobenzene by EPA TO-15 & TO-14A
Benzene by EPA TO-15 & TO-14A
Chlorobenzene by EPA TO-15 & TO-14A
Ethyl benzene by EPA TO-15 & TO-14A
Styrene by EPA TO-15 & TO-14A
Toluene by EPA TO-15 & TO-14A
Total Xylenes by EPA TO-15 & TO-14A
1,1,1-Trichloroethane by EPA TO-15 & TO-14A
1,1,2,2-Tetrachloroethane by EPA TO-15 & TO-14A
1,1,2-Trichloroethane by EPA TO-15 & TO-14A
1,1-Dichloroethane by EPA TO-15 & TO-14A
1,1-Dichloroethene by EPA TO-15 & TO-14A
1,2-Dichloroethane by EPA TO-15 & TO-14A
1,2-Dichloropropane by EPA TO-15 & TO-14A
Benzyl Chloride by EPA TO-15 & TO-14A
Bromoform by EPA TO-15
Bromomethane by EPA TO-15 & TO-14A
Carbon tetrachloride by EPA TO-15 & TO-14A
Chloroethane by EPA TO-15 & TO-14A
Chloroform by EPA TO-15 & TO-14A
Chloromethane by EPA TO-15 & TO-14A
cis-1,2-Dichloroethene by EPA TO-15 & TO-14A
cis-1,3-Dichloropropene by EPA TO-15 & TO-14A
Methylene chloride by EPA TO -15 & TO-14A
Tetrachloroethane by EPA TO-15 & TO-14A
trans-1,2-Dichloroethene by EPA TO-15
trans-1,3-Dichloropropene by EPA TO-15 & TO-14A
Trichloroethene by EPA TO-15 & TO-14A
Vinyl chloride by EPA TO -15 & TO-14A
2-Butanone by EPA TO-15
4-Methyl-2-Pentanone by EPA TO-15
Hexane by EPA TO-15
Methyl tert-butyl ether by EPA TO-15
Vinyl acetate by EPA TO-15

Dibromochloromethane by EPA TO-15
1,3-Dichlorobenzene by EPA TO-15 & TO-14A
Trichlorofluoromethane by EPA TO-14A
Naphthalene by H&P SOP TO-15/GC-MS
1,2-Dibromoethane (EDB) by EPA TO-15 & TO-14A
1,2-Dibromo-3-chloropropane by EPA TO-15
1,3-Butadiene by EPA TO-15
1,1,2-Trichlorotrifluoroethane by EPA TO-15 & TO-14A
Carbon disulfide by EPA TO-15
1,4-Dioxane by EPA TO-15

This certification applies to samples analyzed in summa canisters.

Chain of Custody Record

H&P Mobile Geochemistry Inc.

☒ 2470 Impala Dr., Carlsbad, CA 92010 • ph 760.804.9678 • fax 760.804.9159
☐ 1855 Coronado Ave., Signal Hill, CA 90755 • ph 800.834.9888

Date:
H&P Project #: MC020413-10
Outside Lab:

Client: Terra Assoc. Inc
Address: 12525 Willows Rd #101, Kirkland WA 98034
Email: clie@terra-associates.com
Collector: Nick Hoffmann
Client Project #: T-6553
Location:
Phone: 425.821.7777 Fax: 425.821.4334
Page: 1 of 1
Project Contact: Chuck Lie
Turn around time: Standard

Geotracker EDF: Yes ☐ No ☐
Global ID:
Excel EDD: Yes ☐ No ☐

Sample Receipt
Intact: ☐ Yes ☐ No
Seal Intact: ☐ Yes ☐ No ☐ N/A
Cold: ☐ Yes ☐ No ☐ N/A
Temperature:

Special Instructions: UPS TRACK#: 1Z93TT49041642 4549
APH Aliphatics & Aromatics
~~BETX~~ Full VOC list by TO-15

Lab Work Order #: E302016

Analysis columns — SOIL/GW: 8260B Full List; 8260B ☐ BTEX/OXY ☐ TPH gas; 8015M TPH ☐ g ☐ d ☐ ext; 418.1 TRPH. SOIL VAPOR/AIR ANALYSIS: VOC's: Full List ☐ 8260B ☒ TO-15; VOC's: Short List/DTSC ☐ 8260B ☐ TO-15; VOC's: SAM, 8260B ☐ SAM A ☐ SAM B; Naphthalene ☐ 8260B ☐ TO-15; Oxygenates ☐ 8260B ☐ TO-15; TPHv gas ☐ 8260B ☐ TO-15; Ketones ☐ 8260B ☐ TO-15; Other ~~BETX~~ APH ☐ 8260B ☒ TO-15; Leak Check Compound ☐ 1,1 DFA ☐ OTHER; Methane; Fixed Gases ☐ CO2 ☐ O2 ☐ N2

Sample Name	Field Point Name	Purge Vol	Time	Date	Sample Type	Container Type	Total # of containers	VOC's: Full List (TO-15)	Other (APH, TO-15)	Can ID #	Vacuum
VP-1	" "		9:50	1/29/13	Air	Suma		X	X	370	-.92
VP-2	" "		10:00	1/29/13	Air	Suma		X	X	307	.22
VP-3	" "		10:10	1/29/13	Air	Suma		X	X	157	-.83

Relinquished by: (Signature)	(company)	Received by: (Signature)	(company)	Date	Time
[signature]	TAI	J. Villarreal	H&P	2/4/13	1200

*Signature constitutes authorization to proceed with analysis and acceptance of condition on back.

Sample disposal instruction: ☐ Disposal ☐ Return to client ☐ Pickup

APPENDIX E
ANALYTICAL TESTING
VACUUM SYSTEM

5221 Ballard Avenue NW
Seattle, Washington

All vapor samples were placed into laboratory-provided tedlar bags. Each sample was given unique sample identification. An electric pump was used to fill the tedlar bags from a sample port in the inlet pipe of the Vacuum system. All samples were kept refrigerated pending delivery to OnSite Environmental Inc. in Redmond, Washington. Chain of custody protocols were followed for all samples. OnSite Environmental Inc. has accreditation from Ecology for all of the testing performed during this project.

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

Based on our review of the laboratory data, it is our opinion that the results are acceptable for current use.

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

May 7, 2012

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

Re: Analytical Data for Project 6552
Laboratory Reference No. 1205-020

Dear Chuck:

Enclosed are the analytical results and associated quality control data for samples submitted on May 2, 2012.

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

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

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: May 7, 2012
Samples Submitted: May 2, 2012
Laboratory Reference: 1205-020
Project: 6552

Case Narrative

Samples were collected on May 2, 2012 and received by the laboratory on May 2, 2012. They were maintained at the laboratory at a temperature of 2°C to 6°C.

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

NWTPH Gx/BTEX Analysis

The chromatograms for samples 3A and 102 are similar to mineral spirits.

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: May 7, 2012
Samples Submitted: May 2, 2012
Laboratory Reference: 1205-020
Project: 6552

NWTPH-Gx/BTEX

Matrix: Air
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**3A**					
Laboratory ID:	05-020-01					
Benzene	**ND**	1.0	EPA 8021	5-3-12	5-3-12	
Toluene	**ND**	1.0	EPA 8021	5-3-12	5-3-12	
Ethyl Benzene	**ND**	1.0	EPA 8021	5-3-12	5-3-12	
m,p-Xylene	**4.2**	1.0	EPA 8021	5-3-12	5-3-12	
o-Xylene	**ND**	5.0	EPA 8021	5-3-12	5-3-12	U1
Gasoline	**1900**	100	NWTPH-Gx	5-3-12	5-3-12	Z
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*89*	*73-121*				
Client ID:	**102**					
Laboratory ID:	05-020-02					
Benzene	**ND**	1.0	EPA 8021	5-3-12	5-3-12	
Toluene	**ND**	1.0	EPA 8021	5-3-12	5-3-12	
Ethyl Benzene	**ND**	1.0	EPA 8021	5-3-12	5-3-12	
m,p-Xylene	**4.8**	1.0	EPA 8021	5-3-12	5-3-12	
o-Xylene	**ND**	5.0	EPA 8021	5-3-12	5-3-12	U1
Gasoline	**1700**	200	NWTPH-Gx	5-3-12	5-3-12	Z
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*96*	*73-121*				

Date of Report: May 7, 2012
Samples Submitted: May 2, 2012
Laboratory Reference: 1205-020
Project: 6552

NWTPH-Gx/BTEX
QUALITY CONTROL

Matrix: Air
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0503A1					
Benzene	ND	1.0	EPA 8021	5-3-12	5-3-12	
Toluene	ND	1.0	EPA 8021	5-3-12	5-3-12	
Ethyl Benzene	ND	1.0	EPA 8021	5-3-12	5-3-12	
m,p-Xylene	ND	1.0	EPA 8021	5-3-12	5-3-12	
o-Xylene	ND	5.0	EPA 8021	5-3-12	5-3-12	
Gasoline	ND	100	NWTPH-Gx	5-3-12	5-3-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*98*	*73-121*				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	05-020-02									
	ORIG	DUP								
Benzene	ND	ND	NA	NA		NA	NA	NA	30	
Toluene	ND	ND	NA	NA		NA	NA	NA	30	
Ethyl Benzene	ND	ND	NA	NA		NA	NA	NA	30	
m,p-Xylene	4.78	4.28	NA	NA		NA	NA	11	30	
o-Xylene	ND	ND	NA	NA		NA	NA	NA	30	
Gasoline	1710	1440	NA	NA		NA	NA	19	30	
Surrogate:										
Fluorobenzene						*96*	*95*	*73-121*		

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

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

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

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

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

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

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

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

Z - The sample chromatogram is similar to mineral spirits.

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

Chain of Custody

Page 1 of 1

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

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

Turnaround Request (in working days)

(Check One)

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

Laboratory Number: 05-020

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	No. of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260B	Halogenated Volatiles 8260B	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082	Organochlorine Pesticides 8081A	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664					% Moisture
1	3A	5/2/12	1400	Air	1		X																			
2	10 ~~3~~ 2	5/2/12	1445	Air	1		X																			

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished		TAI	5/2/12	1610	weight by volume
Received		Onsite	5-2-12	1610	
Relinquished					
Received					
Relinquished					
Received					
Reviewed/Date		Reviewed/Date			Chromatograms with final report ☐

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

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

May 16, 2012

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

Re: Analytical Data for Project 6552
Laboratory Reference No. 1205-063

Dear Chuck:

Enclosed are the analytical results and associated quality control data for samples submitted on May 8, 2012.

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

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

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: May 16, 2012
Samples Submitted: May 8, 2012
Laboratory Reference: 1205-063
Project: 6552

Case Narrative

Samples were collected on May 8, 2012 and received by the laboratory on May 8, 2012. They were maintained at the laboratory at a temperature of 2°C to 6°C.

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

NWTPH Gx/BTEX Analysis

The chromatogram for sample 102 is similar to mineral spirits.

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: May 16, 2012
Samples Submitted: May 8, 2012
Laboratory Reference: 1205-063
Project: 6552

NWTPH-Gx/BTEX

Matrix: Air
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**102**					
Laboratory ID:	05-063-01					
Benzene	**ND**	1.0	EPA 8021	5-9-12	5-9-12	
Toluene	**ND**	1.0	EPA 8021	5-9-12	5-9-12	
Ethyl Benzene	**ND**	1.0	EPA 8021	5-9-12	5-9-12	
m,p-Xylene	**3.4**	1.0	EPA 8021	5-9-12	5-9-12	
o-Xylene	**ND**	5.0	EPA 8021	5-9-12	5-9-12	
Gasoline	**2100**	200	NWTPH-Gx	5-9-12	5-9-12	Z
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*96*	*73-121*				

Date of Report: May 16, 2012
Samples Submitted: May 8, 2012
Laboratory Reference: 1205-063
Project: 6552

NWTPH-Gx/BTEX
QUALITY CONTROL

Matrix: Air
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0509A1					
Benzene	ND	1.0	EPA 8021	5-9-12	5-9-12	
Toluene	ND	1.0	EPA 8021	5-9-12	5-9-12	
Ethyl Benzene	ND	1.0	EPA 8021	5-9-12	5-9-12	
m,p-Xylene	ND	1.0	EPA 8021	5-9-12	5-9-12	
o-Xylene	ND	5.0	EPA 8021	5-9-12	5-9-12	
Gasoline	ND	100	NWTPH-Gx	5-9-12	5-9-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*103*	*73-121*				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	05-063-01									
	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	3.45	3.44	NA	NA		NA	NA	0	30	
o-Xylene	ND	ND	NA	NA		NA	NA	NA	30	
Gasoline	2060	2050	NA	NA		NA	NA	0	30	
Surrogate:										
Fluorobenzene						*96* *101*	*73-121*			

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

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

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

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

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

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

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

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

Z - The sample chromatogram is similar to mineral spirits.

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

Chain of Custody

Page 1 of 1

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

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

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

Laboratory Number: 05-063
05-063.

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260B	Halogenated Volatiles 8260B	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082	Organochlorine Pesticides 8081A	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA / MTCA Metals (circle one)	TCLP Metals	HEM (oil and grease) 1664	% Moisture
1	102	5/8/12	11:45	Air			X														

	Signature	Company	Date	Time
Relinquished		TAI	5/8/12	14:04
Received		OnSite	5-8-12	1404
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions
Report results weight by volume if molecular or compound weight needed call Chuck.

Chromatograms with final report ☐

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

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

May 30, 2012

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

Re: Analytical Data for Project 6552
Laboratory Reference No. 1205-217

Dear Chuck:

Enclosed are the analytical results and associated quality control data for samples submitted on May 22, 2012.

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

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

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: May 30, 2012
Samples Submitted: May 22, 2012
Laboratory Reference: 1205-217
Project: 6552

Case Narrative

Samples were collected on May 22, 2012 and received by the laboratory on May 22, 2012. They were maintained at the laboratory at a temperature of 2°C to 6°C.

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

NWTPH Gx/BTEX Analysis

The chromatogram for sample 102 is similar to mineral spirits.

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: May 30, 2012
Samples Submitted: May 22, 2012
Laboratory Reference: 1205-217
Project: 6552

NWTPH-Gx/BTEX

Matrix: Air
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**102**					
Laboratory ID:	05-217-01					
Benzene	**ND**	1.0	EPA 8021	5-24-12	5-24-12	
Toluene	**ND**	1.0	EPA 8021	5-24-12	5-24-12	
Ethyl Benzene	**ND**	1.0	EPA 8021	5-24-12	5-24-12	
m,p-Xylene	**3.3**	1.0	EPA 8021	5-24-12	5-24-12	
o-Xylene	**ND**	1.0	EPA 8021	5-24-12	5-24-12	
Gasoline	**2000**	100	NWTPH-Gx	5-24-12	5-24-12	Z
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*89*	*73-121*				

Date of Report: May 30, 2012
Samples Submitted: May 22, 2012
Laboratory Reference: 1205-217
Project: 6552

NWTPH-Gx/BTEX
QUALITY CONTROL

Matrix: Air
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0524A1					
Benzene	ND	1.0	EPA 8021	5-24-12	5-24-12	
Toluene	ND	1.0	EPA 8021	5-24-12	5-24-12	
Ethyl Benzene	ND	1.0	EPA 8021	5-24-12	5-24-12	
m,p-Xylene	ND	1.0	EPA 8021	5-24-12	5-24-12	
o-Xylene	ND	1.0	EPA 8021	5-24-12	5-24-12	
Gasoline	ND	100	NWTPH-Gx	5-24-12	5-24-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*93*	*73-121*				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	05-217-01									
	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	3.30	3.30	NA	NA		NA	NA	0	30	
o-Xylene	ND	ND	NA	NA		NA	NA	NA	30	
Gasoline	1980	1930	NA	NA		NA	NA	3	30	
Surrogate:										
Fluorobenzene						*89*	*94*	*73-121*		

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

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

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

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

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

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

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

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

Z - The sample chromatogram is similar to mineral spirits.

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

Chain of Custody

Page 1 of 1

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

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

Turnaround Request (in working days)

(Check One)

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

Laboratory Number: 05-217

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	No. of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260B	Halogenated Volatiles 8260B	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082	Organochlorine Pesticides 8081A	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664	% Moisture
1	102	5/22/12	8:45	Air	1		X															

	Signature	Company	Date	Time
Relinquished		TAI	5/22/12	10:00
Received		OSE	5/22/12	1000
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Chromatograms with final report ☐

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

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

June 6, 2012

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

Re: Analytical Data for Project 6552
Laboratory Reference No. 1205-265

Dear Chuck:

Enclosed are the analytical results and associated quality control data for samples submitted on May 29, 2012.

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

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

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: June 6, 2012
Samples Submitted: May 29, 2012
Laboratory Reference: 1205-265
Project: 6552

Case Narrative

Samples were collected on May 29, 2012 and received by the laboratory on May 29, 2012. They were maintained at the laboratory at a temperature of 2°C to 6°C.

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

NWTPH Gx/BTEX Analysis

The chromatogram for sample 102 is similar to mineral spirits.

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

Date of Report: June 6, 2012
Samples Submitted: May 29, 2012
Laboratory Reference: 1205-265
Project: 6552

NWTPH-Gx/BTEX

Matrix: Air
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**102**					
Laboratory ID:	05-265-01					
Benzene	**ND**	1.0	EPA 8021	5-31-12	5-31-12	
Toluene	**ND**	1.0	EPA 8021	5-31-12	5-31-12	
Ethyl Benzene	**ND**	1.0	EPA 8021	5-31-12	5-31-12	
m,p-Xylene	**3.2**	1.0	EPA 8021	5-31-12	5-31-12	
o-Xylene	**ND**	1.0	EPA 8021	5-31-12	5-31-12	
Gasoline	**2200**	200	NWTPH-Gx	5-31-12	5-31-12	Z
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*96*	*73-121*				

Date of Report: June 6, 2012
Samples Submitted: May 29, 2012
Laboratory Reference: 1205-265
Project: 6552

NWTPH-Gx/BTEX
QUALITY CONTROL

Matrix: Air
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0531A1					
Benzene	ND	1.0	EPA 8021	5-31-12	5-31-12	
Toluene	ND	1.0	EPA 8021	5-31-12	5-31-12	
Ethyl Benzene	ND	1.0	EPA 8021	5-31-12	5-31-12	
m,p-Xylene	ND	1.0	EPA 8021	5-31-12	5-31-12	
o-Xylene	ND	1.0	EPA 8021	5-31-12	5-31-12	
Gasoline	ND	100	NWTPH-Gx	5-31-12	5-31-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*95*	*73-121*				
Laboratory ID:	MB0601A2					
Gasoline	ND	100	NWTPH-Gx	6-1-12	6-1-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*89*	*73-121*				

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	05-265-01								
	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	3.20	3.20	NA	NA	NA	NA	0	30	
o-Xylene	ND	ND	NA	NA	NA	NA	NA	30	
Gasoline	2230	1790	NA	NA	NA	NA	22	30	
Surrogate:									
Fluorobenzene					*96*	*94*	*73-121*		

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

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

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

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

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

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

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

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

Z - The sample chromatogram is similar to mineral spirits.

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

Chain of Custody

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

Page 1 of 1

Company: Tarca Associates
Project Number: 6552
Project Name:
Project Manager: Chuck Li
Sampled by: Nicolas Ritchie

Turnaround Request (in working days)

(Check One)

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

Laboratory Number: 05-285

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	No. of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260B	Halogenated Volatiles 8260B	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082	Organochlorine Pesticides 8081A	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664				% Moisture
1	~~B~~ 102	5/29/12	11:30	Air	1		X																		

	Signature	Company	Date	Time
Relinquished		TRC	5/29/12	12:15
Received			5/29/12	1215
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Report results weight by volume

Chromatograms with final report ☐

Data Package: Level III ☐ Level IV ☐

Electronic Data Deliverables (EDDs) ☐ _____

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

June 19, 2012

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

Re: Analytical Data for Project 6552
Laboratory Reference No. 1206-103

Dear Chuck:

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

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

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

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: June 19, 2012
Samples Submitted: June 14, 2012
Laboratory Reference: 1206-103
Project: 6552

Case Narrative

Samples were collected on June 14, 2012 and received by the laboratory on June 14, 2012. They were maintained at the laboratory at a temperature of 2°C to 6°C.

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

NWTPH Gx/BTEX Analysis

The chromatogram for sample 102 is similar to mineral spirits with diesel.

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

Date of Report: June 19, 2012
Samples Submitted: June 14, 2012
Laboratory Reference: 1206-103
Project: 6552

NWTPH-Gx/BTEX

Matrix: Air
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**102**					
Laboratory ID:	06-103-01					
Benzene	**ND**	1.0	EPA 8021	6-15-12	6-15-12	
Toluene	**ND**	1.0	EPA 8021	6-15-12	6-15-12	
Ethyl Benzene	**ND**	1.0	EPA 8021	6-15-12	6-15-12	
m,p-Xylene	**2.3**	1.0	EPA 8021	6-15-12	6-15-12	
o-Xylene	**ND**	1.0	EPA 8021	6-15-12	6-15-12	
Gasoline	**1700**	100	NWTPH-Gx	6-15-12	6-15-12	Z
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*92*	*71-116*				

Date of Report: June 19, 2012
Samples Submitted: June 14, 2012
Laboratory Reference: 1206-103
Project: 6552

NWTPH-Gx/BTEX
QUALITY CONTROL

Matrix: Air
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0615A1					
Benzene	ND	1.0	EPA 8021	6-15-12	6-15-12	
Toluene	ND	1.0	EPA 8021	6-15-12	6-15-12	
Ethyl Benzene	ND	1.0	EPA 8021	6-15-12	6-15-12	
m,p-Xylene	ND	1.0	EPA 8021	6-15-12	6-15-12	
o-Xylene	ND	1.0	EPA 8021	6-15-12	6-15-12	
Gasoline	ND	100	NWTPH-Gx	6-15-12	6-15-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*91*	*71-116*				

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	06-103-01								
	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	2.30	2.20	NA	NA	NA	NA	4	30	
o-Xylene	ND	ND	NA	NA	NA	NA	NA	30	
Gasoline	1680	1700	NA	NA	NA	NA	1	30	
Surrogate:									
Fluorobenzene					*92* *92*	*71-116*			

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

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

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

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

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

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

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

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

Z - The sample chromatogram is similar to mineral spirits with diesel.

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

Chain of Custody

Page 1 of 1

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

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

Turnaround Request (in working days)

(Check One)

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

Laboratory Number: 06-103

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	No. of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260B	Halogenated Volatiles 8260B	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082	Organochlorine Pesticides 8081A	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664					% Moisture
1	102	6/14/12	7:30	Air	1		X																			

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished		TAI	6/14/12	10:25	
Received		OSE	6/14/12	1025	
Relinquished					
Received					
Relinquished					
Received					
Reviewed/Date		Reviewed/Date			Chromatograms with final report ☐

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

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

June 21, 2012

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

Re: Analytical Data for Project 6552
Laboratory Reference No. 1206-120

Dear Chuck:

Enclosed are the analytical results and associated quality control data for samples submitted on June 18, 2012.

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

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

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: June 21, 2012
Samples Submitted: June 18, 2012
Laboratory Reference: 1206-120
Project: 6552

Case Narrative

Samples were collected on June 18, 2012 and received by the laboratory on June 18, 2012. They were maintained at the laboratory at a temperature of 2°C to 6°C.

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

NWTPH Gx/BTEX Analysis

The chromatogram for sample 101-103 is similar to mineral spirits.

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

Date of Report: June 21, 2012
Samples Submitted: June 18, 2012
Laboratory Reference: 1206-120
Project: 6552

NWTPH-Gx/BTEX

Matrix: Air
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**101-103**					
Laboratory ID:	06-120-01					
Benzene	**ND**	1.0	EPA 8021	6-19-12	6-19-12	
Toluene	**ND**	1.0	EPA 8021	6-19-12	6-19-12	
Ethyl Benzene	**ND**	1.0	EPA 8021	6-19-12	6-19-12	
m,p-Xylene	**3.7**	1.0	EPA 8021	6-19-12	6-19-12	
o-Xylene	**ND**	1.0	EPA 8021	6-19-12	6-19-12	
Gasoline	**2300**	200	NWTPH-Gx	6-19-12	6-19-12	Z
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*98*	*71-116*				

Date of Report: June 21, 2012
Samples Submitted: June 18, 2012
Laboratory Reference: 1206-120
Project: 6552

NWTPH-Gx/BTEX
QUALITY CONTROL

Matrix: Air
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0619A1					
Benzene	ND	1.0	EPA 8021	6-19-12	6-19-12	
Toluene	ND	1.0	EPA 8021	6-19-12	6-19-12	
Ethyl Benzene	ND	1.0	EPA 8021	6-19-12	6-19-12	
m,p-Xylene	ND	1.0	EPA 8021	6-19-12	6-19-12	
o-Xylene	ND	1.0	EPA 8021	6-19-12	6-19-12	
Gasoline	ND	100	NWTPH-Gx	6-19-12	6-19-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*95*	*71-116*				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	06-120-01									
	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	3.70	3.40	NA	NA		NA	NA	8	30	
o-Xylene	ND	ND	NA	NA		NA	NA	NA	30	
Gasoline	2270	2270	NA	NA		NA	NA	0	30	
Surrogate:										
Fluorobenzene						*98*	*95*	*71-116*		

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

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

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

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

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

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

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

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

Z - The sample chromatogram is similar to mineral spirits.

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

Chain of Custody

Page 1 of 1

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

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

Turnaround Request (in working days)

(Check One)

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

Laboratory Number: 06-120

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	No. of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260B	Halogenated Volatiles 8260B	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082	Organochlorine Pesticides 8081A	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664	% Moisture
1	B1-103	6/18/12	9:30	Av	1		X															

	Signature	Company	Date	Time
Relinquished		TAI	6/18/12	10:40
Received		OSE	6/18/12	1040
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Chromatograms with final report ☐

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

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

July 31, 2012

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

Re: Analytical Data for Project 6552
Laboratory Reference No. 1207-210

Dear Chuck:

Enclosed are the analytical results and associated quality control data for samples submitted on July 26, 2012.

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

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

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: July 31, 2012
Samples Submitted: July 26, 2012
Laboratory Reference: 1207-210
Project: 6552

Case Narrative

Samples were collected on July 26, 2012 and received by the laboratory on July 26, 2012. They were maintained at the laboratory at a temperature of 2°C to 6°C.

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

NWTPH Gx/BTEX (air) Analysis

The chromatogram for sample 101-103 is similar to mineral spirits.

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: July 31, 2012
Samples Submitted: July 26, 2012
Laboratory Reference: 1207-210
Project: 6552

NWTPH-Gx/BTEX

Matrix: Air
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**101-103**					
Laboratory ID:	07-210-01					
Benzene	**ND**	1.0	EPA 8021	7-27-12	7-27-12	
Toluene	**ND**	1.0	EPA 8021	7-27-12	7-27-12	
Ethyl Benzene	**ND**	1.0	EPA 8021	7-27-12	7-27-12	
m,p-Xylene	**2.9**	1.0	EPA 8021	7-27-12	7-27-12	
o-Xylene	**ND**	1.0	EPA 8021	7-27-12	7-27-12	
Gasoline	**1700**	100	NWTPH-Gx	7-27-12	7-27-12	Z
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*101*	*71-116*				

Date of Report: July 31, 2012
Samples Submitted: July 26, 2012
Laboratory Reference: 1207-210
Project: 6552

NWTPH-Gx/BTEX
QUALITY CONTROL

Matrix: Air
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0727A1					
Benzene	ND	1.0	EPA 8021	7-27-12	7-27-12	
Toluene	ND	1.0	EPA 8021	7-27-12	7-27-12	
Ethyl Benzene	ND	1.0	EPA 8021	7-27-12	7-27-12	
m,p-Xylene	ND	1.0	EPA 8021	7-27-12	7-27-12	
o-Xylene	ND	1.0	EPA 8021	7-27-12	7-27-12	
Gasoline	ND	100	NWTPH-Gx	7-27-12	7-27-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*105*	*71-116*				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	07-210-01									
	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	2.90	2.60	NA	NA		NA	NA	11	30	
o-Xylene	ND	ND	NA	NA		NA	NA	NA	30	
Gasoline	1700	1670	NA	NA		NA	NA	2	30	Z
Surrogate:										
Fluorobenzene						*101*	*105*	*71-116*		

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

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

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

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

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

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

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

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

Z - The sample chromatogram is similar to mineral spirits.

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

Chain of Custody

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

Company: TAI
Project Number: 6552
Project Name:
Project Manager: Chuck Lia
Sampled by:

Turnaround Request (in working days)

(Check One)

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

Laboratory Number: 07-210

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	No. of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260B	Halogenated Volatiles 8260B	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082	Organochlorine Pesticides 8081A	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664					% Moisture
1	101-103	7/26/12	12:30	Air	1		X																			

	Signature	Company	Date	Time
Relinquished		TAI	7/26/12	13:56
Received		OSE	7/26/12	1352
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Chromatograms with final report ☐

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

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

September 12, 2012

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

Re: Analytical Data for Project 6552
Laboratory Reference No. 1209-011

Dear Chuck:

Enclosed are the analytical results and associated quality control data for samples submitted on September 4, 2012.

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

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

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: September 12, 2012
Samples Submitted: September 4, 2012
Laboratory Reference: 1209-011
Project: 6552

Case Narrative

Samples were collected on September 4, 2012 and received by the laboratory on September 4, 2012. They were maintained at the laboratory at a temperature of 2°C to 6°C.

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

NWTPH Gx/BTEX Analysis

The chromatogram for sample 101-103 is similar to mineral spirits.

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: September 12, 2012
Samples Submitted: September 4, 2012
Laboratory Reference: 1209-011
Project: 6552

NWTPH-Gx/BTEX

Matrix: Air
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**101-103**					
Laboratory ID:	09-011-01					
Benzene	**ND**	1.0	EPA 8021	9-6-12	9-6-12	
Toluene	**ND**	1.0	EPA 8021	9-6-12	9-6-12	
Ethyl Benzene	**ND**	1.0	EPA 8021	9-6-12	9-6-12	
m,p-Xylene	**1.8**	1.0	EPA 8021	9-6-12	9-6-12	
o-Xylene	**ND**	1.0	EPA 8021	9-6-12	9-6-12	
Gasoline	**1000**	100	NWTPH-Gx	9-6-12	9-6-12	Z
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*90*	*71-116*				

Date of Report: September 12, 2012
Samples Submitted: September 4, 2012
Laboratory Reference: 1209-011
Project: 6552

NWTPH-Gx/BTEX
QUALITY CONTROL

Matrix: Air
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0906A1					
Benzene	ND	1.0	EPA 8021	9-6-12	9-6-12	
Toluene	ND	1.0	EPA 8021	9-6-12	9-6-12	
Ethyl Benzene	ND	1.0	EPA 8021	9-6-12	9-6-12	
m,p-Xylene	ND	1.0	EPA 8021	9-6-12	9-6-12	
o-Xylene	ND	1.0	EPA 8021	9-6-12	9-6-12	
Gasoline	ND	100	NWTPH-Gx	9-6-12	9-6-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*86*	*71-116*				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	09-011-01									
	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	1.80	1.70	NA	NA		NA	NA	6	30	
o-Xylene	ND	ND	NA	NA		NA	NA	NA	30	
Gasoline	1010	963	NA	NA		NA	NA	5	30	
Surrogate:										
Fluorobenzene						*90*	*93*	*71-116*		

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

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

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

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

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

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

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

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

Z - The sample chromatogram is similar to mineral spirits.

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

Chain of Custody

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

Page 1 of 1

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

Turnaround Request (in working days)

(Check One)

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

Laboratory Number: 09-011

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	No. of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260B	Halogenated Volatiles 8260B	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082	Organochlorine Pesticides 8081A	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664	% Moisture
	101-103	9/4/12	10:00	Air	1		X															

	Signature	Company	Date	Time
Relinquished		Terra Associates	9/4/12	14:20
Received		ONE	9/4/12	1420
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions:

Chromatograms with final report ☐

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

OnSite Environmental Inc.
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October 5, 2012

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

Re: Analytical Data for Project 6552
Laboratory Reference No. 1210-002

Dear Chuck:

Enclosed are the analytical results and associated quality control data for samples submitted on October 1, 2012.

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

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

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: October 5, 2012
Samples Submitted: October 1, 2012
Laboratory Reference: 1210-002
Project: 6552

Case Narrative

Samples were collected on October 1, 2012 and received by the laboratory on October 1, 2012. They were maintained at the laboratory at a temperature of 2°C to 6°C.

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

NWTPH Gx/BTEX Analysis

The chromatogram for sample 101-103 is similar to mineral spirits.

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 5, 2012
Samples Submitted: October 1, 2012
Laboratory Reference: 1210-002
Project: 6552

NWTPH-Gx/BTEX

Matrix: Air
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**101-103**					
Laboratory ID:	10-002-01					
Benzene	**ND**	1.0	EPA 8021	10-2-12	10-2-12	
Toluene	**ND**	1.0	EPA 8021	10-2-12	10-2-12	
Ethyl Benzene	**ND**	1.0	EPA 8021	10-2-12	10-2-12	
m,p-Xylene	**2.1**	1.0	EPA 8021	10-2-12	10-2-12	
o-Xylene	**ND**	1.0	EPA 8021	10-2-12	10-2-12	
Gasoline	**1700**	100	NWTPH-Gx	10-2-12	10-2-12	Z
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*97*	*71-116*				

Date of Report: October 5, 2012
Samples Submitted: October 1, 2012
Laboratory Reference: 1210-002
Project: 6552

NWTPH-Gx/BTEX
QUALITY CONTROL

Matrix: Air
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1002A1					
Benzene	ND	1.0	EPA 8021	10-2-12	10-2-12	
Toluene	ND	1.0	EPA 8021	10-2-12	10-2-12	
Ethyl Benzene	ND	1.0	EPA 8021	10-2-12	10-2-12	
m,p-Xylene	ND	1.0	EPA 8021	10-2-12	10-2-12	
o-Xylene	ND	1.0	EPA 8021	10-2-12	10-2-12	
Gasoline	ND	100	NWTPH-Gx	10-2-12	10-2-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*97*	*71-116*				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	10-002-01									
	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	2.10	2.10	NA	NA		NA	NA	0	30	
o-Xylene	ND	ND	NA	NA		NA	NA	NA	30	
Gasoline	1700	1650	NA	NA		NA	NA	3	30	
Surrogate:										
Fluorobenzene						*97*	*96*	*71-116*		

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

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

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

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

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

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

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

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

Z - The sample chromatogram is similar to mineral spirits.

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

Chain of Custody

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Analytical Laboratory Testing Services
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Page 1 of 1

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

Turnaround Request (in working days)

(Check One)

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

Laboratory Number: 10-002

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	No. of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260B	Halogenated Volatiles 8260B	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082	Organochlorine Pesticides 8081A	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664					% Moisture
1	101-103	10/1/12	11:00	Air	1		X																			

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished			10/1/12	12:20	
Received			10/1/12	1220	
Relinquished					
Received					
Relinquished					
Received					
Reviewed/Date		Reviewed/Date			Chromatograms with final report ☐

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

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

November 21, 2012

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

Re: Analytical Data for Project T-6552
Laboratory Reference No. 1211-118

Dear Charles:

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

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

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

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: November 21, 2012
Samples Submitted: November 14, 2012
Laboratory Reference: 1211-118
Project: T-6552

Case Narrative

Samples were collected on November 14, 2012 and received by the laboratory on November 14, 2012. They were maintained at the laboratory at a temperature of 2°C to 6°C.

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

NWTPH Gx/BTEX Analysis

The chromatogram for sample Air 11-14 is similar to mineral spirits.

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: November 21, 2012
Samples Submitted: November 14, 2012
Laboratory Reference: 1211-118
Project: T-6552

NWTPH-Gx/BTEX

Matrix: Air
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Air 11-14**					
Laboratory ID:	11-118-01					
Benzene	**ND**	1.0	EPA 8021B	11-15-12	11-15-12	
Toluene	**ND**	1.0	EPA 8021B	11-15-12	11-15-12	
Ethyl Benzene	**ND**	1.0	EPA 8021B	11-15-12	11-15-12	
m,p-Xylene	**ND**	1.0	EPA 8021B	11-15-12	11-15-12	
o-Xylene	**ND**	1.0	EPA 8021B	11-15-12	11-15-12	
Gasoline	**970**	100	NWTPH-Gx	11-15-12	11-15-12	Z
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*99*	*71-116*				

Date of Report: November 21, 2012
Samples Submitted: November 14, 2012
Laboratory Reference: 1211-118
Project: T-6552

NWTPH-Gx/BTEX
QUALITY CONTROL

Matrix: Air
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1115A1					
Benzene	ND	1.0	EPA 8021B	11-15-12	11-15-12	
Toluene	ND	1.0	EPA 8021B	11-15-12	11-15-12	
Ethyl Benzene	ND	1.0	EPA 8021B	11-15-12	11-15-12	
m,p-Xylene	ND	1.0	EPA 8021B	11-15-12	11-15-12	
o-Xylene	ND	1.0	EPA 8021B	11-15-12	11-15-12	
Gasoline	ND	100	NWTPH-Gx	11-15-12	11-15-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*104*	*71-116*				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	11-118-01									
	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	967	1020	NA	NA		NA	NA	5	30	
Surrogate:										
Fluorobenzene						*99*	*101*	*71-116*		

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

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

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

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

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

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

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

Y - 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 similar to mineral spirits.

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

Chain of Custody

Page 1 of 1

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

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

Turnaround Request (in working days)

(Check One)

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

Laboratory Number: 11-118

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	No. of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260B	Halogenated Volatiles 8260B	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082	Organochlorine Pesticides 8081A	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664				% Moisture
1	Anr 11-14	11/14/12	1130	Anr	1		X																		

	Signature	Company	Date	Time
Relinquished		Environmental Field Serv	11/14/12	1350
Received			11/14/12	1350
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Chromatograms with final report ☐

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

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

December 14, 2012

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

Re: Analytical Data for Project 6550
Laboratory Reference No. 1212-084

Dear Chuck:

Enclosed are the analytical results and associated quality control data for samples submitted on December 12, 2012.

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

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

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: December 14, 2012
Samples Submitted: December 12, 2012
Laboratory Reference: 1212-084
Project: 6550

Case Narrative

Samples were collected on December 12, 2012 and received by the laboratory on December 12, 2012. They were maintained at the laboratory at a temperature of 2°C to 6°C.

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

NWTPH Gx/BTEX Analysis

The chromatogram for sample 101-103 is similar to mineral spirits.

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: December 14, 2012
Samples Submitted: December 12, 2012
Laboratory Reference: 1212-084
Project: 6550

NWTPH-Gx/BTEX

Matrix: Air
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**101-103**					
Laboratory ID:	12-084-01					
Benzene	**ND**	1.0	EPA 8021	12-13-12	12-13-12	
Toluene	**ND**	1.0	EPA 8021	12-13-12	12-13-12	
Ethyl Benzene	**ND**	1.0	EPA 8021	12-13-12	12-13-12	
m,p-Xylene	**ND**	1.0	EPA 8021	12-13-12	12-13-12	
o-Xylene	**ND**	1.0	EPA 8021	12-13-12	12-13-12	
Gasoline	**790**	100	NWTPH-Gx	12-13-12	12-13-12	Z
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*93*	*71-116*				

Date of Report: December 14, 2012
Samples Submitted: December 12, 2012
Laboratory Reference: 1212-084
Project: 6550

NWTPH-Gx/BTEX
QUALITY CONTROL

Matrix: Air
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1213A1					
Benzene	ND	1.0	EPA 8021	12-13-12	12-13-12	
Toluene	ND	1.0	EPA 8021	12-13-12	12-13-12	
Ethyl Benzene	ND	1.0	EPA 8021	12-13-12	12-13-12	
m,p-Xylene	ND	1.0	EPA 8021	12-13-12	12-13-12	
o-Xylene	ND	1.0	EPA 8021	12-13-12	12-13-12	
Gasoline	ND	100	NWTPH-Gx	12-13-12	12-13-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*100*	*71-116*				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	12-084-01									
	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	792	815	NA	NA		NA	NA	3	30	
Surrogate:										
Fluorobenzene						*93*	*97*	*71-116*		

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

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

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

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

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

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

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

Y - 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 similar to mineral spirits.

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

Chain of Custody

Page 1 of 1

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

Laboratory Number: 12-084

Company: Terra Associates Inc
Project Number: 6550
Project Name:
Project Manager: Chuck Lie
Sampled by: Nicolas R. Hoffman

Turnaround Request (in working days)

(Check One)

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

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals/ MTCA Metals (circle one)	TCLP Metals	HEM (oil and grease) 1664A	% Moisture
1	101-103	12/12/12	12:15	Air	1		X														

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished		TAI	12/12/12	13:35	
Received		ESE	12/12/12	1335	
Relinquished					
Received					
Relinquished					
Received					
Reviewed/Date		Reviewed/Date			Chromatograms with final report ☐

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

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

January 11, 2013

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

Re: Analytical Data for Project 6552
Laboratory Reference No. 1301-078

Dear Chuck:

Enclosed are the analytical results and associated quality control data for samples submitted on January 10, 2013.

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

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

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: January 11, 2013
Samples Submitted: January 10, 2013
Laboratory Reference: 1301-078
Project: 6552

Case Narrative

Samples were collected on January 10, 2013 and received by the laboratory on January 10, 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 101-103 is similar to mineral spirits.

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: January 11, 2013
Samples Submitted: January 10, 2013
Laboratory Reference: 1301-078
Project: 6552

NWTPH-Gx/BTEX

Matrix: Air
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**101-103**					
Laboratory ID:	01-078-01					
Benzene	**ND**	1.0	EPA 8021	1-10-13	1-10-13	
Toluene	**ND**	1.0	EPA 8021	1-10-13	1-10-13	
Ethyl Benzene	**ND**	1.0	EPA 8021	1-10-13	1-10-13	
m,p-Xylene	**ND**	1.0	EPA 8021	1-10-13	1-10-13	
o-Xylene	**ND**	1.0	EPA 8021	1-10-13	1-10-13	
Gasoline	**770**	100	NWTPH-Gx	1-10-13	1-10-13	Z
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*106*	*71-116*				

Date of Report: January 11, 2013
Samples Submitted: January 10, 2013
Laboratory Reference: 1301-078
Project: 6552

NWTPH-Gx/BTEX
QUALITY CONTROL

Matrix: Air
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0110A1					
Benzene	ND	1.0	EPA 8021	1-10-13	1-10-13	
Toluene	ND	1.0	EPA 8021	1-10-13	1-10-13	
Ethyl Benzene	ND	1.0	EPA 8021	1-10-13	1-10-13	
m,p-Xylene	ND	1.0	EPA 8021	1-10-13	1-10-13	
o-Xylene	ND	1.0	EPA 8021	1-10-13	1-10-13	
Gasoline	ND	100	NWTPH-Gx	1-10-13	1-10-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*105*	*71-116*				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	01-078-01									
	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	765	654	NA	NA		NA	NA	16	30	
Surrogate:										
Fluorobenzene						*106*	*101*	*71-116*		

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

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

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

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

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

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

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

Y - 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 similar to mineral spirits.

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

Chain of Custody

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

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

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

Laboratory Number: 01-078

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals/ MTCA Metals (circle one)	TCLP Metals	HEM (oil and grease) 1664A	% Moisture
1	101-103	1/10/13	8:35	Air	2		X														

	Signature	Company	Date	Time
Relinquished		TAI	1/10/13	9:55
Received		OSE	1/10/13	0955
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions: WTL

Chromatograms with final report ☐

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

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

January 25, 2013

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

Re: Analytical Data for Project 6552
Laboratory Reference No. 1301-134

Dear Chuck:

Enclosed are the analytical results and associated quality control data for samples submitted on January 22, 2013.

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

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

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: January 25, 2013
Samples Submitted: January 22, 2013
Laboratory Reference: 1301-134
Project: 6552

NWTPH-Gx/BTEX
QUALITY CONTROL

Matrix: Air
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0124A1					
Benzene	ND	1.0	EPA 8021	1-24-13	1-24-13	
Toluene	ND	1.0	EPA 8021	1-24-13	1-24-13	
Ethyl Benzene	ND	1.0	EPA 8021	1-24-13	1-24-13	
m,p-Xylene	ND	1.0	EPA 8021	1-24-13	1-24-13	
o-Xylene	ND	1.0	EPA 8021	1-24-13	1-24-13	
Gasoline	ND	100	NWTPH-Gx	1-24-13	1-24-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*103*	*71-116*				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	01-134-01									
	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	663	648	NA	NA		NA	NA	2	30	
Surrogate:										
Fluorobenzene						*98*	*99*	*71-116*		

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

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

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

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

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

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

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

Y - 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 similar to mineral spirits.

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

Chain of Custody

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

Page 1 of 1

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

Turnaround Request (in working days)

(Check One)

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

Laboratory Number: 01-134

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals/ MTCA Metals (circle one)	TCLP Metals	HEM (oil and grease) 1664A	% Moisture
1	101-103	1/22/13	10:25	Air			X														

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished		TAI	1/22/13	11:30	WTL
Received		OSE	1/22/13	1130	
Relinquished					
Received					
Relinquished					
Received					
Reviewed/Date		Reviewed/Date			Chromatograms with final report ☐

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

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

February 19, 2013

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

Re: Analytical Data for Project T-6552
Laboratory Reference No. 1302-092

Dear Chuck:

Enclosed are the analytical results and associated quality control data for samples submitted on February 14, 2013.

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

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

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: February 19, 2013
Samples Submitted: February 14, 2013
Laboratory Reference: 1302-092
Project: T-6552

Case Narrative

Samples were collected on February 14, 2013 and received by the laboratory on February 14, 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 Air 02-14 is similar to mineral spirits.

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: February 19, 2013
Samples Submitted: February 14, 2013
Laboratory Reference: 1302-092
Project: T-6552

NWTPH-Gx/BTEX

Matrix: Air
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Air 02-14**					
Laboratory ID:	02-092-01					
Benzene	**ND**	1.0	EPA 8021	2-14-13	2-14-13	
Toluene	**ND**	1.0	EPA 8021	2-14-13	2-14-13	
Ethyl Benzene	**ND**	1.0	EPA 8021	2-14-13	2-14-13	
m,p-Xylene	**ND**	1.0	EPA 8021	2-14-13	2-14-13	
o-Xylene	**ND**	1.0	EPA 8021	2-14-13	2-14-13	
Gasoline	**980**	100	NWTPH-Gx	2-14-13	2-14-13	Z
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*102*	*71-116*				

Date of Report: February 19, 2013
Samples Submitted: February 14, 2013
Laboratory Reference: 1302-092
Project: T-6552

NWTPH-Gx/BTEX
QUALITY CONTROL

Matrix: Air
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0214A1					
Benzene	ND	1.0	EPA 8021	2-14-13	2-14-13	
Toluene	ND	1.0	EPA 8021	2-14-13	2-14-13	
Ethyl Benzene	ND	1.0	EPA 8021	2-14-13	2-14-13	
m,p-Xylene	ND	1.0	EPA 8021	2-14-13	2-14-13	
o-Xylene	ND	1.0	EPA 8021	2-14-13	2-14-13	
Gasoline	ND	100	NWTPH-Gx	2-14-13	2-14-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*99*	*71-116*				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	02-091-04									
	ORIG	DUP								
Benzene	ND	ND	NA	NA		NA	NA	NA	30	
Toluene	ND	ND	NA	NA		NA	NA	NA	30	
Ethyl Benzene	ND	ND	NA	NA		NA	NA	NA	30	
m,p-Xylene	ND	ND	NA	NA		NA	NA	NA	30	
o-Xylene	ND	ND	NA	NA		NA	NA	NA	30	
Gasoline	ND	ND	NA	NA		NA	NA	NA	30	
Surrogate:										
Fluorobenzene						*99*	*100*	*71-116*		

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

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

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

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

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

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

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

Y - 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 similar to mineral spirits.

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

Chain of Custody

Page 1 of 1

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

Laboratory Number: 02-092

Company: Terra Associates Inc.
Project Number: T-6552
Project Name:
Project Manager: Charles Lie
Sampled by: Terry Bukowski, EPS, LLC

Turnaround Request (in working days)

(Check One)

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

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	No. of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260B	Halogenated Volatiles 8260B	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082	Organochlorine Pesticides 8081A	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664					% Moisture
1	Air 02-14	2/14/13	1010	Air	1		X																			

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished		Environmental Technology	2/14/13	1200	WT/L
Received		OSE	2/14/13	1200	
Relinquished					
Received					
Relinquished					
Received					
Reviewed/Date		Reviewed/Date			Chromatograms with final report ☐

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

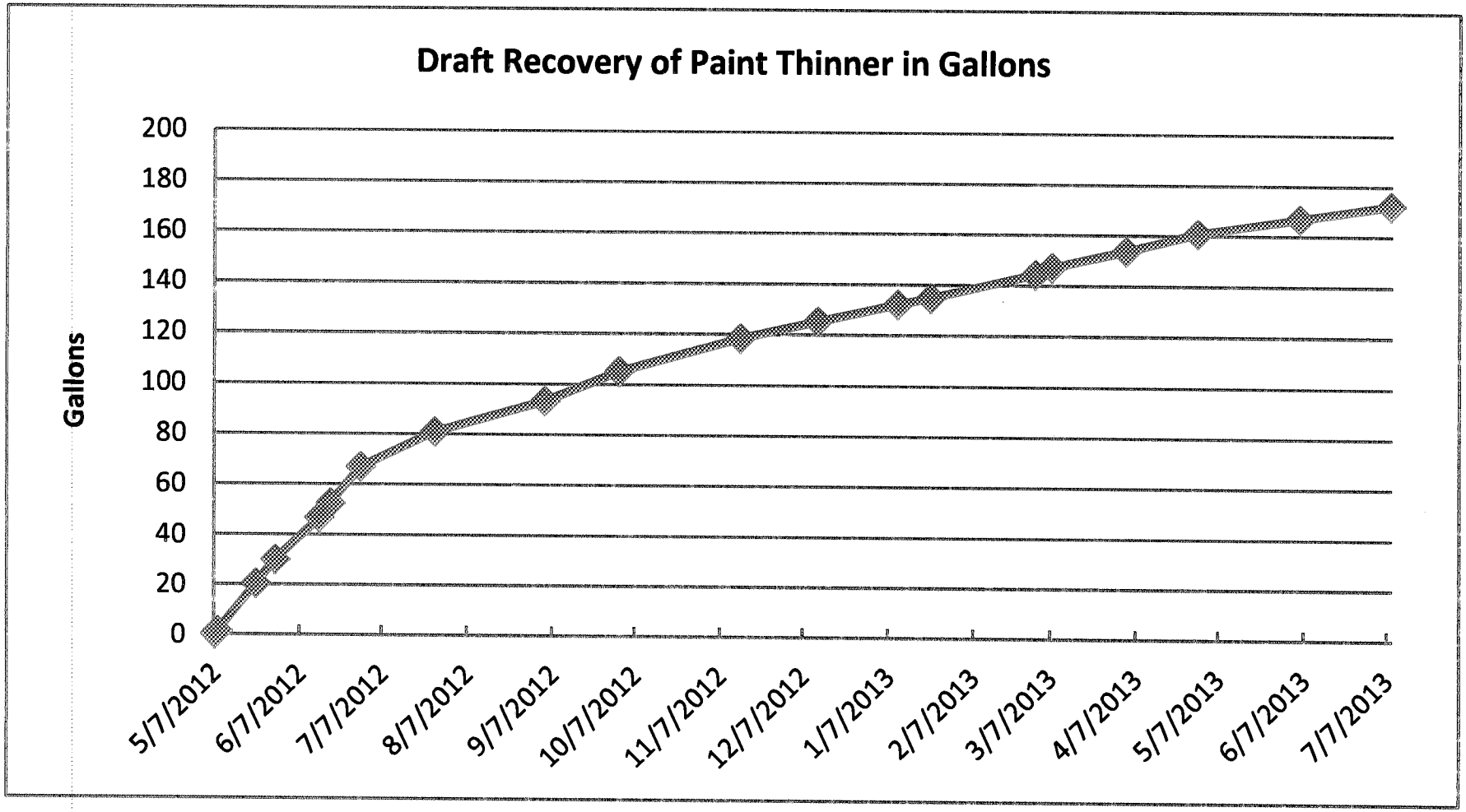
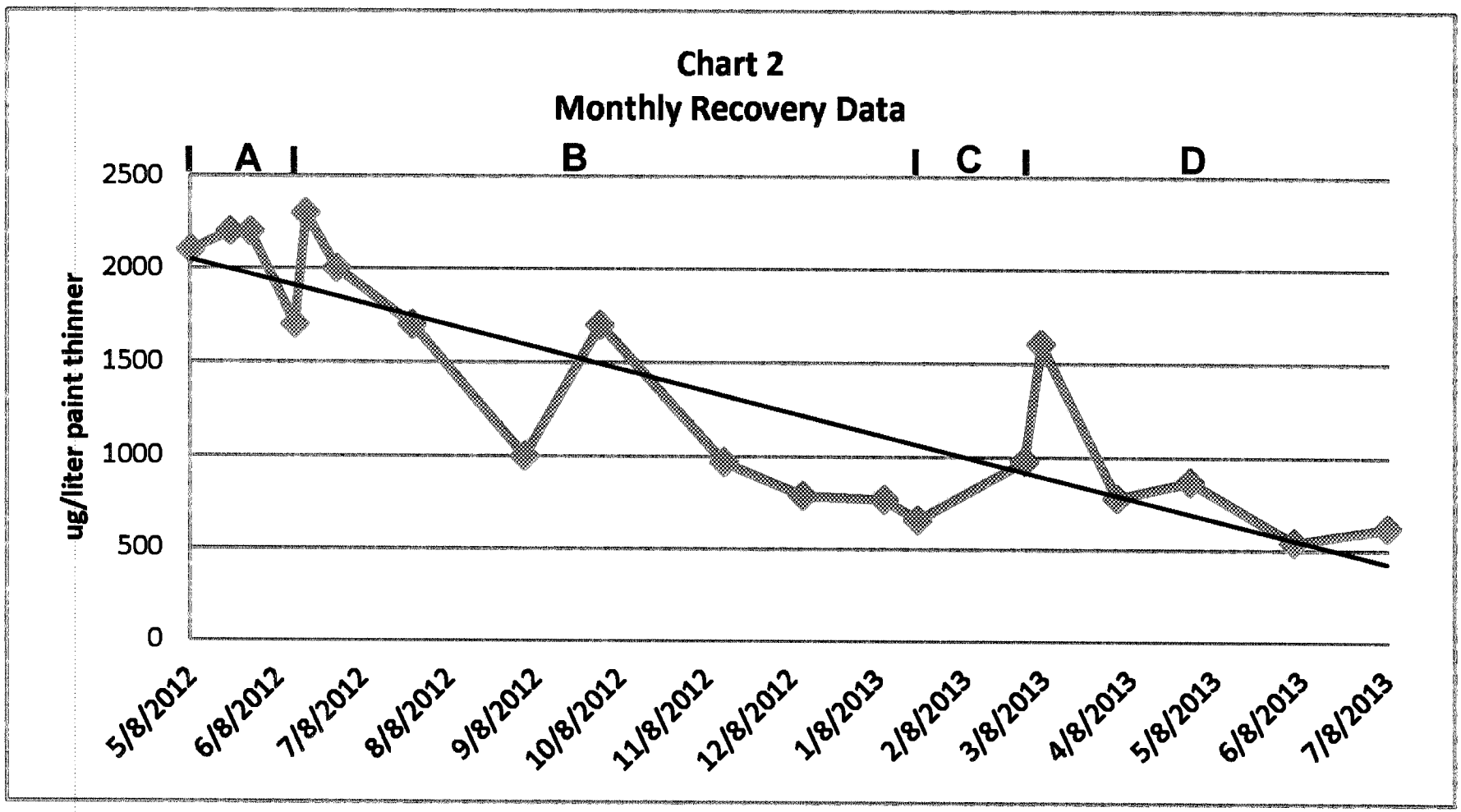


Chart E-1
July 2013
T-6552
CRL



A-MW-101 only
B- MW-101, 102 and 103
C-MW-101 and 102
D-MW-101, 102, 105 and 106

Chart E-2
T-6552
July 2013

APPENDIX F

MTCA TPH 11.1 SUMMARIES

A2 Soil Cleanup Levels: Calculation and Summary of Results. Refer to WAC 173-340-720, 740, 745, 747, 750

Site Information

Date: 4/30/2013
Site Name: 5221 Ballard Ave NW
Sample Name: DPT 4 5-10
Measured Soil TPH Concentration, mg/kg: 7,257.721

1. Summary of Calculation Results

Exposure Pathway	Method/Goal	Protective Soil TPH Conc, mg/kg	With Measured Soil Conc		Does Measured Soil Conc Pass or Fail?
			RISK @	HI @	
Protection of Soil Direct Contact: Human Health	Method B	1,999	6.06E-10	3.63E+00	Fail
	Method C	38,789	8.11E-11	1.87E-01	Pass
Protection of Method B Ground Water Quality (Leaching)	Potable GW: Human Health Protectior	34	2.81E-07	2.82E+00	Fail
	Target TPH GW Conc. @ 500 ug/L	267	NA	NA	Fail

Warning! Check to determine if a simplified or site-specific Terrestrial Ecological Evaluation may be required (Refer to WAC 173-340-7490 through ~7494).

Warning! Check Residual Saturation (WAC340-747(10)).

2. Results for Protection of Soil Direct Contact Pathway: Human Health

	Method B: Unrestricted Land Use	Method C: Industrial Land Use
Protective Soil Concentration, TPH mg/kg	1,999.02	38,788.53
Most Stringent Criterion	HI =1	HI =1

Soil Criteria	Protective Soil Concentration @Method B				Protective Soil Concentration @Method C			
	Most Stringent?	TPH Conc, mg/kg	RISK @	HI @	Most Stringent?	TPH Conc, mg/kg	RISK @	HI @
HI =1	YES	2.00E+03	1.67E-10	1.00E+00	YES	3.88E+04	4.33E-10	1.00E+00
Total Risk=1E-5	*NO*	1.20E+08	1.00E-05	5.99E+04	*NO*	8.95E+08	1.00E-05	2.31E+04
Risk of Benzene= 1E-6	*NO*	1.20E+07	1.00E-06	5.99E+03				
Risk of cPAHs mixture= 1E-6	NA	NA	NA	NA				
EDB	NA	NA	NA	NA		NA		
EDC	NA	NA	NA	NA				

3. Results for Protection of Ground Water Quality (Leaching Pathway)

3.1. Protection of Potable Ground Water Quality (Method B): Human Health Protection

Most Stringent Criterion	HI=1
Protective Ground Water Concentration, ug/L	196.72
Protective Soil Concentration, mg/kg	34.07

Ground Water Criteria	Protective Potable Ground Water Concentration @Method B				Protective Soil Conc, mg/kg
	Most Stringent?	TPH Conc, ug/L	RISK @	HI @	
HI=1	YES	1.97E+02	1.13E-08	1.00E+00	3.41E+01
Total Risk = 1E-5	*NO*	6.17E+02	3.12E-07	2.84E+00	100% NAPL
Total Risk = 1E-6	*NO*	6.17E+02	3.12E-07	2.84E+00	100% NAPL
Risk of cPAHs mixture= 1E-5	NA	NA	NA	NA	NA
Benzene MCL = 5 ug/L	*NO*	6.17E+02	3.12E-07	2.84E+00	100% NAPL
MTBE = 20 ug/L	NA	NA	NA	NA	NA

Note: 100% NAPL is 69000 mg/kg TPH.

3.2 Protection of Ground Water Quality for TPH Ground Water Concentration previously adjusted and entered

Ground Water Criteria	Protective Ground Water Concentration			Protective Soil Conc, mg/kg
	TPH Conc, ug/L	Risk @	HI @	
Target TPH GW Conc = 500 ug/L	5.00E+02	7.21E-08	2.40E+00	2.67E+02

A1 Soil Cleanup Levels: Worksheet for Soil Data Entry: Refer to WAC 173-340-720, 740,745, 747, 760

1. Enter Site Information

Date: 04/30/13
Site Name: 5221 Ballard Ave NW
Sample Name: DPT 4 5-10

2. Enter Soil Concentration Measured

Chemical of Concern or Equivalent Carbon Group	Measured Soil Conc dry basis mg/kg	Composition Ratio %
Petroleum EC Fraction		
AL_EC >5-6	2.5	0.03%
AL_EC >6-8	2.5	0.03%
AL_EC >8-10	11	0.15%
AL_EC >10-12	4600	63.38%
AL_EC >12-16	71	0.98%
AL_EC >16-21	2.5	0.03%
AL_EC >21-34	2.5	0.03%
AR_EC >8-10	360	4.96%
AR_EC >10-12	2100	28.93%
AR_EC >12-16	100	1.38%
AR_EC >16-21	2.5	0.03%
AR_EC >21-34	2.5	0.03%
Benzene	0.011	0.00%
Toluene	0.055	0.00%
Ethylbenzene	0.055	0.00%
Total Xylenes	0.6	0.01%
Naphthalene	0	0.00%
1-Methyl Naphthalene	0	0.00%
2-Methyl Naphthalene	0	0.00%
n-Hexane	0	0.00%
MTBE	0	0.00%
Ethylene Dibromide (EDB)	0	0.00%
1,2 Dichloroethane (EDC)	0	0.00%
Benzo(a)anthracene	0	0.00%
Benzo(b)fluoranthene	0	0.00%
Benzo(k)fluoranthene	0	0.00%
Benzo(a)pyrene	0	0.00%
Chrysene	0	0.00%
Dibenz(a,h)anthracene	0	0.00%
Indeno(1,2,3-cd)pyrene	0	0.00%
Sum	7257.721	100.00%

Notes for Data Entry | Set Default Hydrogeology
Clear All Soil Concentration Data Entry Cells
Restore All Soil Concentration Data cleared

REMARK:
Enter site-specific information here.....

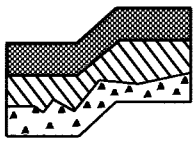
3. Enter Site-Specific Hydrogeological Data

Total soil porosity:	0.43	Unitless
Volumetric water content:	0.3	Unitless
Volumetric air content:	0.13	Unitless
Soil bulk density measured:	1.5	kg/L
Fraction Organic Carbon:	0.001	Unitless
Dilution Factor:	20	Unitless

4. Target TPH Ground Water Concentation (if adjusted)

If you adjusted the target TPH ground water concentration, enter adjusted value here: 500 ug/L

LETTER OF TRANSMITTAL



TERRA ASSOCIATES, Inc.

Consultants in Geotechnical Engineering, Geology and Environmental Earth Sciences

Ms. Heather Vick		DATE:	**7/24/13**
WDOE NWRO		JOB NO.:	**T-6552**
3190 – 160th Avenue SE		PROJECT:	**5221 Ballard Avenue NW**
Bellevue, WA 98008-5452			

We are sending you:

Attached: √ Under separate cover via: _____

the following: _____

Copies	Date	Description
1	7/24/13	Remedial Investigation/Feasibility Study/Remedial Action Summary

Remarks: _____

cc:

Signed: *Charles R. Lie*

12525 Willows Road, Suite 101 ♦ Kirkland, Washington ♦ 98034
Phone (425) 821-7777 ♦ Fax (425) 821-4334