Earth Solutions NW LLC

• Geotechnical Engineering
• Construction Monitoring
• Environmental Sciences

October 3, 2014
ES-2880.07

Potala Village Kirkland, LLC
2804 Grand Avenue, Suite 308
Everett, Washington 98201

Attention: Mr. Joe Zlab

Subject: Supplemental Environmental Investigation
Potala Village Kirkland
6700 Lake Washington Boulevard
Kirkland, Washington

Dear Mr. Zlab:

This report presents the results of our supplemental environmental investigation performed at the above-referenced property located in Kirkland, Washington (see attached Plate 1 for site location). This investigation was performed to assess the extent of gasoline petroleum soil and groundwater contamination that was found to have migrated beyond the subject site's southwestern property boundary underneath the adjoining sidewalk and Lake Washington Boulevard.

Our site assessment included collecting 14 discreet soil samples from four borings advanced downgradient of the subject site's former Arco gasoline service station, located along the east and west shoulders of Lake Washington Boulevard (see attached Plate 2 for boring locations). Groundwater monitoring wells were installed in two of the four borings and one groundwater sample was collected from each of the wells during a subsequent visit. All soil and groundwater samples collected during this assessment were analyzed at a State Certified laboratory for the presence of gasoline range petroleum hydrocarbons, as well as benzene, toluene, ethylbenzene, and xylenes (BTEX).

In summary, the analytical results of the soil samples indicate that the concentrations of gasoline range petroleum hydrocarbons and benzene present in a shallow soil collected in one of the soil borings advanced along the east side of Lake Washington Boulevard exceeded Washington Department of Ecology's Model Toxics Control Act (MTCA) Method A unrestricted land use soil cleanup levels. Gasoline range petroleum hydrocarbons and BTEX were also detected in shallow soil samples collected from the other borings, but not at concentrations exceeding MTCA Method A unrestricted land use soil cleanup levels. Based on laboratory analytical results, the lateral extent of the gasoline and benzene soil contamination is currently unknown, however, the contamination appears to have not migrated deeper than five feet below the ground surface.

In regards to the groundwater samples collected from the monitoring wells installed during this investigation, gasoline range petroleum hydrocarbons and BTEX were not detected above the laboratory reporting limits. Soil and groundwater analytical results are summarized in Tables 1 and 2 (see attached).

Previous Site Work

Between April 16, 2014 and May 2, 2014, AMDO, Inc. excavated approximately 3,216 tons of gasoline range petroleum impacted soil at the former Arco station area of the site. UST product piping and areas containing shallow perched water were also removed when encountered. The impacted soil excavated from the site was stockpiled at the south end of the property, where it was subsequently loaded into trucks that transported the soil to CEMEX's treatment facility in Everett, Washington.

At the conclusion of excavation activities, a total of 66 confirmatory soil samples were collected throughout the former Arco station excavation area between April 22, 2014 and May 2, 2014. Specifically, 34 confirmatory soil samples were collected along the north, south, east, and west sidewalls at 10-foot intervals and 32 confirmatory soil samples were collected from the bottom of the excavation; one for every 125 square feet.

All confirmation soil samples were submitted to On-Site and analyzed for the following:

- Total petroleum hydrocarbons (TPH) as gasoline using NWTPH-Gx as the analytical method.
- TPH as diesel and heavy oil using NWTPH-Dx as the analytical method.
- VOCs using EPA Method 8260C as the analytical method.
- MTCA 5 metals (arsenic, cadmium, chromium, lead, mercury) using EPA Method 6010C/7471B as the analytical method.

In addition, two of the confirmatory soil samples were selected to be analyzed for the presence of hexavalent chromium (chromium VI) and two more confirmatory soil samples with the highest reported concentrations of heavy oil range petroleum hydrocarbons were also analyzed for the presence of carcinogenic polycyclic aromatic hydrocarbons (cPAHs), and poly-chlorinated biphenyls (PCBs).

Based on the analytical results, all confirmatory soil samples collected throughout the bottom of the excavation and all confirmatory soil samples collected along the north, south, and east sidewalls of the excavation were reported by the laboratory as not containing TPH (as gasoline, diesel, heavy oil), VOCs, and metals at concentrations exceeding MTCA Method A soil cleanup levels. Chromium VI was not detected above the laboratory method reporting limit in the two soil samples selected for chromium VI analysis (Sample Nos. GEX-C-SW-3 and GEX-C-B12-5), therefore all chromium analytical results were compared to MTCA Method A soil cleanup level for chromium III (2,000 mg/kg). Furthermore, PCBs were also not detected above the laboratory method reporting limit in the two soil samples containing the highest concentrations of heavy oil range petroleum hydrocarbons (Sample Nos. GEX-C-EW-5 and GEC-C-EW-6) and cPAH concentrations for these two samples were reported to be below MTCA Method A soil cleanup levels.

TPH (as gasoline) concentrations in four of the ten confirmatory soil samples collected along the west sidewall (property boundary) of the excavation (Sample Nos. GEX-C-WW-6, -7, -8, and -9) ranged between 280 mg/kg to 1,800 mg/kg, exceeding the MTCA Method A soil cleanup level for gasoline (30 mg/kg when benzene is present and 100 mg/kg when benzene is not present). TPH (as diesel and heavy oil), VOCs, and metal concentrations in Sample Nos. GEC-C-WW-6, -7, -8, and -9 were reportedly below MTCA Method A soil cleanup levels. Additionally, the remaining six confirmatory soil samples collected along the west sidewall of the excavation reportedly did not contain TPH (as gasoline, diesel, and heavy oil), VOCs, and metals exceeding MTCA Method A soil cleanup levels.

Based on the analytical data above, no further remedial activities took place. However, residual gasoline petroleum hydrocarbon contamination remains beyond the site's southwestern property boundary, fronting Lake Washington Boulevard. On May 2, 2014, the sidewall along the southwest property boundary was sealed with bentonite (volclay) panels to prevent off-site contaminants from migrating back on-site.

Soil Lithology and Depth to Groundwater

The subsurface geology at the site consists of localized deposits of shallow fill, outwash deposits (primarily upper east half of site), and dense to very dense glacial till and transitional bed silt. At the locations of the recent remedial and soil removal activities, the underlying native soil deposits exposed in excavations were observed to consist of dense to very dense (cemented) glacial till and transitional bed silts (at-depth).

Based on the December 13, 2013 Geotechnical Engineering Study report prepared for the subject property by ESNW, localized and discrete zones of groundwater seepage exist at depths of approximately 4 to 51.5 feet bgs. Groundwater flow across the site is generally to the west. Throughout the westerly portions of the property where recent remedial activities were focused, groundwater conditions are characterized as a near surface (shallow) perched condition. This conclusion is supported by the observed dense to very dense native soils, and absence of an established groundwater table during recent soil removal activities.

To further characterize the site hydrogeology where recent remedial activities occurred, a deep test pit was excavated in the west – central portion of the site. The test pit was excavated on May 7, 2014 (following unusually heavy March and April rainfall amounts). Very dense (and cemented) glacial till underlain by dense transitional bed silt (below 15 feet) was encountered to the maximum exploration depth of 22 feet bgs. No groundwater seepage was observed. The test excavation was left open for 30 minutes following excavation to further assess potential groundwater seepage condition. No evidence of groundwater seepage (or associated excavation instability) was observed.

Based on the above findings, shallow zones of perched groundwater seepage develop seasonally along the upper contact of the very dense till and transitional bed deposits. These shallow zones of seepage are discrete and seasonal in nature with respect to flow.

During this investigation, perched groundwater was encountered at depths ranging between 23 and 27 feet below the ground surface.

Field Activities

Field activities involved with completing this supplemental environmental investigation were performed on August 25th and August 26th, 2014. The field activities included collecting 14 discreet soil samples from four borings advanced downgradient of the former Arco gasoline service station at the site, along the east and west shoulders of Lake Washington Boulevard. Groundwater monitoring wells were installed in two of the four borings and one groundwater /sample was collected from each of the wells during a subsequent visit.

Drilling and Soil Sampling Activities

Between August 25th and August 26th, 2014, four soil borings were completed along the east and west shoulders of Lake Washington Boulevard bordering the subject site using a hollow-stem auger drill rig supplied and operated by Cascade Drilling L.P. Three of the four borings were completed along the east side of Lake Washington Boulevard and the fourth boring was completed along the west side of Lake Washington Boulevard to assess the extent of gasoline petroleum soil and groundwater contamination that was found to have migrated beyond the subject site's southwestern property boundary, underneath the adjoining sidewalk and Lake Washington Boulevard. Boring locations are depicted on Plate 2.

Soil borings advanced at the site during this investigation ranged in depths between 10 to 30 feet bgs. Soil samples for logging purposes were collected from each boring at a minimum depth interval of every 2.5 feet using a split-spoon sampler. Soil samples collected during this investigation were visually inspected for signs of petroleum staining, petroleum odors, and field screened using a photoionization detector (PID). Soil samples were described using the Unified Soil Classification System (USCS). Prior to arrival at the site and between boring locations, the drilling equipment was cleaned using a steam cleaner.

Up to four soil samples were selected from each boring for laboratory analysis based on field screening results. Nitrile type gloves were worn during sampling activities at each boring location. All soil samples selected for TPH (as gasoline) and BTEX analysis were collected directly from the split-spoon sampler using plastic syringes in accordance with EPA's soil sampling method 5035A. A new syringe was used for every soil sample collected.

Monitoring Well Installation, Development, and Sampling Activities

Groundwater monitoring wells were installed within two of the soil borings and were constructed of 2-inch-diameter, flush-thread Schedule 40 PVC casing and containing 10 feet of 0.020-inch slot well screens. Both wells were installed at a depth of approximately 30 feet bgs. The base of each well screen was sealed with a 3-inch-long PVC bottom screw cap. A filter pack consisting of silica sand was placed around and approximately 18-inches below and at least 24-inches above each of the well screens. The annular space above the filter pack was sealed with bentonite chips and topped-off with concrete. A plastic end cap was placed on the top of the PVC well casings and a locking protective flush-mount steel well cover was installed over the wells at ground surface. Monitoring well construction logs are included as an attachment to this report.

On August 26, 2014, the monitoring wells were developed by Cascade using a submersible pump. The pump was thoroughly decontaminated prior to placement in the wells and between wells by washing with soapy water and double rinsing with distilled water. Purged water obtained from the wells was contained in 55-gallon drums staged on site pending laboratory analytical results.

Groundwater samples were collected from the monitoring wells by ESNW on September 9, 2014 and were transferred into glass containers supplied by the laboratory using a peristaltic pump.

Soil and Groundwater Sample Analysis

The jars containing the soil and groundwater samples collected during this investigation were sealed, labeled, and stored on ice in a cooler until delivery to the laboratory. The samples were delivered to OnSite Environmental, Inc. in Redmond, Washington, to be analyzed for the following:

- TPH (as gasoline), by Ecology Method NWTPH-Gx.
- BTEX by EPA Method 8021B.

Results

Applicable Regulatory Standards – Soil and Groundwater

The rules that guide the cleanup process at sites within Washington are incorporated into the Model Toxics Control Act (MTCA) administered by Ecology, as defined in WAC 173-340. For this report, TPH and BTEX analytical laboratory results are compared to MTCA Method A cleanup levels for soil and groundwater. The Method A cleanup levels are conservative and are for sites with relatively few hazardous substances, which may be inappropriate for all sites. The regulations state that Method A should not automatically be used to define cleanup levels that must be met for financial, real estate, insurance coverage, or similar purposes. Additionally, test results above Method A cleanup levels do not necessarily mandate a cleanup action for a site. The applicable MTCA Method A soil and groundwater cleanup levels are presented in Tables 1 and 2, alongside the soil and groundwater sample analytical results, for comparison.

Soil Sample Analytical Results

TPH (as gasoline) was detected in the following four soil samples: B-1@2' (78 mg/kg), B-1@4' (62 mg/kg), MW-4@2.5' (300 mg/kg), and MW-4@5' (47 mg/kg). Benzene was also detected in soil sample MW-4@2.5' (0.082 mg/kg), but not detected in soil samples B-1@2', B-1@4', and MW-4@5'. The MTCA Method A soil cleanup level for TPH (as gasoline - when benzene is present) is 30 mg/kg and the MTCA Method A soil cleanup level for TPH (as gasoline –when benzene is not present) is 100 mg/kg (see Table 1). Therefore, TPH (as gasoline) concentrations and benzene concentrations in sample MW-4@2.5' exceed the MTCA Method A gasoline and benzene soil cleanup levels. TPH (as gasoline) concentrations in soil samples B-1@2', B-1@4', and MW-4@5' are below MTCA Method A gasoline soil cleanup levels. Ethylbenzene and xylenes were also detected in three soil samples, but at concentrations well below MTCA Method A soil cleanup levels.

The soil samples impacted with gasoline were either stained, produced an elevated PID reading, or had a distinct petroleum odor. Visual signs of stained soil where elevated levels of TPH (as gasoline) were identified occurred intermittently and varied in depths ranging between 2 to 5 feet bgs. The source of the TPH (as gasoline) in soil samples collected at the site is suspected to have originated from historic fuel tank releases and spills from fueling automobiles when the site was an active Arco service station.

Groundwater Sample Analytical Results

Laboratory analytical reports indicated that TPH (as gasoline) and BTEX were not detected above the laboratory reporting limits in groundwater samples collected from wells MW-4 and MW-5.

Summary and Conclusions

Consistent with Potala Village Kirkland LLC's request, ESNW completed a supplemental environmental investigation along Lake Washington Boulevard, bordering the subject site. This investigation included (1) collecting 14 discreet soil samples from four borings advanced downgradient of the subject site's former Arco gasoline service station, located along the east and west shoulders of Lake Washington Boulevard; (2) collecting two groundwater samples from monitoring wells installed in two boreholes advanced to 30 feet bgs; and (3) submitting the soil and groundwater samples to a State Certified laboratory to be analyzed for the presence of gasoline range petroleum hydrocarbons and BTEX.

Analytical results of the soil samples indicate that the concentrations of gasoline range petroleum hydrocarbons and benzene present in a shallow soil collected in one of the soil borings advanced along the east side of Lake Washington Boulevard exceeded Washington Department of Ecology's Model Toxics Control Act (MTCA) Method A unrestricted land use soil cleanup levels. Gasoline range petroleum hydrocarbons and BTEX were also detected in shallow soil samples collected from the other borings, but not at concentrations exceeding MTCA Method A unrestricted land use soil cleanup levels. Based on laboratory analytical results, the lateral extent of the gasoline and benzene soil contamination is currently unknown, however, the contamination appears to have not migrated deeper than five feet below the ground surface.

In regards to the groundwater samples collected from the wells installed during this investigation, gasoline range petroleum hydrocarbons and BTEX were not detected above the laboratory reporting limits. Soil and groundwater analytical results are summarized in Tables 1 and 2 (see attached).

Recommendations

Based on the findings of this assessment, further characterization along Lake Washington Boulevard is not recommended at this time.

LIMITATIONS

The work described herein was performed to address the requirements expressed in Department of Ecology's May 29, 2014 opinion letter concerning the subject site. The findings and recommendations in this report are made based upon the analytical results, field observations, and our best professional judgment. It is possible that unforeseen events could occur that may limit the effectiveness of this assessment. Although risk can never be eliminated, more detailed and extensive sampling and testing would yield better management of site risks. Since such extensive services involve greater expense, we ask our clients to participate in identifying the level of service that will provide them with an acceptable level of risk. Please contact the signatories of this report if you would like to discuss this issue of risk further.

The scope of work on this project was presented in our December 2, 2013 Environmental Support Services proposal (Proposal No. PES-2880.05) and subsequently approved by Potala Village Kirkland, LLC as our client. Please be aware our scope of work was limited to those items specifically identified in the proposal. Other activities not specifically included in the presented scope of work (in the Proposal, correspondence, or this report) are excluded and should not be considered to be a part of our scope of services.

Land use, site conditions (both on-site and off-site) and other factors will change over time. Since site activities and regulations beyond our control could change at any time after the completion of this report, our observations, findings and opinions can be considered valid only as of the date of the site visit.

This report may be used by Potala Village Kirkland, LLC (The Client) and only for the purposes stated within a reasonable time from its issuance, but in no event later than one year from the date of this report.

Any party other than Potala Village Kirkland, LLC who would like to use this report shall notify ESNW of such intended use. Based on the intended use of this report, ESNW may require that additional work be performed and that a revised report be issued. Non-compliance with any of these requirements by Potala Village Kirkland, LLC or anyone else will release ESNW from any liability resulting from the use of this letter report by any unauthorized party.

No warranty, either express, or implied is made.

Closing

We trust this report meets your needs at this time and appreciate the opportunity to provide our consulting services to Potala Village Kirkland, LLC. Please contact the undersigned at (425) 449-4704 if you have questions or require additional information.

Sincerely,

EARTH SOLUTIONS NW, LLC

Ted W. Sykes
Senior Environmental Project Manager

10/3/14

RAYMOND A COGLAS
STATE OF WASHINGTON
36018
REGISTERED
PROFESSIONAL ENGINEER

Raymond A. Coglas, P.E.
Principal

Attachments: Plate 1 – Site Vicinity Map
Plate 2 – Soil Boring Location Plan
Table 1 – Soil Sample Analytical Results
Table 2 – Groundwater Sample Analytical Results
Analytical Laboratory Reports and Chain-of-Custody
Monitoring Well Construction Logs

Reference:
King County, Washington
Map 536
By The Thomas Guide
Rand McNally
32nd Edition

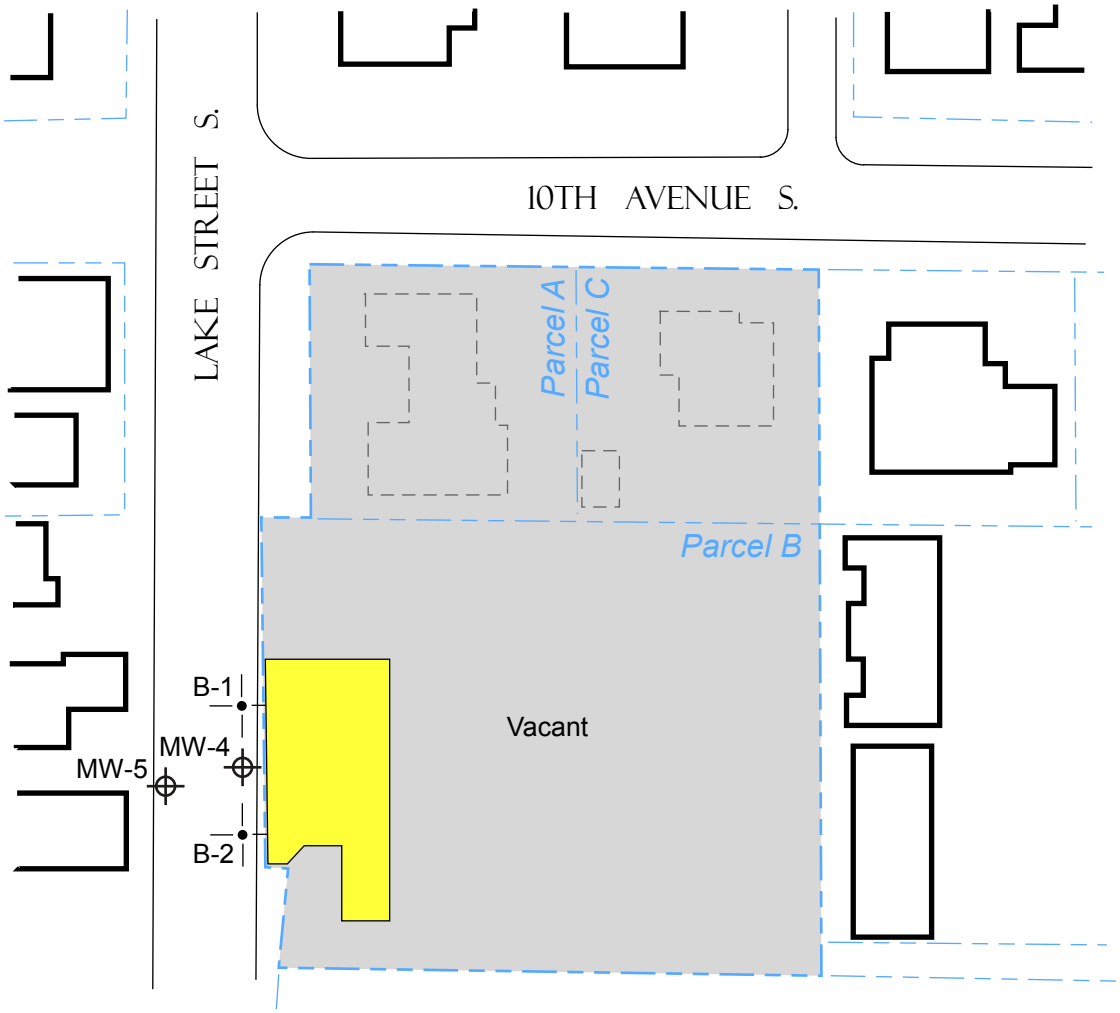
NORTH

NOTE: This plate may contain areas of color. ESNW cannot be responsible for any subsequent misinterpretation of the information resulting from black & white reproductions of this plate.

Earth Solutions NW LLC
Geotechnical Engineering, Construction Monitoring and Environmental Sciences

Vicinity Map
Potala Village Kirkland
Kirkland, Washington

Drwn. GLS	Date 09/18/2014	Proj. No. 2880.07
Checked TWS	Date Sept. 2014	Plate 1



LEGEND

- Subject Site
- Former Building Location (Demolished)
- Former Gasoline Service Station Excavation Area
- MW-4 — Groundwater Monitoring Well Location
- B-1 — Soil Boring Location

Not - To - Scale

Earth Solutions NW LLC

Geotechnical Engineering, Construction Monitoring and Environmental Sciences

Boring / Well Location Plan
Potala Village Kirkland
Kirkland, Washington

Drwn. GLS	Date 09/18/2014	Proj. No. 2880.07
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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
POTALA VILLAGE KIRKLAND
6700 LAKE WASHINGTON BOULEVARD
KIRKLAND, WASHINGTON

Analytes	MTCA Method A cleanup level	MTCA Method B cleanup level	B-1 @ 2'	B-1 @ 4'	B-1 @ 6'	B-1 @ 9'	B-2 @ 2'	B-2 @ 6.5'	B-2 @ 9'	MW-4 @ 2.5'	MW-4 @ 5'	MW-4 @ 10'	MW-5 @ 5'	MW-5 @ 8'	MW-5 @ 12.5'
Sample Depth (Feet)			2.0	4.0	6.0	9.0	2.0	6.5	9.0	2.5	5.0	10.0	5.0	8.0	12.5
Total Petroleum Hydrocarbons (mg/kg)															
Gasoline range	30/100	-	78	62	*	*	*	*	*	**300**	47	*	*	*	*
Volatile Organic Compounds (VOCs) (mg/kg)															
Benzene	0.03	-	*	*	*	*	*	*	*	**0.082**	*	*	*	*	*
Toluene	7	-	*	*	*	*	*	*	*	*	*	*	*	*	*
Ethylbenzene	6	-	*	*	*	*	*	*	*	0.12	*	*	*	*	*
Xylenes	9	-	0.18	0.2	*	*	*	*	*	0.31	*	*	*	*	*

Notes:
MTCA = Model Toxics Control Act (Method A & B Soil Cleanup Levels Reported in mg/kg)
mg/kg = Milligrams per kilogram
(*) = Laboratory analytical result not reported at or above the MRL (Laboratory Analysis Method Reporting Limit)
(-) = Not established/not applicable
Bold/Shaded = Laboratory analysis result is equal to or greater than MTCA Method A Unrestricted Land Use Soil Cleanup Levels.

TABLE 2
GROUNDWATER SAMPLE ANALYTICAL RESULTS
POTALA VILLAGE KIRKLAND
6700 LAKE WASHINGTON BOULEVARD
KIRKLAND, WASHINGTON

Analytes	MTCA Method A cleanup level	MTCA Method B cleanup level	MW-4	MW-5
Total Petroleum Hydrocarbons (ug/L)				
Gasoline range	1000	-	*	*
Volatile Organic Compounds (VOCs) (ug/L)				
Benzene	5	-	*	*
Toluene	1000	-	*	*
Ethylbenzene	700	-	*	*
Xylenes	1000	-	*	*

Notes:
MTCA = Model Toxics Control Act (Method A Groundwater Cleanup Levels Reported in ug/L)
ug/L = Micrograms per liter
(*) = Laboratory analytical result not reported at or above the MRL (Laboratory Analysis Method Reporting Limit.
(**) = Varies with analytes
(-) = Not established/not applicable
Bold/Shaded = Laboratory analysis result is equal to or greater than MTCA Method A Groundwater Cleanup Levels.

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

August 27, 2014

Ted Sykes
Earth Solutions NW, LLC
1805 136th Place NE, Suite #201
Bellevue, WA 98005

Re: Analytical Data for Project ES-2880.07
Laboratory Reference No. 1408-216

Dear Ted:

Enclosed are the analytical results and associated quality control data for samples submitted on August 25, 2014.

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

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

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: August 27, 2014
Samples Submitted: August 25, 2014
Laboratory Reference: 1408-216
Project: ES-2880.07

Case Narrative

Samples were collected on August 25, 2014 and received by the laboratory on August 25, 2014. They were maintained at the laboratory at a temperature of 2°C to 6°C.

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

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-4 @ 2.5' and MW-4 @ 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: August 27, 2014
Samples Submitted: August 25, 2014
Laboratory Reference: 1408-216
Project: ES-2880.07

NWTPH-Gx/BTEX

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B-1 @ 2'**					
Laboratory ID:	08-216-01					
Benzene	**ND**	0.020	EPA 8021B	8-25-14	8-26-14	
Toluene	**ND**	0.089	EPA 8021B	8-25-14	8-26-14	
Ethyl Benzene	**ND**	0.089	EPA 8021B	8-25-14	8-26-14	
m,p-Xylene	**0.18**	0.089	EPA 8021B	8-25-14	8-26-14	
o-Xylene	**ND**	0.089	EPA 8021B	8-25-14	8-26-14	
Gasoline	**78**	8.9	NWTPH-Gx	8-25-14	8-26-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*98*	*71-121*				
Client ID:	**B-1 @ 4'**					
Laboratory ID:	08-216-02					
Benzene	**ND**	0.020	EPA 8021B	8-25-14	8-26-14	
Toluene	**ND**	0.082	EPA 8021B	8-25-14	8-26-14	
Ethyl Benzene	**ND**	0.082	EPA 8021B	8-25-14	8-26-14	
m,p-Xylene	**0.20**	0.082	EPA 8021B	8-25-14	8-26-14	
o-Xylene	**ND**	0.082	EPA 8021B	8-25-14	8-26-14	
Gasoline	**62**	8.2	NWTPH-Gx	8-25-14	8-26-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*97*	*71-121*				
Client ID:	**B-1 @ 6'**					
Laboratory ID:	08-216-03					
Benzene	**ND**	0.020	EPA 8021B	8-25-14	8-25-14	
Toluene	**ND**	0.033	EPA 8021B	8-25-14	8-25-14	
Ethyl Benzene	**ND**	0.033	EPA 8021B	8-25-14	8-25-14	
m,p-Xylene	**ND**	0.033	EPA 8021B	8-25-14	8-25-14	
o-Xylene	**ND**	0.033	EPA 8021B	8-25-14	8-25-14	
Gasoline	**ND**	3.3	NWTPH-Gx	8-25-14	8-25-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*93*	*71-121*				

Date of Report: August 27, 2014
Samples Submitted: August 25, 2014
Laboratory Reference: 1408-216
Project: ES-2880.07

NWTPH-Gx/BTEX

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B-1 @ 9'**					
Laboratory ID:	08-216-04					
Benzene	**ND**	0.020	EPA 8021B	8-25-14	8-25-14	
Toluene	**ND**	0.033	EPA 8021B	8-25-14	8-25-14	
Ethyl Benzene	**ND**	0.033	EPA 8021B	8-25-14	8-25-14	
m,p-Xylene	**ND**	0.033	EPA 8021B	8-25-14	8-25-14	
o-Xylene	**ND**	0.033	EPA 8021B	8-25-14	8-25-14	
Gasoline	**ND**	3.3	NWTPH-Gx	8-25-14	8-25-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*95*	*71-121*				
Client ID:	**B-2 @ 2'**					
Laboratory ID:	08-216-05					
Benzene	**ND**	0.020	EPA 8021B	8-25-14	8-25-14	
Toluene	**ND**	0.046	EPA 8021B	8-25-14	8-25-14	
Ethyl Benzene	**ND**	0.046	EPA 8021B	8-25-14	8-25-14	
m,p-Xylene	**ND**	0.046	EPA 8021B	8-25-14	8-25-14	
o-Xylene	**ND**	0.046	EPA 8021B	8-25-14	8-25-14	
Gasoline	**ND**	4.6	NWTPH-Gx	8-25-14	8-25-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*99*	*71-121*				
Client ID:	**B-2 @ 6.5'**					
Laboratory ID:	08-216-06					
Benzene	**ND**	0.020	EPA 8021B	8-25-14	8-25-14	
Toluene	**ND**	0.033	EPA 8021B	8-25-14	8-25-14	
Ethyl Benzene	**ND**	0.033	EPA 8021B	8-25-14	8-25-14	
m,p-Xylene	**ND**	0.033	EPA 8021B	8-25-14	8-25-14	
o-Xylene	**ND**	0.033	EPA 8021B	8-25-14	8-25-14	
Gasoline	**ND**	3.3	NWTPH-Gx	8-25-14	8-25-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*102*	*71-121*				

Date of Report: August 27, 2014
Samples Submitted: August 25, 2014
Laboratory Reference: 1408-216
Project: ES-2880.07

NWTPH-Gx/BTEX

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B-2 @ 9'**					
Laboratory ID:	08-216-07					
Benzene	**ND**	0.020	EPA 8021B	8-25-14	8-25-14	
Toluene	**ND**	0.041	EPA 8021B	8-25-14	8-25-14	
Ethyl Benzene	**ND**	0.041	EPA 8021B	8-25-14	8-25-14	
m,p-Xylene	**ND**	0.041	EPA 8021B	8-25-14	8-25-14	
o-Xylene	**ND**	0.041	EPA 8021B	8-25-14	8-25-14	
Gasoline	**ND**	4.1	NWTPH-Gx	8-25-14	8-25-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*94*	*71-121*				
Client ID:	**MW-4 @ 2.5'**					
Laboratory ID:	08-216-08					
Benzene	**0.082**	0.020	EPA 8021B	8-25-14	8-26-14	
Toluene	**ND**	0.085	EPA 8021B	8-25-14	8-26-14	
Ethyl Benzene	**0.12**	0.085	EPA 8021B	8-25-14	8-26-14	
m,p-Xylene	**0.31**	0.085	EPA 8021B	8-25-14	8-26-14	
o-Xylene	**ND**	0.43	EPA 8021B	8-25-14	8-26-14	U1
Gasoline	**300**	8.5	NWTPH-Gx	8-25-14	8-26-14	Z
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*86*	*71-121*				
Client ID:	**MW-4 @ 5'**					
Laboratory ID:	08-216-09					
Benzene	**ND**	0.020	EPA 8021B	8-25-14	8-26-14	
Toluene	**ND**	0.078	EPA 8021B	8-25-14	8-26-14	
Ethyl Benzene	**ND**	0.078	EPA 8021B	8-25-14	8-26-14	
m,p-Xylene	**ND**	0.078	EPA 8021B	8-25-14	8-26-14	
o-Xylene	**ND**	0.078	EPA 8021B	8-25-14	8-26-14	
Gasoline	**47**	7.8	NWTPH-Gx	8-25-14	8-26-14	Z
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*86*	*71-121*				

Date of Report: August 27, 2014
Samples Submitted: August 25, 2014
Laboratory Reference: 1408-216
Project: ES-2880.07

NWTPH-Gx/BTEX

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-4 @ 10'**					
Laboratory ID:	08-216-10					
Benzene	**ND**	0.020	EPA 8021B	8-25-14	8-25-14	
Toluene	**ND**	0.037	EPA 8021B	8-25-14	8-25-14	
Ethyl Benzene	**ND**	0.037	EPA 8021B	8-25-14	8-25-14	
m,p-Xylene	**ND**	0.037	EPA 8021B	8-25-14	8-25-14	
o-Xylene	**ND**	0.037	EPA 8021B	8-25-14	8-25-14	
Gasoline	**ND**	3.7	NWTPH-Gx	8-25-14	8-25-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*97*	*71-121*				

Date of Report: August 27, 2014
Samples Submitted: August 25, 2014
Laboratory Reference: 1408-216
Project: ES-2880.07

NWTPH-Gx/BTEX
QUALITY CONTROL

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0825S3					
Benzene	**ND**	0.020	EPA 8021B	8-25-14	8-25-14	
Toluene	**ND**	0.050	EPA 8021B	8-25-14	8-25-14	
Ethyl Benzene	**ND**	0.050	EPA 8021B	8-25-14	8-25-14	
m,p-Xylene	**ND**	0.050	EPA 8021B	8-25-14	8-25-14	
o-Xylene	**ND**	0.050	EPA 8021B	8-25-14	8-25-14	
Gasoline	**ND**	5.0	NWTPH-Gx	8-25-14	8-25-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*94*	*71-121*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	08-217-01										
	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	**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						*91*	*86*	*71-121*			
SPIKE BLANKS											
Laboratory ID:	SB0825S1										
	SB	SBD	SB	SBD		SB	SBD				
Benzene	**0.909**	**0.991**	1.00	1.00		**91**	**99**	73-121	9	10	
Toluene	**0.894**	**0.966**	1.00	1.00		**89**	**97**	75-124	8	10	
Ethyl Benzene	**0.922**	**0.989**	1.00	1.00		**92**	**99**	75-125	7	9	
m,p-Xylene	**0.923**	**0.992**	1.00	1.00		**92**	**99**	75-126	7	9	
o-Xylene	**0.914**	**0.985**	1.00	1.00		**91**	**99**	74-123	7	8	
Surrogate:											
Fluorobenzene						*88*	*89*	*71-121*			

Date of Report: August 27, 2014
Samples Submitted: August 25, 2014
Laboratory Reference: 1408-216
Project: ES-2880.07

% MOISTURE

Date Analyzed: 8-25-14

Client ID	Lab ID	% Moisture
B-1 @ 2'	08-216-01	10
B-1 @ 4'	08-216-02	9
B-1 @ 6'	08-216-03	7
B-1 @ 9'	08-216-04	7
B-2 @ 2'	08-216-05	11
B-2 @ 6.5'	08-216-06	10
B-2 @ 9'	08-216-07	9
MW-4 @ 2.5'	08-216-08	11
MW-4 @ 5'	08-216-09	9
MW-4 @ 10'	08-216-10	8

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

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

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

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

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

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

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

I - Compound recovery is outside of the control limits.

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

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

L - The RPD is outside of the control limits.

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

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

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

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

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

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

Q - Surrogate recovery is outside of the control limits.

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

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

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

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

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

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

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z - The sample chromatogram is 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: Earth Solutions NW
Project Number: ES-2880.07
Project Name: Potala Village Kirkland
Project Manager: Ted Sykes
Sampled by: Ted Sykes

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

Laboratory Number: 08-216

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A						% Moisture
1	B-1 @ 2'	8/25/14		Soil	2		X																				X
2	B-1 @ 4'				2		X																				X
3	B-1 @ 6'				2		X																				X
4	B-1 @ 9'				2		X																				X
5	B-2 @ 2'				2		X																				X
6	B-2 @ 6.5'				2		X																				X
7	B-2 @ 9.0'				2		X																				X
8	mw-4 @ 2.5'				2		X																				X
9	mw-4 @ 5'				2		X																				X
10	mw-4 @ 10'				2		X																				X

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished		ESNW	8/25/14	2:30pm	
Received		Onsite ES	8/25/14	1432	
Relinquished					
Received					
Relinquished					
Received					
Reviewed/Date		Reviewed/Date			Chromatograms with final report ☐

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

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

August 27, 2014

Ted Sykes
Earth Solutions NW, LLC
1805 136th Place NE, Suite #201
Bellevue, WA 98005

Re: Analytical Data for Project ES-2880.07
Laboratory Reference No. 1408-226

Dear Ted:

Enclosed are the analytical results and associated quality control data for samples submitted on August 26, 2014.

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

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

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: August 27, 2014
Samples Submitted: August 26, 2014
Laboratory Reference: 1408-226
Project: ES-2880.07

Case Narrative

Samples were collected on August 26, 2014 and received by the laboratory on August 26, 2014. They were maintained at the laboratory at a temperature of 2°C to 6°C.

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

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.

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: August 27, 2014
Samples Submitted: August 26, 2014
Laboratory Reference: 1408-226
Project: ES-2880.07

NWTPH-Gx/BTEX

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-5 @ 5'**					
Laboratory ID:	08-226-01					
Benzene	**ND**	0.020	EPA 8021B	8-26-14	8-26-14	
Toluene	**ND**	0.033	EPA 8021B	8-26-14	8-26-14	
Ethyl Benzene	**ND**	0.033	EPA 8021B	8-26-14	8-26-14	
m,p-Xylene	**ND**	0.033	EPA 8021B	8-26-14	8-26-14	
o-Xylene	**ND**	0.033	EPA 8021B	8-26-14	8-26-14	
Gasoline	**ND**	3.3	NWTPH-Gx	8-26-14	8-26-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*92*	*71-121*				
Client ID:	**MW-5 @ 6.5'**					
Laboratory ID:	08-226-02					
Benzene	**ND**	0.020	EPA 8021B	8-26-14	8-26-14	
Toluene	**ND**	0.032	EPA 8021B	8-26-14	8-26-14	
Ethyl Benzene	**ND**	0.032	EPA 8021B	8-26-14	8-26-14	
m,p-Xylene	**ND**	0.032	EPA 8021B	8-26-14	8-26-14	
o-Xylene	**ND**	0.032	EPA 8021B	8-26-14	8-26-14	
Gasoline	**ND**	3.2	NWTPH-Gx	8-26-14	8-26-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*98*	*71-121*				
Client ID:	**MW-5 @ 8'**					
Laboratory ID:	08-226-03					
Benzene	**ND**	0.020	EPA 8021B	8-26-14	8-26-14	
Toluene	**ND**	0.028	EPA 8021B	8-26-14	8-26-14	
Ethyl Benzene	**ND**	0.028	EPA 8021B	8-26-14	8-26-14	
m,p-Xylene	**ND**	0.028	EPA 8021B	8-26-14	8-26-14	
o-Xylene	**ND**	0.028	EPA 8021B	8-26-14	8-26-14	
Gasoline	**ND**	2.8	NWTPH-Gx	8-26-14	8-26-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*102*	*71-121*				

Date of Report: August 27, 2014
Samples Submitted: August 26, 2014
Laboratory Reference: 1408-226
Project: ES-2880.07

NWTPH-Gx/BTEX

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-5 @12.5'**					
Laboratory ID:	08-226-04					
Benzene	**ND**	0.020	EPA 8021B	8-26-14	8-26-14	
Toluene	**ND**	0.036	EPA 8021B	8-26-14	8-26-14	
Ethyl Benzene	**ND**	0.036	EPA 8021B	8-26-14	8-26-14	
m,p-Xylene	**ND**	0.036	EPA 8021B	8-26-14	8-26-14	
o-Xylene	**ND**	0.036	EPA 8021B	8-26-14	8-26-14	
Gasoline	**ND**	3.6	NWTPH-Gx	8-26-14	8-26-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*96*	*71-121*				

Date of Report: August 27, 2014
Samples Submitted: August 26, 2014
Laboratory Reference: 1408-226
Project: ES-2880.07

NWTPH-Gx/BTEX
QUALITY CONTROL

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0826S1					
Benzene	**ND**	0.020	EPA 8021B	8-26-14	8-26-14	
Toluene	**ND**	0.050	EPA 8021B	8-26-14	8-26-14	
Ethyl Benzene	**ND**	0.050	EPA 8021B	8-26-14	8-26-14	
m,p-Xylene	**ND**	0.050	EPA 8021B	8-26-14	8-26-14	
o-Xylene	**ND**	0.050	EPA 8021B	8-26-14	8-26-14	
Gasoline	**ND**	5.0	NWTPH-Gx	8-26-14	8-26-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*89*	*71-121*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	08-224-03										
	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	**6.38**	**5.72**	NA	NA		NA		NA	11	30	
Surrogate:											
Fluorobenzene						*94*	*99*	*71-121*			
SPIKE BLANKS											
Laboratory ID:	SB0826S1										
	SB	SBD	SB	SBD		SB	SBD				
Benzene	**0.939**	**1.01**	1.00	1.00		**94**	**101**	73-121	7	10	
Toluene	**0.939**	**1.02**	1.00	1.00		**94**	**102**	75-124	8	10	
Ethyl Benzene	**0.958**	**1.02**	1.00	1.00		**96**	**102**	75-125	6	9	
m,p-Xylene	**0.961**	**1.02**	1.00	1.00		**96**	**102**	75-126	6	9	
o-Xylene	**0.939**	**1.00**	1.00	1.00		**94**	**100**	74-123	6	8	
Surrogate:											
Fluorobenzene						*83*	*86*	*71-121*			

Date of Report: August 27, 2014
Samples Submitted: August 26, 2014
Laboratory Reference: 1408-226
Project: ES-2880.07

% MOISTURE

Date Analyzed: 8-26-14

Client ID	Lab ID	% Moisture
MW-5 @ 5'	08-226-01	5
MW-5 @ 6.5'	08-226-02	9
MW-5 @ 8'	08-226-03	11
MW-5 @12.5'	08-226-04	10

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

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

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

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

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

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

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

I - Compound recovery is outside of the control limits.

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

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

L - The RPD is outside of the control limits.

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

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

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

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

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

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

Q - Surrogate recovery is outside of the control limits.

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

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

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

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

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

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

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

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

Chain of Custody

Page 1 of 1

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

Laboratory Number: 08-226

Company: Earth Solutions NW
Project Number: ES-2880.07
Project Name: Potala Village Kirkland
Project Manager: Ted Sykes
Sampled by: Ted Sykes

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

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	% Moisture
1	MW-5 S 5'	8/26/14		Soil	2		X															X
2	MW-5 S 6.5'	↓		↓	2		X															X
3	MW-5 S 8'				2		X															X
4	MW-5 S 12.5'	↓		↓	2		X															X

	Signature	Company	Date	Time
Relinquished	[signature]	ESNW	8/26/14	1:35
Received	Alex Armandcost	OSE	8/26/14	1337
Relinquished				
Received				
Relinquished				
Received				

Comments/Special Instructions

Reviewed/Date

Reviewed/Date

Chromatograms with final report ☐

Data Package: Standard ☐ Level III ☐ Level IV ☐

Electronic Data Deliverables (EDDs) ☐ _____

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

September 15, 2014

Ted Sykes
Earth Solutions NW, LLC
1805 136th Place NE, Suite #201
Bellevue, \WA 98005

Re: Analytical Data for Project ES-2880.07
Laboratory Reference No. 1409-071

Dear Ted:

Enclosed are the analytical results and associated quality control data for samples submitted on September 9, 2014.

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

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

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: September 15, 2014
Samples Submitted: September 9, 2014
Laboratory Reference: 1409-071
Project: ES-2880.07

Case Narrative

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

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

Date of Report: September 15, 2014
Samples Submitted: September 9, 2014
Laboratory Reference: 1409-071
Project: ES-2880.07

NWTPH-Gx/BTEX

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-4**					
Laboratory ID:	09-071-01					
Benzene	**ND**	1.0	EPA 8021B	9-9-14	9-9-14	
Toluene	**ND**	1.0	EPA 8021B	9-9-14	9-9-14	
Ethyl Benzene	**ND**	1.0	EPA 8021B	9-9-14	9-9-14	
m,p-Xylene	**ND**	1.0	EPA 8021B	9-9-14	9-9-14	
o-Xylene	**ND**	1.0	EPA 8021B	9-9-14	9-9-14	
Gasoline	**ND**	100	NWTPH-Gx	9-9-14	9-9-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*90*	*71-112*				
Client ID:	**MW-5**					
Laboratory ID:	09-071-02					
Benzene	**ND**	1.0	EPA 8021B	9-9-14	9-9-14	
Toluene	**ND**	1.0	EPA 8021B	9-9-14	9-9-14	
Ethyl Benzene	**ND**	1.0	EPA 8021B	9-9-14	9-9-14	
m,p-Xylene	**ND**	1.0	EPA 8021B	9-9-14	9-9-14	
o-Xylene	**ND**	1.0	EPA 8021B	9-9-14	9-9-14	
Gasoline	**ND**	100	NWTPH-Gx	9-9-14	9-9-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*91*	*71-112*				

Date of Report: September 15, 2014
Samples Submitted: September 9, 2014
Laboratory Reference: 1409-071
Project: ES-2880.07

NWTPH-Gx/BTEX
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0909W1					
Benzene	**ND**	1.0	EPA 8021B	9-9-14	9-9-14	
Toluene	**ND**	1.0	EPA 8021B	9-9-14	9-9-14	
Ethyl Benzene	**ND**	1.0	EPA 8021B	9-9-14	9-9-14	
m,p-Xylene	**ND**	1.0	EPA 8021B	9-9-14	9-9-14	
o-Xylene	**ND**	1.0	EPA 8021B	9-9-14	9-9-14	
Gasoline	**ND**	100	NWTPH-Gx	9-9-14	9-9-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*95*	*71-112*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	09-066-01										
	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						*91*	*90*	*71-112*			
MATRIX SPIKES											
Laboratory ID:	09-066-01										
	MS	MSD	MS	MSD		MS	MSD				
Benzene	**45.9**	**49.9**	50.0	50.0	ND	**92**	**100**	78-120	8	12	
Toluene	**46.0**	**49.5**	50.0	50.0	ND	**92**	**99**	80-121	7	12	
Ethyl Benzene	**47.3**	**50.4**	50.0	50.0	ND	**95**	**101**	81-120	6	13	
m,p-Xylene	**48.4**	**50.8**	50.0	50.0	ND	**97**	**102**	81-119	5	13	
o-Xylene	**48.9**	**51.0**	50.0	50.0	ND	**98**	**102**	79-117	4	13	
Surrogate:											
Fluorobenzene						*82*	*89*	*71-112*			

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

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

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

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

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

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

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

I - Compound recovery is outside of the control limits.

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

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

L - The RPD is outside of the control limits.

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

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

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

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

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

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

Q - Surrogate recovery is outside of the control limits.

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

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

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

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

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

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

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

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

Chain of Custody

Page 1 of 1

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

Laboratory Number: 09-071

Company: EARTH SOLUTIONS NW
Project Number: ES-2880.07
Project Name: POTALA VILLAGE KIRKLAND
Project Manager: TED SYKES
Sampled by: TED SYKES

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

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A							% Moisture
1	MW-4	9/9/14		WATER	3		X																					
2	MW-5	9/9/14		WATER	3		X																					

	Signature	Company	Date	Time
Relinquished		ESNW	9/9/14	
Received		OSE	9/9/14	1221
Relinquished				
Received				
Relinquished				
Received				

Comments/Special Instructions

Reviewed/Date | Reviewed/Date | Chromatograms with final report ☐

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

MW-4

RESOURCE PROTECTION WELL REPORT

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

CURRENT

Notice of Intent No. RE10365

Construction/Decommission

[X] Construction

[ ] Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Type of Well

[X] Resource Protection

[ ] Geotechnical Soil Boring

Consulting Firm **Earth Solutions Northwest**

Property Owner **Potala Village**

Site Address **6700 Lake Washington Blvd NE**

City **Kirkland** County **King**

Unique Ecology Well ID Tag No. BID-639

Location 1/4 **NW** 1/4 **SW** Sec **8** TWN **25N** R **5E** [EWM] or WWM

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Lat/Long (s,t,r still Required) Lat Deg x Lat Min/Sec x Long Deg x Long Min/Sec x

[X] Driller [ ] Trainee Name (Print) **James Goble**

Driller/Trainee Signature _____

Driller/Trainee License No. **3131**

Tax Parcel No. **0825059233**

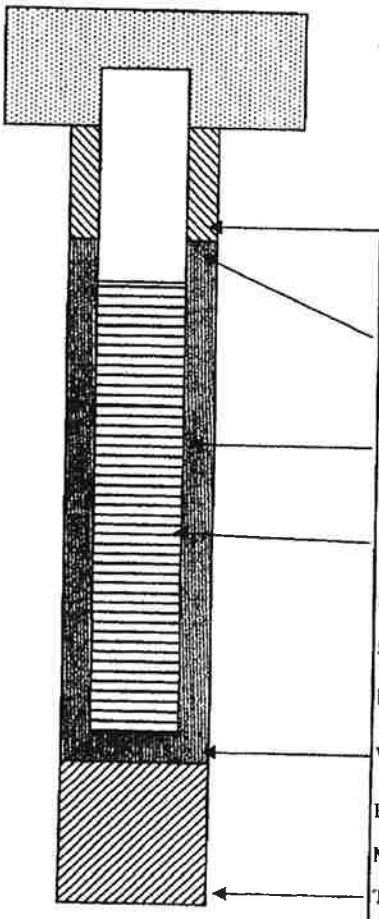
Cased or Uncased Diameter 8" Static Level 20'

If trainee, licensed driller's Signature and License No. _____

Work/Decommision Start Date 8.25.14

Work/Decommision End Date 8.25.14

Construction/Design



Well Data 103-14-1379

Concrete Surface Seal Depth	3'	FT
Blank Casing (dia x dep)	2" x 20'	
Material	PVC - SCH. 40	
Backfill	15'	FT
Type	MED BENT CHIPS	
Seal	—	
Material	—	
Gravel Pack	12'	FT
Material	#2/12 Sand	
Screen (dia x dep)	2" x 10'	
Slot Size	010	
Material	PVC - SCH. 40	
Well Depth	30'	FT
Backfill	x	
Material	x	
Total Hole Depth	30'	FT

Formation Description

0 - 6' FT
(Fill) Sand + gravel Concrete + Brick Debris

0 6' - 30' FT
grey gravely Till w/ small grey silty sand layers yeilding small H20 Volumes on Install

0 - FT

Scale 1" = _____

Page _____ of _____

ECY 050-12 (Rev 2/01)

MW-5

RESOURCE PROTECTION WELL REPORT

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Construction/Decommission

[X] Construction

[ ] Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Consulting Firm **Earth Solutions Northwest**

Unique Ecology Well ID Tag No. (BTD 640)

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

[X] Driller [ ] Trainee Name (Print) **James Goble**

Driller/Trainee Signature _____

Driller/Trainee License No. **3131**

If trainee, licensed driller's Signature and License No. _____

CURRENT

Notice of Intent No. **RE10365**

Type of Well

[X] Resource Protection

[ ] Geotechnical Soil Boring

Property Owner **Potala Village**

Site Address **6700 Lake Washington Blvd NE**

City **Kirkland** County **King**

Location 1/4 **NW** 1/4 **SW** Sec **8** TWN **25N** R **5E** [EWM] or WWM

Lat/Long (s,t,r still Required) Lat Deg x Lat Min/Sec x Long Deg x Long Min/Sec x

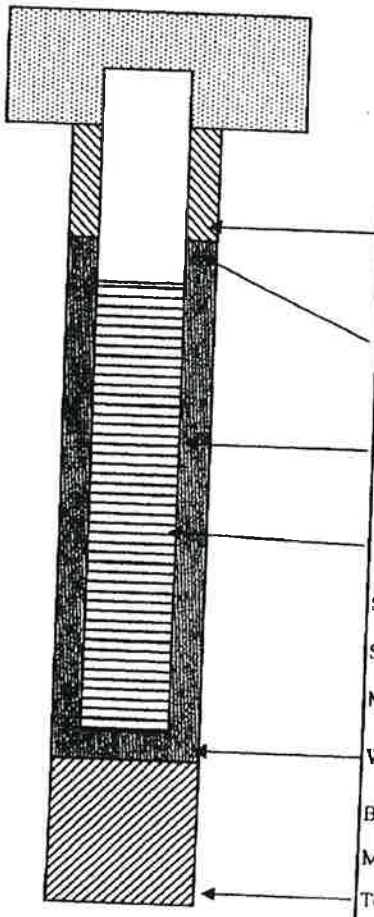
Tax Parcel No. **0825059233**

Cased or Uncased Diameter 8" Static Level 20'

Work/Decommision Start Date 8-26-14

Work/Decommision End Date 8-26-14

Construction/Design



Well Data 103-14-1379

Concrete Surface Seal Depth	3'	FT
Blank Casing (dia x dep)	2"x 20'	
Material	PVC - SCH. 40	
Backfill	14'	FT
Type	Bent chips	
Seal		
Material		
Gravel Pack	12'	FT
Material	#2 Sand	
Screen (dia x dep)	2"x 10'	
Slot Size	010	
Material	PVC - SCH - 40	
Well Depth	30'	FT
Backfill		
Material		
Total Hole Depth	30'	FT

Formation Description

0 - 12'		FT
Fill, sand + gravel		
0 6' - 30'		FT
grey gravel & Till w/ silt, sand + gravel		
0 -		FT

Scale 1" = _____

Page _____ of _____

ECY 050-12 (Rev 2/01)