Washington State Department of Transportation

SR 520 Bridge Replacement and HOV Program

Supplemental Limited Phase II Environmental Site Assessment State Route (SR) 520 Eastbound Ramps to Montlake Vicinity Seattle, Washington

Prepared for

Washington State Department of Transportation
SR520 Bridge Replacement and HOV Program
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Seattle, WA 98104

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February 21, 2018

Supplemental Limited Phase II Environmental Site Assessment
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We have performed a Phase II Environmental Site Assessment of the (SR) 520 Eastbound Ramps to Montlake Vicinity Seattle, Washington in conformance with the scope and limitations of ASTM Practice E 1903-11 and for the following objectives:

> This Supplemental Phase II ESA was conducted to define the extent of impacted and contaminated soil encountered during the initial Phase II ESA (completed during October 2016) and identify potential additional evidence of impacted or contaminated soil present in the subsurface of rights-of-way (ROWs) adjacent to 2625 East Montlake Place East ('76 Gas Station property). These ROWs included East Montlake Place East and the SR 520 Eastbound ramps. Additional investigations are planned for the Montlake '76 gas station property; however, negotiations for access are still in progress.

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Table of Contents

Figures

Tables

Appendices

Acronyms and Abbreviations

bgs	below ground surface
CLARC	Cleanup Levels and Risk Calculation
COPC	contaminant of potential concern
CSM	Conceptual Site Model
CUL	Cleanup Level
Dx	Diesel-range petroleum hydrocarbons
Ecology	Washington Department of Ecology
ESA	Environmental Site Assessment
Gx	Gasoline-range hydrocarbons
HCID	Hydrocarbon Identification
KCWTD	King County Wastewater Treatment Division
INNOVEX	Innovex Environmental Management, Inc.
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MS	Matrix Spike
MSD	Matrix Spike Duplicate
MTCA	Model Toxics Control Act
NWTPH	Northwest Total Petroleum Hydrocarbons
OnSite	OnSite Environmental Inc.
PCB	Polychlorinated Biphenyl
PDI	Photoionization Detector
PP-13	Priority Pollutant Metals
Program	SR 520 Bridge Replacement and HOV Program
QA	Quality Assurance
QC	Quality Control
REC	Recognized Environmental Condition
RPD	Relative Percent Difference
SDCI	Seattle Department of Construction and Inspections
SPU	Seattle Public Utilities
SR	State Route
SSAP	Supplemental Sampling and Analysis Plan
SDOT	Seattle Department of Transportation
SVOC	Semivolatile Organic Compound
TPHg	Total Petroleum Hydrocarbons as Gasoline
UST	Underground Storage Tank
VOC	Volatile Organic Compound
WABN	West Approach Bridge North
WAC	Washington Administrative Code
WSDOT	Washington State Department of Transportation

1.0 INTRODUCTION

1.1 Authorization

Innovex Environmental Management (INNOVEX) has completed this Supplemental Phase II Environmental Site Assessment (ESA) of the City of Seattle and Washington State Department of Transportation (WSDOT) right-of-way in the vicinity of 2625 East Montlake Place East, Seattle, Washington. The project was completed in support of the WSDOT SR520 Bridge Replacement and HOV Program (PROGRAM).

Field activities were conducted in accordance with the Supplemental Sampling and Analysis Plan (SSAP) prepared and submitted to WSDOT (dated October 16, 2017). Any deviations from the SSAP are summarized in the Phase II ESA Activities section of this report.

1.2 Objective

This Supplemental Phase II ESA was conducted to define the extent of impacted and contaminated soil encountered during the initial Phase II ESA (completed during October 2016) and identify potential additional evidence of impacted or contaminated soil present in the subsurface of rights-of-way (ROWs) adjacent to 2625 East Montlake Place East (’76 Gas Station property). These ROWs included East Montlake Place East and the SR 520 Eastbound ramps. Additional investigations are planned for the Montlake ’76 gas station property; however, negotiations for access are still in progress.

The completed scope of this investigation included the following tasks:

- Five soil borings were advanced in order to collect soil and, if encountered, groundwater samples for chemical analysis.
- Soil samples were collected and analyzed to determine if petroleum related contamination is present in the soil beneath the offsite, cross- to down-gradient locations.
- One soil sample from each boring was selected and submitted for laboratory and analyzed for site contaminants of concern. Additional samples were selected and analyzed based on field observations and initial analytical results with the approval of the WSDOT Project Manager.
- The results of this Supplemental Phase II investigation will be used to assist WSDOT in management of potential environmental risks during property acquisition and subsequent reconstruction of the SR 520 Eastbound on and off ramps and East Montlake Place East.

2.0 SITE BACKGROUND

The areas investigated for the original Phase II ESA and this Supplemental Phase II ESA are the City of Seattle and WSDOT SR 520 rights-of-way in the vicinity of 2625 East Montlake Place East, Seattle, Washington. The investigation took place in the northeast quarter of Township 25 North, Range 4 East and Section 21.

During 2016 a Phase II ESA was completed for the City of Seattle and WSDOT SR 520 rights-of-way. The Phase II ESA included the advancement of five soil borings (H-1-16, H-2-16, H-3-16, H-4-16 and H-5-16), which were located around the northern, western and eastern perimeters of the gas station property (Figure 2). Soil and groundwater analytical results indicated the following:

- Total Petroleum Hydrocarbons (TPH) as gasoline was detected in two soil samples from boring H-4-16.
- VOCS were detected in soils samples from soil borings H-2-16, H-3-16, H-4-16 and H-5-16. VOCs above the applicable cleanup level were detected soil samples from borings H-3-16, H-4-16, and H-5-16. Concentrations of benzene, ethylbenzene, total xylene, naphthalene, and methylene chloride were detected above applicable cleanup levels.
- SVOCS were detected in soils samples from soil borings H-2-16, H-3-16, H-4-16 and H-5-16. One SVOC, naphthalene, was detected above the applicable cleanup level in a soil sample from borings H-4-16.
- PCBs were not detected in any of the soil samples analyzed.
- Chromium, copper, lead, nickel and zinc were present in soil samples from each of the five boring at concentrations above the analytical method reporting limit. Copper and nickel were detected at concentrations above the applicable cleanup level.
- One groundwater sample was collected from boring H-3-16 and was analyzed for VOCs, SVOCs and dissolved metals. Three VOCs (benzene, bromochloromethane, and chloroform); and two dissolved metals (antimony and arsenic) were detected in concentrations greater than the applicable cleanup levels

3.0 PHASE II ESA ACTIVITIES

3.1 Scope of Assessment

A sampling and analysis plan was developed (INNOVEX, 2017) to investigate recognized environmental conditions (RECs) identified in the Limited Phase I ESA (WSDOT 2016) and to further assess for impacts to the property soil and groundwater. A total of five soil borings were drilled. Six subsurface soil samples were collected and submitted to OnSite Environmental Inc. in Redmond, Washington for chemical analysis. Our rationale and the results for the exploration program are summarized below.

3.2 Conceptual Site Model and Sampling Plan

In order to provide a framework for evaluating data gaps and subsequent analytical data, a conceptual site model (CSM) depicting potential sources of chemicals, release mechanisms, means of retention in or migration to exposure media, exposure routes, and receptors was developed for the property during the initial Phase II ESA (INNOVEX 2016). The CSM is largely unchanged from the initial Phase II ESA and describes, in a generalized way, the interactions of potential contaminants, mechanisms of contaminant migration, and possible routes of human and ecological exposure under site-specific conditions.

Based on background information previously presented, the contaminants of potential concern (COPCs) identified for the site included:

- Gasoline-range hydrocarbons
- Diesel-range petroleum hydrocarbons
- Oil-range petroleum hydrocarbons
- Polychlorinated Biphenyls (PCBs)
- Volatile Organic Compounds (VOCs)
- Semi-volatile Organics (SVOCs)
- RCRA Metals

3.3 Utility Location

Overhead power lines related to operation of the King County Metro electric trolleys were present along East Montlake Place East. WSDOT coordinated the trolley line deactivation for safety purposes. A combined sewer and siphon trunk line system of stormwater conveyance structures operated by King County are present below the SR 520 Eastbound on and off ramps. During preliminary field reconnaissance and during the first 25 feet of drilling at boring H-7-17, the King County Wastewater Treatment Division provided an inspector/investigator to assist with locating the structures. In addition, Holocene Drilling (Holocene) advanced through the first five feet of each boring using high pressure water jets and a vactor truck in order to avoid disruption of any unidentified utilities. Innovex coordinated the remaining utility locates.

3.4 Permits, Noise and Traffic Control

WSDOT obtained a Street Use permit from SDOT for the traffic control and investigation work on East Montlake Place East. In addition, WSDOT obtained a temporary noise variance from the Seattle Department of Construction and Inspections (SDCI) to allow the drilling to be conducted at night, and reducing the impacts to traffic and local businesses.

The project office provided WSDOT approved traffic control plans for the SR 520 Eastbound ramps and INNOVEX subcontracted Altus, Inc. to implement the plans.

3.5 Sonic Drilling

Five soil borings were advanced by Holocene using a sonic drill rig. Fieldwork was conducted on the nights of October 21, 22, 23, 24 and 25, 2017. Five boring locations were planned to determine the extent of petroleum contamination identified within the East Montlake Place East and SR 520 Eastbound ramp rights-of-way in the initial Phase II ESA report.

Drilling equipment was decontaminated at the WSDOT WABN Laydown Yard on Lake Washington Boulevard at the start of drilling and after each night's work. Investigation-derived waste in the form of drilling cuttings and decontamination water was also staged using secondary containment measures and stored at the WSDOT yard.

3.6 Soil and Groundwater Sampling

A total of 41 soil samples were recovered from the soil borings at approximate 5-foot intervals using 18-inch standard penetration test (SPT) split spoon sampler advanced in front of the sonic drill head.

An aliquot of material recovered from each drilling interval was placed in a ziplock bag and allowed to volatilize for approximately 15-minutes. If the recovery percentage allowed, the aliquot was collected from the SPT. At some deeper depths the SPT was advanced into dense till and the recovery percentage was poor or zero. In these cases (marked in the boring logs) the aliquot was collected from the sonic drill core. The headspace within the ziplock bag was evaluated for organic vapors using a photo-ionization detector (PID). The soil sample from the depth with the highest PID reading was selected for chemical analysis. An additional soil sample was collected from Boring H-7-17.

No petroleum odors and/or elevated photoionization detector (PID) readings were noted in soil samples from four of the five borings (H-6-17, H-8-17, H-9-17 and H-10-17).

Elevated PID readings and petroleum-odors were observed in soil samples collected from the 10-foot and the 20-foot intervals from Boring H-7-17. The soil aliquot collected from the 10-foot interval had a PID reading of 9.1 ppm. The aliquot collected from the 20-foot interval had a reading of 4.8 ppm. The soil sample collected from the 20-foot interval also represents the contact with dense glacial till. The 15-foot interval from Boring H-7-17 did not have elevated PID readings or petroleum odors. The soil samples from the 10-foot and 20-foot intervals were selected for chemical analysis. It should be noted that the previously-mentioned King County combined sewer and associated trenching and construction (piping and pea gravel fill material) is located in close proximity to the depths were elevated PID readings and petroleum odors were recorded. Boring Logs are included in Appendix A.

No other soil samples revealed elevated PID readings or petroleum odors.

Groundwater was not encountered during the drilling of the five borings.

3.7 Analytical Methods

The contaminants of potential concern (COPCs) identified for the site include petroleum hydrocarbon related constituents. Selected soil samples were analyzed to determine the concentrations of these COPCs using the following methods:

Hydrocarbon Identification (HCID) – Northwest Total Petroleum Hydrocarbon (NWTPH) HCID

Gasoline-range hydrocarbons –NWTPH-Gx

Diesel-range petroleum hydrocarbons – NWTPH-Dx

Oil-range petroleum hydrocarbons – NWTPH-Dx

Polychlorinated Biphenyls (PCBs) – EPA Method 8082

Volatile Organic Compounds (VOCs) – EPA Method 8260

Semi-volatile Organics (SVOCs) – EPA Method 8270

RCRA Metals – EPA Method 6010

3.8 Site Cleanup Levels

Soil cleanup levels for the site were identified using the Model Toxics Control Act (MTCA) regulation (WAC 173-340). MTCA soil cleanup levels are tabulated in Ecology's CLARC table available at: https://fortress.wa.gov/ecy/clarc/FocusSheets/CLARC%20Master%20Spreadsheet.xlsx.

The most commonly applied cleanup levels are Method A for Unrestricted Land Use and Method B. Applicable cleanup levels for detected analytes are summarized in Table 2.

Selecting soil cleanup levels required the incorporation of cleanup levels protective of groundwater because of the 10- to 12-foot depth to groundwater reported in the three WSDOT piezometers discussed in the Site Geology and Hydrogeology described in the initial Phase II ESA (2016). The resulting Site soil cleanup levels are summarized in Table 3.

3.8.1 Soil Analytical Results

Detected analytes in soil are summarized in the following tables:

- Table 1 HCID Soil Analytical Results
- Table 2 VOCs
- Table 3 SVOCs
- Table 4 PAH TEFs
- Table 5 PCBs
- Table 6 RCRA Metals

The analytical reports are included in Appendix B.

HCID analysis did not detect total petroleum hydrocarbons in any of the soil samples (Table 1). As a result, further analyses for total petroleum hydrocarbons was not requested.

VOCs were not detected in the analyzed soil sample from borings H-6-17, H-8-17, H-9-17 or H-10-17. Select VOCS including benzene, toluene, ethylbenzene, total xylenes (BTEX) and acetone were detected below applicable cleanup levels in soils samples from the 20-foot depth of boring H-7-17 (Table 2).

SVOCs were not detected in any analyzed soil samples except the sample collected from the 10-foot interval from boring H-7-17. The detected SVOCs consisted of polycyclic aromatic hydrocarbons (PAHs) and were evaluated by calculating a toxicity equivalent soil concentration (TEC, Table 4). No SVOCs, including PAHs were detected above the applicable cleanup levels.

PCBs were not detected in any of the soil samples analyzed (Table 5).

Barium and chromium were detected below applicable CULs in all five borings. Lead was detected below the applicable CUL in the soil sample collected from the 10-foot interval in boring H-7-17 (Table 6).

3.8.2 Groundwater Analytical Results

Groundwater was not encountered during the drilling of the five borings.

3.9 Data Quality

Data reports from OnSite were reviewed by INNOVEX. Laboratory provided data quality parameters were reviewed. Data qualifiers were applied as necessary. Data for VOCs, PAHs, PCBs, MTCA metals, and TPHs were determined by INNOVEX to be as qualified acceptable for all purposes following evaluation of the quality control specifications presented in the SSAP; or equivalent requirements found in the contracted commercial laboratory analytical methods. Precision, accuracy, representativeness, comparability, and completeness parameters were evaluated for each method. In addition to laboratory control samples, the data were also reviewed for trip temperature and holding time.

OnSite followed most recent version of the specified analytical methods. Precision was acceptable as demonstrated by the reported matrix spike/matrix spike duplicate (MS/MSD) laboratory control sample/laboratory control sample duplicate (LCS/LCSD) relative percent difference (RPD) values. Accuracy was also acceptable, as demonstrated by the reported surrogate, MS/MSD and LCS/LCD percent recovery values. Samples were collected and field activities were conducted in accordance with the SSAP, with the exception of the deviations described in the above section.

3.10 Disposal of Investigation Derived Waste (IDW)

IDW including soil cuttings and decontamination water were containerized by the drilling crew and taken to the WSDOT WABN Laydown Yard on Lake Washington Boulevard, Seattle for temporary storage pending sample analytical results followed by proper disposal.

4.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the results of the 2016 Phase II ESA, and the findings presented above, we offer the following conclusions for the investigation area. See Figure 4 for a summary of the analytical results from both the 2016 and the 2017 Phase II ESA investigations.

Gasoline related analytes and compounds were detected in the soil sample from boring H-7-17 collected from a depth of 20 feet. Benzene was the only compound detected at a concentration above the applicable MTCA cleanup level. The soil samples from the other four borings did not contain detectable concentrations of analytes.

Based on the results of the five soil borings completed during October 2017, the subsurface below the SR 520 Eastbound on ramp does not appear to have been impacted by petroleum releases except for the area below soil boring H-7-17 and the King County combined sewer and siphon trunk line system. During the drilling of H-7-17, petroleum odors were noted and elevated concentrations of petroleum constituents were reported to be present between 10- and 20-feet bgs. Subsurface soil encountered in this area may have been impacted by a petroleum release and may require special accommodation during any potential redevelopment process.

Typical sewer utility trench construction involves the removal of native soil and the application of fill (pea gravel) with a greater permeability. Innovex recommends that WSDOT review available as-built drawings of the sewer/trunk line construction with the purpose of understanding how the alignment and materials used in the construction may have influenced the migration of contaminants at the site.

Groundwater was not encountered during this investigation.

The two Phase II ESA investigations did not confirm the source of the contamination found. The 2016 boring were located adjacent to the 2625 East Montlake Place East property. The 2017 borings were located farther from the 2625 East Montlake Place East property. Contaminant concentrations detected in the 2017 samples were significantly less than the concentrations detected in the 2016 samples (Figure 4).

It is recommended that the investigation presented in the approved SSAP be completed to determine the source of contamination.

4.1 Remediation Methods

Based on the absence of groundwater, it is our opinion that any contaminated soil discovered during the redevelopment of the site could be remediated using excavation and disposal. The resulting excavation could be treated with an appropriate bioremediation product to enhance the breakdown of contaminants. An institutional control such as a deed restriction would likely be necessary if contaminated soil remained in the subsurface.

5.0 LIMITATIONS

This report is based on the site conditions, data, and other information available as of the date of the report, and the conclusions herein are applicable only to the time frame in which the report was prepared. Background information used to prepare this report including, but not limited to site plans and other data have been furnished to INNOVEX by WSDOT and as available on Ecology's website. INNOVEX has relied on this information as furnished, and is neither responsible for nor has confirmed the accuracy of this information.

6.0 REFERENCES

INNOVEX, 2016. Phase II Environmental Site Assessment, State Route (SR) 520 Eastbound Off-Ramp to Montlake Vicinity, Seattle, Washington

WSDOT (Washington State Department of Transportation), 2016. Limited Phase I Environmental Site Assessment State Route (SR) 520 Montlake '76 Gasoline and Service Station, Seattle, Washington

Lasmanis, Raymond, 1991. The Geology of Washington Rocks and Minerals. Volume 66, No. 4, p. 262-277.

FIGURES

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August 30, 2016

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LON□IT□DE 122D 18M 15S WEST

□S □EOLO□ICAL S□RVEY - 201□
7.5 MIN□TE □□ADRAN□LE MA□
SEATTLE NORTH, WASHIN□TON

FIGURE 1

Site Location Map

State Route 520
Eastbound Ramps
SEATTLE, WASHINGTON

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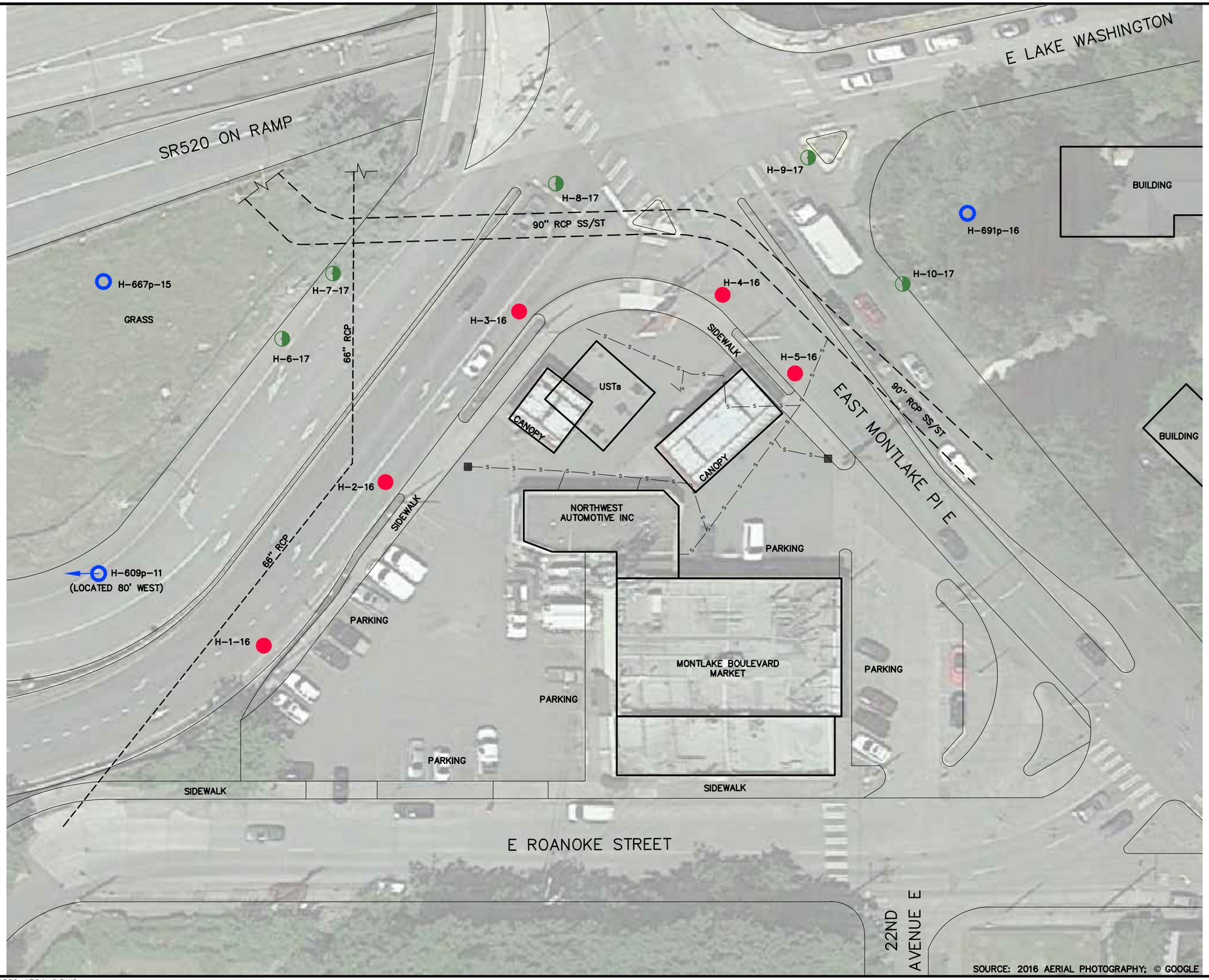

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LEGEND

H-1-16	SOIL BORING LOCATION (2016 ESA)
H-10-17	SOIL BORING LOCATION (2017 ESA)
H-667p-15	GEOTECHNICAL EXPLORATIONS
—— S —— S ——	SEWER LINE
90" RCP SS/ST	90" DIAMETER REINFORCED CONCRETE PIPE
66" RCP	66" DIAMETER REINFORCED CONCRETE PIPE
	CATCH BASIN

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FIGURE 2

2016-2017 Boring Locations Map

State Route 520 Eastbound Ramps SEATTLE, WASHINGTON

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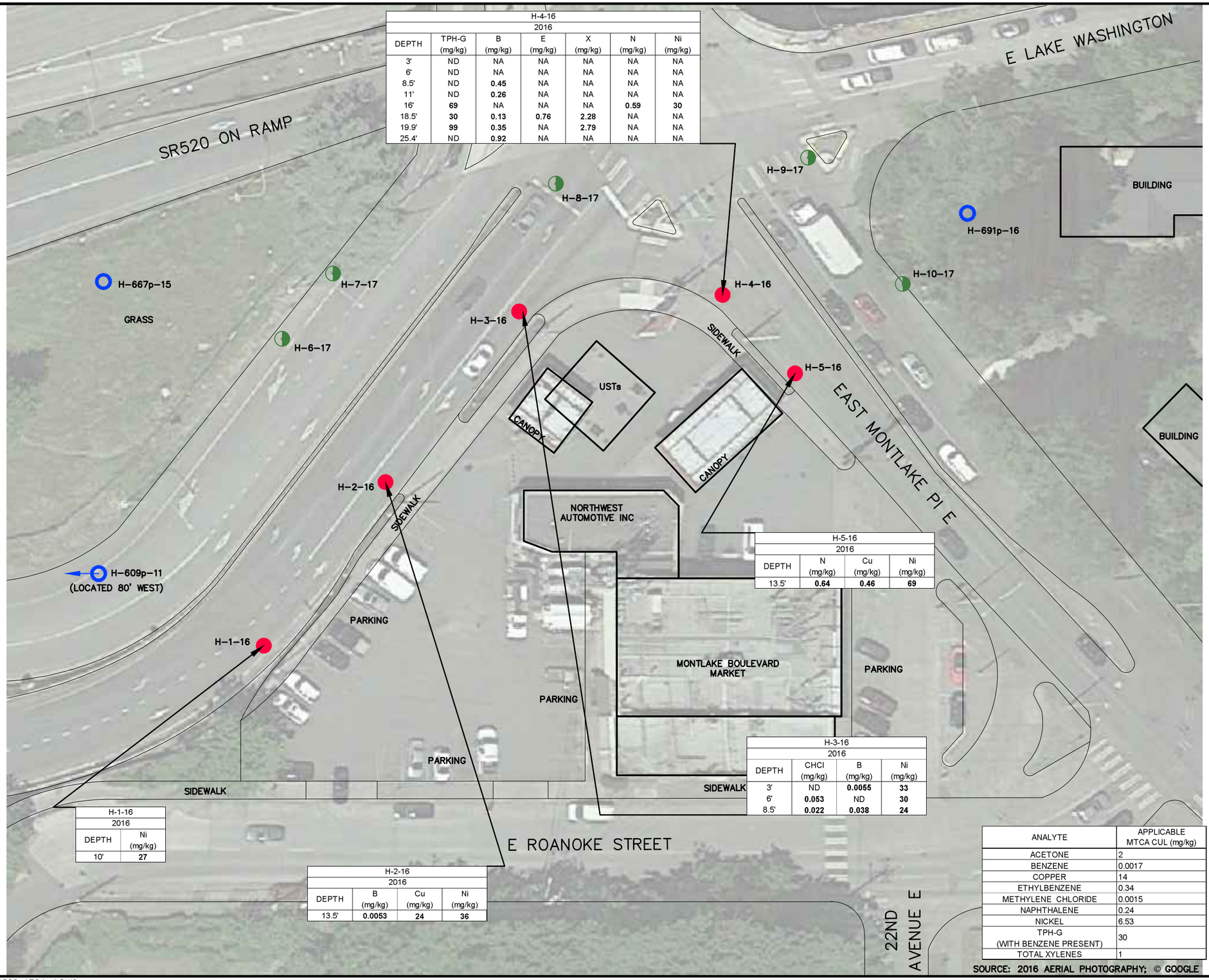

H-4-16						
2016						
DEPTH	TPH-G (mg/kg)	B (mg/kg)	E (mg/kg)	X (mg/kg)	N (mg/kg)	Ni (mg/kg)
3'	ND	NA	NA	NA	NA	NA
6'	ND	NA	NA	NA	NA	NA
8.5'	ND	**0.45**	NA	NA	NA	NA
11'	ND	**0.26**	NA	NA	NA	NA
16'	**69**	NA	NA	NA	**0.59**	**30**
18.5'	**30**	**0.13**	**0.76**	**2.28**	NA	NA
19.9'	**99**	**0.35**	NA	**2.79**	NA	NA
25.4'	ND	**0.92**	NA	NA	NA	NA

H-5-16			
2016			
DEPTH	N (mg/kg)	Cu (mg/kg)	Ni (mg/kg)
13.5'	**0.64**	**0.46**	**69**

H-3-16			
2016			
DEPTH	CHCl (mg/kg)	B (mg/kg)	Ni (mg/kg)
3'	ND	**0.0055**	**33**
6'	**0.053**	ND	**30**
8.5'	**0.022**	**0.038**	**24**

H-1-16	
2016	
DEPTH	Ni (mg/kg)
10'	**27**

H-2-16			
2016			
DEPTH	B (mg/kg)	Cu (mg/kg)	Ni (mg/kg)
13.5'	**0.0053**	**24**	**36**

ANALYTE	APPLICABLE MTCA CUL (mg/kg)
ACETONE	2
BENZENE	0.0017
COPPER	14
ETHYLBENZENE	0.34
METHYLENE CHLORIDE	0.0015
NAPHTHALENE	0.24
NICKEL	6.53
TPH-G (WITH BENZENE PRESENT)	30
TOTAL XYLENES	1

SOURCE: 2016 AERIAL PHOTOGRAPHY; © GOOGLE

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LEGEND

H-1-16	SOIL BORING LOCATION (2016)
H-10-17	SOIL BORING LOCATION (2017)
H-667p-15	GEOTECHNICAL EXPLORATIONS
TPH-G	TOTAL PETROLEUM HYDROCARBONS AS GASOLINE (mg/kg)
CHCl	METHYLENE CHLORIDE (mg/kg)
B	BENZENE (mg/kg)
E	ETHYLBENZENE (mg/kg)
X	TOTAL XYLENES (mg/kg)
N	NAPHTHALENE (mg/kg)
Cu	COPPER (mg/kg)
Ni	NICKEL (mg/kg)
mg/kg	MILLIGRAMS PER KILOGRAM
DEPTH	SAMPLING DEPTH (FEET)
ND	NOT DETECTED
NA	NOT ANALYZED
CULs	CLEANUP LEVELS

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February 13, 2018

FIGURE 3
2016
Soil Sample
Analytical Results
Exceeding MTCA Clean Up Levels

STATE ROUTE 520 EAST BOUND ON-RAMP SEATTLE, WASHINGTON

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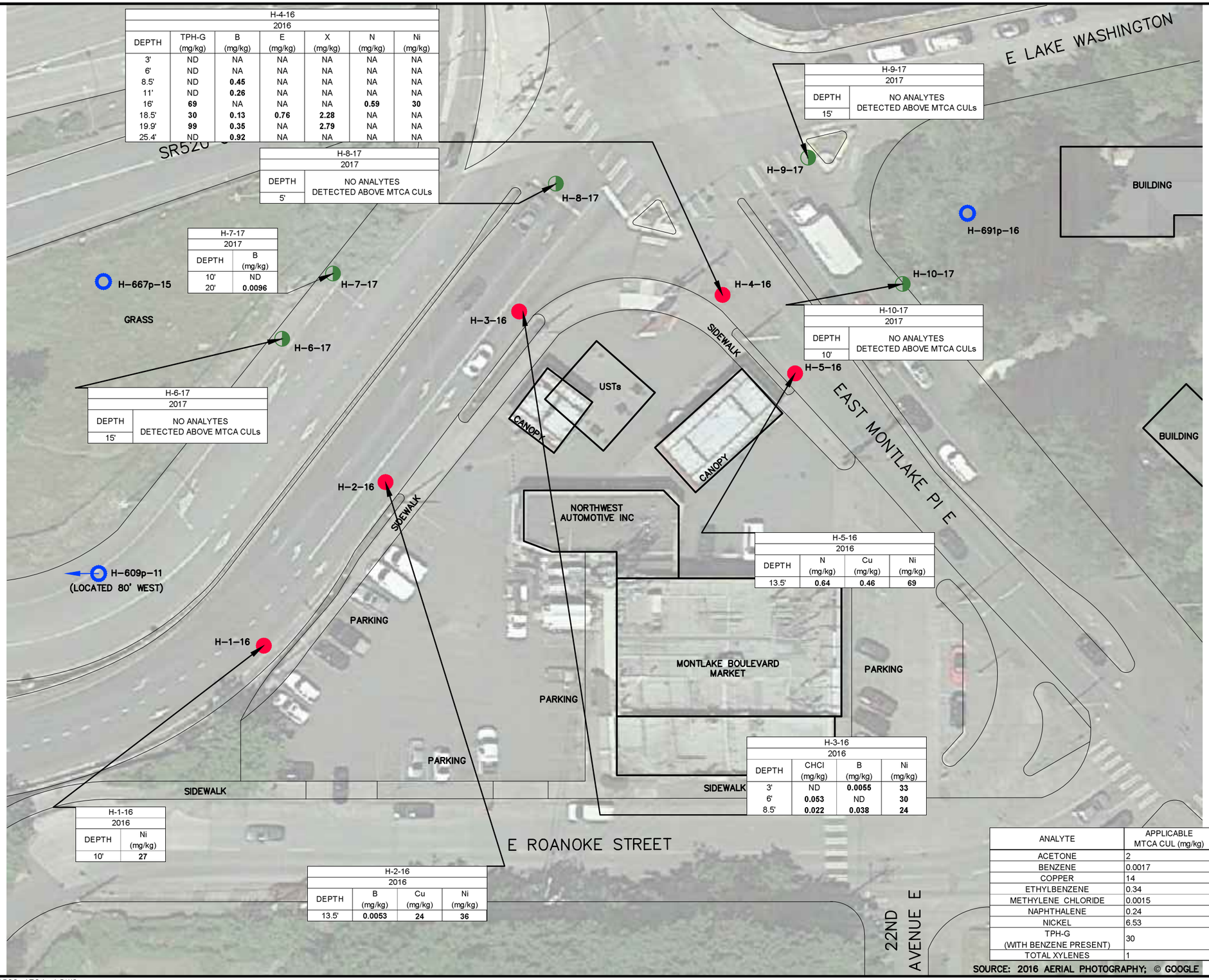

H-4-16						
2016						
DEPTH	TPH-G (mg/kg)	B (mg/kg)	E (mg/kg)	X (mg/kg)	N (mg/kg)	Ni (mg/kg)
3'	ND	NA	NA	NA	NA	NA
6'	ND	NA	NA	NA	NA	NA
8.5'	ND	**0.45**	NA	NA	NA	NA
11'	ND	**0.26**	NA	NA	NA	NA
16'	**69**	NA	NA	NA	**0.59**	**30**
18.5'	**30**	**0.13**	**0.76**	**2.28**	NA	NA
19.9'	**99**	**0.35**	NA	**2.79**	NA	NA
25.4'	ND	**0.92**	NA	NA	NA	NA

H-8-17	
2017	
DEPTH	NO ANALYTES DETECTED ABOVE MTCA CULs
5'	

H-9-17	
2017	
DEPTH	NO ANALYTES DETECTED ABOVE MTCA CULs
15'	

H-7-17	
2017	
DEPTH	B (mg/kg)
10'	ND
20'	**0.0096**

H-10-17	
2017	
DEPTH	NO ANALYTES DETECTED ABOVE MTCA CULs
10'	

H-6-17	
2017	
DEPTH	NO ANALYTES DETECTED ABOVE MTCA CULs
15'	

H-5-16			
2016			
DEPTH	N (mg/kg)	Cu (mg/kg)	Ni (mg/kg)
13.5'	**0.64**	**0.46**	**69**

H-3-16			
2016			
DEPTH	CHCl (mg/kg)	B (mg/kg)	Ni (mg/kg)
3'	ND	**0.0055**	**33**
6'	**0.053**	ND	**30**
8.5'	**0.022**	**0.038**	**24**

H-1-16	
2016	
DEPTH	Ni (mg/kg)
10'	**27**

H-2-16			
2016			
DEPTH	B (mg/kg)	Cu (mg/kg)	Ni (mg/kg)
13.5'	**0.0053**	**24**	**36**

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LEGEND

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H-10-17	SOIL BORING LOCATION (2017)
H-667p-15	GEOTECHNICAL EXPLORATIONS
TPH-G	TOTAL PETROLEUM HYDROCARBONS AS GASOLINE (mg/kg)
CHCl	METHYLENE CHLORIDE (mg/kg)
B	BENZENE (mg/kg)
E	ETHYLBENZENE (mg/kg)
X	TOTAL XYLENES (mg/kg)
N	NAPHTHALENE (mg/kg)
Cu	COPPER (mg/kg)
Ni	NICKEL (mg/kg)
mg/kg	MILLIGRAMS PER KILOGRAM
DEPTH	SAMPLING DEPTH (FEET)
ND	NOT DETECTED
NA	NOT ANALYZED
CULs	CLEANUP LEVELS

ANALYTE	APPLICABLE MTCA CUL (mg/kg)
ACETONE	2
BENZENE	0.0017
COPPER	14
ETHYLBENZENE	0.34
METHYLENE CHLORIDE	0.0015
NAPHTHALENE	0.24
NICKEL	6.53
TPH-G (WITH BENZENE PRESENT)	30
TOTAL XYLENES	1

SOURCE: 2016 AERIAL PHOTOGRAPHY; © GOOGLE

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February 13, 2018

FIGURE 4
2016 and 2017 Soil Sample Analytical Results Exceeding MTCA Clean Up Levels

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SR520_17Q4_4.DWG

TABLES

Table 1. HCID Soil Analytical Results, SR 520 Eastbound Off-Ramp to Montlake Vicinity Seattle, Washington

Sample ID	Sample Date	Sample depth (ft.)	TPHg (mg/kg)	TPHd (mg/kg)	TPHo (mg/kg)
H-6-17-15	10/22/2017	15	ND	ND	ND
H-9-17-15	10/21/2017	15	ND	ND	ND
H-10-17-10	10/22/2017	10	ND	ND	ND
H-8-17-5	10/24/2017	5	ND	ND	ND
H-7-17-10	10/23/2017	10	ND	ND	ND
H-7-17-20	10/23/2017	20	ND	ND	ND

ND Not Detected

Table 2: Volatile Organic Compounds Detected in Soil Samples, SR 520 Eastbound Off-Ramp to Montlake Vicinity, Seattle, Washington

Sample ID	Sample Date	Sample depth (ft.)	Acetone (mg/kg)	Methylene Chloride (mg/kg)	2-Butanone (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total-xylenes (mg/kg)	Isopropyl-benzene (mg/kg)	n-Propyl-benzene (mg/kg)	1,3,5-Trimethyl-benzene (mg/kg)	1,2,4-Trimethyl-benzene (mg/kg)	sec-Butyl-benzene (mg/kg)	p-Isopropyl-toluene (mg/kg)	n-Butyl-benzene (mg/kg)	Napthalene (mg/kg)
H-6-17-15	10/22/2017	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
H-9-17-15	10/21/2017	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
H-10-17-10	10/22/2017	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
H-8-17-5	10/24/2017	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
H-7-17-10	10/23/2017	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
H-7-17-20	10/23/2017	20	0.078	ND	0.014	0.0096	ND	0.0022	0.0024	0.0012	0.0035	ND	0.0015	ND	ND	ND	0.0027
MTCA Cleanup Level			2	0.0015	48000	0.0017	0.27	0.34	9	8000	8000	800	No CUL	8000	No CUL	4000	0.24

--	Not Analyzed
ND	Not Detected
99	Exceeds Cleanup Level
H	H - The result indicated is a common laboratory contaminant and may have been introduced during sample preparation.

Table 3. Semi Volatile Organic Compounds Detected in Soil Samples, SR 520 Eastbound Off-Ramp to Montlake Vicinity, Seattle, Washington

Sample ID	Sample Date	Sample Depth	Napthalene (mg/kg)	2-Methylnaphthalene (mg/kg)	1-Methylnaphthalene (mg/kg)	Phenanthrene (mg/kg)	Fluoranthene (mg/kg)	Pyrene (mg/kg)	Benzo[a] anthracene (mg/kg)	Chrysene (mg/kg)	Benzo[b] fluoranthene (mg/kg)	Benzo[a] pyrene (mg/kg)	Benzo[j,k] fluoranthene (mg/kg)	Indeno[1,2,3-cd]pyrene (mg/kg)	Dibenz[a,h] anthracene (mg/kg)	Benzo[g,h,i] perylene (mg/kg)
H-6-17-15	10/22/2017	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
H-9-17-15	10/21/2016	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
H-10-17-10	10/22/2016	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
H-8-17-5	10/24/2017	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
H-7-17-10	10/23/2017	10	ND	ND	ND	0.019	0.027	0.041	0.017	0.019	0.020	0.020	ND	0.013	ND	0.014
H-7-17-20	10/23/2017	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MTCA Cleanup Level			0.24	320	34	No CUL	3200	32.8	0.137	0.137	0.137	0.137	0.137	0.137	0.137	No CUL

ND No Detected

Table 4. PAH TEF Calculations

From: gov/ecy/clarc/FocusSheets/tef.pdf (last page of document)

Step 1: Analyze the cPAH mixture at the site to determine the solid concentration of each cPAH

Step 2: For each cPAH identified at the site, multiply the soil concentration (Column 2) by the

Step 3: Add the products in step 2 to obtain the total toxicity equivalent soil concentration (TTEC) for

Step 4: Compare the TTEC for the cPAH mixture (0.133 mg/kg) with the Method B cleanup level for

Compare sum to Method B CUL for Benzo(a)pyrene (0.137 mg/kg)

H-7-17-10'

		Concentration (mg/kg)	TEF (unitless)	Toxicity Equivalent Soil Concentration (mg/kg)
Benzo(a)pyrene		0.021	1.00	0.021
Benzo(a)anthracene		0.052	0.1	0.0052
Benzo(b)fluoranthene		0.045	0.1	0.0045
Benzo(k)fluoranthene		0.014	0.1	0.0014
Chrysene		0.065	0.01	0.00065
Dibenzo(ah,h)anthracene	nd		0.1	0
Indeno(1,2,3-cd)pyrene		0.021	0.1	0.0021
			SUM	0.03485

Table 5. Polychlorinated Biphenyls Detected in Soil Samples, SR 520 Eastbound Off-Ramp to Montlake Vicinity, Seattle, Washington

Sample ID	Sample Date	Sample depth (ft.)	Aroclor 1016 (mg/kg)	Aroclor 1212 (mg/kg)	Aroclor 1232 (mg/kg)	Aroclor 1242 (mg/kg)	Aroclor 1248 (mg/kg)	Aroclor 1254 (mg/kg)	Aroclor 1260 (mg/kg)
H-6-17-15	10/22/2017	15	ND	ND	ND	ND	ND	ND	ND
H-9-17-15	10/21/2016	15	ND	ND	ND	ND	ND	ND	ND
H-10-17-10	10/22/2016	10	ND	ND	ND	ND	ND	ND	ND
H-8-17-5	10/24/2017	5	ND	ND	ND	ND	ND	ND	ND
H-7-17-10	10/23/2017	10	ND	ND	ND	ND	ND	ND	ND
H-7-17-20	10/23/2017	20	ND	ND	ND	ND	ND	ND	ND

ND Not Detected

Table 6. Metals Detected in Soil Samples, SR 520 Eastbound Off-Ramp to Montlake Vicinity, Seattle, Washington

Sample ID	Sample Date	Sample depth (ft.)	Arsenic (mg/kg)	Barium (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Lead (mg/kg)	Mercury (mg/kg)	Selenium (mg/kg)	Silver (mg/kg)
H-6-17-15	10/22/2017	15	ND	47	ND	33	ND	ND	ND	ND
H-9-17-15	10/21/2016	15	ND	63	ND	37	ND	ND	ND	ND
H-10-17-10	10/22/2016	10	ND	35	ND	27	ND	ND	ND	ND
H-8-17-5	10/24/2017	5	ND	69	ND	35	ND	ND	ND	ND
H-7-17-10	10/23/2017	10	ND	59	ND	37	6.0	ND	ND	ND
H-7-17-20	10/23/2017	20	ND	42	ND	35	ND	ND	ND	ND
MTCA Cleanup Level			20	82.6	2	2000	250	2	400	400

ND Not Detected

22 Exceeds Cleanup Level

APPENDICES

APPENDIX A
BORING LOGS

Project: MONTAKE / 520	Project Number: 31008	Client: WDR	Boring No. H.6.17
Address, City, State		Drilling Contractor: HOLOCENE	Drill Rig Type: SONIC
Logged By: M. WILLIAMS	Date Started: 10.22.17	Bit Type:	Diameter: 4.25
Drill Crew: HOLOCENE	Completed: 10.23.17	Hammer Type:	
USA Ticket Number:	Backfilled: 10.23.17	Hammer Weight: 40lb	Hammer Drop:
	Groundwater Depth: NA	Elevation:	Total Depth of Boring: 50'

Depth (feet)	Sample Number	Blow Counts (blows/foot)	Graphic Log	Lithology **Soil Group Name:** modifier, color, moisture, density/consistency, grain size, other descriptors **Rock Description:** modifierm color, hardness/degree of concentration, bedding and joint characteristics, solutions, void conditions.	PID	Recovery %	Additional Test
10:08 5		7 4 3		MED BROWN SILTY CLAY, MOIST, VERY LOOSE	0.0	25	
1022 10		8 9 11		~~SAA~~. MED BR SILTY SAND (F-M) MOIST. LOOSE @ 11' 1"+M (3") SILTY CLAY LAYER WITHIN SAND	0.2	50	
1048 15		7 3 2		MED BROWN SILTY SAND (F-M GRAINED) W/ OCCASIONAL RED MOTLING. MOIST, MED DENSE, MINOR GRVL (5%, 1/2-3/4" DIA, SUBROUNDED. WOOD FRAGMENTS (FILL)	0.0	50	
1120 20		45 50/4	↔	MED GREY SILTY SAND (F-M GRAINED) W/ MINOR GRVL (1/4"-3") SUBROUNDED, VERY DENSE, DRY. RED MOTTLING (TILL)	0.1	100	
25		45 50/6		MED GREY SILTY SAND (F-M GRAINED) W/ MINOR GRVL (10'., 1/4-1/2" DIA. SUBROUNDED - SUBANGULAR, DRY VERY DENSE (TILL)	0.1	100	

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Boring Log: Sheet 1 of 2

- Standard Penetration Slit Spoon Sampler (SPT)
- California Sampler
- Shelby Tube
- CPP Sampler
- Bulk/ Bag Sample
- Stabllized Ground water
- Groundwater At time of Drilling

Project: MONTCLAIR / 520	Project Number: 31008	Client:	Boring No. H.6.17

	Depth (feet)	Sample Number	Blow Counts (blows/foot)	Graphic Log	Lithology **Soil Group Name:** modifier, color, moisture, density/consistency, grain size, other descriptors **Rock Description:** modifierm color, hardness/degree of concentration, bedding and joint characteristics, solutions, void conditions.	PID	Recovery %	Additional Test
12:18	30		50/3		SAA (TILL)	0.0	100	
12:48	35		50/1		SAA (TILL)	0.0	10	
1:28	40		50/1		SAA (TILL)	0.0	10	
3:08	45		50/1		SAA (TILL)	0.0	10	
4:10	50		50/1		SAA (TILL)	0.0	10	

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Boring Log: Sheet 2 of 2

- Standard Penetration Slit Spoon Sampler (SPT)
- California Sampler
- Shelby Tube
- CPP Sampler
- ☒ Bulk/ Bag Sample

Stabllized Ground water
Groundwater At time of Drilling

Project: MONTLAKE / 520	Project Number: 31008	Client:	Boring No. H.7.17
Address, City, State		Drilling Contractor: HOLOCENE	Drill Rig Type: SONIC
Logged By: M. WILLIAMS	Date Started: 10.23.17	Bit Type:	Diameter: 4.25
Drill Crew: HOLOCENE	Completed: 10.24.17	Hammer Type:	
USA Ticket Number:	Backfilled: 10.24.17	Hammer Weight: 40lb	Hammer Drop:
	Groundwater Depth: NA	Elevation:	Total Depth of Boring: 50

Depth (feet)	Sample Number	Blow Counts (blows/foot)	Graphic Log	Lithology **Soil Group Name:** modifier, color, moisture, density/consistency, grain size, other descriptors **Rock Description:** modifierm color, hardness/degree of concentration, bedding and joint characteristics, solutions, void conditions.	PID	Recovery %	Additional Test
10:08 5		12 8 5		MED GREY SILTY SAND (F-M GRAINED) MOIST. MEDIUM DENSE. MINOR (5%) GRVL (1/8-1/2" DIA) SUBROUNDED - SUBANGULAR	2.5	50	
10:18 10	–	11 11 11		SAA. PETROLEUM ODOR	9.1	75	
10:35 15		41 50/5		MED GREY SILTY SAND (F-M GRAINS) ~~SLIGHTLY MOIST~~. DRY. DENSE. MINOR GRVL (1/2"-3"). RED MOTTLING. NO ODOR.	0.4	80	
1103 20				SAA. PETROLEUM ODOR.	4.8	50	
1138 25		50/2		SAA	6.6	20	

INNOVEX ENVIRONMENTAL MANAGEMENT, INC.

Boring Log: Sheet 1 of 2

- Standard Penetration Slit Spoon Sampler (SPT)
- California Sampler
- Shelby Tube
- CPP Sampler
- Bulk/ Bag Sample
- Stabllized Ground water
- Groundwater At time of Drilling

Project:	Project Number:	Client:	Boring No.
MONTLAKE 1S'20	31008	HDR	H.7.17

	Depth (feet)	Sample Number	Blow Counts (blows/foot)	Graphic Log	Lithology **Soil Group Name:** modifier, color, moisture, density/consistency, grain size, other descriptors **Rock Description:** modifierm color, hardness/degree of concentration, bedding and joint characteristics, solutions, void conditions.	PID	Recovery %	Additional Test
12:20	30		50/4		SAA	1.1	60	
1259	35		50/1		SAA	0.9	70	
152	40		50/1		SAA	1.0	100	
2:19	45		50/2		SAA	2.1	100	
3:25	50		50/1		SAA	0.8	60	

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Boring Log: Sheet 2 of 2

- Standard Penetration Slit Spoon Sampler (SPT)
- California Sampler
- Shelby Tube
- CPP Sampler
- ☒ Bulk/ Bag Sample

Stabllized Ground water
Groundwater At time of Drilling

Project: MONTLAKE / 520	Project Number: 31008	Client:	Boring No. H-8-17
Address, City, State		Drilling Contractor:	Drill Rig Type: SONIC
Logged By: M. WILLIAMS	Date Started: 10.24.17	Bit Type:	Diameter: 4.25
Drill Crew: HOLOCENE	Completed: 10.25.17	Hammer Type:	
USA Ticket Number:	Backfilled: 10.25.17	Hammer Weight: 40lb.	Hammer Drop:
	Groundwater Depth: NA	Elevation: —	Total Depth of Boring: 50'

Depth (feet)	Sample Number	Blow Counts (blows/foot)	Graphic Log	Lithology **Soil Group Name:** modifier, color, moisture, density/consistency, grain size, other descriptors **Rock Description:** modifierm color, hardness/degree of concentration, bedding and joint characteristics, solutions, void conditions.	PID	Recovery %	Additional Test
		15 26 50/5					
10:33 5				MED GREY SILTY SAND (F-M GRAINED). MED DENSE, MINOR (15%) GRVL (1/2-3/4") SLIGHTLY MOIST. (INCREASED MOISTURE @ 6-7'. (TILL).	0.3	100	
10:59 10		50/2		MED GREY SILTY SAND (F GRAINED). DENSE MINOR (15%) GRVL (SUBROUNDED-SUBANGULAR). DRY.	0.5	15	
11:32 15		50/1		SAA	1.6	10	
11:56 20		50/3		SAA	1.9	10	
12:32 25		50/6		SAA	0.8	30	

INNOVEX ENVIRONMENTAL MANAGEMENT, INC.

Boring Log: Sheet 1 of 2

- Standard Penetration Slit Spoon Sampler (SPT)
- California Sampler
- Shelby Tube
- CPP Sampler
- Bulk/ Bag Sample
- Stabllized Ground water
- Groundwater At time of Drilling

Project: MONTLAKE / 520	Project Number: 31008	Client: HDR	Boring No. H-B-17

	Depth (feet)	Sample Number	Blow Counts (blows/foot)	Graphic Log	Lithology Soil Group Name: modifier, color, moisture, density/consistency, grain size, other descriptors Rock Description: modifierm color, hardness/degree of concentration, bedding and joint characteristics, solutions, void conditions.	PID	Recovery %	Additional Test
12:48	30		50/1		MED GREY SILTY SAND (F-M GR). DENSE. SILTY SAND MATERIAL IS DRY INTERNALLY BUT MOISTURE IN SPT -	0.3	25	
1:08	35		50/1		SAA. STOPPED DRILLING FOR 35 MIN TO WAIT FOR POSSIBLE WATER ACCUMULATION. ATTEMPTED TO BAIL BUT INSUFFICIENT WATER.	0.5	30	
2:09	40		50/1		SAA. ATTEMPTED TO BAIL FOR 2nd TIME - INSUFFICIENT WATER.	0.4	10	
2:59	45		50/1		SAA. - ATTEMPTED TO BAIL FOR 3RD TIME - INSUFFICIENT WATER. COLLECTED SOIL SAMPLE FROM SONIC "BAG".	0.4	0	
3:51	50		50/1		SAA. COLLECTED SOIL SAMPLE FROM SONIC "BAG".	0.4	0	

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Boring Log: Sheet 2 of 2

- Standard Penetration Slit Spoon Sampler (SPT)
- California Sampler
- Shelby Tube
- CPP Sampler
- ☒ Bulk/ Bag Sample

Stabllized Ground water
Groundwater At time of Drilling

Project:	Project Number:	Client:	Boring No.
MONTLAKE / 520	31008	HDR	H.9.17
Address, City, State		Drilling Contractor: HOLOCENE	Drill Rig Type: SONIC
Logged By: M. WILLIAMS	Date Started: 10.22.17	Bit Type:	Diameter: 4.25
Drill Crew: HOLOCENE	Completed: 10.22.17	Hammer Type: 40 lb	
USA Ticket Number:	Backfilled: 10.22.17	Hammer Weight: 140 lb	Hammer Drop:
	Groundwater Depth: NA	Elevation: /	Total Depth of Boring: 30'

	Depth (feet)	Sample Number	Blow Counts (blows/foot)	Graphic Log	Lithology **Soil Group Name:** modifier, color, moisture, density/consistency, grain size, other descriptors **Rock Description:** modifierm color, hardness/degree of concentration, bedding and joint characteristics, solutions, void conditions.	PID	Recovery %	Additional Test
10:15	5		4 6 7		NO RECOVERY		0	
10:30	10		20 20 25		GREY SILTY SAND (F-M GRAINED) W/MINOR CLAY. MEDIUM DENSE. DRY	0.3	100	
1100	15		45 50/4		GREY SILTY SAND (F-M GRAINED). DENSE. MOIST* (POSSIBLY WATER FROM SURFACE)	0.4	80	
1119	20		50/2		SILTY SANDY CLAY (MINOR CLAY ~20%) DENSE DRY. MINOR GRVL (1/4-1/2") SUBROUNDED-SUBANGULAR (TILL)	0.5	100	
1143	25		50/3		SILTY SAND (TILL) GREY. DRY. VERY DENSE. MINOR GRVL (1/4-3/4") SUB-ROUNDED-SUBANGULAR (TILL)	0.8	25	

INNOVEX ENVIRONMENTAL MANAGEMENT, INC.

Boring Log: Sheet 1 of 2

- Standard Penetration Slit Spoon Sampler (SPT)
- California Sampler
- Shelby Tube
- CPP Sampler
- Bulk/ Bag Sample
- Stabllized Ground water
- Groundwater At time of Drilling

Project:	Project Number:	Client:	Boring No.
MONTLAKE / 520	31008	HDR	H.9.17

Depth (feet)	Sample Number	Blow Counts (blows/foot)	Graphic Log	Lithology **Soil Group Name:** modifier, color, moisture, density/consistency, grain size, other descriptors **Rock Description:** modifierm color, hardness/degree of concentration, bedding and joint characteristics, solutions, void conditions.	PID	Recovery %	Additional Test
30		50/3		SAA - TILL	0.0	100	
35							
40							
45							
50							

1242

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Boring Log: Sheet 2 of 2

- Standard Penetration Slit Spoon Sampler (SPT)
- California Sampler
- Shelby Tube
- CPP Sampler
- Bulk/ Bag Sample

Stabllized Ground water
Groundwater At time of Drilling

Project: MONTLAKE / 520	Project Number: 31008	Client: HDR	Boring No. H.10.17
Address, City, State		Drilling Contractor: HOLOCENE	Drill Rig Type: SONIC
Logged By: M. WILLIAMS	Date Started: 10.22.17	Bit Type:	Diameter: 4.25
Drill Crew: HOLOCENE	Completed: 10.22.17	Hammer Type:	
USA Ticket Number:	Backfilled: 10.22.17	Hammer Weight: 40 lb	Hammer Drop:
	Groundwater Depth: NA	Elevation:	Total Depth of Boring: 30

	Depth (feet)	Sample Number	Blow Counts (blows/foot)	Graphic Log	Lithology **Soil Group Name:** modifier, color, moisture, density/consistency, grain size, other descriptors **Rock Description:** modifierm color, hardness/degree of concentration, bedding and joint characteristics, solutions, void conditions.	PID	Recovery %	Additional Test
1:42	5		3 4 5		GREY SILTY SAND (F-M GRAINED) W/ MINOR CLAY, LOOSE, MOIST	0.2	100	
2:28	10		23 24 21		GREY SILTY SAND (F-M GRAINED) ~~LOOSE~~ MED DENSE, DRY. @ 11' BGS ABRUPT CONTACT W/ GREY SILTY SANDY CLAY. DENSE. DRY	0.6	100	
2:50	15		50/5		GREY SILTY SAND (F-M GRAINED), DRY. VERY DENSE (TILL). MINOR GRVL (1/4-1/2") SUBROUNDED - SUBANGULAR (TILL)	1.0	20%	
3:10	20		50/4		SAA - TILL	1.1	60	
3:30	25		50/3		SAA - TILL	0.9	30	

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Boring Log: Sheet 1 of 2

- Standard Penetration Slit Spoon Sampler (SPT)
- California Sampler
- Shelby Tube
- CPP Sampler
- Bulk/ Bag Sample
- Stabllized Ground water
- Groundwater At time of Drilling

Project:	Project Number:	Client:	Boring No.
MONTAKE / 520	31008	HDR	H.10.17

Depth (feet)	Sample Number	Blow Counts (blows/foot)	Graphic Log	Lithology **Soil Group Name:** modifier, color, moisture, density/consistency, grain size, other descriptors **Rock Description:** modifierm color, hardness/degree of concentration, bedding and joint characteristics, solutions, void conditions.	PID	Recovery %	Additional Test
4:08							
30		50/3		SAA	0.8	30	
35							
40							
45							
50							

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Boring Log: Sheet 2 of 2

- Standard Penetration Slit Spoon Sampler (SPT)
- California Sampler
- Shelby Tube
- CPP Sampler
- ☒ Bulk/ Bag Sample

Stabllized Ground water
Groundwater At time of Drilling

APPENDIX B
ANALYTICAL REPORTS

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

October 30, 2017

Glenn Hayman
INNOVEX Environmental Mgt., Inc.
16310 NE 80th St., Suite 300
Redmond, WA 98052

Re: Analytical Data for Project 520 Montlake Phase II
Laboratory Reference No. 1710-291

Dear Glenn:

Enclosed are the analytical results and associated quality control data for samples submitted on October 23, 2017.

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 30, 2017
Samples Submitted: October 23, 2017
Laboratory Reference: 1710-291
Project: 520 Montlake Phase II

Case Narrative

Samples were collected on October 22 and 23, 2017 and received by the laboratory on October 23, 2017. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

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.

Volatiles EPA 8260C Analysis

Sodium Bisulfate preservation has been proven to increase the frequency of detection and the concentration of Acetone and 2-Butanone due in part to chemical reactions in the sample. If Acetone is a potential site contaminant, Sodium Bisulfate should not be used.

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 30, 2017
Samples Submitted: October 23, 2017
Laboratory Reference: 1710-291
Project: 520 Montlake Phase II

NWTPH-HCID

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**H-6-17-15'**					
Laboratory ID:	10-291-03					
Gasoline Range Organics	**ND**	22	NWTPH-HCID	10-24-17	10-24-17	
Diesel Range Organics	**ND**	56	NWTPH-HCID	10-24-17	10-24-17	
Lube Oil Range Organics	**ND**	110	NWTPH-HCID	10-24-17	10-24-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*108*	*50-150*				

Date of Report: October 30, 2017
Samples Submitted: October 23, 2017
Laboratory Reference: 1710-291
Project: 520 Montlake Phase II

NWTPH-HCID
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1024S1					
Gasoline Range Organics	**ND**	20	NWTPH-HCID	10-24-17	10-24-17	
Diesel Range Organics	**ND**	50	NWTPH-HCID	10-24-17	10-24-17	
Lube Oil Range Organics	**ND**	100	NWTPH-HCID	10-24-17	10-24-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*103*	*50-150*				

Date of Report: October 30, 2017
Samples Submitted: October 23, 2017
Laboratory Reference: 1710-291
Project: 520 Montlake Phase II

VOLATILES EPA 8260C

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**H-6-17-15'**					
Laboratory ID:	10-291-03					
Dichlorodifluoromethane	ND	0.0014	EPA 8260C	10-25-17	10-25-17	
Chloromethane	ND	0.0054	EPA 8260C	10-25-17	10-25-17	
Vinyl Chloride	ND	0.0011	EPA 8260C	10-25-17	10-25-17	
Bromomethane	ND	0.0011	EPA 8260C	10-25-17	10-25-17	
Chloroethane	ND	0.0054	EPA 8260C	10-25-17	10-25-17	
Trichlorofluoromethane	ND	0.0011	EPA 8260C	10-25-17	10-25-17	
1,1-Dichloroethene	ND	0.0011	EPA 8260C	10-25-17	10-25-17	
Acetone	ND	0.054	EPA 8260C	10-25-17	10-25-17	
Iodomethane	ND	0.0054	EPA 8260C	10-25-17	10-25-17	
Carbon Disulfide	0.0026	0.0011	EPA 8260C	10-25-17	10-25-17	
Methylene Chloride	ND	0.0054	EPA 8260C	10-25-17	10-25-17	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	10-25-17	10-25-17	
Methyl t-Butyl Ether	ND	0.0011	EPA 8260C	10-25-17	10-25-17	
1,1-Dichloroethane	ND	0.0011	EPA 8260C	10-25-17	10-25-17	
Vinyl Acetate	ND	0.0054	EPA 8260C	10-25-17	10-25-17	
2,2-Dichloropropane	ND	0.0011	EPA 8260C	10-25-17	10-25-17	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	10-25-17	10-25-17	
2-Butanone	ND	0.011	EPA 8260C	10-25-17	10-25-17	
Bromochloromethane	ND	0.0011	EPA 8260C	10-25-17	10-25-17	
Chloroform	ND	0.0011	EPA 8260C	10-25-17	10-25-17	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260C	10-25-17	10-25-17	
Carbon Tetrachloride	ND	0.0011	EPA 8260C	10-25-17	10-25-17	
1,1-Dichloropropene	ND	0.0011	EPA 8260C	10-25-17	10-25-17	
Benzene	ND	0.0011	EPA 8260C	10-25-17	10-25-17	
1,2-Dichloroethane	ND	0.0011	EPA 8260C	10-25-17	10-25-17	
Trichloroethene	ND	0.0011	EPA 8260C	10-25-17	10-25-17	
1,2-Dichloropropane	ND	0.0011	EPA 8260C	10-25-17	10-25-17	
Dibromomethane	ND	0.0011	EPA 8260C	10-25-17	10-25-17	
Bromodichloromethane	ND	0.0011	EPA 8260C	10-25-17	10-25-17	
2-Chloroethyl Vinyl Ether	ND	0.0076	EPA 8260C	10-25-17	10-25-17	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	10-25-17	10-25-17	
Methyl Isobutyl Ketone	ND	0.0054	EPA 8260C	10-25-17	10-25-17	
Toluene	ND	0.0054	EPA 8260C	10-25-17	10-25-17	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	10-25-17	10-25-17	

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Laboratory Reference: 1710-291
Project: 520 Montlake Phase II

VOLATILES EPA 8260C
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**H-6-17-15'**					
Laboratory ID:	10-291-03					
1,1,2-Trichloroethane	ND	0.0011	EPA 8260C	10-25-17	10-25-17	
Tetrachloroethene	ND	0.0011	EPA 8260C	10-25-17	10-25-17	
1,3-Dichloropropane	ND	0.0011	EPA 8260C	10-25-17	10-25-17	
2-Hexanone	ND	0.0054	EPA 8260C	10-25-17	10-25-17	
Dibromochloromethane	ND	0.0011	EPA 8260C	10-25-17	10-25-17	
1,2-Dibromoethane	ND	0.0011	EPA 8260C	10-25-17	10-25-17	
Chlorobenzene	ND	0.0011	EPA 8260C	10-25-17	10-25-17	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260C	10-25-17	10-25-17	
Ethylbenzene	ND	0.0011	EPA 8260C	10-25-17	10-25-17	
m,p-Xylene	ND	0.0022	EPA 8260C	10-25-17	10-25-17	
o-Xylene	ND	0.0011	EPA 8260C	10-25-17	10-25-17	
Styrene	ND	0.0011	EPA 8260C	10-25-17	10-25-17	
Bromoform	ND	0.0054	EPA 8260C	10-25-17	10-25-17	
Isopropylbenzene	ND	0.0011	EPA 8260C	10-25-17	10-25-17	
Bromobenzene	ND	0.060	EPA 8260C	10-25-17	10-25-17	
1,1,2,2-Tetrachloroethane	ND	0.060	EPA 8260C	10-25-17	10-25-17	
1,2,3-Trichloropropane	ND	0.060	EPA 8260C	10-25-17	10-25-17	
n-Propylbenzene	ND	0.060	EPA 8260C	10-25-17	10-25-17	
2-Chlorotoluene	ND	0.060	EPA 8260C	10-25-17	10-25-17	
4-Chlorotoluene	ND	0.060	EPA 8260C	10-25-17	10-25-17	
1,3,5-Trimethylbenzene	ND	0.060	EPA 8260C	10-25-17	10-25-17	
tert-Butylbenzene	ND	0.060	EPA 8260C	10-25-17	10-25-17	
1,2,4-Trimethylbenzene	ND	0.060	EPA 8260C	10-25-17	10-25-17	
sec-Butylbenzene	ND	0.060	EPA 8260C	10-25-17	10-25-17	
1,3-Dichlorobenzene	ND	0.060	EPA 8260C	10-25-17	10-25-17	
p-Isopropyltoluene	ND	0.060	EPA 8260C	10-25-17	10-25-17	
1,4-Dichlorobenzene	ND	0.060	EPA 8260C	10-25-17	10-25-17	
1,2-Dichlorobenzene	ND	0.060	EPA 8260C	10-25-17	10-25-17	
n-Butylbenzene	ND	0.060	EPA 8260C	10-25-17	10-25-17	
1,2-Dibromo-3-chloropropane	ND	0.30	EPA 8260C	10-25-17	10-25-17	
1,2,4-Trichlorobenzene	ND	0.060	EPA 8260C	10-25-17	10-25-17	
Hexachlorobutadiene	ND	0.30	EPA 8260C	10-25-17	10-25-17	
Naphthalene	ND	0.060	EPA 8260C	10-25-17	10-25-17	
1,2,3-Trichlorobenzene	ND	0.060	EPA 8260C	10-25-17	10-25-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*114*	*75-131*				
Toluene-d8	*95*	*83-126*				
4-Bromofluorobenzene	*80*	*78-125*				

Date of Report: October 30, 2017
Samples Submitted: October 23, 2017
Laboratory Reference: 1710-291
Project: 520 Montlake Phase II

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

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1025S1					
Dichlorodifluoromethane	ND	0.0013	EPA 8260C	10-25-17	10-25-17	
Chloromethane	ND	0.0050	EPA 8260C	10-25-17	10-25-17	
Vinyl Chloride	ND	0.0010	EPA 8260C	10-25-17	10-25-17	
Bromomethane	ND	0.0010	EPA 8260C	10-25-17	10-25-17	
Chloroethane	ND	0.0050	EPA 8260C	10-25-17	10-25-17	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	10-25-17	10-25-17	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	10-25-17	10-25-17	
Acetone	ND	0.050	EPA 8260C	10-25-17	10-25-17	
Iodomethane	ND	0.0050	EPA 8260C	10-25-17	10-25-17	
Carbon Disulfide	ND	0.0010	EPA 8260C	10-25-17	10-25-17	
Methylene Chloride	ND	0.0050	EPA 8260C	10-25-17	10-25-17	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	10-25-17	10-25-17	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260C	10-25-17	10-25-17	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	10-25-17	10-25-17	
Vinyl Acetate	ND	0.0050	EPA 8260C	10-25-17	10-25-17	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	10-25-17	10-25-17	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	10-25-17	10-25-17	
2-Butanone	ND	0.010	EPA 8260C	10-25-17	10-25-17	
Bromochloromethane	ND	0.0010	EPA 8260C	10-25-17	10-25-17	
Chloroform	ND	0.0010	EPA 8260C	10-25-17	10-25-17	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	10-25-17	10-25-17	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	10-25-17	10-25-17	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	10-25-17	10-25-17	
Benzene	ND	0.0010	EPA 8260C	10-25-17	10-25-17	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	10-25-17	10-25-17	
Trichloroethene	ND	0.0010	EPA 8260C	10-25-17	10-25-17	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	10-25-17	10-25-17	
Dibromomethane	ND	0.0010	EPA 8260C	10-25-17	10-25-17	
Bromodichloromethane	ND	0.0010	EPA 8260C	10-25-17	10-25-17	
2-Chloroethyl Vinyl Ether	ND	0.0070	EPA 8260C	10-25-17	10-25-17	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	10-25-17	10-25-17	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260C	10-25-17	10-25-17	
Toluene	ND	0.0050	EPA 8260C	10-25-17	10-25-17	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	10-25-17	10-25-17	

Date of Report: October 30, 2017
Samples Submitted: October 23, 2017
Laboratory Reference: 1710-291
Project: 520 Montlake Phase II

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

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1025S1					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	10-25-17	10-25-17	
Tetrachloroethene	ND	0.0010	EPA 8260C	10-25-17	10-25-17	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	10-25-17	10-25-17	
2-Hexanone	ND	0.0050	EPA 8260C	10-25-17	10-25-17	
Dibromochloromethane	ND	0.0010	EPA 8260C	10-25-17	10-25-17	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	10-25-17	10-25-17	
Chlorobenzene	ND	0.0010	EPA 8260C	10-25-17	10-25-17	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	10-25-17	10-25-17	
Ethylbenzene	ND	0.0010	EPA 8260C	10-25-17	10-25-17	
m,p-Xylene	ND	0.0020	EPA 8260C	10-25-17	10-25-17	
o-Xylene	ND	0.0010	EPA 8260C	10-25-17	10-25-17	
Styrene	ND	0.0010	EPA 8260C	10-25-17	10-25-17	
Bromoform	ND	0.0050	EPA 8260C	10-25-17	10-25-17	
Isopropylbenzene	ND	0.0010	EPA 8260C	10-25-17	10-25-17	
Bromobenzene	ND	0.0010	EPA 8260C	10-25-17	10-25-17	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	10-25-17	10-25-17	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	10-25-17	10-25-17	
n-Propylbenzene	ND	0.0010	EPA 8260C	10-25-17	10-25-17	
2-Chlorotoluene	ND	0.0010	EPA 8260C	10-25-17	10-25-17	
4-Chlorotoluene	ND	0.0010	EPA 8260C	10-25-17	10-25-17	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260C	10-25-17	10-25-17	
tert-Butylbenzene	ND	0.0010	EPA 8260C	10-25-17	10-25-17	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260C	10-25-17	10-25-17	
sec-Butylbenzene	ND	0.0010	EPA 8260C	10-25-17	10-25-17	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	10-25-17	10-25-17	
p-Isopropyltoluene	ND	0.0010	EPA 8260C	10-25-17	10-25-17	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	10-25-17	10-25-17	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	10-25-17	10-25-17	
n-Butylbenzene	ND	0.0010	EPA 8260C	10-25-17	10-25-17	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	10-25-17	10-25-17	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	10-25-17	10-25-17	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	10-25-17	10-25-17	
Naphthalene	ND	0.0010	EPA 8260C	10-25-17	10-25-17	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	10-25-17	10-25-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*101*	*75-131*				
Toluene-d8	*96*	*83-126*				
4-Bromofluorobenzene	*96*	*78-125*				

Date of Report: October 30, 2017
Samples Submitted: October 23, 2017
Laboratory Reference: 1710-291
Project: 520 Montlake Phase II

VOLATILES by EPA 8260C
SB/SBD QUALITY CONTROL

Matrix: Soil
Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB1025S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**0.0420**	**0.0466**	0.0500	0.0500	84	93	58-126	10	20	
Benzene	**0.0483**	**0.0517**	0.0500	0.0500	97	103	72-122	7	19	
Trichloroethene	**0.0485**	**0.0523**	0.0500	0.0500	97	105	75-120	8	20	
Toluene	**0.0430**	**0.0461**	0.0500	0.0500	86	92	78-123	7	19	
Chlorobenzene	**0.0461**	**0.0485**	0.0500	0.0500	92	97	75-120	5	18	
Surrogate:										
Dibromofluoromethane					*105*	*103*	*75-131*			
Toluene-d8					*94*	*93*	*83-126*			
4-Bromofluorobenzene					*96*	*93*	*78-125*			

Date of Report: October 30, 2017
Samples Submitted: October 23, 2017
Laboratory Reference: 1710-291
Project: 520 Montlake Phase II

SEMIVOLATILES EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**H-6-17-15'**					
Laboratory ID:	10-291-03					
n-Nitrosodimethylamine	**ND**	0.037	EPA 8270D	10-25-17	10-26-17	
Pyridine	**ND**	0.37	EPA 8270D	10-25-17	10-26-17	
Phenol	**ND**	0.037	EPA 8270D	10-25-17	10-26-17	
Aniline	**ND**	0.19	EPA 8270D	10-25-17	10-26-17	
bis(2-Chloroethyl)ether	**ND**	0.037	EPA 8270D	10-25-17	10-26-17	
2-Chlorophenol	**ND**	0.037	EPA 8270D	10-25-17	10-26-17	
1,3-Dichlorobenzene	**ND**	0.037	EPA 8270D	10-25-17	10-26-17	
1,4-Dichlorobenzene	**ND**	0.037	EPA 8270D	10-25-17	10-26-17	
Benzyl alcohol	**ND**	0.19	EPA 8270D	10-25-17	10-26-17	
1,2-Dichlorobenzene	**ND**	0.037	EPA 8270D	10-25-17	10-26-17	
2-Methylphenol (o-Cresol)	**ND**	0.037	EPA 8270D	10-25-17	10-26-17	
bis(2-Chloroisopropyl)ether	**ND**	0.037	EPA 8270D	10-25-17	10-26-17	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.037	EPA 8270D	10-25-17	10-26-17	
n-Nitroso-di-n-propylamine	**ND**	0.037	EPA 8270D	10-25-17	10-26-17	
Hexachloroethane	**ND**	0.037	EPA 8270D	10-25-17	10-26-17	
Nitrobenzene	**ND**	0.037	EPA 8270D	10-25-17	10-26-17	
Isophorone	**ND**	0.037	EPA 8270D	10-25-17	10-26-17	
2-Nitrophenol	**ND**	0.037	EPA 8270D	10-25-17	10-26-17	
2,4-Dimethylphenol	**ND**	0.037	EPA 8270D	10-25-17	10-26-17	
bis(2-Chloroethoxy)methane	**ND**	0.037	EPA 8270D	10-25-17	10-26-17	
2,4-Dichlorophenol	**ND**	0.037	EPA 8270D	10-25-17	10-26-17	
1,2,4-Trichlorobenzene	**ND**	0.037	EPA 8270D	10-25-17	10-26-17	
Naphthalene	**ND**	0.0074	EPA 8270D/SIM	10-25-17	10-26-17	
4-Chloroaniline	**ND**	0.19	EPA 8270D	10-25-17	10-26-17	
Hexachlorobutadiene	**ND**	0.037	EPA 8270D	10-25-17	10-26-17	
4-Chloro-3-methylphenol	**ND**	0.037	EPA 8270D	10-25-17	10-26-17	
2-Methylnaphthalene	**ND**	0.0074	EPA 8270D/SIM	10-25-17	10-26-17	
1-Methylnaphthalene	**ND**	0.0074	EPA 8270D/SIM	10-25-17	10-26-17	
Hexachlorocyclopentadiene	**ND**	0.037	EPA 8270D	10-25-17	10-26-17	
2,4,6-Trichlorophenol	**ND**	0.037	EPA 8270D	10-25-17	10-26-17	
2,3-Dichloroaniline	**ND**	0.037	EPA 8270D	10-25-17	10-26-17	
2,4,5-Trichlorophenol	**ND**	0.037	EPA 8270D	10-25-17	10-26-17	
2-Chloronaphthalene	**ND**	0.037	EPA 8270D	10-25-17	10-26-17	
2-Nitroaniline	**ND**	0.037	EPA 8270D	10-25-17	10-26-17	
1,4-Dinitrobenzene	**ND**	0.037	EPA 8270D	10-25-17	10-26-17	
Dimethylphthalate	**ND**	0.037	EPA 8270D	10-25-17	10-26-17	
1,3-Dinitrobenzene	**ND**	0.037	EPA 8270D	10-25-17	10-26-17	
2,6-Dinitrotoluene	**ND**	0.037	EPA 8270D	10-25-17	10-26-17	
1,2-Dinitrobenzene	**ND**	0.037	EPA 8270D	10-25-17	10-26-17	
Acenaphthylene	**ND**	0.0074	EPA 8270D/SIM	10-25-17	10-26-17	
3-Nitroaniline	**ND**	0.037	EPA 8270D	10-25-17	10-26-17	

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Project: 520 Montlake Phase II

SEMIVOLATILES EPA 8270D/SIM

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**H-6-17-15'**					
Laboratory ID:	10-291-03					
2,4-Dinitrophenol	**ND**	0.19	EPA 8270D	10-25-17	10-26-17	
Acenaphthene	**ND**	0.0074	EPA 8270D/SIM	10-25-17	10-26-17	
4-Nitrophenol	**ND**	0.037	EPA 8270D	10-25-17	10-26-17	
2,4-Dinitrotoluene	**ND**	0.037	EPA 8270D	10-25-17	10-26-17	
Dibenzofuran	**ND**	0.037	EPA 8270D	10-25-17	10-26-17	
2,3,5,6-Tetrachlorophenol	**ND**	0.037	EPA 8270D	10-25-17	10-26-17	
2,3,4,6-Tetrachlorophenol	**ND**	0.037	EPA 8270D	10-25-17	10-26-17	
Diethylphthalate	**ND**	0.19	EPA 8270D	10-25-17	10-26-17	
4-Chlorophenyl-phenylether	**ND**	0.037	EPA 8270D	10-25-17	10-26-17	
4-Nitroaniline	**ND**	0.037	EPA 8270D	10-25-17	10-26-17	
Fluorene	**ND**	0.0074	EPA 8270D/SIM	10-25-17	10-26-17	
4,6-Dinitro-2-methylphenol	**ND**	0.19	EPA 8270D	10-25-17	10-26-17	
n-Nitrosodiphenylamine	**ND**	0.037	EPA 8270D	10-25-17	10-26-17	
1,2-Diphenylhydrazine	**ND**	0.037	EPA 8270D	10-25-17	10-26-17	
4-Bromophenyl-phenylether	**ND**	0.037	EPA 8270D	10-25-17	10-26-17	
Hexachlorobenzene	**ND**	0.037	EPA 8270D	10-25-17	10-26-17	
Pentachlorophenol	**ND**	0.19	EPA 8270D	10-25-17	10-26-17	
Phenanthrene	**ND**	0.0074	EPA 8270D/SIM	10-25-17	10-26-17	
Anthracene	**ND**	0.0074	EPA 8270D/SIM	10-25-17	10-26-17	
Carbazole	**ND**	0.037	EPA 8270D	10-25-17	10-26-17	
Di-n-butylphthalate	**ND**	0.19	EPA 8270D	10-25-17	10-26-17	
Fluoranthene	**ND**	0.0074	EPA 8270D/SIM	10-25-17	10-26-17	
Benzidine	**ND**	0.37	EPA 8270D	10-25-17	10-26-17	
Pyrene	**ND**	0.0074	EPA 8270D/SIM	10-25-17	10-26-17	
Butylbenzylphthalate	**ND**	0.19	EPA 8270D	10-25-17	10-26-17	
bis-2-Ethylhexyladipate	**ND**	0.19	EPA 8270D	10-25-17	10-26-17	
3,3'-Dichlorobenzidine	**ND**	0.19	EPA 8270D	10-25-17	10-26-17	
Benzo[a]anthracene	**ND**	0.0074	EPA 8270D/SIM	10-25-17	10-26-17	
Chrysene	**ND**	0.0074	EPA 8270D/SIM	10-25-17	10-26-17	
bis(2-Ethylhexyl)phthalate	**ND**	0.19	EPA 8270D	10-25-17	10-26-17	
Di-n-octylphthalate	**ND**	0.19	EPA 8270D	10-25-17	10-26-17	
Benzo[b]fluoranthene	**ND**	0.0074	EPA 8270D/SIM	10-25-17	10-26-17	
Benzo(j,k)fluoranthene	**ND**	0.0074	EPA 8270D/SIM	10-25-17	10-26-17	
Benzo[a]pyrene	**ND**	0.0074	EPA 8270D/SIM	10-25-17	10-26-17	
Indeno[1,2,3-cd]pyrene	**ND**	0.0074	EPA 8270D/SIM	10-25-17	10-26-17	
Dibenz[a,h]anthracene	**ND**	0.0074	EPA 8270D/SIM	10-25-17	10-26-17	
Benzo[g,h,i]perylene	**ND**	0.0074	EPA 8270D/SIM	10-25-17	10-26-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*31*	*18 - 113*				
Phenol-d6	*42*	*19 - 119*				
Nitrobenzene-d5	*32*	*19 - 119*				
2-Fluorobiphenyl	*52*	*33 - 109*				
2,4,6-Tribromophenol	*75*	*19 - 121*				
Terphenyl-d14	*71*	*30 - 116*				

Date of Report: October 30, 2017
Samples Submitted: October 23, 2017
Laboratory Reference: 1710-291
Project: 520 Montlake Phase II

SEMIVOLATILES EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
page 1 of 2

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1025S1					
n-Nitrosodimethylamine	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
Pyridine	**ND**	0.33	EPA 8270D	10-25-17	10-26-17	
Phenol	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
Aniline	**ND**	0.17	EPA 8270D	10-25-17	10-26-17	
bis(2-Chloroethyl)ether	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
2-Chlorophenol	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
1,3-Dichlorobenzene	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
1,4-Dichlorobenzene	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
Benzyl alcohol	**ND**	0.17	EPA 8270D	10-25-17	10-26-17	
1,2-Dichlorobenzene	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
2-Methylphenol (o-Cresol)	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
bis(2-Chloroisopropyl)ether	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
n-Nitroso-di-n-propylamine	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
Hexachloroethane	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
Nitrobenzene	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
Isophorone	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
2-Nitrophenol	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
2,4-Dimethylphenol	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
bis(2-Chloroethoxy)methane	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
2,4-Dichlorophenol	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
1,2,4-Trichlorobenzene	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
Naphthalene	**ND**	0.0067	EPA 8270D/SIM	10-25-17	10-26-17	
4-Chloroaniline	**ND**	0.17	EPA 8270D	10-25-17	10-26-17	
Hexachlorobutadiene	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
4-Chloro-3-methylphenol	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
2-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	10-25-17	10-26-17	
1-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	10-25-17	10-26-17	
Hexachlorocyclopentadiene	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
2,4,6-Trichlorophenol	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
2,3-Dichloroaniline	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
2,4,5-Trichlorophenol	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
2-Chloronaphthalene	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
2-Nitroaniline	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
1,4-Dinitrobenzene	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
Dimethylphthalate	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
1,3-Dinitrobenzene	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
2,6-Dinitrotoluene	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
1,2-Dinitrobenzene	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
Acenaphthylene	**ND**	0.0067	EPA 8270D/SIM	10-25-17	10-26-17	
3-Nitroaniline	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	

Date of Report: October 30, 2017
Samples Submitted: October 23, 2017
Laboratory Reference: 1710-291
Project: 520 Montlake Phase II

SEMIVOLATILES EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1025S1					
2,4-Dinitrophenol	**ND**	0.17	EPA 8270D	10-25-17	10-26-17	
Acenaphthene	**ND**	0.0067	EPA 8270D/SIM	10-25-17	10-26-17	
4-Nitrophenol	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
2,4-Dinitrotoluene	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
Dibenzofuran	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
2,3,5,6-Tetrachlorophenol	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
2,3,4,6-Tetrachlorophenol	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
Diethylphthalate	**ND**	0.17	EPA 8270D	10-25-17	10-26-17	
4-Chlorophenyl-phenylether	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
4-Nitroaniline	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
Fluorene	**ND**	0.0067	EPA 8270D/SIM	10-25-17	10-26-17	
4,6-Dinitro-2-methylphenol	**ND**	0.17	EPA 8270D	10-25-17	10-26-17	
n-Nitrosodiphenylamine	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
1,2-Diphenylhydrazine	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
4-Bromophenyl-phenylether	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
Hexachlorobenzene	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
Pentachlorophenol	**ND**	0.17	EPA 8270D	10-25-17	10-26-17	
Phenanthrene	**ND**	0.0067	EPA 8270D/SIM	10-25-17	10-26-17	
Anthracene	**ND**	0.0067	EPA 8270D/SIM	10-25-17	10-26-17	
Carbazole	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
Di-n-butylphthalate	**ND**	0.17	EPA 8270D	10-25-17	10-26-17	
Fluoranthene	**ND**	0.0067	EPA 8270D/SIM	10-25-17	10-26-17	
Benzidine	**ND**	0.33	EPA 8270D	10-25-17	10-26-17	
Pyrene	**ND**	0.0067	EPA 8270D/SIM	10-25-17	10-26-17	
Butylbenzylphthalate	**ND**	0.17	EPA 8270D	10-25-17	10-26-17	
bis-2-Ethylhexyladipate	**ND**	0.17	EPA 8270D	10-25-17	10-26-17	
3,3'-Dichlorobenzidine	**ND**	0.17	EPA 8270D	10-25-17	10-26-17	
Benzo[a]anthracene	**ND**	0.0067	EPA 8270D/SIM	10-25-17	10-26-17	
Chrysene	**ND**	0.0067	EPA 8270D/SIM	10-25-17	10-26-17	
bis(2-Ethylhexyl)phthalate	**ND**	0.17	EPA 8270D	10-25-17	10-26-17	
Di-n-octylphthalate	**ND**	0.17	EPA 8270D	10-25-17	10-26-17	
Benzo[b]fluoranthene	**ND**	0.0067	EPA 8270D/SIM	10-25-17	10-26-17	
Benzo(j,k)fluoranthene	**ND**	0.0067	EPA 8270D/SIM	10-25-17	10-26-17	
Benzo[a]pyrene	**ND**	0.0067	EPA 8270D/SIM	10-25-17	10-26-17	
Indeno[1,2,3-cd]pyrene	**ND**	0.0067	EPA 8270D/SIM	10-25-17	10-26-17	
Dibenz[a,h]anthracene	**ND**	0.0067	EPA 8270D/SIM	10-25-17	10-26-17	
Benzo[g,h,i]perylene	**ND**	0.0067	EPA 8270D/SIM	10-25-17	10-26-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*66*	*18 - 113*				
Phenol-d6	*74*	*19 - 119*				
Nitrobenzene-d5	*64*	*19 - 119*				
2-Fluorobiphenyl	*73*	*33 - 109*				
2,4,6-Tribromophenol	*87*	*19 - 121*				
Terphenyl-d14	*77*	*30 - 116*				

Date of Report: October 30, 2017
Samples Submitted: October 23, 2017
Laboratory Reference: 1710-291
Project: 520 Montlake Phase II

SEMIVOLATILES EPA 8270D/SIM
SB/SBD QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB1025S1									
	SB	SBD	SB	SBD	SB	SBD				
Phenol	**1.02**	**1.04**	1.33	1.33	77	78	39 - 109	2	36	
2-Chlorophenol	**0.995**	**1.01**	1.33	1.33	75	76	42 - 105	1	35	
1,4-Dichlorobenzene	**0.467**	**0.482**	0.667	0.667	70	72	31 - 103	3	37	
n-Nitroso-di-n-propylamine	**0.474**	**0.497**	0.667	0.667	71	75	36 - 104	5	34	
1,2,4-Trichlorobenzene	**0.491**	**0.509**	0.667	0.667	74	76	32 - 104	4	38	
4-Chloro-3-methylphenol	**1.14**	**1.11**	1.33	1.33	86	83	48 - 107	3	31	
Acenaphthene	**0.522**	**0.525**	0.667	0.667	78	79	38 - 102	1	33	
4-Nitrophenol	**1.26**	**1.25**	1.33	1.33	95	94	27 - 121	1	35	
2,4-Dinitrotoluene	**0.629**	**0.625**	0.667	0.667	94	94	36 - 103	1	34	
Pentachlorophenol	**1.37**	**1.39**	1.33	1.33	103	105	21 - 114	1	37	
Pyrene	**0.556**	**0.565**	0.667	0.667	83	85	46 - 108	2	31	
Surrogate:										
2-Fluorophenol					*75*	*76*	*18 - 113*			
Phenol-d6					*77*	*78*	*19 - 119*			
Nitrobenzene-d5					*69*	*69*	*19 - 119*			
2-Fluorobiphenyl					*77*	*78*	*33 - 109*			
2,4,6-Tribromophenol					*93*	*90*	*19 - 121*			
Terphenyl-d14					*82*	*83*	*30 - 116*			

Date of Report: October 30, 2017
Samples Submitted: October 23, 2017
Laboratory Reference: 1710-291
Project: 520 Montlake Phase II

PCBs EPA 8082A

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**H-6-17-15'**					
Laboratory ID:	10-291-03					
Aroclor 1016	**ND**	0.056	EPA 8082A	10-26-17	10-26-17	
Aroclor 1221	**ND**	0.056	EPA 8082A	10-26-17	10-26-17	
Aroclor 1232	**ND**	0.056	EPA 8082A	10-26-17	10-26-17	
Aroclor 1242	**ND**	0.056	EPA 8082A	10-26-17	10-26-17	
Aroclor 1248	**ND**	0.056	EPA 8082A	10-26-17	10-26-17	
Aroclor 1254	**ND**	0.056	EPA 8082A	10-26-17	10-26-17	
Aroclor 1260	**ND**	0.056	EPA 8082A	10-26-17	10-26-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*60*	*40-134*				

Date of Report: October 30, 2017
Samples Submitted: October 23, 2017
Laboratory Reference: 1710-291
Project: 520 Montlake Phase II

PCBs EPA 8082A
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1026S1					
Aroclor 1016	**ND**	0.050	EPA 8082A	10-26-17	10-26-17	
Aroclor 1221	**ND**	0.050	EPA 8082A	10-26-17	10-26-17	
Aroclor 1232	**ND**	0.050	EPA 8082A	10-26-17	10-26-17	
Aroclor 1242	**ND**	0.050	EPA 8082A	10-26-17	10-26-17	
Aroclor 1248	**ND**	0.050	EPA 8082A	10-26-17	10-26-17	
Aroclor 1254	**ND**	0.050	EPA 8082A	10-26-17	10-26-17	
Aroclor 1260	**ND**	0.050	EPA 8082A	10-26-17	10-26-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*66*	*40-134*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
MATRIX SPIKES											
Laboratory ID:	10-291-03										
	MS	MSD	MS	MSD		MS	MSD				
Aroclor 1260	**0.344**	**0.341**	0.500	0.500	ND	**69**	**68**	34-126	1	16	
Surrogate:											
DCB						*67*	*66*	*40-134*			

Date of Report: October 30, 2017
Samples Submitted: October 23, 2017
Laboratory Reference: 1710-291
Project: 520 Montlake Phase II

TOTAL METALS
EPA 6010C/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	10-291-03					
Client ID:	**H-6-17-15'**					
Arsenic	**ND**	11	6010C	10-25-17	10-25-17	
Barium	**47**	2.8	6010C	10-25-17	10-25-17	
Cadmium	**ND**	0.56	6010C	10-25-17	10-25-17	
Chromium	**33**	0.56	6010C	10-25-17	10-25-17	
Lead	**ND**	5.6	6010C	10-25-17	10-25-17	
Mercury	**ND**	0.28	7471B	10-25-17	10-25-17	
Selenium	**ND**	11	6010C	10-25-17	10-25-17	
Silver	**ND**	1.1	6010C	10-25-17	10-25-17	

Date of Report: October 30, 2017
Samples Submitted: October 23, 2017
Laboratory Reference: 1710-291
Project: 520 Montlake Phase II

TOTAL METALS
EPA 6010C
METHOD BLANK QUALITY CONTROL

Date Extracted: 10-25-17
Date Analyzed: 10-25-17

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: MB1025SM1

Analyte	Method	Result	PQL
Arsenic	6010C	**ND**	10
Barium	6010C	**ND**	2.5
Cadmium	6010C	**ND**	0.50
Chromium	6010C	**ND**	0.50
Lead	6010C	**ND**	5.0
Selenium	6010C	**ND**	10
Silver	6010C	**ND**	1.0

Date of Report: October 30, 2017
Samples Submitted: October 23, 2017
Laboratory Reference: 1710-291
Project: 520 Montlake Phase II

TOTAL MERCURY
EPA 7471B
METHOD BLANK QUALITY CONTROL

Date Extracted:	10-25-17
Date Analyzed:	10-25-17
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	MB1025S2

Analyte	Method	Result	PQL
Mercury	7471B	**ND**	0.25

Date of Report: October 30, 2017
Samples Submitted: October 23, 2017
Laboratory Reference: 1710-291
Project: 520 Montlake Phase II

TOTAL METALS
EPA 6010C
DUPLICATE QUALITY CONTROL

Date Extracted: 10-25-17
Date Analyzed: 10-25-17

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 10-276-01

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**ND**	**ND**	NA	10	
Barium	**39.4**	**38.2**	3	2.5	
Cadmium	**ND**	**ND**	NA	0.50	
Chromium	**90.6**	**87.2**	4	0.50	
Lead	**ND**	**ND**	NA	5.0	
Selenium	**ND**	**ND**	NA	10	
Silver	**ND**	**ND**	NA	1.0	

Date of Report: October 30, 2017
Samples Submitted: October 23, 2017
Laboratory Reference: 1710-291
Project: 520 Montlake Phase II

TOTAL MERCURY
EPA 7471B
DUPLICATE QUALITY CONTROL

Date Extracted: 10-25-17
Date Analyzed: 10-25-17

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 10-286-01

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Mercury	**ND**	**ND**	NA	0.25	

Date of Report: October 30, 2017
Samples Submitted: October 23, 2017
Laboratory Reference: 1710-291
Project: 520 Montlake Phase II

TOTAL METALS
EPA 6010C
MS/MSD QUALITY CONTROL

Date Extracted: 10-25-17
Date Analyzed: 10-25-17

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 10-276-01

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	**96.1**	96	**96.3**	96	0	
Barium	100	**134**	94	**135**	96	1	
Cadmium	50.0	**48.5**	97	**48.5**	97	0	
Chromium	100	**174**	84	**179**	89	3	
Lead	250	**232**	93	**234**	93	1	
Selenium	100	**95.0**	95	**94.8**	95	0	
Silver	25.0	**20.4**	82	**20.2**	81	1	

Date of Report: October 30, 2017
Samples Submitted: October 23, 2017
Laboratory Reference: 1710-291
Project: 520 Montlake Phase II

TOTAL MERCURY
EPA 7471B
MS/MSD QUALITY CONTROL

Date Extracted: 10-25-17
Date Analyzed: 10-25-17

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 10-286-01

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Mercury	0.500	**0.581**	116	**0.587**	117	1	

Date of Report: October 30, 2017
Samples Submitted: October 23, 2017
Laboratory Reference: 1710-291
Project: 520 Montlake Phase II

% MOISTURE

Date Analyzed: 10-24-17

Client ID	Lab ID	% Moisture
H-6-17-15'	10-291-03	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

Company: INNOVEX
Project Number:
Project Name: 520/ MONTLAKE PH II
Project Manager: GLENN HARMAN
Sampled by: M. WILLIAMS

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: 10-291

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx (HOLD)	NWTPH-Dx (☐ Acid / SG Clean-up) (HOLD)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	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	MERCURY	HOLD			% Moisture
1	H-6-17 5'	10.22.17	1008	S	6																			X			
2	H-6-17 10'		1027																					X			
3	H-6-17 15'		1048			X		X	X	X			X		X				X				X	[redacted]			X
4	H-6-17 20'		1120																					X			
5	H-6-17 25'		1152																					X			
6	H-6-17 30'	10.23.17	1218																					X			
7	H-6-17 35'		1248																					X			
8	H-6-17 40'		128																					X			
9	H-6-17 45'		208																					X			
10	H-6-17 50'	V	306	V	V																			X			

	Signature	Company	Date	Time
Relinquished	[signature]	INNOVEX	10/23/17	0940
Received	[signature]	OSE	10/23/17	094
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions
email Glenn

Data Package: Standard ☒ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☒

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

October 31, 2017

Glenn Hayman
INNOVEX Environmental Mgt., Inc.
16310 NE 80th St., Suite 300
Redmond, WA 98052

Re: Analytical Data for Project 520-Montlake Phase II
Laboratory Reference No. 1710-292

Dear Glenn:

Enclosed are the analytical results and associated quality control data for samples submitted on October 23, 2017.

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 31, 2017
Samples Submitted: October 23, 2017
Laboratory Reference: 1710-292
Project: 520-Montlake Phase II

Case Narrative

Samples were collected on October 21 and 22, 2017 and received by the laboratory on October 23, 2017. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

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.

Volatiles EPA 8260C Analysis

Sodium Bisulfate preservation has been proven to increase the frequency of detection and the concentration of Acetone and 2-Butanone due in part to chemical reactions in the sample. If Acetone is a potential site contaminant, Sodium Bisulfate should not be used.

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 31, 2017
Samples Submitted: October 23, 2017
Laboratory Reference: 1710-292
Project: 520-Montlake Phase II

NWTPH-HCID

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**H-9-17-15'**					
Laboratory ID:	10-292-02					
Gasoline Range Organics	**ND**	25	NWTPH-HCID	10-24-17	10-24-17	
Diesel Range Organics	**ND**	63	NWTPH-HCID	10-24-17	10-24-17	
Lube Oil Range Organics	**ND**	130	NWTPH-HCID	10-24-17	10-24-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*111*	*50-150*				
Client ID:	**H-10-17-10'**					
Laboratory ID:	10-292-07					
Gasoline Range Organics	**ND**	25	NWTPH-HCID	10-24-17	10-24-17	
Diesel Range Organics	**ND**	61	NWTPH-HCID	10-24-17	10-24-17	
Lube Oil Range Organics	**ND**	120	NWTPH-HCID	10-24-17	10-24-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*111*	*50-150*				

Date of Report: October 31, 2017
Samples Submitted: October 23, 2017
Laboratory Reference: 1710-292
Project: 520-Montlake Phase II

NWTPH-HCID
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1024S2					
Gasoline Range Organics	**ND**	20	NWTPH-HCID	10-24-17	10-24-17	
Diesel Range Organics	**ND**	50	NWTPH-HCID	10-24-17	10-24-17	
Lube Oil Range Organics	**ND**	100	NWTPH-HCID	10-24-17	10-24-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*106*	*50-150*				

Date of Report: October 31, 2017
Samples Submitted: October 23, 2017
Laboratory Reference: 1710-292
Project: 520-Montlake Phase II

VOLATILES EPA 8260C
page 1 of 2

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**H-9-17-15'**					
Laboratory ID:	10-292-02					
Dichlorodifluoromethane	ND	0.0014	EPA 8260C	10-24-17	10-24-17	
Chloromethane	ND	0.0056	EPA 8260C	10-24-17	10-24-17	
Vinyl Chloride	ND	0.0011	EPA 8260C	10-24-17	10-24-17	
Bromomethane	ND	0.0071	EPA 8260C	10-24-17	10-24-17	
Chloroethane	ND	0.0056	EPA 8260C	10-24-17	10-24-17	
Trichlorofluoromethane	ND	0.0011	EPA 8260C	10-24-17	10-24-17	
1,1-Dichloroethene	ND	0.0011	EPA 8260C	10-24-17	10-24-17	
Acetone	ND	0.056	EPA 8260C	10-24-17	10-24-17	
Iodomethane	ND	0.0056	EPA 8260C	10-24-17	10-24-17	
Carbon Disulfide	ND	0.0011	EPA 8260C	10-24-17	10-24-17	
Methylene Chloride	ND	0.0056	EPA 8260C	10-24-17	10-24-17	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	10-24-17	10-24-17	
Methyl t-Butyl Ether	ND	0.0011	EPA 8260C	10-24-17	10-24-17	
1,1-Dichloroethane	ND	0.0011	EPA 8260C	10-24-17	10-24-17	
Vinyl Acetate	ND	0.0056	EPA 8260C	10-24-17	10-24-17	
2,2-Dichloropropane	ND	0.0011	EPA 8260C	10-24-17	10-24-17	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	10-24-17	10-24-17	
2-Butanone	ND	0.011	EPA 8260C	10-24-17	10-24-17	
Bromochloromethane	ND	0.0011	EPA 8260C	10-24-17	10-24-17	
Chloroform	ND	0.0011	EPA 8260C	10-24-17	10-24-17	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260C	10-24-17	10-24-17	
Carbon Tetrachloride	ND	0.0011	EPA 8260C	10-24-17	10-24-17	
1,1-Dichloropropene	ND	0.0011	EPA 8260C	10-24-17	10-24-17	
Benzene	ND	0.0011	EPA 8260C	10-24-17	10-24-17	
1,2-Dichloroethane	ND	0.0011	EPA 8260C	10-24-17	10-24-17	
Trichloroethene	ND	0.0011	EPA 8260C	10-24-17	10-24-17	
1,2-Dichloropropane	ND	0.0011	EPA 8260C	10-24-17	10-24-17	
Dibromomethane	ND	0.0011	EPA 8260C	10-24-17	10-24-17	
Bromodichloromethane	ND	0.0011	EPA 8260C	10-24-17	10-24-17	
2-Chloroethyl Vinyl Ether	ND	0.0056	EPA 8260C	10-24-17	10-24-17	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	10-24-17	10-24-17	
Methyl Isobutyl Ketone	ND	0.0056	EPA 8260C	10-24-17	10-24-17	
Toluene	ND	0.0056	EPA 8260C	10-24-17	10-24-17	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	10-24-17	10-24-17	

Date of Report: October 31, 2017
Samples Submitted: October 23, 2017
Laboratory Reference: 1710-292
Project: 520-Montlake Phase II

VOLATILES EPA 8260C
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**H-9-17-15'**					
Laboratory ID:	10-292-02					
1,1,2-Trichloroethane	ND	0.0011	EPA 8260C	10-24-17	10-24-17	
Tetrachloroethene	ND	0.0011	EPA 8260C	10-24-17	10-24-17	
1,3-Dichloropropane	ND	0.0011	EPA 8260C	10-24-17	10-24-17	
2-Hexanone	ND	0.0056	EPA 8260C	10-24-17	10-24-17	
Dibromochloromethane	ND	0.0011	EPA 8260C	10-24-17	10-24-17	
1,2-Dibromoethane	ND	0.0011	EPA 8260C	10-24-17	10-24-17	
Chlorobenzene	ND	0.0011	EPA 8260C	10-24-17	10-24-17	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260C	10-24-17	10-24-17	
Ethylbenzene	ND	0.0011	EPA 8260C	10-24-17	10-24-17	
m,p-Xylene	ND	0.0022	EPA 8260C	10-24-17	10-24-17	
o-Xylene	ND	0.0011	EPA 8260C	10-24-17	10-24-17	
Styrene	ND	0.0011	EPA 8260C	10-24-17	10-24-17	
Bromoform	ND	0.0056	EPA 8260C	10-24-17	10-24-17	
Isopropylbenzene	ND	0.0011	EPA 8260C	10-24-17	10-24-17	
Bromobenzene	ND	0.0011	EPA 8260C	10-24-17	10-24-17	
1,1,2,2-Tetrachloroethane	ND	0.0011	EPA 8260C	10-24-17	10-24-17	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260C	10-24-17	10-24-17	
n-Propylbenzene	ND	0.0011	EPA 8260C	10-24-17	10-24-17	
2-Chlorotoluene	ND	0.0011	EPA 8260C	10-24-17	10-24-17	
4-Chlorotoluene	ND	0.0011	EPA 8260C	10-24-17	10-24-17	
1,3,5-Trimethylbenzene	ND	0.0011	EPA 8260C	10-24-17	10-24-17	
tert-Butylbenzene	ND	0.0011	EPA 8260C	10-24-17	10-24-17	
1,2,4-Trimethylbenzene	ND	0.0011	EPA 8260C	10-24-17	10-24-17	
sec-Butylbenzene	ND	0.0011	EPA 8260C	10-24-17	10-24-17	
1,3-Dichlorobenzene	ND	0.0011	EPA 8260C	10-24-17	10-24-17	
p-Isopropyltoluene	ND	0.0011	EPA 8260C	10-24-17	10-24-17	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260C	10-24-17	10-24-17	
1,2-Dichlorobenzene	ND	0.0011	EPA 8260C	10-24-17	10-24-17	
n-Butylbenzene	ND	0.0011	EPA 8260C	10-24-17	10-24-17	
1,2-Dibromo-3-chloropropane	ND	0.0056	EPA 8260C	10-24-17	10-24-17	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260C	10-24-17	10-24-17	
Hexachlorobutadiene	ND	0.0056	EPA 8260C	10-24-17	10-24-17	
Naphthalene	ND	0.0011	EPA 8260C	10-24-17	10-24-17	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260C	10-24-17	10-24-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*109*	*75-131*				
Toluene-d8	*101*	*83-126*				
4-Bromofluorobenzene	*93*	*78-125*				

Date of Report: October 31, 2017
Samples Submitted: October 23, 2017
Laboratory Reference: 1710-292
Project: 520-Montlake Phase II

VOLATILES EPA 8260C
page 1 of 2

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**H-10-17-10'**					
Laboratory ID:	10-292-07					
Dichlorodifluoromethane	ND	0.0010	EPA 8260C	10-24-17	10-24-17	
Chloromethane	ND	0.0040	EPA 8260C	10-24-17	10-24-17	
Vinyl Chloride	ND	0.00081	EPA 8260C	10-24-17	10-24-17	
Bromomethane	ND	0.0052	EPA 8260C	10-24-17	10-24-17	
Chloroethane	ND	0.0040	EPA 8260C	10-24-17	10-24-17	
Trichlorofluoromethane	ND	0.00081	EPA 8260C	10-24-17	10-24-17	
1,1-Dichloroethene	ND	0.00081	EPA 8260C	10-24-17	10-24-17	
Acetone	ND	0.040	EPA 8260C	10-24-17	10-24-17	
Iodomethane	ND	0.0040	EPA 8260C	10-24-17	10-24-17	
Carbon Disulfide	ND	0.00081	EPA 8260C	10-24-17	10-24-17	
Methylene Chloride	ND	0.0040	EPA 8260C	10-24-17	10-24-17	
(trans) 1,2-Dichloroethene	ND	0.00081	EPA 8260C	10-24-17	10-24-17	
Methyl t-Butyl Ether	ND	0.00081	EPA 8260C	10-24-17	10-24-17	
1,1-Dichloroethane	ND	0.00081	EPA 8260C	10-24-17	10-24-17	
Vinyl Acetate	ND	0.0040	EPA 8260C	10-24-17	10-24-17	
2,2-Dichloropropane	ND	0.00081	EPA 8260C	10-24-17	10-24-17	
(cis) 1,2-Dichloroethene	ND	0.00081	EPA 8260C	10-24-17	10-24-17	
2-Butanone	ND	0.0081	EPA 8260C	10-24-17	10-24-17	
Bromochloromethane	ND	0.00081	EPA 8260C	10-24-17	10-24-17	
Chloroform	ND	0.00081	EPA 8260C	10-24-17	10-24-17	
1,1,1-Trichloroethane	ND	0.00081	EPA 8260C	10-24-17	10-24-17	
Carbon Tetrachloride	ND	0.00081	EPA 8260C	10-24-17	10-24-17	
1,1-Dichloropropene	ND	0.00081	EPA 8260C	10-24-17	10-24-17	
Benzene	ND	0.00081	EPA 8260C	10-24-17	10-24-17	
1,2-Dichloroethane	ND	0.00081	EPA 8260C	10-24-17	10-24-17	
Trichloroethene	ND	0.00081	EPA 8260C	10-24-17	10-24-17	
1,2-Dichloropropane	ND	0.00081	EPA 8260C	10-24-17	10-24-17	
Dibromomethane	ND	0.00081	EPA 8260C	10-24-17	10-24-17	
Bromodichloromethane	ND	0.00081	EPA 8260C	10-24-17	10-24-17	
2-Chloroethyl Vinyl Ether	ND	0.0040	EPA 8260C	10-24-17	10-24-17	
(cis) 1,3-Dichloropropene	ND	0.00081	EPA 8260C	10-24-17	10-24-17	
Methyl Isobutyl Ketone	ND	0.0040	EPA 8260C	10-24-17	10-24-17	
Toluene	ND	0.0040	EPA 8260C	10-24-17	10-24-17	
(trans) 1,3-Dichloropropene	ND	0.00081	EPA 8260C	10-24-17	10-24-17	

Date of Report: October 31, 2017
Samples Submitted: October 23, 2017
Laboratory Reference: 1710-292
Project: 520-Montlake Phase II

VOLATILES EPA 8260C
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**H-10-17-10'**					
Laboratory ID:	10-292-07					
1,1,2-Trichloroethane	ND	0.00081	EPA 8260C	10-24-17	10-24-17	
Tetrachloroethene	ND	0.00081	EPA 8260C	10-24-17	10-24-17	
1,3-Dichloropropane	ND	0.00081	EPA 8260C	10-24-17	10-24-17	
2-Hexanone	ND	0.0040	EPA 8260C	10-24-17	10-24-17	
Dibromochloromethane	ND	0.00081	EPA 8260C	10-24-17	10-24-17	
1,2-Dibromoethane	ND	0.00081	EPA 8260C	10-24-17	10-24-17	
Chlorobenzene	ND	0.00081	EPA 8260C	10-24-17	10-24-17	
1,1,1,2-Tetrachloroethane	ND	0.00081	EPA 8260C	10-24-17	10-24-17	
Ethylbenzene	ND	0.00081	EPA 8260C	10-24-17	10-24-17	
m,p-Xylene	ND	0.0016	EPA 8260C	10-24-17	10-24-17	
o-Xylene	ND	0.00081	EPA 8260C	10-24-17	10-24-17	
Styrene	ND	0.00081	EPA 8260C	10-24-17	10-24-17	
Bromoform	ND	0.0040	EPA 8260C	10-24-17	10-24-17	
Isopropylbenzene	ND	0.00081	EPA 8260C	10-24-17	10-24-17	
Bromobenzene	ND	0.00081	EPA 8260C	10-24-17	10-24-17	
1,1,2,2-Tetrachloroethane	ND	0.00081	EPA 8260C	10-24-17	10-24-17	
1,2,3-Trichloropropane	ND	0.00081	EPA 8260C	10-24-17	10-24-17	
n-Propylbenzene	ND	0.00081	EPA 8260C	10-24-17	10-24-17	
2-Chlorotoluene	ND	0.00081	EPA 8260C	10-24-17	10-24-17	
4-Chlorotoluene	ND	0.00081	EPA 8260C	10-24-17	10-24-17	
1,3,5-Trimethylbenzene	ND	0.00081	EPA 8260C	10-24-17	10-24-17	
tert-Butylbenzene	ND	0.00081	EPA 8260C	10-24-17	10-24-17	
1,2,4-Trimethylbenzene	ND	0.00081	EPA 8260C	10-24-17	10-24-17	
sec-Butylbenzene	ND	0.00081	EPA 8260C	10-24-17	10-24-17	
1,3-Dichlorobenzene	ND	0.00081	EPA 8260C	10-24-17	10-24-17	
p-Isopropyltoluene	ND	0.00081	EPA 8260C	10-24-17	10-24-17	
1,4-Dichlorobenzene	ND	0.00081	EPA 8260C	10-24-17	10-24-17	
1,2-Dichlorobenzene	ND	0.00081	EPA 8260C	10-24-17	10-24-17	
n-Butylbenzene	ND	0.00081	EPA 8260C	10-24-17	10-24-17	
1,2-Dibromo-3-chloropropane	ND	0.0040	EPA 8260C	10-24-17	10-24-17	
1,2,4-Trichlorobenzene	ND	0.00081	EPA 8260C	10-24-17	10-24-17	
Hexachlorobutadiene	ND	0.0040	EPA 8260C	10-24-17	10-24-17	
Naphthalene	ND	0.00081	EPA 8260C	10-24-17	10-24-17	
1,2,3-Trichlorobenzene	ND	0.00081	EPA 8260C	10-24-17	10-24-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*101*	*75-131*				
Toluene-d8	*102*	*83-126*				
4-Bromofluorobenzene	*107*	*78-125*				

Date of Report: October 31, 2017
Samples Submitted: October 23, 2017
Laboratory Reference: 1710-292
Project: 520-Montlake Phase II

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

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1024S1					
Dichlorodifluoromethane	ND	0.0013	EPA 8260C	10-24-17	10-24-17	
Chloromethane	ND	0.0050	EPA 8260C	10-24-17	10-24-17	
Vinyl Chloride	ND	0.0010	EPA 8260C	10-24-17	10-24-17	
Bromomethane	ND	0.0064	EPA 8260C	10-24-17	10-24-17	
Chloroethane	ND	0.0050	EPA 8260C	10-24-17	10-24-17	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	10-24-17	10-24-17	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	10-24-17	10-24-17	
Acetone	ND	0.050	EPA 8260C	10-24-17	10-24-17	
Iodomethane	ND	0.0050	EPA 8260C	10-24-17	10-24-17	
Carbon Disulfide	ND	0.0010	EPA 8260C	10-24-17	10-24-17	
Methylene Chloride	ND	0.0050	EPA 8260C	10-24-17	10-24-17	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	10-24-17	10-24-17	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260C	10-24-17	10-24-17	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	10-24-17	10-24-17	
Vinyl Acetate	ND	0.0050	EPA 8260C	10-24-17	10-24-17	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	10-24-17	10-24-17	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	10-24-17	10-24-17	
2-Butanone	ND	0.010	EPA 8260C	10-24-17	10-24-17	
Bromochloromethane	ND	0.0010	EPA 8260C	10-24-17	10-24-17	
Chloroform	ND	0.0010	EPA 8260C	10-24-17	10-24-17	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	10-24-17	10-24-17	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	10-24-17	10-24-17	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	10-24-17	10-24-17	
Benzene	ND	0.0010	EPA 8260C	10-24-17	10-24-17	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	10-24-17	10-24-17	
Trichloroethene	ND	0.0010	EPA 8260C	10-24-17	10-24-17	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	10-24-17	10-24-17	
Dibromomethane	ND	0.0010	EPA 8260C	10-24-17	10-24-17	
Bromodichloromethane	ND	0.0010	EPA 8260C	10-24-17	10-24-17	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260C	10-24-17	10-24-17	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	10-24-17	10-24-17	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260C	10-24-17	10-24-17	
Toluene	ND	0.0050	EPA 8260C	10-24-17	10-24-17	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	10-24-17	10-24-17	

Date of Report: October 31, 2017
Samples Submitted: October 23, 2017
Laboratory Reference: 1710-292
Project: 520-Montlake Phase II

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

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1024S1					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	10-24-17	10-24-17	
Tetrachloroethene	ND	0.0010	EPA 8260C	10-24-17	10-24-17	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	10-24-17	10-24-17	
2-Hexanone	ND	0.0050	EPA 8260C	10-24-17	10-24-17	
Dibromochloromethane	ND	0.0010	EPA 8260C	10-24-17	10-24-17	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	10-24-17	10-24-17	
Chlorobenzene	ND	0.0010	EPA 8260C	10-24-17	10-24-17	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	10-24-17	10-24-17	
Ethylbenzene	ND	0.0010	EPA 8260C	10-24-17	10-24-17	
m,p-Xylene	ND	0.0020	EPA 8260C	10-24-17	10-24-17	
o-Xylene	ND	0.0010	EPA 8260C	10-24-17	10-24-17	
Styrene	ND	0.0010	EPA 8260C	10-24-17	10-24-17	
Bromoform	ND	0.0050	EPA 8260C	10-24-17	10-24-17	
Isopropylbenzene	ND	0.0010	EPA 8260C	10-24-17	10-24-17	
Bromobenzene	ND	0.0010	EPA 8260C	10-24-17	10-24-17	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	10-24-17	10-24-17	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	10-24-17	10-24-17	
n-Propylbenzene	ND	0.0010	EPA 8260C	10-24-17	10-24-17	
2-Chlorotoluene	ND	0.0010	EPA 8260C	10-24-17	10-24-17	
4-Chlorotoluene	ND	0.0010	EPA 8260C	10-24-17	10-24-17	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260C	10-24-17	10-24-17	
tert-Butylbenzene	ND	0.0010	EPA 8260C	10-24-17	10-24-17	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260C	10-24-17	10-24-17	
sec-Butylbenzene	ND	0.0010	EPA 8260C	10-24-17	10-24-17	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	10-24-17	10-24-17	
p-Isopropyltoluene	ND	0.0010	EPA 8260C	10-24-17	10-24-17	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	10-24-17	10-24-17	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	10-24-17	10-24-17	
n-Butylbenzene	ND	0.0010	EPA 8260C	10-24-17	10-24-17	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	10-24-17	10-24-17	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	10-24-17	10-24-17	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	10-24-17	10-24-17	
Naphthalene	ND	0.0010	EPA 8260C	10-24-17	10-24-17	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	10-24-17	10-24-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*116*	*75-131*				
Toluene-d8	*111*	*83-126*				
4-Bromofluorobenzene	*115*	*78-125*				

Date of Report: October 31, 2017
Samples Submitted: October 23, 2017
Laboratory Reference: 1710-292
Project: 520-Montlake Phase II

VOLATILES by EPA 8260C
SB/SBD QUALITY CONTROL

Matrix: Soil
Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB1024S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**0.0401**	**0.0376**	0.0500	0.0500	80	75	58-126	6	20	
Benzene	**0.0465**	**0.0450**	0.0500	0.0500	93	90	72-122	3	19	
Trichloroethene	**0.0447**	**0.0434**	0.0500	0.0500	89	87	75-120	3	20	
Toluene	**0.0490**	**0.0464**	0.0500	0.0500	98	93	78-123	5	19	
Chlorobenzene	**0.0468**	**0.0451**	0.0500	0.0500	94	90	75-120	4	18	
Surrogate:										
Dibromofluoromethane					*98*	*100*	*75-131*			
Toluene-d8					*96*	*96*	*83-126*			
4-Bromofluorobenzene					*98*	*98*	*78-125*			

Date of Report: October 31, 2017
Samples Submitted: October 23, 2017
Laboratory Reference: 1710-292
Project: 520-Montlake Phase II

SEMIVOLATILES EPA 8270D/SIM

page 1 of 2

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**H-9-17-15'**					
Laboratory ID:	10-292-02					
n-Nitrosodimethylamine	**ND**	0.042	EPA 8270D	10-25-17	10-26-17	
Pyridine	**ND**	0.42	EPA 8270D	10-25-17	10-26-17	
Phenol	**ND**	0.042	EPA 8270D	10-25-17	10-26-17	
Aniline	**ND**	0.21	EPA 8270D	10-25-17	10-26-17	
bis(2-Chloroethyl)ether	**ND**	0.042	EPA 8270D	10-25-17	10-26-17	
2-Chlorophenol	**ND**	0.042	EPA 8270D	10-25-17	10-26-17	
1,3-Dichlorobenzene	**ND**	0.042	EPA 8270D	10-25-17	10-26-17	
1,4-Dichlorobenzene	**ND**	0.042	EPA 8270D	10-25-17	10-26-17	
Benzyl alcohol	**ND**	0.21	EPA 8270D	10-25-17	10-26-17	
1,2-Dichlorobenzene	**ND**	0.042	EPA 8270D	10-25-17	10-26-17	
2-Methylphenol (o-Cresol)	**ND**	0.042	EPA 8270D	10-25-17	10-26-17	
bis(2-Chloroisopropyl)ether	**ND**	0.042	EPA 8270D	10-25-17	10-26-17	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.042	EPA 8270D	10-25-17	10-26-17	
n-Nitroso-di-n-propylamine	**ND**	0.042	EPA 8270D	10-25-17	10-26-17	
Hexachloroethane	**ND**	0.042	EPA 8270D	10-25-17	10-26-17	
Nitrobenzene	**ND**	0.042	EPA 8270D	10-25-17	10-26-17	
Isophorone	**ND**	0.042	EPA 8270D	10-25-17	10-26-17	
2-Nitrophenol	**ND**	0.042	EPA 8270D	10-25-17	10-26-17	
2,4-Dimethylphenol	**ND**	0.042	EPA 8270D	10-25-17	10-26-17	
bis(2-Chloroethoxy)methane	**ND**	0.042	EPA 8270D	10-25-17	10-26-17	
2,4-Dichlorophenol	**ND**	0.042	EPA 8270D	10-25-17	10-26-17	
1,2,4-Trichlorobenzene	**ND**	0.042	EPA 8270D	10-25-17	10-26-17	
Naphthalene	**ND**	0.0083	EPA 8270D/SIM	10-25-17	10-26-17	
4-Chloroaniline	**ND**	0.21	EPA 8270D	10-25-17	10-26-17	
Hexachlorobutadiene	**ND**	0.042	EPA 8270D	10-25-17	10-26-17	
4-Chloro-3-methylphenol	**ND**	0.042	EPA 8270D	10-25-17	10-26-17	
2-Methylnaphthalene	**ND**	0.0083	EPA 8270D/SIM	10-25-17	10-26-17	
1-Methylnaphthalene	**ND**	0.0083	EPA 8270D/SIM	10-25-17	10-26-17	
Hexachlorocyclopentadiene	**ND**	0.042	EPA 8270D	10-25-17	10-26-17	
2,4,6-Trichlorophenol	**ND**	0.042	EPA 8270D	10-25-17	10-26-17	
2,3-Dichloroaniline	**ND**	0.042	EPA 8270D	10-25-17	10-26-17	
2,4,5-Trichlorophenol	**ND**	0.042	EPA 8270D	10-25-17	10-26-17	
2-Chloronaphthalene	**ND**	0.042	EPA 8270D	10-25-17	10-26-17	
2-Nitroaniline	**ND**	0.042	EPA 8270D	10-25-17	10-26-17	
1,4-Dinitrobenzene	**ND**	0.042	EPA 8270D	10-25-17	10-26-17	
Dimethylphthalate	**ND**	0.042	EPA 8270D	10-25-17	10-26-17	
1,3-Dinitrobenzene	**ND**	0.042	EPA 8270D	10-25-17	10-26-17	
2,6-Dinitrotoluene	**ND**	0.042	EPA 8270D	10-25-17	10-26-17	
1,2-Dinitrobenzene	**ND**	0.042	EPA 8270D	10-25-17	10-26-17	
Acenaphthylene	**ND**	0.0083	EPA 8270D/SIM	10-25-17	10-26-17	
3-Nitroaniline	**ND**	0.042	EPA 8270D	10-25-17	10-26-17	

Date of Report: October 31, 2017
Samples Submitted: October 23, 2017
Laboratory Reference: 1710-292
Project: 520-Montlake Phase II

SEMIVOLATILES EPA 8270D/SIM
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**H-9-17-15'**					
Laboratory ID:	10-292-02					
2,4-Dinitrophenol	**ND**	0.21	EPA 8270D	10-25-17	10-26-17	
Acenaphthene	**ND**	0.0083	EPA 8270D/SIM	10-25-17	10-26-17	
4-Nitrophenol	**ND**	0.042	EPA 8270D	10-25-17	10-26-17	
2,4-Dinitrotoluene	**ND**	0.042	EPA 8270D	10-25-17	10-26-17	
Dibenzofuran	**ND**	0.042	EPA 8270D	10-25-17	10-26-17	
2,3,5,6-Tetrachlorophenol	**ND**	0.042	EPA 8270D	10-25-17	10-26-17	
2,3,4,6-Tetrachlorophenol	**ND**	0.042	EPA 8270D	10-25-17	10-26-17	
Diethylphthalate	**ND**	0.21	EPA 8270D	10-25-17	10-26-17	
4-Chlorophenyl-phenylether	**ND**	0.042	EPA 8270D	10-25-17	10-26-17	
4-Nitroaniline	**ND**	0.042	EPA 8270D	10-25-17	10-26-17	
Fluorene	**ND**	0.0083	EPA 8270D/SIM	10-25-17	10-26-17	
4,6-Dinitro-2-methylphenol	**ND**	0.21	EPA 8270D	10-25-17	10-26-17	
n-Nitrosodiphenylamine	**ND**	0.042	EPA 8270D	10-25-17	10-26-17	
1,2-Diphenylhydrazine	**ND**	0.059	EPA 8270D	10-25-17	10-26-17	U1
4-Bromophenyl-phenylether	**ND**	0.042	EPA 8270D	10-25-17	10-26-17	
Hexachlorobenzene	**ND**	0.042	EPA 8270D	10-25-17	10-26-17	
Pentachlorophenol	**ND**	0.21	EPA 8270D	10-25-17	10-26-17	
Phenanthrene	**ND**	0.0083	EPA 8270D/SIM	10-25-17	10-26-17	
Anthracene	**ND**	0.0083	EPA 8270D/SIM	10-25-17	10-26-17	
Carbazole	**ND**	0.042	EPA 8270D	10-25-17	10-26-17	
Di-n-butylphthalate	**ND**	0.42	EPA 8270D	10-25-17	10-26-17	
Fluoranthene	**ND**	0.0083	EPA 8270D/SIM	10-25-17	10-26-17	
Benzidine	**ND**	0.42	EPA 8270D	10-25-17	10-26-17	
Pyrene	**ND**	0.0083	EPA 8270D/SIM	10-25-17	10-26-17	
Butylbenzylphthalate	**ND**	0.21	EPA 8270D	10-25-17	10-26-17	
bis-2-Ethylhexyladipate	**ND**	0.21	EPA 8270D	10-25-17	10-26-17	
3,3'-Dichlorobenzidine	**ND**	0.21	EPA 8270D	10-25-17	10-26-17	
Benzo[a]anthracene	**ND**	0.0083	EPA 8270D/SIM	10-25-17	10-26-17	
Chrysene	**ND**	0.0083	EPA 8270D/SIM	10-25-17	10-26-17	
bis(2-Ethylhexyl)phthalate	**ND**	0.21	EPA 8270D	10-25-17	10-26-17	
Di-n-octylphthalate	**ND**	0.21	EPA 8270D	10-25-17	10-26-17	
Benzo[b]fluoranthene	**ND**	0.0083	EPA 8270D/SIM	10-25-17	10-26-17	
Benzo(j,k)fluoranthene	**ND**	0.0083	EPA 8270D/SIM	10-25-17	10-26-17	
Benzo[a]pyrene	**ND**	0.0083	EPA 8270D/SIM	10-25-17	10-26-17	
Indeno[1,2,3-cd]pyrene	**ND**	0.0083	EPA 8270D/SIM	10-25-17	10-26-17	
Dibenz[a,h]anthracene	**ND**	0.0083	EPA 8270D/SIM	10-25-17	10-26-17	
Benzo[g,h,i]perylene	**ND**	0.0083	EPA 8270D/SIM	10-25-17	10-26-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*49*	*18 - 113*				
Phenol-d6	*54*	*19 - 119*				
Nitrobenzene-d5	*44*	*19 - 119*				
2-Fluorobiphenyl	*63*	*33 - 109*				
2,4,6-Tribromophenol	*70*	*19 - 121*				
Terphenyl-d14	*63*	*30 - 116*				

Date of Report: October 31, 2017
Samples Submitted: October 23, 2017
Laboratory Reference: 1710-292
Project: 520-Montlake Phase II

SEMIVOLATILES EPA 8270D/SIM

page 1 of 2

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**H-10-17-10'**					
Laboratory ID:	10-292-07					
n-Nitrosodimethylamine	**ND**	0.041	EPA 8270D	10-25-17	10-26-17	
Pyridine	**ND**	0.41	EPA 8270D	10-25-17	10-26-17	
Phenol	**ND**	0.041	EPA 8270D	10-25-17	10-26-17	
Aniline	**ND**	0.20	EPA 8270D	10-25-17	10-26-17	
bis(2-Chloroethyl)ether	**ND**	0.041	EPA 8270D	10-25-17	10-26-17	
2-Chlorophenol	**ND**	0.041	EPA 8270D	10-25-17	10-26-17	
1,3-Dichlorobenzene	**ND**	0.041	EPA 8270D	10-25-17	10-26-17	
1,4-Dichlorobenzene	**ND**	0.041	EPA 8270D	10-25-17	10-26-17	
Benzyl alcohol	**ND**	0.20	EPA 8270D	10-25-17	10-26-17	
1,2-Dichlorobenzene	**ND**	0.041	EPA 8270D	10-25-17	10-26-17	
2-Methylphenol (o-Cresol)	**ND**	0.041	EPA 8270D	10-25-17	10-26-17	
bis(2-Chloroisopropyl)ether	**ND**	0.041	EPA 8270D	10-25-17	10-26-17	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.041	EPA 8270D	10-25-17	10-26-17	
n-Nitroso-di-n-propylamine	**ND**	0.041	EPA 8270D	10-25-17	10-26-17	
Hexachloroethane	**ND**	0.041	EPA 8270D	10-25-17	10-26-17	
Nitrobenzene	**ND**	0.041	EPA 8270D	10-25-17	10-26-17	
Isophorone	**ND**	0.041	EPA 8270D	10-25-17	10-26-17	
2-Nitrophenol	**ND**	0.041	EPA 8270D	10-25-17	10-26-17	
2,4-Dimethylphenol	**ND**	0.041	EPA 8270D	10-25-17	10-26-17	
bis(2-Chloroethoxy)methane	**ND**	0.041	EPA 8270D	10-25-17	10-26-17	
2,4-Dichlorophenol	**ND**	0.041	EPA 8270D	10-25-17	10-26-17	
1,2,4-Trichlorobenzene	**ND**	0.041	EPA 8270D	10-25-17	10-26-17	
Naphthalene	**ND**	0.0082	EPA 8270D/SIM	10-25-17	10-26-17	
4-Chloroaniline	**ND**	0.20	EPA 8270D	10-25-17	10-26-17	
Hexachlorobutadiene	**ND**	0.041	EPA 8270D	10-25-17	10-26-17	
4-Chloro-3-methylphenol	**ND**	0.041	EPA 8270D	10-25-17	10-26-17	
2-Methylnaphthalene	**ND**	0.0082	EPA 8270D/SIM	10-25-17	10-26-17	
1-Methylnaphthalene	**ND**	0.0082	EPA 8270D/SIM	10-25-17	10-26-17	
Hexachlorocyclopentadiene	**ND**	0.041	EPA 8270D	10-25-17	10-26-17	
2,4,6-Trichlorophenol	**ND**	0.041	EPA 8270D	10-25-17	10-26-17	
2,3-Dichloroaniline	**ND**	0.041	EPA 8270D	10-25-17	10-26-17	
2,4,5-Trichlorophenol	**ND**	0.041	EPA 8270D	10-25-17	10-26-17	
2-Chloronaphthalene	**ND**	0.041	EPA 8270D	10-25-17	10-26-17	
2-Nitroaniline	**ND**	0.041	EPA 8270D	10-25-17	10-26-17	
1,4-Dinitrobenzene	**ND**	0.041	EPA 8270D	10-25-17	10-26-17	
Dimethylphthalate	**ND**	0.041	EPA 8270D	10-25-17	10-26-17	
1,3-Dinitrobenzene	**ND**	0.041	EPA 8270D	10-25-17	10-26-17	
2,6-Dinitrotoluene	**ND**	0.041	EPA 8270D	10-25-17	10-26-17	
1,2-Dinitrobenzene	**ND**	0.041	EPA 8270D	10-25-17	10-26-17	
Acenaphthylene	**ND**	0.0082	EPA 8270D/SIM	10-25-17	10-26-17	
3-Nitroaniline	**ND**	0.041	EPA 8270D	10-25-17	10-26-17	

Date of Report: October 31, 2017
Samples Submitted: October 23, 2017
Laboratory Reference: 1710-292
Project: 520-Montlake Phase II

SEMIVOLATILES EPA 8270D/SIM
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**H-10-17-10'**					
Laboratory ID:	10-292-07					
2,4-Dinitrophenol	**ND**	0.20	EPA 8270D	10-25-17	10-26-17	
Acenaphthene	**ND**	0.0082	EPA 8270D/SIM	10-25-17	10-26-17	
4-Nitrophenol	**ND**	0.041	EPA 8270D	10-25-17	10-26-17	
2,4-Dinitrotoluene	**ND**	0.041	EPA 8270D	10-25-17	10-26-17	
Dibenzofuran	**ND**	0.041	EPA 8270D	10-25-17	10-26-17	
2,3,5,6-Tetrachlorophenol	**ND**	0.041	EPA 8270D	10-25-17	10-26-17	
2,3,4,6-Tetrachlorophenol	**ND**	0.041	EPA 8270D	10-25-17	10-26-17	
Diethylphthalate	**ND**	0.20	EPA 8270D	10-25-17	10-26-17	
4-Chlorophenyl-phenylether	**ND**	0.041	EPA 8270D	10-25-17	10-26-17	
4-Nitroaniline	**ND**	0.041	EPA 8270D	10-25-17	10-26-17	
Fluorene	**ND**	0.0082	EPA 8270D/SIM	10-25-17	10-26-17	
4,6-Dinitro-2-methylphenol	**ND**	0.20	EPA 8270D	10-25-17	10-26-17	
n-Nitrosodiphenylamine	**ND**	0.041	EPA 8270D	10-25-17	10-26-17	
1,2-Diphenylhydrazine	**ND**	0.041	EPA 8270D	10-25-17	10-26-17	
4-Bromophenyl-phenylether	**ND**	0.041	EPA 8270D	10-25-17	10-26-17	
Hexachlorobenzene	**ND**	0.041	EPA 8270D	10-25-17	10-26-17	
Pentachlorophenol	**ND**	0.20	EPA 8270D	10-25-17	10-26-17	
Phenanthrene	**ND**	0.0082	EPA 8270D/SIM	10-25-17	10-26-17	
Anthracene	**ND**	0.0082	EPA 8270D/SIM	10-25-17	10-26-17	
Carbazole	**ND**	0.041	EPA 8270D	10-25-17	10-26-17	
Di-n-butylphthalate	**ND**	0.41	EPA 8270D	10-25-17	10-26-17	
Fluoranthene	**ND**	0.0082	EPA 8270D/SIM	10-25-17	10-26-17	
Benzidine	**ND**	0.41	EPA 8270D	10-25-17	10-26-17	
Pyrene	**ND**	0.0082	EPA 8270D/SIM	10-25-17	10-26-17	
Butylbenzylphthalate	**ND**	0.20	EPA 8270D	10-25-17	10-26-17	
bis-2-Ethylhexyladipate	**ND**	0.20	EPA 8270D	10-25-17	10-26-17	
3,3'-Dichlorobenzidine	**ND**	0.20	EPA 8270D	10-25-17	10-26-17	
Benzo[a]anthracene	**ND**	0.0082	EPA 8270D/SIM	10-25-17	10-26-17	
Chrysene	**ND**	0.0082	EPA 8270D/SIM	10-25-17	10-26-17	
bis(2-Ethylhexyl)phthalate	**ND**	0.20	EPA 8270D	10-25-17	10-26-17	
Di-n-octylphthalate	**ND**	0.20	EPA 8270D	10-25-17	10-26-17	
Benzo[b]fluoranthene	**ND**	0.0082	EPA 8270D/SIM	10-25-17	10-26-17	
Benzo(j,k)fluoranthene	**ND**	0.0082	EPA 8270D/SIM	10-25-17	10-26-17	
Benzo[a]pyrene	**ND**	0.0082	EPA 8270D/SIM	10-25-17	10-26-17	
Indeno[1,2,3-cd]pyrene	**ND**	0.0082	EPA 8270D/SIM	10-25-17	10-26-17	
Dibenz[a,h]anthracene	**ND**	0.0082	EPA 8270D/SIM	10-25-17	10-26-17	
Benzo[g,h,i]perylene	**ND**	0.0082	EPA 8270D/SIM	10-25-17	10-26-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*29*	*18 - 113*				
Phenol-d6	*36*	*19 - 119*				
Nitrobenzene-d5	*34*	*19 - 119*				
2-Fluorobiphenyl	*62*	*33 - 109*				
2,4,6-Tribromophenol	*70*	*19 - 121*				
Terphenyl-d14	*65*	*30 - 116*				

Date of Report: October 31, 2017
Samples Submitted: October 23, 2017
Laboratory Reference: 1710-292
Project: 520-Montlake Phase II

SEMIVOLATILES EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
page 1 of 2

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1025S1					
n-Nitrosodimethylamine	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
Pyridine	**ND**	0.33	EPA 8270D	10-25-17	10-26-17	
Phenol	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
Aniline	**ND**	0.17	EPA 8270D	10-25-17	10-26-17	
bis(2-Chloroethyl)ether	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
2-Chlorophenol	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
1,3-Dichlorobenzene	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
1,4-Dichlorobenzene	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
Benzyl alcohol	**ND**	0.17	EPA 8270D	10-25-17	10-26-17	
1,2-Dichlorobenzene	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
2-Methylphenol (o-Cresol)	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
bis(2-Chloroisopropyl)ether	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
n-Nitroso-di-n-propylamine	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
Hexachloroethane	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
Nitrobenzene	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
Isophorone	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
2-Nitrophenol	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
2,4-Dimethylphenol	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
bis(2-Chloroethoxy)methane	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
2,4-Dichlorophenol	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
1,2,4-Trichlorobenzene	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
Naphthalene	**ND**	0.0067	EPA 8270D/SIM	10-25-17	10-26-17	
4-Chloroaniline	**ND**	0.17	EPA 8270D	10-25-17	10-26-17	
Hexachlorobutadiene	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
4-Chloro-3-methylphenol	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
2-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	10-25-17	10-26-17	
1-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	10-25-17	10-26-17	
Hexachlorocyclopentadiene	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
2,4,6-Trichlorophenol	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
2,3-Dichloroaniline	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
2,4,5-Trichlorophenol	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
2-Chloronaphthalene	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
2-Nitroaniline	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
1,4-Dinitrobenzene	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
Dimethylphthalate	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
1,3-Dinitrobenzene	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
2,6-Dinitrotoluene	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
1,2-Dinitrobenzene	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
Acenaphthylene	**ND**	0.0067	EPA 8270D/SIM	10-25-17	10-26-17	
3-Nitroaniline	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	

Date of Report: October 31, 2017
Samples Submitted: October 23, 2017
Laboratory Reference: 1710-292
Project: 520-Montlake Phase II

SEMIVOLATILES EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1025S1					
2,4-Dinitrophenol	**ND**	0.17	EPA 8270D	10-25-17	10-26-17	
Acenaphthene	**ND**	0.0067	EPA 8270D/SIM	10-25-17	10-26-17	
4-Nitrophenol	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
2,4-Dinitrotoluene	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
Dibenzofuran	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
2,3,5,6-Tetrachlorophenol	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
2,3,4,6-Tetrachlorophenol	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
Diethylphthalate	**ND**	0.17	EPA 8270D	10-25-17	10-26-17	
4-Chlorophenyl-phenylether	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
4-Nitroaniline	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
Fluorene	**ND**	0.0067	EPA 8270D/SIM	10-25-17	10-26-17	
4,6-Dinitro-2-methylphenol	**ND**	0.17	EPA 8270D	10-25-17	10-26-17	
n-Nitrosodiphenylamine	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
1,2-Diphenylhydrazine	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
4-Bromophenyl-phenylether	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
Hexachlorobenzene	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
Pentachlorophenol	**ND**	0.17	EPA 8270D	10-25-17	10-26-17	
Phenanthrene	**ND**	0.0067	EPA 8270D/SIM	10-25-17	10-26-17	
Anthracene	**ND**	0.0067	EPA 8270D/SIM	10-25-17	10-26-17	
Carbazole	**ND**	0.033	EPA 8270D	10-25-17	10-26-17	
Di-n-butylphthalate	**ND**	0.33	EPA 8270D	10-25-17	10-26-17	
Fluoranthene	**ND**	0.0067	EPA 8270D/SIM	10-25-17	10-26-17	
Benzidine	**ND**	0.33	EPA 8270D	10-25-17	10-26-17	
Pyrene	**ND**	0.0067	EPA 8270D/SIM	10-25-17	10-26-17	
Butylbenzylphthalate	**ND**	0.17	EPA 8270D	10-25-17	10-26-17	
bis-2-Ethylhexyladipate	**ND**	0.17	EPA 8270D	10-25-17	10-26-17	
3,3'-Dichlorobenzidine	**ND**	0.17	EPA 8270D	10-25-17	10-26-17	
Benzo[a]anthracene	**ND**	0.0067	EPA 8270D/SIM	10-25-17	10-26-17	
Chrysene	**ND**	0.0067	EPA 8270D/SIM	10-25-17	10-26-17	
bis(2-Ethylhexyl)phthalate	**ND**	0.17	EPA 8270D	10-25-17	10-26-17	
Di-n-octylphthalate	**ND**	0.17	EPA 8270D	10-25-17	10-26-17	
Benzo[b]fluoranthene	**ND**	0.0067	EPA 8270D/SIM	10-25-17	10-26-17	
Benzo(j,k)fluoranthene	**ND**	0.0067	EPA 8270D/SIM	10-25-17	10-26-17	
Benzo[a]pyrene	**ND**	0.0067	EPA 8270D/SIM	10-25-17	10-26-17	
Indeno[1,2,3-cd]pyrene	**ND**	0.0067	EPA 8270D/SIM	10-25-17	10-26-17	
Dibenz[a,h]anthracene	**ND**	0.0067	EPA 8270D/SIM	10-25-17	10-26-17	
Benzo[g,h,i]perylene	**ND**	0.0067	EPA 8270D/SIM	10-25-17	10-26-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*66*	*18 - 113*				
Phenol-d6	*74*	*19 - 119*				
Nitrobenzene-d5	*64*	*19 - 119*				
2-Fluorobiphenyl	*73*	*33 - 109*				
2,4,6-Tribromophenol	*87*	*19 - 121*				
Terphenyl-d14	*77*	*30 - 116*				

Date of Report: October 31, 2017
Samples Submitted: October 23, 2017
Laboratory Reference: 1710-292
Project: 520-Montlake Phase II

SEMIVOLATILES EPA 8270D/SIM
SB/SBD QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB1025S1									
	SB	SBD	SB	SBD	SB	SBD				
Phenol	**1.02**	**1.04**	1.33	1.33	77	78	39 - 109	2	36	
2-Chlorophenol	**0.995**	**1.01**	1.33	1.33	75	76	42 - 105	1	35	
1,4-Dichlorobenzene	**0.467**	**0.482**	0.667	0.667	70	72	31 - 103	3	37	
n-Nitroso-di-n-propylamine	**0.474**	**0.497**	0.667	0.667	71	75	36 - 104	5	34	
1,2,4-Trichlorobenzene	**0.491**	**0.509**	0.667	0.667	74	76	32 - 104	4	38	
4-Chloro-3-methylphenol	**1.14**	**1.11**	1.33	1.33	86	83	48 - 107	3	31	
Acenaphthene	**0.522**	**0.525**	0.667	0.667	78	79	38 - 102	1	33	
4-Nitrophenol	**1.26**	**1.25**	1.33	1.33	95	94	27 - 121	1	35	
2,4-Dinitrotoluene	**0.629**	**0.625**	0.667	0.667	94	94	36 - 103	1	34	
Pentachlorophenol	**1.37**	**1.39**	1.33	1.33	103	105	21 - 114	1	37	
Pyrene	**0.556**	**0.565**	0.667	0.667	83	85	46 - 108	2	31	
Surrogate:										
2-Fluorophenol					*75*	*76*	*18 - 113*			
Phenol-d6					*77*	*78*	*19 - 119*			
Nitrobenzene-d5					*69*	*69*	*19 - 119*			
2-Fluorobiphenyl					*77*	*78*	*33 - 109*			
2,4,6-Tribromophenol					*93*	*90*	*19 - 121*			
Terphenyl-d14					*82*	*83*	*30 - 116*			

Date of Report: October 31, 2017
Samples Submitted: October 23, 2017
Laboratory Reference: 1710-292
Project: 520-Montlake Phase II

PCBs EPA 8082A

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**H-9-17-15'**					
Laboratory ID:	10-292-02					
Aroclor 1016	**ND**	0.063	EPA 8082A	10-26-17	10-26-17	
Aroclor 1221	**ND**	0.063	EPA 8082A	10-26-17	10-26-17	
Aroclor 1232	**ND**	0.063	EPA 8082A	10-26-17	10-26-17	
Aroclor 1242	**ND**	0.063	EPA 8082A	10-26-17	10-26-17	
Aroclor 1248	**ND**	0.063	EPA 8082A	10-26-17	10-26-17	
Aroclor 1254	**ND**	0.063	EPA 8082A	10-26-17	10-26-17	
Aroclor 1260	**ND**	0.063	EPA 8082A	10-26-17	10-26-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*59*	*40-134*				
Client ID:	**H-10-17-10'**					
Laboratory ID:	10-292-07					
Aroclor 1016	**ND**	0.061	EPA 8082A	10-26-17	10-26-17	
Aroclor 1221	**ND**	0.061	EPA 8082A	10-26-17	10-26-17	
Aroclor 1232	**ND**	0.061	EPA 8082A	10-26-17	10-26-17	
Aroclor 1242	**ND**	0.061	EPA 8082A	10-26-17	10-26-17	
Aroclor 1248	**ND**	0.061	EPA 8082A	10-26-17	10-26-17	
Aroclor 1254	**ND**	0.061	EPA 8082A	10-26-17	10-26-17	
Aroclor 1260	**ND**	0.061	EPA 8082A	10-26-17	10-26-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*64*	*40-134*				

Date of Report: October 31, 2017
Samples Submitted: October 23, 2017
Laboratory Reference: 1710-292
Project: 520-Montlake Phase II

PCBs EPA 8082A
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1026S1					
Aroclor 1016	**ND**	0.050	EPA 8082A	10-26-17	10-26-17	
Aroclor 1221	**ND**	0.050	EPA 8082A	10-26-17	10-26-17	
Aroclor 1232	**ND**	0.050	EPA 8082A	10-26-17	10-26-17	
Aroclor 1242	**ND**	0.050	EPA 8082A	10-26-17	10-26-17	
Aroclor 1248	**ND**	0.050	EPA 8082A	10-26-17	10-26-17	
Aroclor 1254	**ND**	0.050	EPA 8082A	10-26-17	10-26-17	
Aroclor 1260	**ND**	0.050	EPA 8082A	10-26-17	10-26-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*66*	*40-134*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
MATRIX SPIKES											
Laboratory ID:	10-291-03										
	MS	MSD	MS	MSD		MS	MSD				
Aroclor 1260	**0.344**	**0.341**	0.500	0.500	ND	**69**	**68**	34-126	1	16	
Surrogate:											
DCB						*67*	*66*	*40-134*			

Date of Report: October 31, 2017
Samples Submitted: October 23, 2017
Laboratory Reference: 1710-292
Project: 520-Montlake Phase II

TOTAL METALS
EPA 6010C/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	10-292-02					
Client ID:	**H-9-17-15'**					
Arsenic	**ND**	13	6010C	10-25-17	10-25-17	
Barium	**63**	3.1	6010C	10-25-17	10-25-17	
Cadmium	**ND**	0.63	6010C	10-25-17	10-25-17	
Chromium	**37**	0.63	6010C	10-25-17	10-25-17	
Lead	**ND**	6.3	6010C	10-25-17	10-25-17	
Mercury	**ND**	0.31	7471B	10-25-17	10-25-17	
Selenium	**ND**	13	6010C	10-25-17	10-25-17	
Silver	**ND**	1.3	6010C	10-25-17	10-25-17	
Lab ID:	10-292-07					
Client ID:	**H-10-17-10'**					
Arsenic	**ND**	12	6010C	10-25-17	10-25-17	
Barium	**35**	3.1	6010C	10-25-17	10-25-17	
Cadmium	**ND**	0.61	6010C	10-25-17	10-25-17	
Chromium	**27**	0.61	6010C	10-25-17	10-25-17	
Lead	**ND**	6.1	6010C	10-25-17	10-25-17	
Mercury	**ND**	0.31	7471B	10-25-17	10-25-17	
Selenium	**ND**	12	6010C	10-25-17	10-25-17	
Silver	**ND**	1.2	6010C	10-25-17	10-25-17	

Date of Report: October 31, 2017
Samples Submitted: October 23, 2017
Laboratory Reference: 1710-292
Project: 520-Montlake Phase II

TOTAL METALS
EPA 6010C
METHOD BLANK QUALITY CONTROL

Date Extracted: 10-25-17
Date Analyzed: 10-25-17

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: MB1025SM1

Analyte	Method	Result	PQL
Arsenic	6010C	**ND**	10
Barium	6010C	**ND**	2.5
Cadmium	6010C	**ND**	0.50
Chromium	6010C	**ND**	0.50
Lead	6010C	**ND**	5.0
Selenium	6010C	**ND**	10
Silver	6010C	**ND**	1.0

Date of Report: October 31, 2017
Samples Submitted: October 23, 2017
Laboratory Reference: 1710-292
Project: 520-Montlake Phase II

TOTAL MERCURY
EPA 7471B
METHOD BLANK QUALITY CONTROL

Date Extracted:	10-25-17
Date Analyzed:	10-25-17
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	MB1025S2

Analyte	Method	Result	PQL
Mercury	7471B	**ND**	0.25

Date of Report: October 31, 2017
Samples Submitted: October 23, 2017
Laboratory Reference: 1710-292
Project: 520-Montlake Phase II

TOTAL METALS
EPA 6010C
DUPLICATE QUALITY CONTROL

Date Extracted: 10-25-17
Date Analyzed: 10-25-17

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 10-276-01

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**ND**	**ND**	NA	10	
Barium	**39.4**	**38.2**	3	2.5	
Cadmium	**ND**	**ND**	NA	0.50	
Chromium	**90.6**	**87.2**	4	0.50	
Lead	**ND**	**ND**	NA	5.0	
Selenium	**ND**	**ND**	NA	10	
Silver	**ND**	**ND**	NA	1.0	

Date of Report: October 31, 2017
Samples Submitted: October 23, 2017
Laboratory Reference: 1710-292
Project: 520-Montlake Phase II

TOTAL MERCURY
EPA 7471B
DUPLICATE QUALITY CONTROL

Date Extracted: 10-25-17
Date Analyzed: 10-25-17

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 10-286-01

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Mercury	**ND**	**ND**	NA	0.25	

Date of Report: October 31, 2017
Samples Submitted: October 23, 2017
Laboratory Reference: 1710-292
Project: 520-Montlake Phase II

TOTAL METALS
EPA 6010C
MS/MSD QUALITY CONTROL

Date Extracted: 10-25-17
Date Analyzed: 10-25-17

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 10-276-01

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	**96.1**	96	**96.3**	96	0	
Barium	100	**134**	94	**135**	96	1	
Cadmium	50.0	**48.5**	97	**48.5**	97	0	
Chromium	100	**174**	84	**179**	89	3	
Lead	250	**232**	93	**234**	93	1	
Selenium	100	**95.0**	95	**94.8**	95	0	
Silver	25.0	**20.4**	82	**20.2**	81	1	

Date of Report: October 31, 2017
Samples Submitted: October 23, 2017
Laboratory Reference: 1710-292
Project: 520-Montlake Phase II

TOTAL MERCURY
EPA 7471B
MS/MSD QUALITY CONTROL

Date Extracted: 10-25-17
Date Analyzed: 10-25-17

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 10-286-01

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Mercury	0.500	**0.581**	116	**0.587**	117	1	

Date of Report: October 31, 2017
Samples Submitted: October 23, 2017
Laboratory Reference: 1710-292
Project: 520-Montlake Phase II

% MOISTURE

Date Analyzed: 10-24-17

Client ID	Lab ID	% Moisture
H-9-17-15'	10-292-02	20
H-10-17-10'	10-292-07	18

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 2

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

Company: INNOVEX
Project Number:
Project Name: 520/ MONTLAKE PH II
Project Manager: GLENN HAYMAN
Sampled by: M. WILLIAMS

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: 10-292

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx (modified)	NWTPH-Dx (☐ Acid / SG Clean-up) (modified)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	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	MERCURY EPA 7470 HOLD				% Moisture
1	H-9-17-10'	10.27.17	1015	S	6			X	X															X			
2	H-9-17-15'		1036			X		X	X	X			X		X				X				X				X
3	H-9-17-20'		1100																					X			
4	H-9-17-25'		1117 1107																					X			
5	H-9-17-30'		1143																					X			
6	H-10-17-5'	10.27	1242																					X			
7	H-10-17-10'		142			X		X	X	X			X		X				X				X				X
8	H-10-17-15'		228																					X			
9	H-10-17-20'		250																					X			
10	H-10-17-25'	↓	310	↓	↓																			X			

	Signature	Company	Date	Time
Relinquished	[signature]	INNOVEX	10/23/17	0940
Received	[signature]	OSE	10/23/17	0940
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions
email Glenn

Data Package: Standard ☒ Level III ☐ Level IV ☐

Chromatograms with final report ☐ 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: INNOVEX
Project Number:
Project Name: 520/MONTLAKE PH II
Project Manager: GLENN UNVIMAN
Sampled by: M. WILLIAMS

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: 10-292

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	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	1 Hold				% Moisture
11	H-10-17-30'	10.22.17	408	S	6																		X				

	Signature	Company	Date	Time
Relinquished		INNOVEX		
Received		OSR	10/23/17	9:40
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

email Glenn

Data Package: Standard ☒ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☒

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

November 6, 2017

Glenn Hayman
INNOVEX Environmental Mgt., Inc.
16310 NE 80th St., Suite 300
Redmond, WA 98052

Re: Analytical Data for Project 520-Montlake Phase II
Laboratory Reference No. 1710-367

Dear Glenn:

Enclosed are the analytical results and associated quality control data for samples submitted on October 27, 2017.

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 6, 2017
Samples Submitted: October 27, 2017
Laboratory Reference: 1710-367
Project: 520-Montlake Phase II

Case Narrative

Samples were collected on October 24 and 25, 2017 and received by the laboratory on October 27, 2017. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

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: November 6, 2017
Samples Submitted: October 27, 2017
Laboratory Reference: 1710-367
Project: 520-Montlake Phase II

NWTPH-HCID

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**H-8-17-5'**					
Laboratory ID:	10-367-01					
Gasoline Range Organics	**ND**	23	NWTPH-HCID	10-27-17	10-27-17	
Diesel Range Organics	**ND**	57	NWTPH-HCID	10-27-17	10-27-17	
Lube Oil Range Organics	**ND**	120	NWTPH-HCID	10-27-17	10-27-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*101*	*50-150*				

Date of Report: November 6, 2017
Samples Submitted: October 27, 2017
Laboratory Reference: 1710-367
Project: 520-Montlake Phase II

NWTPH-HCID
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1027S1					
Gasoline Range Organics	**ND**	20	NWTPH-HCID	10-27-17	10-27-17	
Diesel Range Organics	**ND**	50	NWTPH-HCID	10-27-17	10-27-17	
Lube Oil Range Organics	**ND**	100	NWTPH-HCID	10-27-17	10-27-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*105*	*50-150*				

Date of Report: November 6, 2017
Samples Submitted: October 27, 2017
Laboratory Reference: 1710-367
Project: 520-Montlake Phase II

VOLATILES EPA 8260C
page 1 of 2

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**H-8-17-5'**					
Laboratory ID:	10-367-01					
Dichlorodifluoromethane	ND	0.0012	EPA 8260C	10-27-17	10-27-17	
Chloromethane	ND	0.0059	EPA 8260C	10-27-17	10-27-17	
Vinyl Chloride	ND	0.0012	EPA 8260C	10-27-17	10-27-17	
Bromomethane	ND	0.0059	EPA 8260C	10-27-17	10-27-17	
Chloroethane	ND	0.0059	EPA 8260C	10-27-17	10-27-17	
Trichlorofluoromethane	ND	0.0012	EPA 8260C	10-27-17	10-27-17	
1,1-Dichloroethene	ND	0.0012	EPA 8260C	10-27-17	10-27-17	
Acetone	ND	0.0590	EPA 8260C	10-27-17	10-27-17	
Iodomethane	ND	0.0059	EPA 8260C	10-27-17	10-27-17	
Carbon Disulfide	ND	0.0012	EPA 8260C	10-27-17	10-27-17	
Methylene Chloride	ND	0.0059	EPA 8260C	10-27-17	10-27-17	
(trans) 1,2-Dichloroethene	ND	0.0012	EPA 8260C	10-27-17	10-27-17	
Methyl t-Butyl Ether	ND	0.0012	EPA 8260C	10-27-17	10-27-17	
1,1-Dichloroethane	ND	0.0012	EPA 8260C	10-27-17	10-27-17	
Vinyl Acetate	ND	0.0059	EPA 8260C	10-27-17	10-27-17	
2,2-Dichloropropane	ND	0.0012	EPA 8260C	10-27-17	10-27-17	
(cis) 1,2-Dichloroethene	ND	0.0012	EPA 8260C	10-27-17	10-27-17	
2-Butanone	ND	0.0120	EPA 8260C	10-27-17	10-27-17	
Bromochloromethane	ND	0.0012	EPA 8260C	10-27-17	10-27-17	
Chloroform	ND	0.0012	EPA 8260C	10-27-17	10-27-17	
1,1,1-Trichloroethane	ND	0.0012	EPA 8260C	10-27-17	10-27-17	
Carbon Tetrachloride	ND	0.0012	EPA 8260C	10-27-17	10-27-17	
1,1-Dichloropropene	ND	0.0012	EPA 8260C	10-27-17	10-27-17	
Benzene	ND	0.0012	EPA 8260C	10-27-17	10-27-17	
1,2-Dichloroethane	ND	0.0012	EPA 8260C	10-27-17	10-27-17	
Trichloroethene	ND	0.0012	EPA 8260C	10-27-17	10-27-17	
1,2-Dichloropropane	ND	0.0012	EPA 8260C	10-27-17	10-27-17	
Dibromomethane	ND	0.0012	EPA 8260C	10-27-17	10-27-17	
Bromodichloromethane	ND	0.0012	EPA 8260C	10-27-17	10-27-17	
2-Chloroethyl Vinyl Ether	ND	0.0059	EPA 8260C	10-27-17	10-27-17	
(cis) 1,3-Dichloropropene	ND	0.0012	EPA 8260C	10-27-17	10-27-17	
Methyl Isobutyl Ketone	ND	0.0059	EPA 8260C	10-27-17	10-27-17	
Toluene	ND	0.0059	EPA 8260C	10-27-17	10-27-17	
(trans) 1,3-Dichloropropene	ND	0.0012	EPA 8260C	10-27-17	10-27-17	

Date of Report: November 6, 2017
Samples Submitted: October 27, 2017
Laboratory Reference: 1710-367
Project: 520-Montlake Phase II

VOLATILES EPA 8260C
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**H-8-17-5'**					
Laboratory ID:	10-367-01					
1,1,2-Trichloroethane	ND	0.0012	EPA 8260C	10-27-17	10-27-17	
Tetrachloroethene	ND	0.0012	EPA 8260C	10-27-17	10-27-17	
1,3-Dichloropropane	ND	0.0012	EPA 8260C	10-27-17	10-27-17	
2-Hexanone	ND	0.0059	EPA 8260C	10-27-17	10-27-17	
Dibromochloromethane	ND	0.0012	EPA 8260C	10-27-17	10-27-17	
1,2-Dibromoethane	ND	0.0012	EPA 8260C	10-27-17	10-27-17	
Chlorobenzene	ND	0.0012	EPA 8260C	10-27-17	10-27-17	
1,1,1,2-Tetrachloroethane	ND	0.0012	EPA 8260C	10-27-17	10-27-17	
Ethylbenzene	ND	0.0012	EPA 8260C	10-27-17	10-27-17	
m,p-Xylene	ND	0.0024	EPA 8260C	10-27-17	10-27-17	
o-Xylene	ND	0.0012	EPA 8260C	10-27-17	10-27-17	
Styrene	ND	0.0012	EPA 8260C	10-27-17	10-27-17	
Bromoform	ND	0.0059	EPA 8260C	10-27-17	10-27-17	
Isopropylbenzene	ND	0.0012	EPA 8260C	10-27-17	10-27-17	
Bromobenzene	ND	0.0012	EPA 8260C	10-27-17	10-27-17	
1,1,2,2-Tetrachloroethane	ND	0.0012	EPA 8260C	10-27-17	10-27-17	
1,2,3-Trichloropropane	ND	0.0012	EPA 8260C	10-27-17	10-27-17	
n-Propylbenzene	ND	0.0012	EPA 8260C	10-27-17	10-27-17	
2-Chlorotoluene	ND	0.0012	EPA 8260C	10-27-17	10-27-17	
4-Chlorotoluene	ND	0.0012	EPA 8260C	10-27-17	10-27-17	
1,3,5-Trimethylbenzene	ND	0.0012	EPA 8260C	10-27-17	10-27-17	
tert-Butylbenzene	ND	0.0012	EPA 8260C	10-27-17	10-27-17	
1,2,4-Trimethylbenzene	ND	0.0012	EPA 8260C	10-27-17	10-27-17	
sec-Butylbenzene	ND	0.0012	EPA 8260C	10-27-17	10-27-17	
1,3-Dichlorobenzene	ND	0.0012	EPA 8260C	10-27-17	10-27-17	
p-Isopropyltoluene	ND	0.0012	EPA 8260C	10-27-17	10-27-17	
1,4-Dichlorobenzene	ND	0.0012	EPA 8260C	10-27-17	10-27-17	
1,2-Dichlorobenzene	ND	0.0012	EPA 8260C	10-27-17	10-27-17	
n-Butylbenzene	ND	0.0012	EPA 8260C	10-27-17	10-27-17	
1,2-Dibromo-3-chloropropane	ND	0.0059	EPA 8260C	10-27-17	10-27-17	
1,2,4-Trichlorobenzene	ND	0.0012	EPA 8260C	10-27-17	10-27-17	
Hexachlorobutadiene	ND	0.0059	EPA 8260C	10-27-17	10-27-17	
Naphthalene	ND	0.0012	EPA 8260C	10-27-17	10-27-17	
1,2,3-Trichlorobenzene	ND	0.0012	EPA 8260C	10-27-17	10-27-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*111*	*75-131*				
Toluene-d8	*109*	*83-126*				
4-Bromofluorobenzene	*111*	*78-125*				

Date of Report: November 6, 2017
Samples Submitted: October 27, 2017
Laboratory Reference: 1710-367
Project: 520-Montlake Phase II

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

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1027S1					
Dichlorodifluoromethane	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
Chloromethane	ND	0.0050	EPA 8260C	10-27-17	10-27-17	
Vinyl Chloride	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
Bromomethane	ND	0.0050	EPA 8260C	10-27-17	10-27-17	
Chloroethane	ND	0.0050	EPA 8260C	10-27-17	10-27-17	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
Acetone	ND	0.050	EPA 8260C	10-27-17	10-27-17	
Iodomethane	ND	0.0050	EPA 8260C	10-27-17	10-27-17	
Carbon Disulfide	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
Methylene Chloride	ND	0.0050	EPA 8260C	10-27-17	10-27-17	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
Vinyl Acetate	ND	0.0050	EPA 8260C	10-27-17	10-27-17	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
2-Butanone	ND	0.010	EPA 8260C	10-27-17	10-27-17	
Bromochloromethane	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
Chloroform	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
Benzene	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
Trichloroethene	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
Dibromomethane	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
Bromodichloromethane	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260C	10-27-17	10-27-17	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260C	10-27-17	10-27-17	
Toluene	ND	0.0050	EPA 8260C	10-27-17	10-27-17	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	10-27-17	10-27-17	

Date of Report: November 6, 2017
Samples Submitted: October 27, 2017
Laboratory Reference: 1710-367
Project: 520-Montlake Phase II

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

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1027S1					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
Tetrachloroethene	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
2-Hexanone	ND	0.0050	EPA 8260C	10-27-17	10-27-17	
Dibromochloromethane	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
Chlorobenzene	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
Ethylbenzene	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
m,p-Xylene	ND	0.0020	EPA 8260C	10-27-17	10-27-17	
o-Xylene	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
Styrene	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
Bromoform	ND	0.0050	EPA 8260C	10-27-17	10-27-17	
Isopropylbenzene	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
Bromobenzene	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
n-Propylbenzene	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
2-Chlorotoluene	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
4-Chlorotoluene	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
tert-Butylbenzene	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
sec-Butylbenzene	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
p-Isopropyltoluene	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
n-Butylbenzene	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	10-27-17	10-27-17	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	10-27-17	10-27-17	
Naphthalene	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*108*	*75-131*				
Toluene-d8	*109*	*83-126*				
4-Bromofluorobenzene	*108*	*78-125*				

Date of Report: November 6, 2017
Samples Submitted: October 27, 2017
Laboratory Reference: 1710-367
Project: 520-Montlake Phase II

VOLATILES by EPA 8260C
SB/SBD QUALITY CONTROL

Matrix: Soil
Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB1027S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**0.0518**	**0.0485**	0.0500	0.0500	104	97	58-126	7	20	
Benzene	**0.0538**	**0.0517**	0.0500	0.0500	108	103	72-122	4	19	
Trichloroethene	**0.0472**	**0.0449**	0.0500	0.0500	94	90	75-120	5	20	
Toluene	**0.0497**	**0.0481**	0.0500	0.0500	99	96	78-123	3	19	
Chlorobenzene	**0.0482**	**0.0468**	0.0500	0.0500	96	94	75-120	3	18	
Surrogate:										
Dibromofluoromethane					*100*	*98*	*75-131*			
Toluene-d8					*100*	*97*	*83-126*			
4-Bromofluorobenzene					*101*	*100*	*78-125*			

Date of Report: November 6, 2017
Samples Submitted: October 27, 2017
Laboratory Reference: 1710-367
Project: 520-Montlake Phase II

SEMIVOLATILES EPA 8270D/SIM
page 1 of 2

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**H-8-17-5'**					
Laboratory ID:	10-367-01					
n-Nitrosodimethylamine	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
Pyridine	**ND**	0.38	EPA 8270D	11-2-17	11-2-17	
Phenol	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
Aniline	**ND**	0.19	EPA 8270D	11-2-17	11-2-17	
bis(2-Chloroethyl)ether	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
2-Chlorophenol	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
1,3-Dichlorobenzene	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
1,4-Dichlorobenzene	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
Benzyl alcohol	**ND**	0.19	EPA 8270D	11-2-17	11-2-17	
1,2-Dichlorobenzene	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
2-Methylphenol (o-Cresol)	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
bis(2-Chloroisopropyl)ether	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
n-Nitroso-di-n-propylamine	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
Hexachloroethane	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
Nitrobenzene	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
Isophorone	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
2-Nitrophenol	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
2,4-Dimethylphenol	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
bis(2-Chloroethoxy)methane	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
2,4-Dichlorophenol	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
1,2,4-Trichlorobenzene	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
Naphthalene	**ND**	0.0077	EPA 8270D/SIM	11-2-17	11-2-17	
4-Chloroaniline	**ND**	0.19	EPA 8270D	11-2-17	11-2-17	
Hexachlorobutadiene	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
4-Chloro-3-methylphenol	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
2-Methylnaphthalene	**ND**	0.0077	EPA 8270D/SIM	11-2-17	11-2-17	
1-Methylnaphthalene	**ND**	0.0077	EPA 8270D/SIM	11-2-17	11-2-17	
Hexachlorocyclopentadiene	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
2,4,6-Trichlorophenol	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
2,3-Dichloroaniline	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
2,4,5-Trichlorophenol	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
2-Chloronaphthalene	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
2-Nitroaniline	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
1,4-Dinitrobenzene	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
Dimethylphthalate	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
1,3-Dinitrobenzene	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
2,6-Dinitrotoluene	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
1,2-Dinitrobenzene	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
Acenaphthylene	**ND**	0.0077	EPA 8270D/SIM	11-2-17	11-2-17	
3-Nitroaniline	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	

Date of Report: November 6, 2017
Samples Submitted: October 27, 2017
Laboratory Reference: 1710-367
Project: 520-Montlake Phase II

SEMIVOLATILES EPA 8270D/SIM
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**H-8-17-5'**					
Laboratory ID:	10-367-01					
2,4-Dinitrophenol	**ND**	0.19	EPA 8270D	11-2-17	11-2-17	
Acenaphthene	**ND**	0.0077	EPA 8270D/SIM	11-2-17	11-2-17	
4-Nitrophenol	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
2,4-Dinitrotoluene	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
Dibenzofuran	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
2,3,5,6-Tetrachlorophenol	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
2,3,4,6-Tetrachlorophenol	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
Diethylphthalate	**ND**	0.19	EPA 8270D	11-2-17	11-2-17	
4-Chlorophenyl-phenylether	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
4-Nitroaniline	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
Fluorene	**ND**	0.0077	EPA 8270D/SIM	11-2-17	11-2-17	
4,6-Dinitro-2-methylphenol	**ND**	0.19	EPA 8270D	11-2-17	11-2-17	
n-Nitrosodiphenylamine	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
1,2-Diphenylhydrazine	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
4-Bromophenyl-phenylether	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
Hexachlorobenzene	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
Pentachlorophenol	**ND**	0.19	EPA 8270D	11-2-17	11-2-17	
Phenanthrene	**ND**	0.0077	EPA 8270D/SIM	11-2-17	11-2-17	
Anthracene	**ND**	0.0077	EPA 8270D/SIM	11-2-17	11-2-17	
Carbazole	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
Di-n-butylphthalate	**ND**	0.19	EPA 8270D	11-2-17	11-2-17	
Fluoranthene	**ND**	0.0077	EPA 8270D/SIM	11-2-17	11-2-17	
Benzidine	**ND**	0.38	EPA 8270D	11-2-17	11-2-17	
Pyrene	**ND**	0.0077	EPA 8270D/SIM	11-2-17	11-2-17	
Butylbenzylphthalate	**ND**	0.19	EPA 8270D	11-2-17	11-2-17	
bis-2-Ethylhexyladipate	**ND**	0.19	EPA 8270D	11-2-17	11-2-17	
3,3'-Dichlorobenzidine	**ND**	0.19	EPA 8270D	11-2-17	11-2-17	
Benzo[a]anthracene	**ND**	0.0077	EPA 8270D/SIM	11-2-17	11-2-17	
Chrysene	**ND**	0.0077	EPA 8270D/SIM	11-2-17	11-2-17	
bis(2-Ethylhexyl)phthalate	**ND**	0.19	EPA 8270D	11-2-17	11-2-17	
Di-n-octylphthalate	**ND**	0.19	EPA 8270D	11-2-17	11-2-17	
Benzo[b]fluoranthene	**ND**	0.0077	EPA 8270D/SIM	11-2-17	11-2-17	
Benzo(j,k)fluoranthene	**ND**	0.0077	EPA 8270D/SIM	11-2-17	11-2-17	
Benzo[a]pyrene	**ND**	0.0077	EPA 8270D/SIM	11-2-17	11-2-17	
Indeno[1,2,3-cd]pyrene	**ND**	0.0077	EPA 8270D/SIM	11-2-17	11-2-17	
Dibenz[a,h]anthracene	**ND**	0.0077	EPA 8270D/SIM	11-2-17	11-2-17	
Benzo[g,h,i]perylene	**ND**	0.0077	EPA 8270D/SIM	11-2-17	11-2-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*63*	*18 - 113*				
Phenol-d6	*68*	*19 - 119*				
Nitrobenzene-d5	*63*	*19 - 119*				
2-Fluorobiphenyl	*73*	*33 - 109*				
2,4,6-Tribromophenol	*73*	*19 - 121*				
Terphenyl-d14	*79*	*30 - 116*				

Date of Report: November 6, 2017
Samples Submitted: October 27, 2017
Laboratory Reference: 1710-367
Project: 520-Montlake Phase II

SEMIVOLATILES EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
page 1 of 2

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1102S2					
n-Nitrosodimethylamine	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
Pyridine	**ND**	0.33	EPA 8270D	11-2-17	11-2-17	
Phenol	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
Aniline	**ND**	0.17	EPA 8270D	11-2-17	11-2-17	
bis(2-Chloroethyl)ether	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
2-Chlorophenol	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
1,3-Dichlorobenzene	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
1,4-Dichlorobenzene	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
Benzyl alcohol	**ND**	0.17	EPA 8270D	11-2-17	11-2-17	
1,2-Dichlorobenzene	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
2-Methylphenol (o-Cresol)	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
bis(2-Chloroisopropyl)ether	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
n-Nitroso-di-n-propylamine	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
Hexachloroethane	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
Nitrobenzene	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
Isophorone	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
2-Nitrophenol	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
2,4-Dimethylphenol	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
bis(2-Chloroethoxy)methane	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
2,4-Dichlorophenol	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
1,2,4-Trichlorobenzene	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
Naphthalene	**ND**	0.0067	EPA 8270D/SIM	11-2-17	11-2-17	
4-Chloroaniline	**ND**	0.17	EPA 8270D	11-2-17	11-2-17	
Hexachlorobutadiene	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
4-Chloro-3-methylphenol	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
2-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	11-2-17	11-2-17	
1-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	11-2-17	11-2-17	
Hexachlorocyclopentadiene	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
2,4,6-Trichlorophenol	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
2,3-Dichloroaniline	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
2,4,5-Trichlorophenol	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
2-Chloronaphthalene	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
2-Nitroaniline	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
1,4-Dinitrobenzene	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
Dimethylphthalate	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
1,3-Dinitrobenzene	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
2,6-Dinitrotoluene	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
1,2-Dinitrobenzene	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
Acenaphthylene	**ND**	0.0067	EPA 8270D/SIM	11-2-17	11-2-17	
3-Nitroaniline	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	

Date of Report: November 6, 2017
Samples Submitted: October 27, 2017
Laboratory Reference: 1710-367
Project: 520-Montlake Phase II

SEMIVOLATILES EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1102S2					
2,4-Dinitrophenol	**ND**	0.17	EPA 8270D	11-2-17	11-2-17	
Acenaphthene	**ND**	0.0067	EPA 8270D/SIM	11-2-17	11-2-17	
4-Nitrophenol	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
2,4-Dinitrotoluene	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
Dibenzofuran	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
2,3,5,6-Tetrachlorophenol	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
2,3,4,6-Tetrachlorophenol	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
Diethylphthalate	**ND**	0.17	EPA 8270D	11-2-17	11-2-17	
4-Chlorophenyl-phenylether	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
4-Nitroaniline	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
Fluorene	**ND**	0.0067	EPA 8270D/SIM	11-2-17	11-2-17	
4,6-Dinitro-2-methylphenol	**ND**	0.17	EPA 8270D	11-2-17	11-2-17	
n-Nitrosodiphenylamine	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
1,2-Diphenylhydrazine	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
4-Bromophenyl-phenylether	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
Hexachlorobenzene	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
Pentachlorophenol	**ND**	0.17	EPA 8270D	11-2-17	11-2-17	
Phenanthrene	**ND**	0.0067	EPA 8270D/SIM	11-2-17	11-2-17	
Anthracene	**ND**	0.0067	EPA 8270D/SIM	11-2-17	11-2-17	
Carbazole	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
Di-n-butylphthalate	**ND**	0.17	EPA 8270D	11-2-17	11-2-17	
Fluoranthene	**ND**	0.0067	EPA 8270D/SIM	11-2-17	11-2-17	
Benzidine	**ND**	0.33	EPA 8270D	11-2-17	11-2-17	
Pyrene	**ND**	0.0067	EPA 8270D/SIM	11-2-17	11-2-17	
Butylbenzylphthalate	**ND**	0.17	EPA 8270D	11-2-17	11-2-17	
bis-2-Ethylhexyladipate	**ND**	0.17	EPA 8270D	11-2-17	11-2-17	
3,3'-Dichlorobenzidine	**ND**	0.17	EPA 8270D	11-2-17	11-2-17	
Benzo[a]anthracene	**ND**	0.0067	EPA 8270D/SIM	11-2-17	11-2-17	
Chrysene	**ND**	0.0067	EPA 8270D/SIM	11-2-17	11-2-17	
bis(2-Ethylhexyl)phthalate	**ND**	0.17	EPA 8270D	11-2-17	11-2-17	
Di-n-octylphthalate	**ND**	0.17	EPA 8270D	11-2-17	11-2-17	
Benzo[b]fluoranthene	**ND**	0.0067	EPA 8270D/SIM	11-2-17	11-2-17	
Benzo(j,k)fluoranthene	**ND**	0.0067	EPA 8270D/SIM	11-2-17	11-2-17	
Benzo[a]pyrene	**ND**	0.0067	EPA 8270D/SIM	11-2-17	11-2-17	
Indeno[1,2,3-cd]pyrene	**ND**	0.0067	EPA 8270D/SIM	11-2-17	11-2-17	
Dibenz[a,h]anthracene	**ND**	0.0067	EPA 8270D/SIM	11-2-17	11-2-17	
Benzo[g,h,i]perylene	**ND**	0.0067	EPA 8270D/SIM	11-2-17	11-2-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*82*	*18 - 113*				
Phenol-d6	*85*	*19 - 119*				
Nitrobenzene-d5	*78*	*19 - 119*				
2-Fluorobiphenyl	*85*	*33 - 109*				
2,4,6-Tribromophenol	*88*	*19 - 121*				
Terphenyl-d14	*91*	*30 - 116*				

Date of Report: November 6, 2017
Samples Submitted: October 27, 2017
Laboratory Reference: 1710-367
Project: 520-Montlake Phase II

SEMIVOLATILES EPA 8270D/SIM
MS/MSD QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
MATRIX SPIKES											
Laboratory ID:	10-377-01										
	MS	MSD	MS	MSD		MS	MSD				
Phenol	**0.707**	**0.759**	1.33	1.33	ND	53	57	25 - 103	7	36	
2-Chlorophenol	**0.646**	**0.723**	1.33	1.33	ND	49	54	21 - 109	11	38	
1,4-Dichlorobenzene	**0.233**	**0.286**	0.667	0.667	ND	35	43	20 - 110	20	40	
n-Nitroso-di-n-propylamine	**0.351**	**0.402**	0.667	0.667	ND	53	60	20 - 111	14	38	
1,2,4-Trichlorobenzene	**0.324**	**0.366**	0.667	0.667	ND	49	55	20 - 107	12	40	
4-Chloro-3-methylphenol	**0.820**	**0.835**	1.33	1.33	ND	62	63	30 - 111	2	29	
Acenaphthene	**0.385**	**0.408**	0.667	0.667	ND	58	61	27 - 109	6	30	
4-Nitrophenol	**0.722**	**0.702**	1.33	1.33	ND	54	53	20 - 119	3	29	
2,4-Dinitrotoluene	**0.379**	**0.382**	0.667	0.667	ND	57	57	32 - 103	1	30	
Pentachlorophenol	**1.03**	**0.986**	1.33	1.33	ND	77	74	20 - 127	4	31	
Pyrene	**0.437**	**0.433**	0.667	0.667	ND	66	65	37 - 111	1	28	
Surrogate:											
2-Fluorophenol						*42*	*47*	*18 - 113*			
Phenol-d6						*52*	*56*	*19 - 119*			
Nitrobenzene-d5						*49*	*51*	*19 - 119*			
2-Fluorobiphenyl						*64*	*64*	*33 - 109*			
2,4,6-Tribromophenol						*65*	*63*	*19 - 121*			
Terphenyl-d14						*65*	*64*	*30 - 116*			

Date of Report: November 6, 2017
Samples Submitted: October 27, 2017
Laboratory Reference: 1710-367
Project: 520-Montlake Phase II

PCBs EPA 8082A

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**H-8-17-5'**					
Laboratory ID:	10-367-01					
Aroclor 1016	**ND**	0.057	EPA 8082A	10-30-17	10-30-17	
Aroclor 1221	**ND**	0.057	EPA 8082A	10-30-17	10-30-17	
Aroclor 1232	**ND**	0.057	EPA 8082A	10-30-17	10-30-17	
Aroclor 1242	**ND**	0.057	EPA 8082A	10-30-17	10-30-17	
Aroclor 1248	**ND**	0.057	EPA 8082A	10-30-17	10-30-17	
Aroclor 1254	**ND**	0.057	EPA 8082A	10-30-17	10-30-17	
Aroclor 1260	**ND**	0.057	EPA 8082A	10-30-17	10-30-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*78*	*40-134*				

Date of Report: November 6, 2017
Samples Submitted: October 27, 2017
Laboratory Reference: 1710-367
Project: 520-Montlake Phase II

PCBs EPA 8082A
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1030S1					
Aroclor 1016	**ND**	0.050	EPA 8082A	10-30-17	10-30-17	
Aroclor 1221	**ND**	0.050	EPA 8082A	10-30-17	10-30-17	
Aroclor 1232	**ND**	0.050	EPA 8082A	10-30-17	10-30-17	
Aroclor 1242	**ND**	0.050	EPA 8082A	10-30-17	10-30-17	
Aroclor 1248	**ND**	0.050	EPA 8082A	10-30-17	10-30-17	
Aroclor 1254	**ND**	0.050	EPA 8082A	10-30-17	10-30-17	
Aroclor 1260	**ND**	0.050	EPA 8082A	10-30-17	10-30-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*73*	*40-134*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
MATRIX SPIKES											
Laboratory ID:	10-372-01										
	MS	MSD	MS	MSD		MS	MSD				
Aroclor 1260	**0.407**	**0.419**	0.500	0.500	ND	**81**	**84**	34-126	3	16	
Surrogate:											
DCB						*75*	*80*	*40-134*			

Date of Report: November 6, 2017
Samples Submitted: October 27, 2017
Laboratory Reference: 1710-367
Project: 520-Montlake Phase II

TOTAL METALS
EPA 6010C/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	10-367-01					
Client ID:	**H-8-17-5'**					
Arsenic	**ND**	11	6010C	10-30-17	10-30-17	
Barium	**69**	2.9	6010C	10-30-17	10-30-17	
Cadmium	**ND**	0.57	6010C	10-30-17	10-30-17	
Chromium	**35**	0.57	6010C	10-30-17	10-30-17	
Lead	**ND**	5.7	6010C	10-30-17	10-30-17	
Mercury	**ND**	0.29	7471B	10-31-17	10-31-17	
Selenium	**ND**	11	6010C	10-30-17	10-30-17	
Silver	**ND**	1.1	6010C	10-30-17	10-30-17	

Date of Report: November 6, 2017
Samples Submitted: October 27, 2017
Laboratory Reference: 1710-367
Project: 520-Montlake Phase II

TOTAL METALS
EPA 6010C/7471B
METHOD BLANK QUALITY CONTROL

Date Extracted: 10-30&31-17
Date Analyzed: 10-30&31-17

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: MB1030SM1&MB1031S1

Analyte	Method	Result	PQL
Arsenic	6010C	**ND**	10
Barium	6010C	**ND**	2.5
Cadmium	6010C	**ND**	0.50
Chromium	6010C	**ND**	0.50
Lead	6010C	**ND**	5.0
Mercury	7471B	**ND**	0.25
Selenium	6010C	**ND**	10
Silver	6010C	**ND**	1.0

Date of Report: November 6, 2017
Samples Submitted: October 27, 2017
Laboratory Reference: 1710-367
Project: 520-Montlake Phase II

TOTAL METALS
EPA 6010C/7471B
DUPLICATE QUALITY CONTROL

Date Extracted: 10-30&31-17
Date Analyzed: 10-30&31-17

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 10-364-08

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**ND**	**ND**	NA	10	
Barium	**41.2**	**42.1**	2	2.5	
Cadmium	**ND**	**ND**	NA	0.50	
Chromium	**30.3**	**30.1**	1	0.50	
Lead	**ND**	**ND**	NA	5.0	
Mercury	**ND**	**ND**	NA	0.25	
Selenium	**ND**	**ND**	NA	10	
Silver	**ND**	**ND**	NA	1.0	

Date of Report: November 6, 2017
Samples Submitted: October 27, 2017
Laboratory Reference: 1710-367
Project: 520-Montlake Phase II

TOTAL METALS
EPA 6010C/7471B
MS/MSD QUALITY CONTROL

Date Extracted: 10-30&31-17
Date Analyzed: 10-30&31-17

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 10-364-08

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	**91.6**	92	**92.2**	92	1	
Barium	100	**136**	95	**135**	94	0	
Cadmium	50.0	**47.1**	94	**46.7**	93	1	
Chromium	100	**118**	87	**116**	86	1	
Lead	250	**222**	89	**217**	87	2	
Mercury	0.500	**0.506**	101	**0.503**	101	1	
Selenium	100	**95.9**	96	**94.7**	95	1	
Silver	25.0	**20.5**	82	**20.2**	81	2	

Date of Report: November 6, 2017
Samples Submitted: October 27, 2017
Laboratory Reference: 1710-367
Project: 520-Montlake Phase II

% MOISTURE

Date Analyzed: 10-27-17

Client ID	Lab ID	% Moisture
H-8-17-5'	10-367-01	13

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

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

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

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

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

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

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

I - Compound recovery is outside of the control limits.

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

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

L - The RPD is outside of the control limits.

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

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

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

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

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

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

Q - Surrogate recovery is outside of the control limits.

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

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

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

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

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

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

X - Sample extract treated with a mercury cleanup procedure.

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

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

Company: INNOVEX
Project Number:
Project Name: ~~GLEN H~~ 520/MONITAKE PH II
Project Manager: GLENN HAMMAN
Sampled by: M. WILLIAMS

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: 10-367

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx (HOLD)	NWTPH-Dx (☐ Acid / SG Clean-up) (HOLD)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	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	Mercury 7471B	HOLD			% Moisture
1	H-8-17 5'	10.24.17	1033	S	6	X		X	X	X			X		X				X				X				X
2	H-8-17 10'		1059																					X			
3	H-8-17 15'		1132																					X			
4	H-8-17 20'		1156																					X			
5	H-8-17 25'	10.25.17	1232																					X			
6	H-8-17 30'		1248																					X			
7	H-8-17 35'		108																					X			
8	H-8-17 40'		28																					X			
9	H-8-17 45'		259																					X			
10	H-8-17 50'		338																					X			

	Signature	Company	Date	Time
Relinquished		INNOVEX	10.27.17	9:20
Received		OnSite Env	10/27/17	920
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Data Package: Standard ☐ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☒

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

November 6, 2017

Glenn Hayman
INNOVEX Environmental Mgt., Inc.
16310 NE 80th St., Suite 300
Redmond, WA 98052

Re: Analytical Data for Project 520-Montlake Phase II
Laboratory Reference No. 1710-368

Dear Glenn:

Enclosed are the analytical results and associated quality control data for samples submitted on October 27, 2017.

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 6, 2017
Samples Submitted: October 27, 2017
Laboratory Reference: 1710-368
Project: 520-Montlake Phase II

Case Narrative

Samples were collected on October 23 and 24, 2017 and received by the laboratory on October 27, 2017. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

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: November 6, 2017
Samples Submitted: October 27, 2017
Laboratory Reference: 1710-368
Project: 520-Montlake Phase II

NWTPH-HCID

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**H-7-17-10'**					
Laboratory ID:	10-368-02					
Gasoline Range Organics	**ND**	23	NWTPH-HCID	10-27-17	10-27-17	
Diesel Range Organics	**ND**	56	NWTPH-HCID	10-27-17	10-27-17	
Lube Oil Range Organics	**ND**	110	NWTPH-HCID	10-27-17	10-27-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*100*	*50-150*				
Client ID:	**H-7-17-20'**					
Laboratory ID:	10-368-04					
Gasoline Range Organics	**ND**	22	NWTPH-HCID	10-27-17	10-27-17	
Diesel Range Organics	**ND**	55	NWTPH-HCID	10-27-17	10-27-17	
Lube Oil Range Organics	**ND**	110	NWTPH-HCID	10-27-17	10-27-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*99*	*50-150*				

Date of Report: November 6, 2017
Samples Submitted: October 27, 2017
Laboratory Reference: 1710-368
Project: 520-Montlake Phase II

NWTPH-HCID
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1027S1					
Gasoline Range Organics	**ND**	20	NWTPH-HCID	10-27-17	10-27-17	
Diesel Range Organics	**ND**	50	NWTPH-HCID	10-27-17	10-27-17	
Lube Oil Range Organics	**ND**	100	NWTPH-HCID	10-27-17	10-27-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*105*	*50-150*				

Date of Report: November 6, 2017
Samples Submitted: October 27, 2017
Laboratory Reference: 1710-368
Project: 520-Montlake Phase II

VOLATILES EPA 8260C

page 1 of 2

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**H-7-17-10'**					
Laboratory ID:	10-368-02					
Dichlorodifluoromethane	ND	0.00094	EPA 8260C	10-27-17	10-27-17	
Chloromethane	ND	0.0047	EPA 8260C	10-27-17	10-27-17	
Vinyl Chloride	ND	0.00094	EPA 8260C	10-27-17	10-27-17	
Bromomethane	ND	0.0047	EPA 8260C	10-27-17	10-27-17	
Chloroethane	ND	0.0047	EPA 8260C	10-27-17	10-27-17	
Trichlorofluoromethane	ND	0.00094	EPA 8260C	10-27-17	10-27-17	
1,1-Dichloroethene	ND	0.00094	EPA 8260C	10-27-17	10-27-17	
Acetone	ND	0.047	EPA 8260C	10-27-17	10-27-17	
Iodomethane	ND	0.0047	EPA 8260C	10-27-17	10-27-17	
Carbon Disulfide	ND	0.00094	EPA 8260C	10-27-17	10-27-17	
Methylene Chloride	ND	0.0047	EPA 8260C	10-27-17	10-27-17	
(trans) 1,2-Dichloroethene	ND	0.00094	EPA 8260C	10-27-17	10-27-17	
Methyl t-Butyl Ether	ND	0.00094	EPA 8260C	10-27-17	10-27-17	
1,1-Dichloroethane	ND	0.00094	EPA 8260C	10-27-17	10-27-17	
Vinyl Acetate	ND	0.0047	EPA 8260C	10-27-17	10-27-17	
2,2-Dichloropropane	ND	0.00094	EPA 8260C	10-27-17	10-27-17	
(cis) 1,2-Dichloroethene	ND	0.00094	EPA 8260C	10-27-17	10-27-17	
2-Butanone	ND	0.0094	EPA 8260C	10-27-17	10-27-17	
Bromochloromethane	ND	0.00094	EPA 8260C	10-27-17	10-27-17	
Chloroform	ND	0.00094	EPA 8260C	10-27-17	10-27-17	
1,1,1-Trichloroethane	ND	0.00094	EPA 8260C	10-27-17	10-27-17	
Carbon Tetrachloride	ND	0.00094	EPA 8260C	10-27-17	10-27-17	
1,1-Dichloropropene	ND	0.00094	EPA 8260C	10-27-17	10-27-17	
Benzene	ND	0.00094	EPA 8260C	10-27-17	10-27-17	
1,2-Dichloroethane	ND	0.00094	EPA 8260C	10-27-17	10-27-17	
Trichloroethene	ND	0.00094	EPA 8260C	10-27-17	10-27-17	
1,2-Dichloropropane	ND	0.00094	EPA 8260C	10-27-17	10-27-17	
Dibromomethane	ND	0.00094	EPA 8260C	10-27-17	10-27-17	
Bromodichloromethane	ND	0.00094	EPA 8260C	10-27-17	10-27-17	
2-Chloroethyl Vinyl Ether	ND	0.0047	EPA 8260C	10-27-17	10-27-17	
(cis) 1,3-Dichloropropene	ND	0.00094	EPA 8260C	10-27-17	10-27-17	
Methyl Isobutyl Ketone	ND	0.0047	EPA 8260C	10-27-17	10-27-17	
Toluene	ND	0.0047	EPA 8260C	10-27-17	10-27-17	
(trans) 1,3-Dichloropropene	ND	0.00094	EPA 8260C	10-27-17	10-27-17	

Date of Report: November 6, 2017
Samples Submitted: October 27, 2017
Laboratory Reference: 1710-368
Project: 520-Montlake Phase II

VOLATILES EPA 8260C
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**H-7-17-10'**					
Laboratory ID:	10-368-02					
1,1,2-Trichloroethane	ND	0.00094	EPA 8260C	10-27-17	10-27-17	
Tetrachloroethene	ND	0.00094	EPA 8260C	10-27-17	10-27-17	
1,3-Dichloropropane	ND	0.00094	EPA 8260C	10-27-17	10-27-17	
2-Hexanone	ND	0.0047	EPA 8260C	10-27-17	10-27-17	
Dibromochloromethane	ND	0.00094	EPA 8260C	10-27-17	10-27-17	
1,2-Dibromoethane	ND	0.00094	EPA 8260C	10-27-17	10-27-17	
Chlorobenzene	ND	0.00094	EPA 8260C	10-27-17	10-27-17	
1,1,1,2-Tetrachloroethane	ND	0.00094	EPA 8260C	10-27-17	10-27-17	
Ethylbenzene	ND	0.00094	EPA 8260C	10-27-17	10-27-17	
m,p-Xylene	ND	0.0019	EPA 8260C	10-27-17	10-27-17	
o-Xylene	ND	0.00094	EPA 8260C	10-27-17	10-27-17	
Styrene	ND	0.00094	EPA 8260C	10-27-17	10-27-17	
Bromoform	ND	0.0047	EPA 8260C	10-27-17	10-27-17	
Isopropylbenzene	ND	0.00094	EPA 8260C	10-27-17	10-27-17	
Bromobenzene	ND	0.00094	EPA 8260C	10-27-17	10-27-17	
1,1,2,2-Tetrachloroethane	ND	0.00094	EPA 8260C	10-27-17	10-27-17	
1,2,3-Trichloropropane	ND	0.00094	EPA 8260C	10-27-17	10-27-17	
n-Propylbenzene	ND	0.00094	EPA 8260C	10-27-17	10-27-17	
2-Chlorotoluene	ND	0.00094	EPA 8260C	10-27-17	10-27-17	
4-Chlorotoluene	ND	0.00094	EPA 8260C	10-27-17	10-27-17	
1,3,5-Trimethylbenzene	ND	0.00094	EPA 8260C	10-27-17	10-27-17	
tert-Butylbenzene	ND	0.00094	EPA 8260C	10-27-17	10-27-17	
1,2,4-Trimethylbenzene	ND	0.00094	EPA 8260C	10-27-17	10-27-17	
sec-Butylbenzene	ND	0.00094	EPA 8260C	10-27-17	10-27-17	
1,3-Dichlorobenzene	ND	0.00094	EPA 8260C	10-27-17	10-27-17	
p-Isopropyltoluene	ND	0.00094	EPA 8260C	10-27-17	10-27-17	
1,4-Dichlorobenzene	ND	0.00094	EPA 8260C	10-27-17	10-27-17	
1,2-Dichlorobenzene	ND	0.00094	EPA 8260C	10-27-17	10-27-17	
n-Butylbenzene	ND	0.00094	EPA 8260C	10-27-17	10-27-17	
1,2-Dibromo-3-chloropropane	ND	0.0047	EPA 8260C	10-27-17	10-27-17	
1,2,4-Trichlorobenzene	ND	0.00094	EPA 8260C	10-27-17	10-27-17	
Hexachlorobutadiene	ND	0.0047	EPA 8260C	10-27-17	10-27-17	
Naphthalene	ND	0.00094	EPA 8260C	10-27-17	10-27-17	
1,2,3-Trichlorobenzene	ND	0.00094	EPA 8260C	10-27-17	10-27-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*110*	*75-131*				
Toluene-d8	*108*	*83-126*				
4-Bromofluorobenzene	*112*	*78-125*				

Date of Report: November 6, 2017
Samples Submitted: October 27, 2017
Laboratory Reference: 1710-368
Project: 520-Montlake Phase II

VOLATILES EPA 8260C

page 1 of 2

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**H-7-17-20'**					
Laboratory ID:	10-368-04					
Dichlorodifluoromethane	ND	0.0011	EPA 8260C	10-27-17	10-27-17	
Chloromethane	ND	0.0053	EPA 8260C	10-27-17	10-27-17	
Vinyl Chloride	ND	0.0011	EPA 8260C	10-27-17	10-27-17	
Bromomethane	ND	0.0053	EPA 8260C	10-27-17	10-27-17	
Chloroethane	ND	0.0053	EPA 8260C	10-27-17	10-27-17	
Trichlorofluoromethane	ND	0.0011	EPA 8260C	10-27-17	10-27-17	
1,1-Dichloroethene	ND	0.0011	EPA 8260C	10-27-17	10-27-17	
Acetone	0.078	0.053	EPA 8260C	10-27-17	10-27-17	
Iodomethane	ND	0.0053	EPA 8260C	10-27-17	10-27-17	
Carbon Disulfide	0.0054	0.0011	EPA 8260C	10-27-17	10-27-17	
Methylene Chloride	ND	0.0053	EPA 8260C	10-27-17	10-27-17	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	10-27-17	10-27-17	
Methyl t-Butyl Ether	ND	0.0011	EPA 8260C	10-27-17	10-27-17	
1,1-Dichloroethane	ND	0.0011	EPA 8260C	10-27-17	10-27-17	
Vinyl Acetate	ND	0.0053	EPA 8260C	10-27-17	10-27-17	
2,2-Dichloropropane	ND	0.0011	EPA 8260C	10-27-17	10-27-17	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	10-27-17	10-27-17	
2-Butanone	0.014	0.011	EPA 8260C	10-27-17	10-27-17	
Bromochloromethane	ND	0.0011	EPA 8260C	10-27-17	10-27-17	
Chloroform	ND	0.0011	EPA 8260C	10-27-17	10-27-17	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260C	10-27-17	10-27-17	
Carbon Tetrachloride	ND	0.0011	EPA 8260C	10-27-17	10-27-17	
1,1-Dichloropropene	ND	0.0011	EPA 8260C	10-27-17	10-27-17	
Benzene	0.0096	0.0011	EPA 8260C	10-27-17	10-27-17	
1,2-Dichloroethane	ND	0.0011	EPA 8260C	10-27-17	10-27-17	
Trichloroethene	ND	0.0011	EPA 8260C	10-27-17	10-27-17	
1,2-Dichloropropane	ND	0.0011	EPA 8260C	10-27-17	10-27-17	
Dibromomethane	ND	0.0011	EPA 8260C	10-27-17	10-27-17	
Bromodichloromethane	ND	0.0011	EPA 8260C	10-27-17	10-27-17	
2-Chloroethyl Vinyl Ether	ND	0.0053	EPA 8260C	10-27-17	10-27-17	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	10-27-17	10-27-17	
Methyl Isobutyl Ketone	ND	0.0053	EPA 8260C	10-27-17	10-27-17	
Toluene	ND	0.0053	EPA 8260C	10-27-17	10-27-17	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	10-27-17	10-27-17	

Date of Report: November 6, 2017
Samples Submitted: October 27, 2017
Laboratory Reference: 1710-368
Project: 520-Montlake Phase II

VOLATILES EPA 8260C
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**H-7-17-20'**					
Laboratory ID:	10-368-04					
1,1,2-Trichloroethane	ND	0.0011	EPA 8260C	10-27-17	10-27-17	
Tetrachloroethene	ND	0.0011	EPA 8260C	10-27-17	10-27-17	
1,3-Dichloropropane	ND	0.0011	EPA 8260C	10-27-17	10-27-17	
2-Hexanone	ND	0.0053	EPA 8260C	10-27-17	10-27-17	
Dibromochloromethane	ND	0.0011	EPA 8260C	10-27-17	10-27-17	
1,2-Dibromoethane	ND	0.0011	EPA 8260C	10-27-17	10-27-17	
Chlorobenzene	ND	0.0011	EPA 8260C	10-27-17	10-27-17	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260C	10-27-17	10-27-17	
Ethylbenzene	0.0022	0.0011	EPA 8260C	10-27-17	10-27-17	
m,p-Xylene	0.0024	0.0021	EPA 8260C	10-27-17	10-27-17	
o-Xylene	ND	0.0011	EPA 8260C	10-27-17	10-27-17	
Styrene	ND	0.0011	EPA 8260C	10-27-17	10-27-17	
Bromoform	ND	0.0053	EPA 8260C	10-27-17	10-27-17	
Isopropylbenzene	0.0012	0.0011	EPA 8260C	10-27-17	10-27-17	
Bromobenzene	ND	0.0011	EPA 8260C	10-27-17	10-27-17	
1,1,2,2-Tetrachloroethane	ND	0.0011	EPA 8260C	10-27-17	10-27-17	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260C	10-27-17	10-27-17	
n-Propylbenzene	0.0035	0.0011	EPA 8260C	10-27-17	10-27-17	
2-Chlorotoluene	ND	0.0011	EPA 8260C	10-27-17	10-27-17	
4-Chlorotoluene	ND	0.0011	EPA 8260C	10-27-17	10-27-17	
1,3,5-Trimethylbenzene	ND	0.0011	EPA 8260C	10-27-17	10-27-17	
tert-Butylbenzene	ND	0.0011	EPA 8260C	10-27-17	10-27-17	
1,2,4-Trimethylbenzene	0.0015	0.0011	EPA 8260C	10-27-17	10-27-17	
sec-Butylbenzene	ND	0.0011	EPA 8260C	10-27-17	10-27-17	
1,3-Dichlorobenzene	ND	0.0011	EPA 8260C	10-27-17	10-27-17	
p-Isopropyltoluene	ND	0.0011	EPA 8260C	10-27-17	10-27-17	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260C	10-27-17	10-27-17	
1,2-Dichlorobenzene	ND	0.0011	EPA 8260C	10-27-17	10-27-17	
n-Butylbenzene	ND	0.0011	EPA 8260C	10-27-17	10-27-17	
1,2-Dibromo-3-chloropropane	ND	0.0053	EPA 8260C	10-27-17	10-27-17	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260C	10-27-17	10-27-17	
Hexachlorobutadiene	ND	0.0053	EPA 8260C	10-27-17	10-27-17	
Naphthalene	0.0027	0.0011	EPA 8260C	10-27-17	10-27-17	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260C	10-27-17	10-27-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*121*	*75-131*				
Toluene-d8	*121*	*83-126*				
4-Bromofluorobenzene	*123*	*78-125*				

Date of Report: November 6, 2017
Samples Submitted: October 27, 2017
Laboratory Reference: 1710-368
Project: 520-Montlake Phase II

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

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1027S1					
Dichlorodifluoromethane	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
Chloromethane	ND	0.0050	EPA 8260C	10-27-17	10-27-17	
Vinyl Chloride	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
Bromomethane	ND	0.0050	EPA 8260C	10-27-17	10-27-17	
Chloroethane	ND	0.0050	EPA 8260C	10-27-17	10-27-17	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
Acetone	ND	0.050	EPA 8260C	10-27-17	10-27-17	
Iodomethane	ND	0.0050	EPA 8260C	10-27-17	10-27-17	
Carbon Disulfide	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
Methylene Chloride	ND	0.0050	EPA 8260C	10-27-17	10-27-17	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
Vinyl Acetate	ND	0.0050	EPA 8260C	10-27-17	10-27-17	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
2-Butanone	ND	0.010	EPA 8260C	10-27-17	10-27-17	
Bromochloromethane	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
Chloroform	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
Benzene	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
Trichloroethene	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
Dibromomethane	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
Bromodichloromethane	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260C	10-27-17	10-27-17	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260C	10-27-17	10-27-17	
Toluene	ND	0.0050	EPA 8260C	10-27-17	10-27-17	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	10-27-17	10-27-17	

Date of Report: November 6, 2017
Samples Submitted: October 27, 2017
Laboratory Reference: 1710-368
Project: 520-Montlake Phase II

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

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1027S1					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
Tetrachloroethene	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
2-Hexanone	ND	0.0050	EPA 8260C	10-27-17	10-27-17	
Dibromochloromethane	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
Chlorobenzene	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
Ethylbenzene	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
m,p-Xylene	ND	0.0020	EPA 8260C	10-27-17	10-27-17	
o-Xylene	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
Styrene	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
Bromoform	ND	0.0050	EPA 8260C	10-27-17	10-27-17	
Isopropylbenzene	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
Bromobenzene	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
n-Propylbenzene	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
2-Chlorotoluene	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
4-Chlorotoluene	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
tert-Butylbenzene	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
sec-Butylbenzene	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
p-Isopropyltoluene	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
n-Butylbenzene	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	10-27-17	10-27-17	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	10-27-17	10-27-17	
Naphthalene	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	10-27-17	10-27-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*108*	*75-131*				
Toluene-d8	*109*	*83-126*				
4-Bromofluorobenzene	*108*	*78-125*				

Date of Report: November 6, 2017
Samples Submitted: October 27, 2017
Laboratory Reference: 1710-368
Project: 520-Montlake Phase II

VOLATILES by EPA 8260C
SB/SBD QUALITY CONTROL

Matrix: Soil
Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB1027S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**0.0518**	**0.0485**	0.0500	0.0500	104	97	58-126	7	20	
Benzene	**0.0538**	**0.0517**	0.0500	0.0500	108	103	72-122	4	19	
Trichloroethene	**0.0472**	**0.0449**	0.0500	0.0500	94	90	75-120	5	20	
Toluene	**0.0497**	**0.0481**	0.0500	0.0500	99	96	78-123	3	19	
Chlorobenzene	**0.0482**	**0.0468**	0.0500	0.0500	96	94	75-120	3	18	
Surrogate:										
Dibromofluoromethane					*100*	*98*	*75-131*			
Toluene-d8					*100*	*97*	*83-126*			
4-Bromofluorobenzene					*101*	*100*	*78-125*			

Date of Report: November 6, 2017
Samples Submitted: October 27, 2017
Laboratory Reference: 1710-368
Project: 520-Montlake Phase II

SEMIVOLATILES EPA 8270D/SIM

page 1 of 2

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**H-7-17-10'**					
Laboratory ID:	10-368-02					
n-Nitrosodimethylamine	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
Pyridine	**ND**	0.38	EPA 8270D	11-2-17	11-2-17	
Phenol	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
Aniline	**ND**	0.19	EPA 8270D	11-2-17	11-2-17	
bis(2-Chloroethyl)ether	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
2-Chlorophenol	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
1,3-Dichlorobenzene	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
1,4-Dichlorobenzene	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
Benzyl alcohol	**ND**	0.19	EPA 8270D	11-2-17	11-2-17	
1,2-Dichlorobenzene	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
2-Methylphenol (o-Cresol)	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
bis(2-Chloroisopropyl)ether	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
n-Nitroso-di-n-propylamine	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
Hexachloroethane	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
Nitrobenzene	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
Isophorone	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
2-Nitrophenol	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
2,4-Dimethylphenol	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
bis(2-Chloroethoxy)methane	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
2,4-Dichlorophenol	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
1,2,4-Trichlorobenzene	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
Naphthalene	**ND**	0.0075	EPA 8270D/SIM	11-2-17	11-2-17	
4-Chloroaniline	**ND**	0.19	EPA 8270D	11-2-17	11-2-17	
Hexachlorobutadiene	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
4-Chloro-3-methylphenol	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
2-Methylnaphthalene	**ND**	0.0075	EPA 8270D/SIM	11-2-17	11-2-17	
1-Methylnaphthalene	**ND**	0.0075	EPA 8270D/SIM	11-2-17	11-2-17	
Hexachlorocyclopentadiene	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
2,4,6-Trichlorophenol	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
2,3-Dichloroaniline	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
2,4,5-Trichlorophenol	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
2-Chloronaphthalene	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
2-Nitroaniline	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
1,4-Dinitrobenzene	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
Dimethylphthalate	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
1,3-Dinitrobenzene	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
2,6-Dinitrotoluene	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
1,2-Dinitrobenzene	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
Acenaphthylene	**ND**	0.0075	EPA 8270D/SIM	11-2-17	11-2-17	
3-Nitroaniline	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	

Date of Report: November 6, 2017
Samples Submitted: October 27, 2017
Laboratory Reference: 1710-368
Project: 520-Montlake Phase II

SEMIVOLATILES EPA 8270D/SIM
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**H-7-17-10'**					
Laboratory ID:	10-368-02					
2,4-Dinitrophenol	**ND**	0.19	EPA 8270D	11-2-17	11-2-17	
Acenaphthene	**ND**	0.0075	EPA 8270D/SIM	11-2-17	11-2-17	
4-Nitrophenol	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
2,4-Dinitrotoluene	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
Dibenzofuran	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
2,3,5,6-Tetrachlorophenol	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
2,3,4,6-Tetrachlorophenol	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
Diethylphthalate	**ND**	0.19	EPA 8270D	11-2-17	11-2-17	
4-Chlorophenyl-phenylether	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
4-Nitroaniline	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
Fluorene	**ND**	0.0075	EPA 8270D/SIM	11-2-17	11-2-17	
4,6-Dinitro-2-methylphenol	**ND**	0.19	EPA 8270D	11-2-17	11-2-17	
n-Nitrosodiphenylamine	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
1,2-Diphenylhydrazine	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
4-Bromophenyl-phenylether	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
Hexachlorobenzene	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
Pentachlorophenol	**ND**	0.19	EPA 8270D	11-2-17	11-2-17	
Phenanthrene	**0.019**	0.0075	EPA 8270D/SIM	11-2-17	11-2-17	
Anthracene	**ND**	0.0075	EPA 8270D/SIM	11-2-17	11-2-17	
Carbazole	**ND**	0.038	EPA 8270D	11-2-17	11-2-17	
Di-n-butylphthalate	**ND**	0.19	EPA 8270D	11-2-17	11-2-17	
Fluoranthene	**0.027**	0.0075	EPA 8270D/SIM	11-2-17	11-2-17	
Benzidine	**ND**	0.38	EPA 8270D	11-2-17	11-2-17	
Pyrene	**0.041**	0.038	EPA 8270D	11-2-17	11-2-17	
Butylbenzylphthalate	**ND**	0.19	EPA 8270D	11-2-17	11-2-17	
bis-2-Ethylhexyladipate	**ND**	0.19	EPA 8270D	11-2-17	11-2-17	
3,3'-Dichlorobenzidine	**ND**	0.19	EPA 8270D	11-2-17	11-2-17	
Benzo[a]anthracene	**0.017**	0.0075	EPA 8270D/SIM	11-2-17	11-2-17	
Chrysene	**0.019**	0.0075	EPA 8270D/SIM	11-2-17	11-2-17	
bis(2-Ethylhexyl)phthalate	**ND**	0.19	EPA 8270D	11-2-17	11-2-17	
Di-n-octylphthalate	**ND**	0.19	EPA 8270D	11-2-17	11-2-17	
Benzo[b]fluoranthene	**0.020**	0.0075	EPA 8270D/SIM	11-2-17	11-2-17	
Benzo(j,k)fluoranthene	**ND**	0.0075	EPA 8270D/SIM	11-2-17	11-2-17	
Benzo[a]pyrene	**0.020**	0.0075	EPA 8270D/SIM	11-2-17	11-2-17	
Indeno[1,2,3-cd]pyrene	**0.013**	0.0075	EPA 8270D/SIM	11-2-17	11-2-17	
Dibenz[a,h]anthracene	**ND**	0.0075	EPA 8270D/SIM	11-2-17	11-2-17	
Benzo[g,h,i]perylene	**0.014**	0.0075	EPA 8270D/SIM	11-2-17	11-2-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*53*	*18 - 113*				
Phenol-d6	*58*	*19 - 119*				
Nitrobenzene-d5	*53*	*19 - 119*				
2-Fluorobiphenyl	*66*	*33 - 109*				
2,4,6-Tribromophenol	*69*	*19 - 121*				
Terphenyl-d14	*70*	*30 - 116*				

Date of Report: November 6, 2017
Samples Submitted: October 27, 2017
Laboratory Reference: 1710-368
Project: 520-Montlake Phase II

SEMIVOLATILES EPA 8270D/SIM
page 1 of 2

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**H-7-17-20'**					
Laboratory ID:	10-368-04					
n-Nitrosodimethylamine	**ND**	0.036	EPA 8270D	11-2-17	11-2-17	
Pyridine	**ND**	0.36	EPA 8270D	11-2-17	11-2-17	
Phenol	**ND**	0.036	EPA 8270D	11-2-17	11-2-17	
Aniline	**ND**	0.18	EPA 8270D	11-2-17	11-2-17	
bis(2-Chloroethyl)ether	**ND**	0.036	EPA 8270D	11-2-17	11-2-17	
2-Chlorophenol	**ND**	0.036	EPA 8270D	11-2-17	11-2-17	
1,3-Dichlorobenzene	**ND**	0.036	EPA 8270D	11-2-17	11-2-17	
1,4-Dichlorobenzene	**ND**	0.036	EPA 8270D	11-2-17	11-2-17	
Benzyl alcohol	**ND**	0.18	EPA 8270D	11-2-17	11-2-17	
1,2-Dichlorobenzene	**ND**	0.036	EPA 8270D	11-2-17	11-2-17	
2-Methylphenol (o-Cresol)	**ND**	0.036	EPA 8270D	11-2-17	11-2-17	
bis(2-Chloroisopropyl)ether	**ND**	0.036	EPA 8270D	11-2-17	11-2-17	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.036	EPA 8270D	11-2-17	11-2-17	
n-Nitroso-di-n-propylamine	**ND**	0.036	EPA 8270D	11-2-17	11-2-17	
Hexachloroethane	**ND**	0.036	EPA 8270D	11-2-17	11-2-17	
Nitrobenzene	**ND**	0.036	EPA 8270D	11-2-17	11-2-17	
Isophorone	**ND**	0.036	EPA 8270D	11-2-17	11-2-17	
2-Nitrophenol	**ND**	0.036	EPA 8270D	11-2-17	11-2-17	
2,4-Dimethylphenol	**ND**	0.036	EPA 8270D	11-2-17	11-2-17	
bis(2-Chloroethoxy)methane	**ND**	0.036	EPA 8270D	11-2-17	11-2-17	
2,4-Dichlorophenol	**ND**	0.036	EPA 8270D	11-2-17	11-2-17	
1,2,4-Trichlorobenzene	**ND**	0.036	EPA 8270D	11-2-17	11-2-17	
Naphthalene	**ND**	0.0073	EPA 8270D/SIM	11-2-17	11-2-17	
4-Chloroaniline	**ND**	0.18	EPA 8270D	11-2-17	11-2-17	
Hexachlorobutadiene	**ND**	0.036	EPA 8270D	11-2-17	11-2-17	
4-Chloro-3-methylphenol	**ND**	0.036	EPA 8270D	11-2-17	11-2-17	
2-Methylnaphthalene	**ND**	0.0073	EPA 8270D/SIM	11-2-17	11-2-17	
1-Methylnaphthalene	**ND**	0.0073	EPA 8270D/SIM	11-2-17	11-2-17	
Hexachlorocyclopentadiene	**ND**	0.036	EPA 8270D	11-2-17	11-2-17	
2,4,6-Trichlorophenol	**ND**	0.036	EPA 8270D	11-2-17	11-2-17	
2,3-Dichloroaniline	**ND**	0.036	EPA 8270D	11-2-17	11-2-17	
2,4,5-Trichlorophenol	**ND**	0.036	EPA 8270D	11-2-17	11-2-17	
2-Chloronaphthalene	**ND**	0.036	EPA 8270D	11-2-17	11-2-17	
2-Nitroaniline	**ND**	0.036	EPA 8270D	11-2-17	11-2-17	
1,4-Dinitrobenzene	**ND**	0.036	EPA 8270D	11-2-17	11-2-17	
Dimethylphthalate	**ND**	0.036	EPA 8270D	11-2-17	11-2-17	
1,3-Dinitrobenzene	**ND**	0.036	EPA 8270D	11-2-17	11-2-17	
2,6-Dinitrotoluene	**ND**	0.036	EPA 8270D	11-2-17	11-2-17	
1,2-Dinitrobenzene	**ND**	0.036	EPA 8270D	11-2-17	11-2-17	
Acenaphthylene	**ND**	0.0073	EPA 8270D/SIM	11-2-17	11-2-17	
3-Nitroaniline	**ND**	0.036	EPA 8270D	11-2-17	11-2-17	

Date of Report: November 6, 2017
Samples Submitted: October 27, 2017
Laboratory Reference: 1710-368
Project: 520-Montlake Phase II

SEMIVOLATILES EPA 8270D/SIM
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**H-7-17-20'**					
Laboratory ID:	10-368-04					
2,4-Dinitrophenol	**ND**	0.18	EPA 8270D	11-2-17	11-2-17	
Acenaphthene	**ND**	0.0073	EPA 8270D/SIM	11-2-17	11-2-17	
4-Nitrophenol	**ND**	0.036	EPA 8270D	11-2-17	11-2-17	
2,4-Dinitrotoluene	**ND**	0.036	EPA 8270D	11-2-17	11-2-17	
Dibenzofuran	**ND**	0.036	EPA 8270D	11-2-17	11-2-17	
2,3,5,6-Tetrachlorophenol	**ND**	0.036	EPA 8270D	11-2-17	11-2-17	
2,3,4,6-Tetrachlorophenol	**ND**	0.036	EPA 8270D	11-2-17	11-2-17	
Diethylphthalate	**ND**	0.18	EPA 8270D	11-2-17	11-2-17	
4-Chlorophenyl-phenylether	**ND**	0.036	EPA 8270D	11-2-17	11-2-17	
4-Nitroaniline	**ND**	0.036	EPA 8270D	11-2-17	11-2-17	
Fluorene	**ND**	0.0073	EPA 8270D/SIM	11-2-17	11-2-17	
4,6-Dinitro-2-methylphenol	**ND**	0.18	EPA 8270D	11-2-17	11-2-17	
n-Nitrosodiphenylamine	**ND**	0.036	EPA 8270D	11-2-17	11-2-17	
1,2-Diphenylhydrazine	**ND**	0.036	EPA 8270D	11-2-17	11-2-17	
4-Bromophenyl-phenylether	**ND**	0.036	EPA 8270D	11-2-17	11-2-17	
Hexachlorobenzene	**ND**	0.036	EPA 8270D	11-2-17	11-2-17	
Pentachlorophenol	**ND**	0.18	EPA 8270D	11-2-17	11-2-17	
Phenanthrene	**ND**	0.0073	EPA 8270D/SIM	11-2-17	11-2-17	
Anthracene	**ND**	0.0073	EPA 8270D/SIM	11-2-17	11-2-17	
Carbazole	**ND**	0.036	EPA 8270D	11-2-17	11-2-17	
Di-n-butylphthalate	**ND**	0.18	EPA 8270D	11-2-17	11-2-17	
Fluoranthene	**ND**	0.0073	EPA 8270D/SIM	11-2-17	11-2-17	
Benzidine	**ND**	0.36	EPA 8270D	11-2-17	11-2-17	
Pyrene	**ND**	0.0073	EPA 8270D/SIM	11-2-17	11-2-17	
Butylbenzylphthalate	**ND**	0.18	EPA 8270D	11-2-17	11-2-17	
bis-2-Ethylhexyladipate	**ND**	0.18	EPA 8270D	11-2-17	11-2-17	
3,3'-Dichlorobenzidine	**ND**	0.18	EPA 8270D	11-2-17	11-2-17	
Benzo[a]anthracene	**ND**	0.0073	EPA 8270D/SIM	11-2-17	11-2-17	
Chrysene	**ND**	0.0073	EPA 8270D/SIM	11-2-17	11-2-17	
bis(2-Ethylhexyl)phthalate	**ND**	0.18	EPA 8270D	11-2-17	11-2-17	
Di-n-octylphthalate	**ND**	0.18	EPA 8270D	11-2-17	11-2-17	
Benzo[b]fluoranthene	**ND**	0.0073	EPA 8270D/SIM	11-2-17	11-2-17	
Benzo(j,k)fluoranthene	**ND**	0.0073	EPA 8270D/SIM	11-2-17	11-2-17	
Benzo[a]pyrene	**ND**	0.0073	EPA 8270D/SIM	11-2-17	11-2-17	
Indeno[1,2,3-cd]pyrene	**ND**	0.0073	EPA 8270D/SIM	11-2-17	11-2-17	
Dibenz[a,h]anthracene	**ND**	0.0073	EPA 8270D/SIM	11-2-17	11-2-17	
Benzo[g,h,i]perylene	**ND**	0.0073	EPA 8270D/SIM	11-2-17	11-2-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*74*	*18 - 113*				
Phenol-d6	*78*	*19 - 119*				
Nitrobenzene-d5	*69*	*19 - 119*				
2-Fluorobiphenyl	*76*	*33 - 109*				
2,4,6-Tribromophenol	*78*	*19 - 121*				
Terphenyl-d14	*80*	*30 - 116*				

Date of Report: November 6, 2017
Samples Submitted: October 27, 2017
Laboratory Reference: 1710-368
Project: 520-Montlake Phase II

SEMIVOLATILES EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
page 1 of 2

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1102S2					
n-Nitrosodimethylamine	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
Pyridine	**ND**	0.33	EPA 8270D	11-2-17	11-2-17	
Phenol	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
Aniline	**ND**	0.17	EPA 8270D	11-2-17	11-2-17	
bis(2-Chloroethyl)ether	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
2-Chlorophenol	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
1,3-Dichlorobenzene	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
1,4-Dichlorobenzene	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
Benzyl alcohol	**ND**	0.17	EPA 8270D	11-2-17	11-2-17	
1,2-Dichlorobenzene	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
2-Methylphenol (o-Cresol)	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
bis(2-Chloroisopropyl)ether	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
n-Nitroso-di-n-propylamine	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
Hexachloroethane	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
Nitrobenzene	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
Isophorone	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
2-Nitrophenol	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
2,4-Dimethylphenol	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
bis(2-Chloroethoxy)methane	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
2,4-Dichlorophenol	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
1,2,4-Trichlorobenzene	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
Naphthalene	**ND**	0.0067	EPA 8270D/SIM	11-2-17	11-2-17	
4-Chloroaniline	**ND**	0.17	EPA 8270D	11-2-17	11-2-17	
Hexachlorobutadiene	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
4-Chloro-3-methylphenol	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
2-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	11-2-17	11-2-17	
1-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	11-2-17	11-2-17	
Hexachlorocyclopentadiene	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
2,4,6-Trichlorophenol	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
2,3-Dichloroaniline	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
2,4,5-Trichlorophenol	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
2-Chloronaphthalene	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
2-Nitroaniline	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
1,4-Dinitrobenzene	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
Dimethylphthalate	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
1,3-Dinitrobenzene	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
2,6-Dinitrotoluene	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
1,2-Dinitrobenzene	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
Acenaphthylene	**ND**	0.0067	EPA 8270D/SIM	11-2-17	11-2-17	
3-Nitroaniline	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	

Date of Report: November 6, 2017
Samples Submitted: October 27, 2017
Laboratory Reference: 1710-368
Project: 520-Montlake Phase II

SEMIVOLATILES EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1102S2					
2,4-Dinitrophenol	**ND**	0.17	EPA 8270D	11-2-17	11-2-17	
Acenaphthene	**ND**	0.0067	EPA 8270D/SIM	11-2-17	11-2-17	
4-Nitrophenol	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
2,4-Dinitrotoluene	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
Dibenzofuran	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
2,3,5,6-Tetrachlorophenol	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
2,3,4,6-Tetrachlorophenol	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
Diethylphthalate	**ND**	0.17	EPA 8270D	11-2-17	11-2-17	
4-Chlorophenyl-phenylether	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
4-Nitroaniline	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
Fluorene	**ND**	0.0067	EPA 8270D/SIM	11-2-17	11-2-17	
4,6-Dinitro-2-methylphenol	**ND**	0.17	EPA 8270D	11-2-17	11-2-17	
n-Nitrosodiphenylamine	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
1,2-Diphenylhydrazine	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
4-Bromophenyl-phenylether	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
Hexachlorobenzene	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
Pentachlorophenol	**ND**	0.17	EPA 8270D	11-2-17	11-2-17	
Phenanthrene	**ND**	0.0067	EPA 8270D/SIM	11-2-17	11-2-17	
Anthracene	**ND**	0.0067	EPA 8270D/SIM	11-2-17	11-2-17	
Carbazole	**ND**	0.033	EPA 8270D	11-2-17	11-2-17	
Di-n-butylphthalate	**ND**	0.17	EPA 8270D	11-2-17	11-2-17	
Fluoranthene	**ND**	0.0067	EPA 8270D/SIM	11-2-17	11-2-17	
Benzidine	**ND**	0.33	EPA 8270D	11-2-17	11-2-17	
Pyrene	**ND**	0.0067	EPA 8270D/SIM	11-2-17	11-2-17	
Butylbenzylphthalate	**ND**	0.17	EPA 8270D	11-2-17	11-2-17	
bis-2-Ethylhexyladipate	**ND**	0.17	EPA 8270D	11-2-17	11-2-17	
3,3'-Dichlorobenzidine	**ND**	0.17	EPA 8270D	11-2-17	11-2-17	
Benzo[a]anthracene	**ND**	0.0067	EPA 8270D/SIM	11-2-17	11-2-17	
Chrysene	**ND**	0.0067	EPA 8270D/SIM	11-2-17	11-2-17	
bis(2-Ethylhexyl)phthalate	**ND**	0.17	EPA 8270D	11-2-17	11-2-17	
Di-n-octylphthalate	**ND**	0.17	EPA 8270D	11-2-17	11-2-17	
Benzo[b]fluoranthene	**ND**	0.0067	EPA 8270D/SIM	11-2-17	11-2-17	
Benzo(j,k)fluoranthene	**ND**	0.0067	EPA 8270D/SIM	11-2-17	11-2-17	
Benzo[a]pyrene	**ND**	0.0067	EPA 8270D/SIM	11-2-17	11-2-17	
Indeno[1,2,3-cd]pyrene	**ND**	0.0067	EPA 8270D/SIM	11-2-17	11-2-17	
Dibenz[a,h]anthracene	**ND**	0.0067	EPA 8270D/SIM	11-2-17	11-2-17	
Benzo[g,h,i]perylene	**ND**	0.0067	EPA 8270D/SIM	11-2-17	11-2-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*82*	*18 - 113*				
Phenol-d6	*85*	*19 - 119*				
Nitrobenzene-d5	*78*	*19 - 119*				
2-Fluorobiphenyl	*85*	*33 - 109*				
2,4,6-Tribromophenol	*88*	*19 - 121*				
Terphenyl-d14	*91*	*30 - 116*				

Date of Report: November 6, 2017
Samples Submitted: October 27, 2017
Laboratory Reference: 1710-368
Project: 520-Montlake Phase II

SEMIVOLATILES EPA 8270D/SIM
MS/MSD QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
MATRIX SPIKES											
Laboratory ID:	10-377-01										
	MS	MSD	MS	MSD		MS	MSD				
Phenol	**0.707**	**0.759**	1.33	1.33	ND	53	57	25 - 103	7	36	
2-Chlorophenol	**0.646**	**0.723**	1.33	1.33	ND	49	54	21 - 109	11	38	
1,4-Dichlorobenzene	**0.233**	**0.286**	0.667	0.667	ND	35	43	20 - 110	20	40	
n-Nitroso-di-n-propylamine	**0.351**	**0.402**	0.667	0.667	ND	53	60	20 - 111	14	38	
1,2,4-Trichlorobenzene	**0.324**	**0.366**	0.667	0.667	ND	49	55	20 - 107	12	40	
4-Chloro-3-methylphenol	**0.820**	**0.835**	1.33	1.33	ND	62	63	30 - 111	2	29	
Acenaphthene	**0.385**	**0.408**	0.667	0.667	ND	58	61	27 - 109	6	30	
4-Nitrophenol	**0.722**	**0.702**	1.33	1.33	ND	54	53	20 - 119	3	29	
2,4-Dinitrotoluene	**0.379**	**0.382**	0.667	0.667	ND	57	57	32 - 103	1	30	
Pentachlorophenol	**1.03**	**0.986**	1.33	1.33	ND	77	74	20 - 127	4	31	
Pyrene	**0.437**	**0.433**	0.667	0.667	ND	66	65	37 - 111	1	28	
Surrogate:											
2-Fluorophenol						*42*	*47*	*18 - 113*			
Phenol-d6						*52*	*56*	*19 - 119*			
Nitrobenzene-d5						*49*	*51*	*19 - 119*			
2-Fluorobiphenyl						*64*	*64*	*33 - 109*			
2,4,6-Tribromophenol						*65*	*63*	*19 - 121*			
Terphenyl-d14						*65*	*64*	*30 - 116*			

Date of Report: November 6, 2017
Samples Submitted: October 27, 2017
Laboratory Reference: 1710-368
Project: 520-Montlake Phase II

PCBs EPA 8082A

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**H-7-17-10'**					
Laboratory ID:	10-368-02					
Aroclor 1016	**ND**	0.056	EPA 8082A	10-30-17	10-30-17	
Aroclor 1221	**ND**	0.056	EPA 8082A	10-30-17	10-30-17	
Aroclor 1232	**ND**	0.056	EPA 8082A	10-30-17	10-30-17	
Aroclor 1242	**ND**	0.056	EPA 8082A	10-30-17	10-30-17	
Aroclor 1248	**ND**	0.056	EPA 8082A	10-30-17	10-30-17	
Aroclor 1254	**ND**	0.056	EPA 8082A	10-30-17	10-30-17	
Aroclor 1260	**ND**	0.056	EPA 8082A	10-30-17	10-30-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*61*	*40-134*				
Client ID:	**H-7-17-20'**					
Laboratory ID:	10-368-04					
Aroclor 1016	**ND**	0.055	EPA 8082A	10-30-17	10-30-17	
Aroclor 1221	**ND**	0.055	EPA 8082A	10-30-17	10-30-17	
Aroclor 1232	**ND**	0.055	EPA 8082A	10-30-17	10-30-17	
Aroclor 1242	**ND**	0.055	EPA 8082A	10-30-17	10-30-17	
Aroclor 1248	**ND**	0.055	EPA 8082A	10-30-17	10-30-17	
Aroclor 1254	**ND**	0.055	EPA 8082A	10-30-17	10-30-17	
Aroclor 1260	**ND**	0.055	EPA 8082A	10-30-17	10-30-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*70*	*40-134*				

Date of Report: November 6, 2017
Samples Submitted: October 27, 2017
Laboratory Reference: 1710-368
Project: 520-Montlake Phase II

PCBs EPA 8082A
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1030S1					
Aroclor 1016	**ND**	0.050	EPA 8082A	10-30-17	10-30-17	
Aroclor 1221	**ND**	0.050	EPA 8082A	10-30-17	10-30-17	
Aroclor 1232	**ND**	0.050	EPA 8082A	10-30-17	10-30-17	
Aroclor 1242	**ND**	0.050	EPA 8082A	10-30-17	10-30-17	
Aroclor 1248	**ND**	0.050	EPA 8082A	10-30-17	10-30-17	
Aroclor 1254	**ND**	0.050	EPA 8082A	10-30-17	10-30-17	
Aroclor 1260	**ND**	0.050	EPA 8082A	10-30-17	10-30-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*73*	*40-134*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
MATRIX SPIKES											
Laboratory ID:	10-372-01										
	MS	MSD	MS	MSD		MS	MSD				
Aroclor 1260	**0.407**	**0.419**	0.500	0.500	ND	**81**	**84**	34-126	3	16	
Surrogate:											
DCB						*75*	*80*	*40-134*			

Date of Report: November 6, 2017
Samples Submitted: October 27, 2017
Laboratory Reference: 1710-368
Project: 520-Montlake Phase II

TOTAL METALS
EPA 6010C/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	10-368-02					
Client ID:	**H-7-17-10'**					
Arsenic	**ND**	11	6010C	10-30-17	10-30-17	
Barium	**59**	2.8	6010C	10-30-17	10-30-17	
Cadmium	**ND**	0.56	6010C	10-30-17	10-30-17	
Chromium	**37**	0.56	6010C	10-30-17	10-30-17	
Lead	**6.0**	5.6	6010C	10-30-17	10-30-17	
Mercury	**ND**	0.28	7471B	10-31-17	10-31-17	
Selenium	**ND**	11	6010C	10-30-17	10-30-17	
Silver	**ND**	1.1	6010C	10-30-17	10-30-17	
Lab ID:	10-368-04					
Client ID:	**H-7-17-20'**					
Arsenic	**ND**	11	6010C	10-30-17	10-30-17	
Barium	**42**	2.7	6010C	10-30-17	10-30-17	
Cadmium	**ND**	0.55	6010C	10-30-17	10-30-17	
Chromium	**35**	0.55	6010C	10-30-17	10-30-17	
Lead	**ND**	5.5	6010C	10-30-17	10-30-17	
Mercury	**ND**	0.27	7471B	10-31-17	10-31-17	
Selenium	**ND**	11	6010C	10-30-17	10-30-17	
Silver	**ND**	1.1	6010C	10-30-17	10-30-17	

Date of Report: November 6, 2017
Samples Submitted: October 27, 2017
Laboratory Reference: 1710-368
Project: 520-Montlake Phase II

TOTAL METALS
EPA 6010C/7471B
METHOD BLANK QUALITY CONTROL

Date Extracted: 10-30&31-17
Date Analyzed: 10-30&31-17

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: MB1030SM1&MB1031S1

Analyte	Method	Result	PQL
Arsenic	6010C	**ND**	10
Barium	6010C	**ND**	2.5
Cadmium	6010C	**ND**	0.50
Chromium	6010C	**ND**	0.50
Lead	6010C	**ND**	5.0
Mercury	7471B	**ND**	0.25
Selenium	6010C	**ND**	10
Silver	6010C	**ND**	1.0

Date of Report: November 6, 2017
Samples Submitted: October 27, 2017
Laboratory Reference: 1710-368
Project: 520-Montlake Phase II

TOTAL METALS
EPA 6010C/7471B
DUPLICATE QUALITY CONTROL

Date Extracted: 10-30&31-17
Date Analyzed: 10-30&31-17

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 10-364-08

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**ND**	**ND**	NA	10	
Barium	**41.2**	**42.1**	2	2.5	
Cadmium	**ND**	**ND**	NA	0.50	
Chromium	**30.3**	**30.1**	1	0.50	
Lead	**ND**	**ND**	NA	5.0	
Mercury	**ND**	**ND**	NA	0.25	
Selenium	**ND**	**ND**	NA	10	
Silver	**ND**	**ND**	NA	1.0	

Date of Report: November 6, 2017
Samples Submitted: October 27, 2017
Laboratory Reference: 1710-368
Project: 520-Montlake Phase II

TOTAL METALS
EPA 6010C/7471B
MS/MSD QUALITY CONTROL

Date Extracted: 10-30&31-17
Date Analyzed: 10-30&31-17

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 10-364-08

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	**91.6**	92	**92.2**	92	1	
Barium	100	**136**	95	**135**	94	0	
Cadmium	50.0	**47.1**	94	**46.7**	93	1	
Chromium	100	**118**	87	**116**	86	1	
Lead	250	**222**	89	**217**	87	2	
Mercury	0.500	**0.506**	101	**0.503**	101	1	
Selenium	100	**95.9**	96	**94.7**	95	1	
Silver	25.0	**20.5**	82	**20.2**	81	2	

Date of Report: November 6, 2017
Samples Submitted: October 27, 2017
Laboratory Reference: 1710-368
Project: 520-Montlake Phase II

% MOISTURE

Date Analyzed: 10-27-17

Client ID	Lab ID	% Moisture
H-7-17-10'	10-368-02	11
H-7-17-20'	10-368-04	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 -

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: INNOVEX
Project Number:
Project Name: 520/MONTLAKE PH II
Project Manager: GLENN HAYMAN
Sampled by: M. WILLIAMS

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: 10-368

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	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	Mercury 7471B	HOLD			% Moisture
1	H.7.17 5'	10.23.17	1008	S	6	X																		X			
2	H.7.17 10'		1018			X	X (NO)	X (HOLD)	X (HOLD)	X			X		X				X				X				X
3	H.7.17 15'		1035																					X			
4	H.7.17 20'		1103			X		X	X	X			X		X				X				X				X
5	H.7.17 25'		1130																					X			
6	H.7.17 30'	10.24.17	1220																					X			
7	H.7.17 35'		1240																					X			
8	H.7.17 40'		131																					X			
9	H.7.17 45'		159																					X			
10	H.7.17 50'		240																					X			

	Signature	Company	Date	Time
Relinquished		INNOVEX	10.27.17	9:20
Received			10/27/17	9 20
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Data Package: Standard ☐ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☒