APPENDIX B

CITY OF SEATTLE REGRADE AND REGIONAL FILLING RECORDS

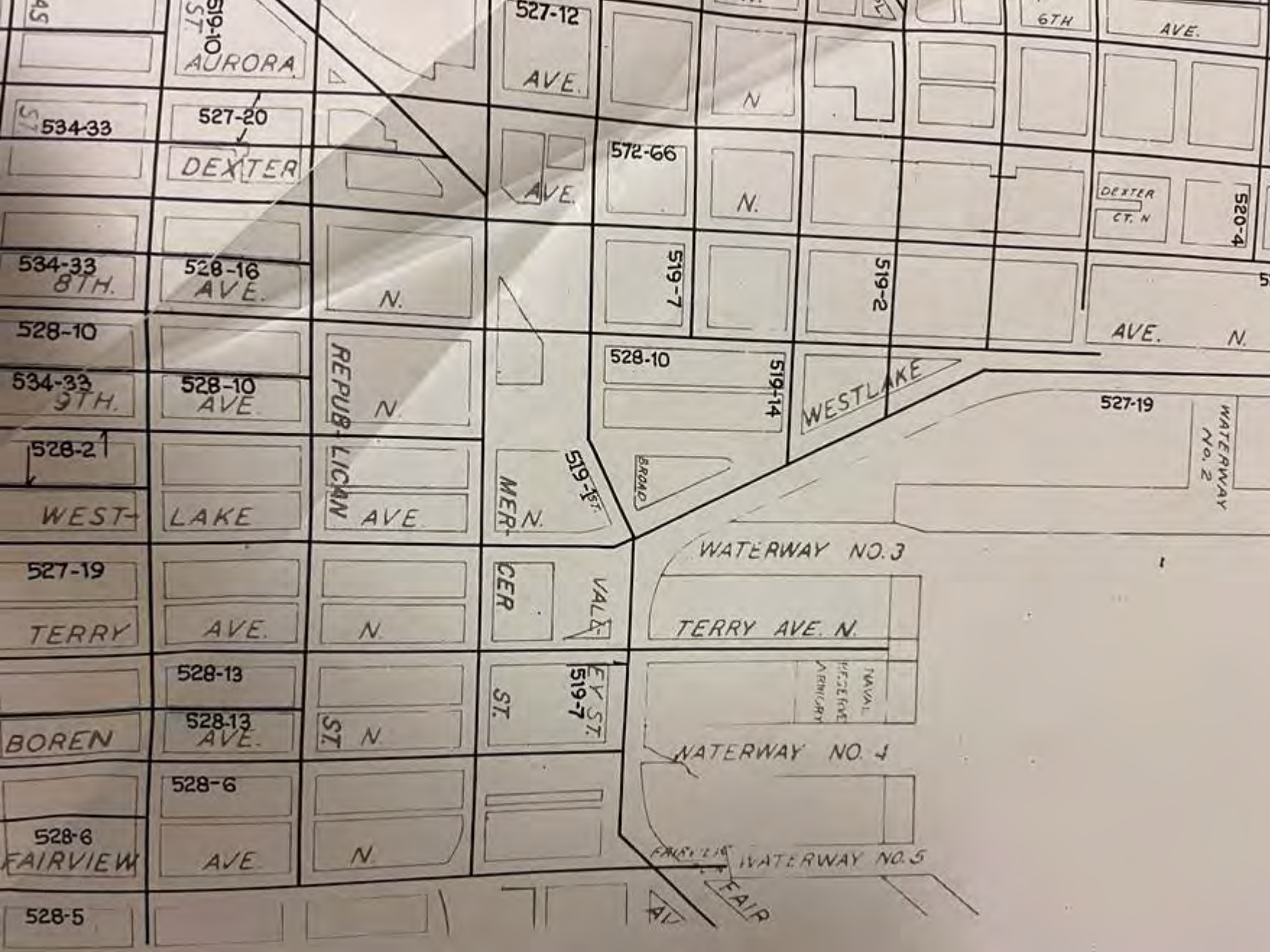
REMEDIAL INVESTIGATION WORK PLAN

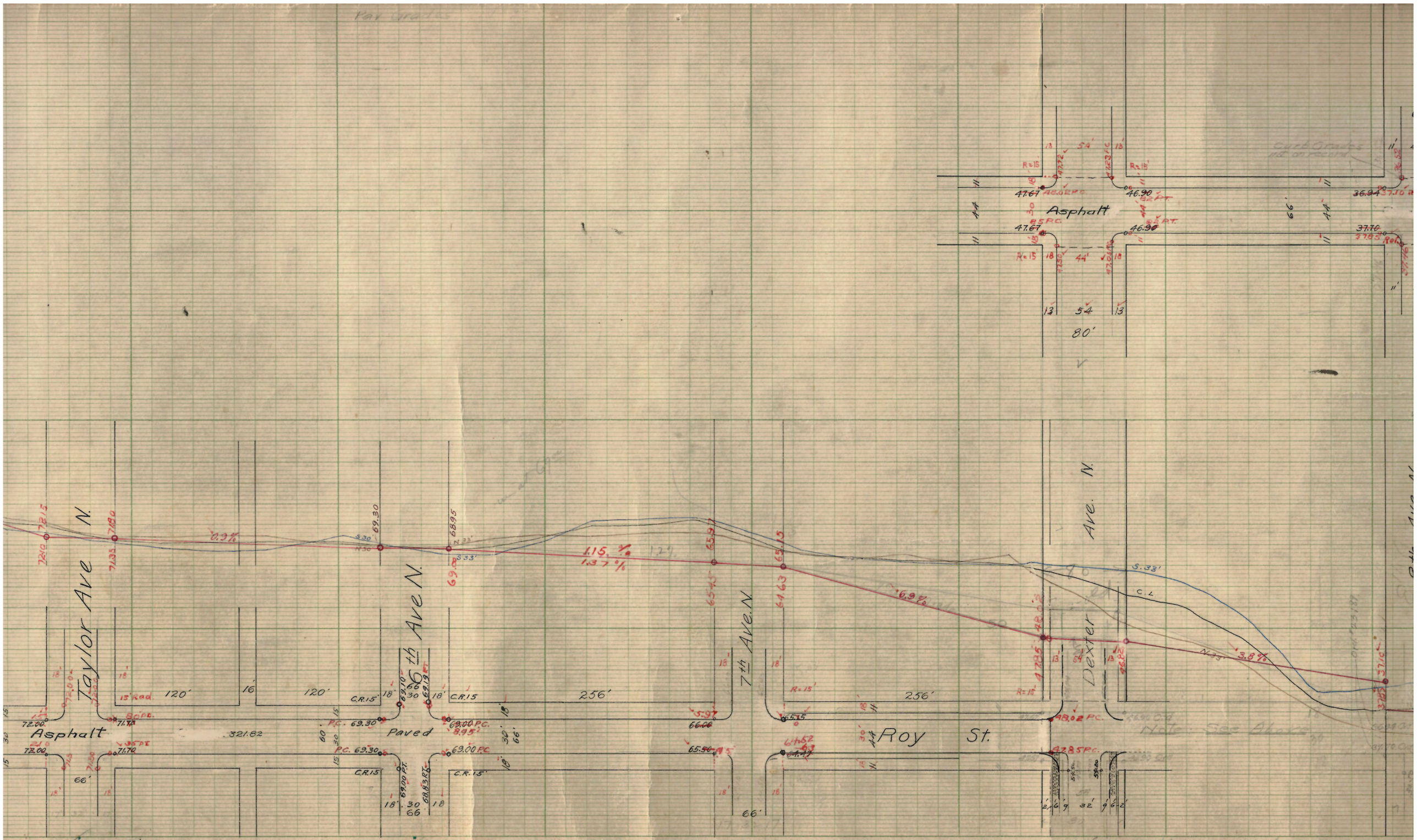
Block 79 East Site

701, 739, 753 9th Avenue North

Seattle, Washington

Farallon PN: 397-035


AURORA
527-20
DEXTER
534-33
8TH.
528-16
AVE.
528-10
534-33
9TH.
528-10
AVE.
528-2
WEST-
LAKE
REPUB-
LICAN
AVE
N.
527-19
TERRY
AVE.
528-13
528-13
BOREN
AVE.
528-6
528-6
FAIRVIEW
AVE
528-5
519-10
527-12
AVE.
534-33
572-66
519-7
519-2
519-14
528-10
519-15
MER-
CER
VAL-
519-7
ST.
WESTLAKE
BROAD
527-19
WATERWAY NO. 3
TERRY AVE. N.
NAVAL RESERVE ARMORY
WATERWAY NO. 4
WATERWAY NO. 5
FAIR
6TH
AVE.
DEXTER CT. N
520-4
AVE. N.
WATERWAY NO. 2



STANDARD PROFILE PLATE, A. 4X20
KEUFFEL & ESSER Co NEW YORK

Asphalt Pavement

Radii 15'

15' Radii

Curb Grades not corrected

Note: See Sheet

Dexter Ave. N.

8th. Ave. N.

9th. Ave N.

Westlake Ave.

Roy St.

LAKE

STANDARD PROFILE PLATE, A. 4X20
KEUFFEL & ESSER Co NEW YORK

Westlake Ave. N.

Terry Ave. N.

Boren Ave. N.

27' S. of C.L.

0.2%

0.4%

R. 290'

72'23

66'

255'595

66'

120'

298.13'

N. 33°

C.L.

S. 33°

0.7% is placed

10" Pipe 3.4%

0.15%

24" X 36" Oviform

682

179.12

Asphalt

Depression

243'67

66'

256'

Asphalt

Valley St.

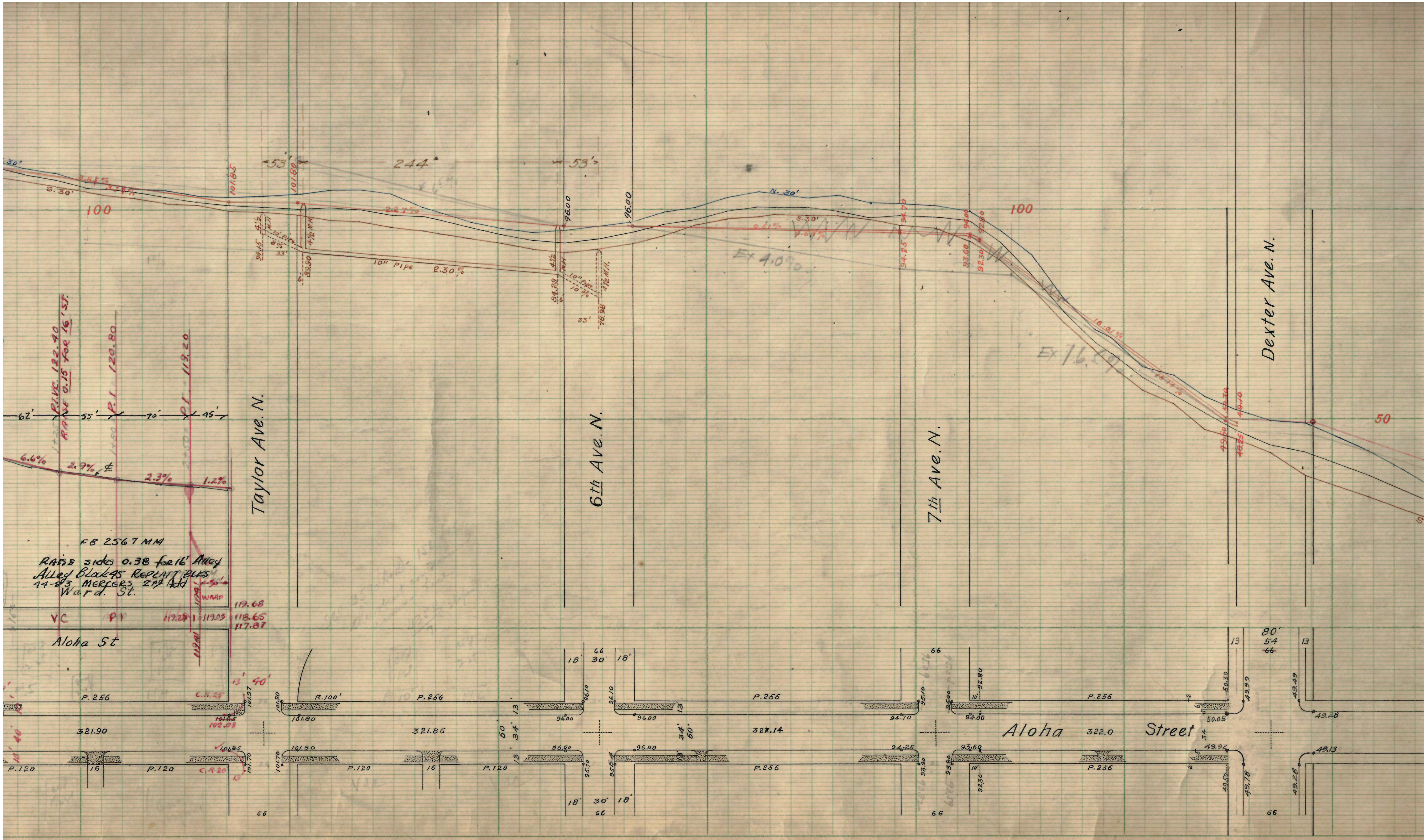
Asphalt

174.42

C.R.=15'

"Preferred" PROFILE PAPER.
PLATE A.

"Preferred" PROFILE PA
PLATE A.



Taylor Ave. N.
6th Ave. N.
7th Ave. N.
Dexter Ave. N.
Aloha Street
Aloha St
FB 2567 MM
RAISE sides 0.38 for 16' Alley
Alley Blok 45 REPLATT BLKS
44-83 MERCERS 2nd Add
Ward. St.
P.I.V.C. 122.40
RAISE 0.15 FOR 16' S.T.
P.I. 120.80
P.I. 118.20
62' 55' 70' 45'
6.6% 2.9% 2.3% 1.2%
VC P.I
WARP
119.68
118.65
117.87
S. 30'
N. 30'
100
50
3.77%
2.27%
10" Pipe 2.30%
4½ M.H.
10" Pipe 8%
10" Pipe 10%
33'
53'
244'
101.85
101.80
96.00
94.70
94.25
94.00
93.60
92.80
92.30
94.15
89.90
84.29
78.98
Ex 4.0%
Ex 16.5%
18.01%
50.30
49.10
49.50
48.25
P.256
P.120
R.100'
C.R.25
C.R.20
321.90
321.86
322.14
322.0
18' 30' 18'
66
80'
54
13' 40'
101.97
101.90
101.70
102.03
96.10
95.70
95.64
95.10
95.00
93.90
93.80
50.05
49.99
49.92
49.78
49.49
49.28
49.13

7th Ave. N.

Dexter Ave. N.

8th Ave. N.

Westlake Ave. N.

Lake Union

N. 30'

S. 30'

100

50

00

Ex 4.0%

Ex 16.5%

15.01%

82.7%

3.2%

94.70

94.25

94.00

93.60

93.30

92.80

92.30

50.30

50.05

49.99

49.78

49.37

49.23

49.0

43.49

42.28

49.13

49.26

28.45

28.33

42

54

80'

66

13

34

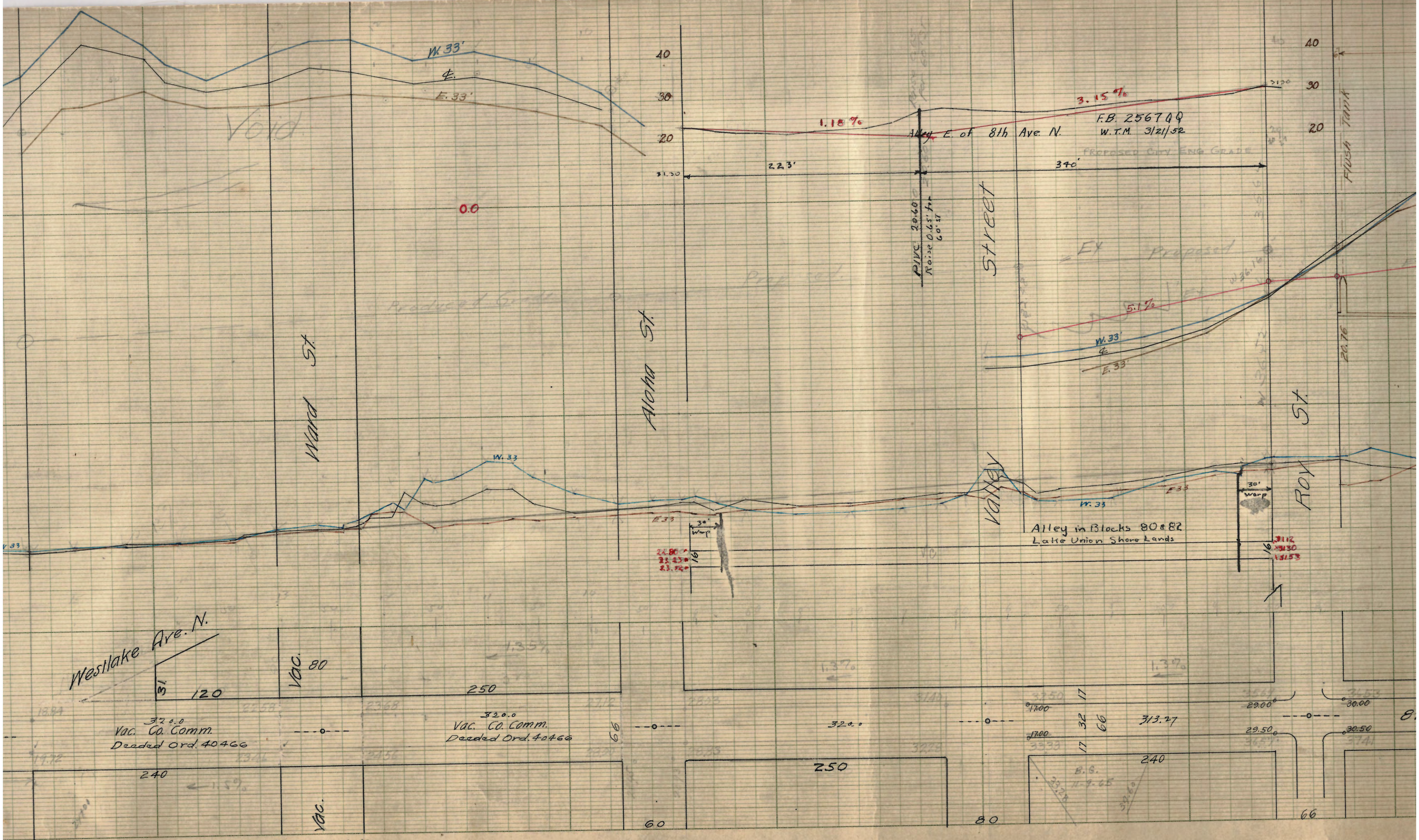
322.14

322.0

Aloha Street

P. 256

1950



STANDARD PROFILE PLATE. A. 4×20
KEUFFEL & ESSER Co NEW YORK

Aloha St.

Alley E. of 8th Ave. N.

F.B. 256700
W.T.M. 3/21/52

1.18%

3.15%

223'

340'

PVC 20.60
R0.32 0.65' for 60'

Street

Ex

Proposed

W 36.16

5.1%

W. 33'

E. 33'

St.

Valley

Roy

Mercer

E 33

W. 33

30' Warp

Alley in Blocks 80 & 82
Lake Union Shore Lands

24.80
23.27
23.52

3112
3130
3153

PROPOSED CITY ENG. GRADE

FLUSH TANK

228'

59.66

58.59

399.85

42' M.H.

50

2.7%

1.5%

8"P
0.5%

6"P
10.05%

12"P
1.1%

20.76

19.62

19.32

25.61

Approach

8th. Ave. N.

310.37

313.27

3200

3250

3273

3333

3141

3143

3150

3153

3112

3130

3153

3943

1.37%

1700

29.00

30.00

36.40

29.50

30.50

37.00

17

32

66

240

250

60

80

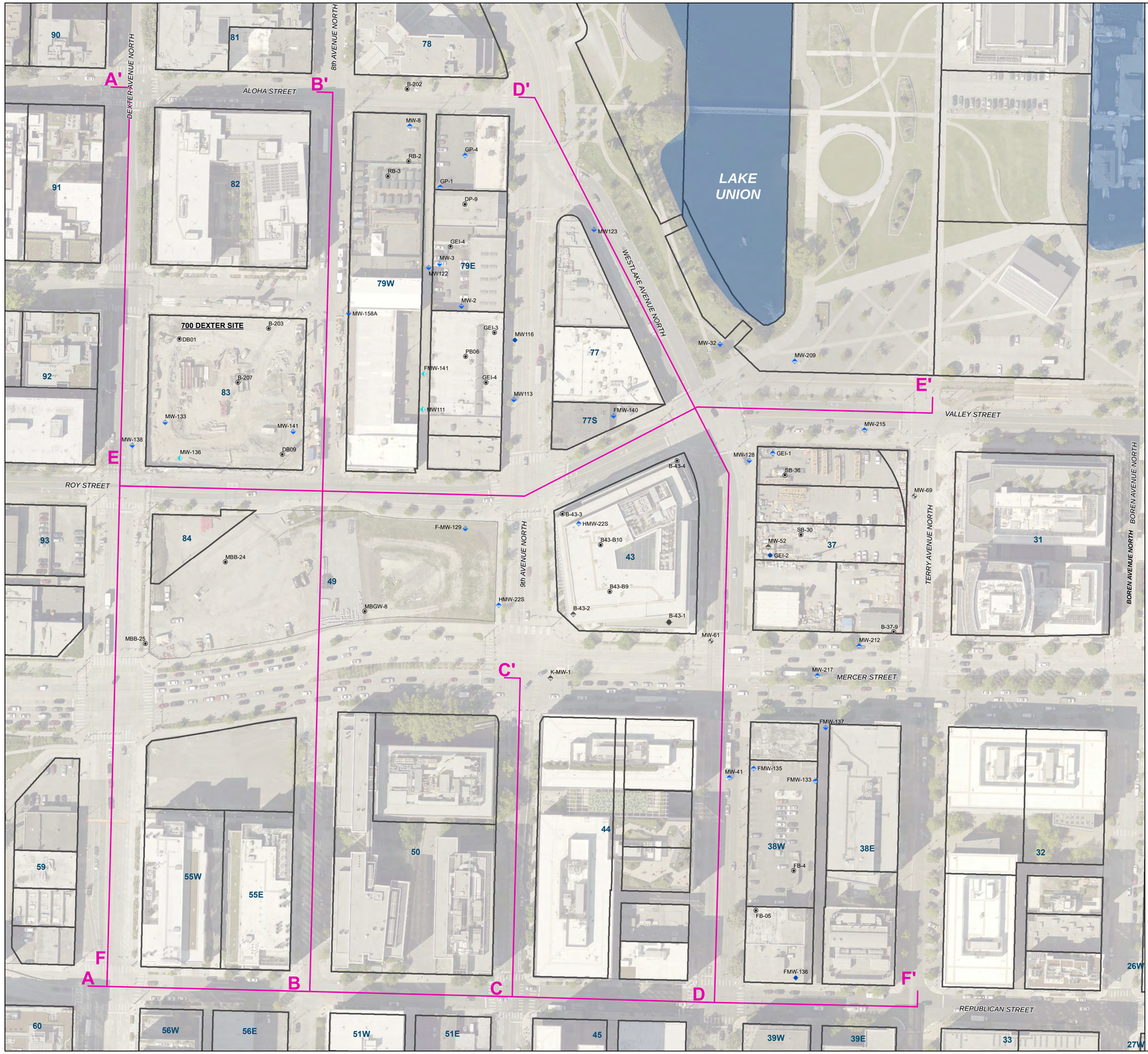
66

B.S.
11-9-65

39.28

39.80

STANDARD PROFILE PLATE. A. 4×20
KEUFFEL & ESSER Co NEW YORK



LEGEND

- SOIL BORING
- SHALLOW WATER-BEARING ZONE WELL
- INTERMEDIATE WATER-BEARING ZONE WELL
- INTERMEDIATE B WATER-BEARING ZONE WELL
- DEEP OUTWASH AQUIFER WELL
- DECOMMISSIONED SHALLOW WELL
- DECOMMISSIONED INTERMEDIATE WELL
- DECOMISSIONED MONITORING WELL (UNKNOWN ZONE)
- A A' — LINE OF CROSS SECTION
- KING COUNTY PARCELS

DRAFT

N

0 80 160

Scale in Feet

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FIGURE 1

GROUNDWATER MONITORING WELLS AND BORING LOCATIONS AND CROSS SECTION LINES
SOUTH LAKE UNION AREA
SEATTLE, WASHINGTON

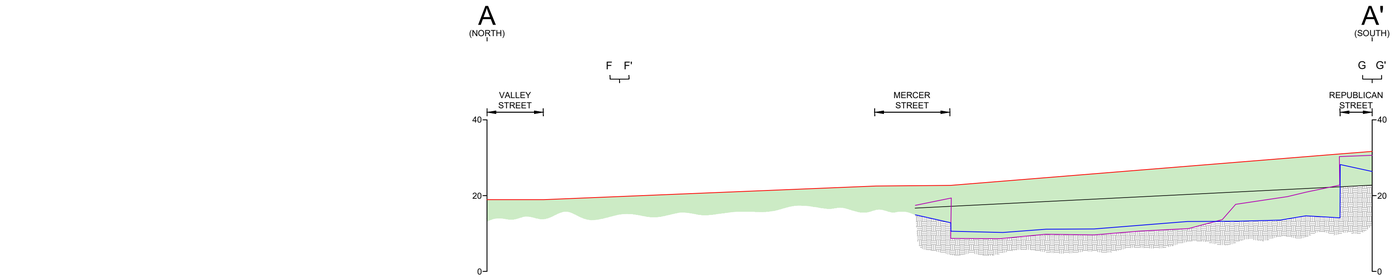
FARALLON PN: 397-010

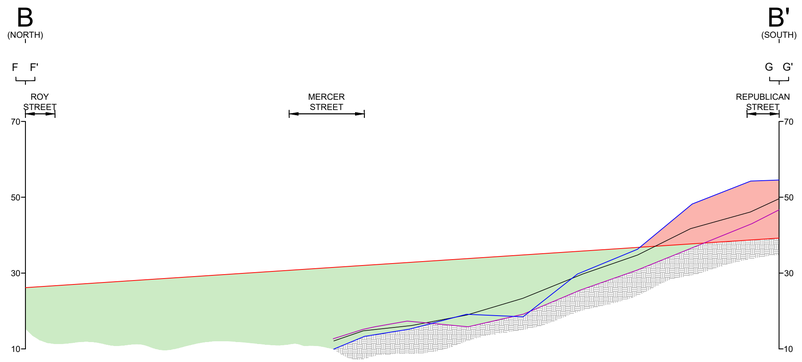
Drawn By: TPerrin

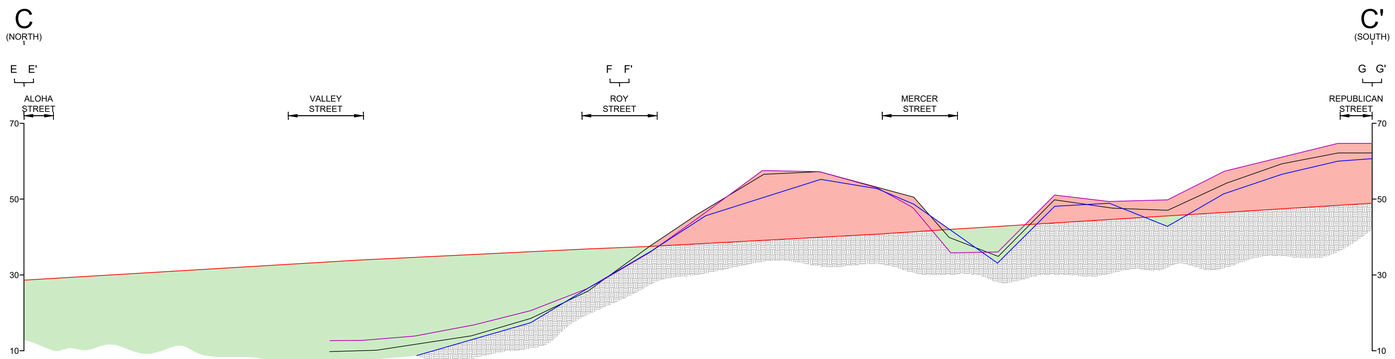
Checked By: EB

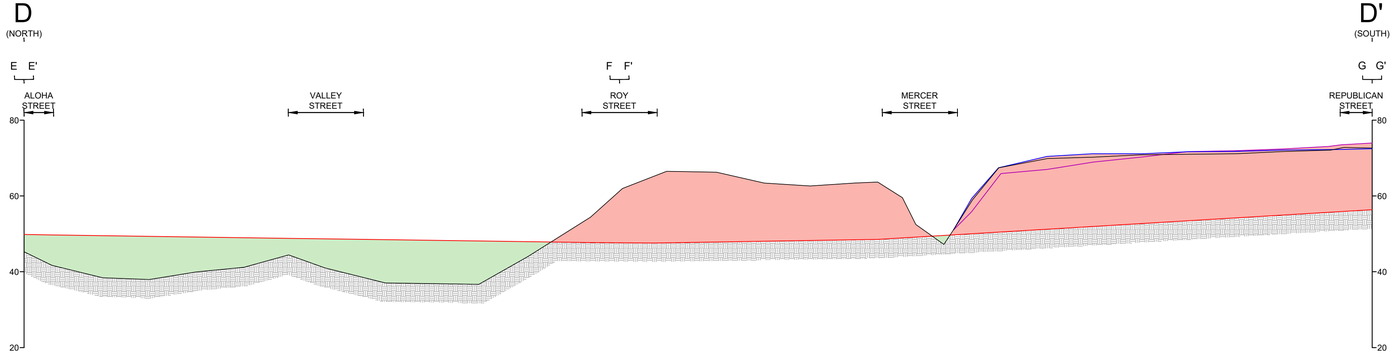
Date: 8/31/2021

Document Path: Q:\Projects\397 VULCAN\019_Block38\Mapfiles\018 Fill Material Tech Memo\Figure-02_CrossSection_SLU.mxd



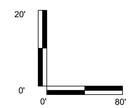






LEGEND

- FINISHED GRADE AT CENTERLINE
- GRADE AT CENTERLINE PRIOR TO CUT
- GRADE AT WEST RIGHT OF WAY PRIOR TO CUT
- GRADE AT EAST RIGHT OF WAY PRIOR TO CUT
- AREA OF CUT
- AREA OF FILL
- NATIVE GROUND



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Issaquah | Bellingham | Seattle
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Portland | Baker City
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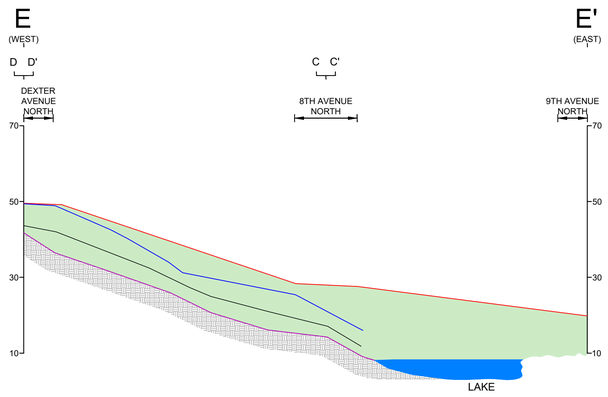
FIGURE 5

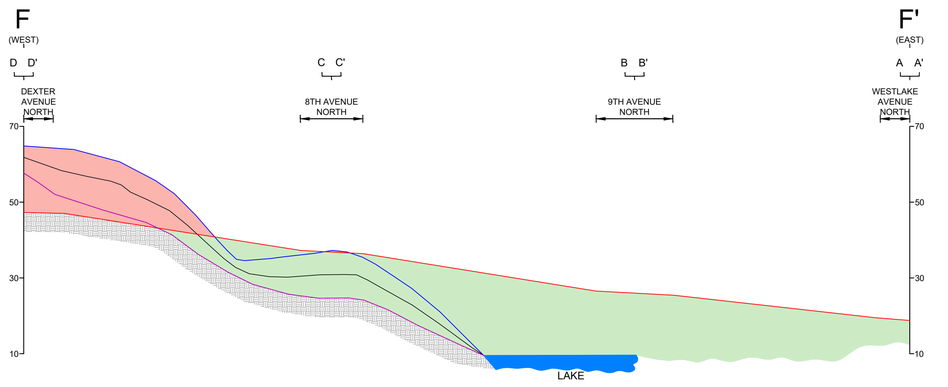
NORTH SOUTH CROSS SECTIONS

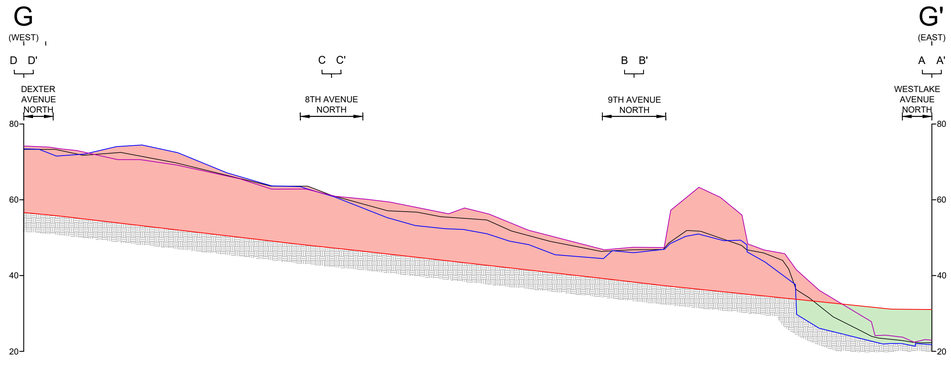
SEATTLE, WASHINGTON

FARALLON PN:397-019

Drawn By: NM Checked By: EB Date: 8/23/2021







LEGEND

- FINISHED GRADE AT CENTERLINE
- GRADE AT CENTERLINE PRIOR TO CUT
- GRADE AT SOUTH RIGHT OF WAY PRIOR TO CUT
- GRADE AT NORTH RIGHT OF WAY PRIOR TO CUT
- AREA OF CUT
- AREA OF FILL
- NATIVE GROUND

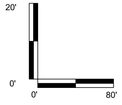


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FIGURE 6

EASAT WEST CROSS SECTIONS

SEATTLE, WASHINGTON

FARALLON PN:397-019

Drawn By: NM Checked By: EB Date: 8/23/2021

PHASE II ENVIRONMENTAL SITE ASSESSMENT REPORT BLOCK 43 DEVELOPMENT PROJECT SOUTH LAKE UNION NEIGHBORHOOD SEATTLE, WASHINGTON

Prepared for
City Investors XX LLC
June 14, 2012

HWA GeoSciences Inc.
• Geotechnical Engineering
• Hydrogeology
• Geoenvironmental Services
• Inspection & Testing

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PHASE II ENVIRONMENTAL SITE ASSESSMENT REPORT
BLOCK 43 DEVELOPMENT PROJECT
SOUTH LAKE UNION NEIGHBORHOOD
SEATTLE, WASHINGTON

1.0 INTRODUCTION

This report presents the results of the HWA GeoSciences Inc. (HWA) Phase II Environmental Site Assessment (ESA) conducted for City Investors XX LLC ("the Client"), at the Block 43 Development Project in the South Lake Union neighborhood of Seattle, Washington. HWA's work for this project was authorized under a master services agreement with City Investors XX LLC dated May 2, 2012.

1.1 SITE LOCATION AND DESCRIPTION

HWA understand that the Client plans to redevelop Block 43 and construct a multi-story, mixed-use building with multiple levels of underground parking. These activities will be performed at a property in Seattle's South Lake Union neighborhood known as "Block 43" (the "Site"). The two adjoining blocks to the south are also slated for redevelopment, and are known as Block 44 and Block 45. Figure 1 shows these properties and surrounding areas. Several small parcels comprise the Site. Figure 2 shows Block 43 and historic and recent environmental sampling locations.

The Site is approximately 53,869 square feet in size and is mostly vacant as existing buildings were previously demolished. Current use of the Site includes construction laydown and storage, and an active retail biofuel station (with above-ground fuel storage tanks) at the northeast corner of the Site. The Site is located at 601 Westlake Avenue North, in Seattle, Washington and is bounded on the south by Mercer Street, on the east by Westlake Avenue North, on the north by Broad Street, and by 9th Avenue North on the west.

1.2 OBJECTIVES AND SCOPE OF WORK

The objectives of this Phase II ESA were to investigate and evaluate the potential presence of soil or ground water contamination beneath the Site, and use this information to support planned property development and construction activities, including: health and safety concerns during construction, construction delays, soil disposal mass/volume and associated disposal costs, handling and disposal of contaminated soil and ground water, and other activities identified by the Client.

HWA's scope of work to fulfill these objectives included:

- Reviewing background data and previous environmental reports pertaining to the Site, including files at the Washington Department of Ecology (Ecology) Northwest Regional Office in Bellevue, Washington;
- Preparing a phase II work plan, including a sampling and analysis plan and health and safety plan;
- Assessing the status of fill ports of two underground storage tanks located in the central portion of the Site;
- Advancing 13 soil borings at various locations to collect soil and ground water samples for chemical analysis;
- Excavating 11 test pits at various locations to provide additional visibility of subsurface soil conditions, locate former hydraulic lifts, and to collect soil samples for chemical analysis;
- Collecting ground water elevation data and samples from five existing monitoring wells;
- Submitting selected soil and ground water samples to an analytical laboratory to quantify potential concentrations of various chemical constituents in the samples;
- Reviewing the results of filed activities, chemical analyses results, and evaluating this information and data with respect to Washington State Department of Ecology (Ecology) cleanup levels and to results from previous environmental investigations; and,
- Preparing this report describing the activities and findings from this assessment.

1.3 FORMER PROPERTY USES AND PREVIOUS ENVIRONMENTAL INVESTIGATIONS

Former property uses reportedly include an automobile wrecking yard in the southwest portion of the Site, and a retail gasoline station in the northeast portion of the Site (at the location of the current retail biofuel station). Most recent use of the Site included an automobile sales and service facility, including vehicle refueling operations and fuel storage. Site investigations conducted to date, among them Kane Environmental, Inc. (May 2003) identified petroleum hydrocarbon constituents in soil and ground water beneath the Site. The highest concentrations appear to be in the northeast portion of the Site. Other relatively lower concentrations are located in the west, central and south portions of the Site. Some petroleum concentrations are also present in ground water beneath the Site.

At least four site investigations and/or sampling activities have been performed at the Site since 2000 to evaluate subsurface hydrogeologic conditions and/or chemical concentrations in soil and/or ground water. The following paragraphs in this section summarize the results of these investigations. Soil boring and monitoring well locations where chemicals were detected at concentrations exceeding Model Toxics Control Act (MTCA) cleanup levels are shown on Figure 3.

A Phase II environmental site assessment and a supplemental Phase II investigation were performed by Kane Environmental, Inc. (Kane), results of which are described in their reports dated May 2, 2003 and May 15, 2003, respectively. These investigations included collecting discrete soil and ground water samples from borings GEO-8 through GEO-17 advanced at or near the Site. Six additional borings were completed as monitoring wells labeled KMW-1 through KMW-6. Chemical analyses results for soil and ground water samples from these investigations indicated that concentrations of petroleum hydrocarbons, mostly in the gasoline range, and concentrations of volatile constituents of gasoline were present in ground water in the northeast portion of the Site (a historic gasoline station) and the central/south-central portion of the Site near three underground storage tanks [USTs]).

A Phase I environmental site assessment was performed by Environmental Partners Inc. (EPI), results of which are described in their report dated August 23, 2000. The report identified the following as historical or current uses of the Site:

- Historic use of the northeast portion of the Site as a gasoline station;
- Four existing USTs from 500 to 1,000 gallons each used to store heating oil and/or bunker C oil; six existing above-ground storage tanks (ASTs) from 150 to 300 gallons each used to store water, new or used motor oil, anti-freeze, and/or hydraulic oil; and several hydraulic lifts. The majority of these features appear to be located in the central and south portions of the Site, both east and west of the former alley located in the central portion of the Site in a north-south orientation.

A limited Phase II investigation was performed by EPI, results of which are described in their report dated June 2000. The investigation by EPI included soil and ground water sampling at approximately 13 locations primarily in the central and south portions of the Site in the vicinity of the USTs, ASTs and hydraulic lifts. Analytical results identified concentrations of oil-range total petroleum hydrocarbons (TPH) in three soil samples and concentrations of benzene in six ground water samples that exceeded MTCA cleanup levels in-place at the time the report was prepared.

A limited Phase II investigation was performed by GeoEngineers, Inc. (GEI), results of which are described in their report dated April 18, 2011. The investigation included advancing four soil borings, one boring near the each of the four property corners. GEI collected soil samples from each boring and submitted them for geotechnical testing and chemical analysis. Chemical analyses included quantification of:

- Gasoline-range TPH (TPHg), diesel -range TPH (TPHd), and lube oil-range TPH (TPHo);
- Benzene, toluene, ethylbenzene, and xylenes (BTEX);

- Volatile organic compounds (VOCs);
- Polycyclic aromatic hydrocarbons (PAHs); and,
- Polychlorinated biphenyls (PCBs)

Chemical analysis results indicate that TPHg concentrations exceeding MTCA Method A cleanup level were detected in soil samples collected from boring B-43-4 at 7.5 feet and 10 feet below ground surface (bgs). Concentrations of other constituents did not exceed MTCA Method A or B cleanup levels.

Monitoring wells were installed by GEI in three of the four borings and are currently located on-site near the northeast, southeast, and southwest corners of the property. GEI collected samples from two of the GEI monitoring wells (B-43-1 and B-43-2) and from two existing monitoring wells (KMW-3 and KMW-6) formerly installed by Kane in 2000. Chemical analysis results for ground water samples indicate TPHg and/or TPHd concentrations in each of the ground water samples, with TPHg and TPHd concentrations exceeding MTCA Method A cleanup levels in the samples collected from KMW-6 and B-43-2, respectively.

1.4 RECENT DEMOLITION ACTIVITIES, HYDRAULIC LIFT REMOVAL, AND OTHER RELATED ACTIVITIES

Except for the existing biofuels station located in the northeast portion of the Site, all existing buildings and almost all surface features (building foundations, etc) were demolished and removed from the Site from June to November 2009. Demolition activities included removal of most of the underground storage tanks (USTs), aboveground storage tanks (ASTs), and hydraulic lifts used by the former automobile dealership during automobile servicing.

During Phase II activities HWA located two UST fill ports that were visible at ground surface in the central portion of the Site and attempted to remove the caps to assess the status and/or contents of the ASTs. HWA filed representatives were able to remove only one of the fill port caps. A steel tape was lowered into the fill port and contacted refusal at a depth of about 42 inches below ground surface (bgs). The end of the tape showed a residue of dark liquid assumed to be petroleum but the tape itself was relatively clean indicating that free-phase/liquid petroleum was generally absent. The shallow depth of refusal and hard resistance encountered by the tape indicates that the UST was likely abandoned in-place using an inert, solid material such as cement slurry (now hardened). The fill port cap was reattached and attempts were made to access the other UST fill port but the cap could not be removed. It is assumed that the second UST is also abandoned in-placed in a similar manner to the other UST.

Demolition activities included removing several hydraulic lifts from the service building on the west portion of the Site. The location of at least seven hydraulic lifts are shown on

figures included in the limited phase II investigation report prepared by Environmental Partners Inc. in 2000 (EPI, 2000). Figures in the EPI (2000) report are of limited use however since they only show a portion of the building, and the building and other potential reference points are now absent. This data gap posed a problem for HWA in terms of evaluating soil and/or groundwater conditions in the vicinity of the former lifts where hydraulic oil was used for lift operation. Discussions between HWA representatives and Mr. Boe McGee of HNTB who was on site during demolition indicated that the orientation of the lifts shown on the EPI (2000) figures was shifted approximately 90 degrees. Photos forwarded to HWA by Mr. McGee were of limited use, and did not clarify the former lift locations. HWA was successful in locating one hydraulic lift during test pit excavations at TP-4 **(see** Figure 2**)** The portions of the hydraulic lift that were exposed during excavation included an intact hydraulic ram and a concrete footing underlying the lift. Soil samples were collected adjacent to and at the base of the lift. The lift was left in-place for removal during future Site development. A photograph of the in-place ram is included on the test pit log included in Appendix B.

2.0 FIELD ACTIVITIES

Field activities associated with HWA's Phase II assessment were performed in May 2012. The program consisted of 13 direct-push soil probe borings, 11 test pits, and sampling soil and ground water. Boring locations from Phase II ESA activities and selected sampling locations from previous environmental investigations are shown on Figure 2. A copy of the Phase II ESA work plan is included in Appendix A and describes field activities, field sampling and laboratory methods, and other planned activities performed during the Phase II ESA. These activities and methodologies are summarized below.

2.1 SOIL SAMPLE COLLECTION

HWA contracted ESN Northwest of Lacey, Washington (ESN), a licensed drilling contractor, to advance soil borings at the Site. Thirteen soil borings were advanced on May 8 and 9, 2012 to depths of up to 20 feet below ground surface (bgs). Soil boring locations are shown on Figure 2.

ESN employed a mobile, direct-push, drive-point sampling device (e.g., Geoprobe) to collect soil and ground water samples. The device consists of a truck-mounted, hydraulic drive assembly that advances 2-inch-diameter steel rods into the ground using a hydraulic impact driver. Soil samples were collected using a stainless-steel sampler equipped with a high-density polyethylene (HDPE) liner. Continuous soil sampling was performed from ground surface to the total depth of exploration at each boring.

Gary Merlino Construction, the Client's general contractor, excavated test pits at the Site. The test pits were excavated on May 10, 2012 using a track-mounted excavator. Test pit locations are shown on Figure 2. HWA collected discrete grab samples at depths of up to 11.5 feet bgs in the test pits based on field observations and field screening of soil samples.

Soil samples were placed in labeled laboratory-provided sample containers using nitrile gloves and clean stainless steel spoons. Soil samples for volatile organic compound (VOC) analysis were collected in accordance with EPA 5035A methodology. Samples were placed in a cooler with "blue ice" for transport to the laboratory under chain-of-custody protocol.

HWA collected up to four soil samples from each soil boring and up to two from each test pit. Soil samples selected for analyses were typically collected at the soil-ground water interface and/or to assess shallow fill soils, typically three to six feet bgs. Soil samples were field screened using a photo ionization detector (PID) to evaluate potential

concentrations of petroleum hydrocarbons in the samples. Field observations, soil conditions and other pertinent information was recorded on boring logs and test pit logs to document subsurface hydrogeologic conditions encountered during field activities. Copies of boring logs and test pit logs are included in Appendix B.

2.2 GROUND WATER SAMPLE COLLECTION

HWA collected ground water samples from eight of the soil borings using low flow sample methods in accordance with the sampling and analysis plan. Ground water was encountered at depths of 7.5 to 15 feet bgs. Samples were collected from temporary PVC slotted screens and casing placed into the borehole and removed subsequent to sample collection. Ground water samples were collected using a peristaltic pump. New pump tubing was used for each sample.

HWA also collected ground water samples from five on-site monitoring wells (B43-1, B43-2, B43-4, KMW-3 and KMW-6) on May 11, 2012. Ground water elevation data and field parameter measurements are included in Table 1.

Water samples collected for dissolved metals analysis were filtered using dedicated disposable 0.45-micron filters at the time of sample collection. Water samples were filtered (for analysis of dissolved metals) to avoid artificially biasing the sample results due to sample turbidity, which is common in ground water samples collected from direct push borings and undeveloped monitoring wells where ground water samples can not be collected without some entrained soil particles. Total metals concentrations in these samples are typically artificially elevated due to leaching of metals from the soil by the nitric acid used as a sample preservative. The MTCA allows filtered ground water samples in cases where "*a properly constructed monitoring well cannot be sufficiently developed to provide low turbidity water samples*." The dissolved analyses are also more likely to represent the water quality of construction dewatering effluent after settling or filtration to meet turbidity requirements for discharge to storm drain or surface water.

Water samples collected for polycyclic aromatic hydrocarbons (PAHs) and polychlorinated biphenyls (PCBs) were filtered at the time of sample collection using dedicated, disposable, 1-micron filters. These filters were used to reduce water sample turbidity and obtain water samples more characteristic of ground water conditions. According to the EPA, particles up to 1 micron are mobile in the subsurface and particles of this size occur in monitoring well water samples from a properly constructed and developed monitoring well (EPA, 1996).

Samples were collected after pH, conductivity, temperature, and dissolved oxygen field readings from periodic monitoring had stabilized, or after repeated purges of the well volume in the event of low-permeability soils.

Samples were collected directly into the sample containers provided by the laboratory, and placed in a cooler with blue ice for transport to the laboratory under chain-of-custody protocol.

2.3 FIELD SCREENING INSTRUMENTS

HWA conducted field screening of soil from the borings for the presence of volatile organic vapors using a Mini-Rae PGM 75 photoionization detector (PID). Visual indications of contamination and odor were also noted. Although the PID is not capable of quantifying or identifying specific organic compounds, this instrument is capable of measuring relative concentrations of a variety of organic vapors with ionization potentials less than the energy of the ultraviolet source (in this case, 10.6 eV). The PID is useful for providing qualitative information with respect to the presence and relative concentration of organic vapors. PID readings are shown on the boring logs.

The PID was calibrated with 100 parts per million isobutylene standard at the beginning of the day. Fifty to 100 milliliters of soil from a discrete depth were placed in a plastic bag, sealed, and permitted to sit at least 10 minutes prior to analyzing the vapor in the sample bag. The bag was then perforated by the PID sample tip to obtain the reading. Samples were screened with the PID when sufficient sample volume was available. Field PID sample screening depths and concentration values were recorded on the boring logs.

2.4 DECONTAMINATION METHODS

To prevent potential cross-contamination of samples, ESN cleaned drilling rods between each boring. All sampling equipment was decontaminated prior to use with detergent solution, potable water, and deionized water.

2.5 INVESTIGATION-DERIVED WASTE

Soil cuttings and decontamination water from the field activities were placed in steel drums and stored at the Site pending analytical results, for disposal during Site excavation and cleanup. Disposable personal protective equipment (e.g., nitrile gloves) was discarded off-site as solid waste.

2.6 SUBSURFACE HYDROGEOLOGIC CONDITIONS

Background geologic information for the subject property was obtained from a map entitled *Composite Geologic Map of the Sno-King Area, Central Puget Lowland,*

Washington (Booth, et al., 2004). According to the map, surficial soils in the vicinity of the subject property are primarily modified land sourced from re-graded lake deposits and ice-contact deposits (a combination of till and coarser outwash materials).

Recent soil borings advanced by GeoEngineers in 2011 also provide information regarding subsurface hydrogeologic conditions below the Site. Four borings were advanced near each of the property corners in 2011 to collect soil samples for geotechnical and environmental testing. The soil borings were relatively deep, ranging from approximately 60 to 80 feet bgs. Soils encountered in the GEI borings indicate that the Site is underlain by fill deposits from ground surface to depths ranging from 17 to 25 feet bgs. The fill generally consisted of very loose to medium dense silty sand with variable gravel content, and gravel with varying amounts of sand and fines. Fill deposits overlie recent silt, clay and granular deposits. The recent deposits are underlain by glacially-consolidated soils.

Based on HWA's observations at the subject property, soil at the Site typically consisted of up to 20 feet of silty sand or sandy silt fill containing wood, construction debris and/or other uncontrolled deposits. Pea gravel backfill was encountered in borings along the east side of the Site (B43-B5, B43-B6, B43-B7, and B43-B8). This backfill was reportedly associated with backfilling of the basements of the former buildings subsequent to demolition. Suspected concrete slabs and/or footings were encountered from 4 feet to 12 feet bgs in borings B43-B8 and B43-B11, and in test pits B43-TP8, B43-TP9, and B43-TP10. The slabs were not penetrated and underlying soils were not recovered or sampled. Medium-dense, silty sand and sandy silt (likely recent alluvial deposits or re-graded ice-contact deposits, was encountered at depths below 10 feet bgs, although the possibility of these materials being fill cannot be ruled out. Ground water was encountered in borings and test pits ranging from depths of approximately 7.5 to 15 feet bgs. Soil boring logs and test pit logs are included in Appendix B.

GEI installed ground water monitoring wells in three of the four borings advanced in 2011. HWA collected water elevation data from the three monitoring wells installed by GEI and from the two monitoring wells installed by Kane in 2003 that are still present at the Site (KMW-3 and KMW-6). Ground water was encountered at depths ranging from approximately 7.7 to 15.9 feet below top of casing (TOC). HWA also collected ground water levels at monitoring wells installed on Block 44 and 45, located south of the Site. Based on survey information for the monitoring wells and HWA's water elevation data, the inferred direction of shallow ground water flow in this limited area is to the east-southeast at a gradient of approximately 0.003 foot per foot. The inferred direction of groundwater flow based on HWA's Phase II data is illustrated on Figure 2. These data are somewhat conflicting with what would be expected based on local Site topography, which slopes gently to the north and east. Based on local Site topography the ground water gradient would be expected to be to the northeast, towards Lake Union. This apparent lack of consistency may be a function of local variations in ground water flow

patterns resulting from recent construction in the area, which included installation of numerous new underground utilities along Mercer Street as well as construction of underground parking facilities for many of the new buildings in the south Lake Union neighborhood. One example of this was the abundance of pea gravel encountered in soil borings advanced by HWA during Phase II field activities.

3.0 CHEMICAL ANALYSES AND QUALITY CONTROL REVIEW

3.1 CHEMICAL ANALYSES

Soil and ground water samples were submitted to OnSite Analytical Laboratories (OnSite) of Redmond, Washington for chemical analysis to evaluate concentrations of TPH, metals, selected VOCs, PAHs and PCBs. Chemical analysis methods performed on the soil and/or ground water samples included:

- Hydrocarbon identification (HCID) scan using Ecology method NWTPH-HCID.
- Total petroleum hydrocarbons in the gasoline range (TPHg) using Ecology method NWTPH-G.
- Total petroleum hydrocarbons in the diesel range (TPHd) and oil range (TPHo) using Ecology method NWTPH-Dx with silica gel/acid cleanup.
- Resource Conservation and Recovery Act (RCRA) total metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium and silver) using Environmental Protection Agency (EPA) method 6010B/7471A (for soil samples only).
- Toxicity characteristic leaching procedure (TCLP) for selected metals (for soil samples only)
- RCRA dissolved metals using EPA method 200.8/7470A (for ground water samples only).
- Benzene, toluene, ethylbenzene and xylenes (BTEX) using EPA method 8021B;
- Selected VOCs: methyl-tertiary butyl ether (MTBE); ethylene dibromide (EDB); and 1,2-dichloroethane (EDC) using EPA method 8260.
- Polynuclear aromatic hydrocarbons (PAHs) using EPA method 8270D/SIM.
- Polychlorinated Biphenyls (PCBs) using EPA method 8082.

Copies of final laboratory reports including chain-of custody documents are included in Appendix C.

3.2 QUALITY CONTROL REVIEW

HWA reviewed quality control results of the analytical data. Surrogate recoveries, method blanks, laboratory duplicates, spike blanks, and spike blank duplicates were all within control limits with the following exceptions:

- Surrogate recovery was outside of control limits due to co-elution of analytes in water sample B43-1-GW. Reanalysis of the sample yielded similar results.

- Some VOC detection limits were raised above MTCA cleanup levels for soil samples B43-B1-10, B43-B12-3 and water sample B43-B10-10 due to necessary dilution of those samples.

- HCID detection limits in ground water samples B43-B1-GW, B43-B3-GW, B43-B5-GW, B43-B9-GW, B43-B10-GW, B43-KMW-6-GW, and B43-DUP-GW and soil samples B43-B11-6.5, B43-B12-3, B43-B12-11, B43-B9-3, B43-B10-19, B43-B11-2.5, B43-B11-6.5, B43-B12-3, B43-B12-11, B43-TP1-1.5, B43-TP2-3, B43-TP2-8, B43-TP3-5, B43-TP3-8, B43-TP4-9, B43-TP6-4, B43-TP7-6 were elevated due to interference.

- Hydrocarbons in the gasoline range impacted the diesel range result in soil sample B43-B1-10.

- The diesel range hydrocarbon practical quantitation limit is elevated in soil samples B43-B8-6, B43-B9-3, B43-B10-19, B43-B11-2.5, B43-B11-6.5, B43-TP1-1.5, B43-TP2-3, B43-TP2-8, B43-TP3-5, B43-TP3-8, B43-TP4-5, B43-TP4-9, B43-TP5-6, B43-TP5-10, B43-TP6-4, B43-TP7-6 due to interferences present in the sample.

- Surrogate Standard 4-Bromofluorobenzene is outside control limits for sample B43-B10-19 due to co-eluting non-target analytes.

- The water sample B43-B9-GW was extracted 2 days out of holding time for PAH analysis.

- Soil samples B43-B9-3, B43-TP6-4 and B43-TP11-5 had one surrogate recovery out of control limits. This is within laboratory allowances as long as the recovery is sufficient (above 10%). All recoveries were above 10%.

- Hydrocarbons in the lube oil range are impacting the diesel range result in soil samples B43-B12-3, B43-B12-11, B43-TP11-5. The diesel results are likely to be biased high due to the overlap interference.

- Surrogate recovery data is not available due to the necessary dilution of samples B43-B12-3 and B43-TP6-4.

OnSite did not flag any other results with qualifiers which would indicate that a given result was suspect. Laboratory method blank analyses were all below detection limits except as noted above. The trip blanks did not contain any volatile organic compounds above laboratory detection limits.

The analyses of the soil samples and water samples collected on May 8, 9, and 11, 2012 were determined to be acceptable for their intended use.

4.0 CHEMICAL ANALYSES RESULTS

4.1 ANALYTICAL RESULTS

Analytical results for soil and ground water samples are described in subsequent sections of this report. Analytical results were compared to Ecology cleanup levels and/or screening levels to provide City Investors XX LLC with information regarding how the cleanup/screening levels may affect future Site development activities (soil disposal, dewatering, etc.) Analytical results for soil samples are summarized in Tables 2 and 3. Analytical results for ground water samples are summarized in Tables 4 and 5. Copies of final laboratory reports including chain-of custody documents are included in Appendix C.

4.1.1 CLEANUP AND SCREENING LEVELS

Laboratory analytical data were compared to the MTCA Method A and/or Method B cleanup levels, as well as MTCA End Use Criteria, primarily for disposal characterization, but also as presumptive cleanup levels (Method A and B) for Site cleanup reporting.

Method A values are intended to be protective of all exposure pathways, but are only provided for a limited list of contaminants. The Method B soil values shown are for the "soil direct contact (ingestion)" pathway. Method B soil values for the "protection of ground water" pathway require Site-specific risk calculations, and are not provided herein. Both Method A and B levels are unlikely to be used at the same site.

MTCA Method A levels are intended to provide conservative values, typically for voluntary or routine cleanups. MTCA states that the Method A values "should not automatically be used to define cleanup levels that must be met for financial, real estate, insurance coverage or placement, or similar transactions or purposes. Exceedances of the values in this table do not necessarily mean the soil/water must be restored to these levels at a site".

MTCA Method B cleanup levels are the universal cleanup levels that typically employ risk-based cleanup levels, and likewise do not necessarily trigger any cleanup action. Cleanup levels for a particular site are determined after evaluating appropriate exposure pathway endpoints (e.g., drinking water, non-potable ground water, surface water, soil, wildlife, etc.) based on site use, contaminant distribution, etc. The actual clean up standard is then based on the calculated cleanup levels, measured at the point of compliance.

Excavated soils that require off site disposal but do not contain contaminants exceeding cleanup levels may still require disposal at a facility licensed to treat, recycle or dispose contaminated soils, as many fill sites will not accept soils with detectable concentrations of contaminants.

MTCA End Use Criteria are provided in the Ecology *Guidance for Remediation of Petroleum Contaminated Sites* (Ecology, 2011). These criteria provide guidelines and limitations for reuse of soils with petroleum hydrocarbons and related compounds at concentrations below cleanup levels. Criteria for unrestricted use of soils are generally lower than cleanup levels.

4.1.2 Analytical Results for Soil Samples

Analytical results for soil samples collected from soil borings and test pits are summarized in Tables 1 through 5, and described below. Detected concentrations listed in the tables are compared to MTCA Method A and B cleanup levels, which are designed for unrestricted land use. Detected concentrations are shown in the table, and are shown in bold type where the concentration exceeds a MTCA cleanup level.

Soil sample locations from the HWA Phase II assessment and from historical investigations are illustrated on Figure 3. Figure 4 shows sampling locations from the HWA Phase II assessment and from historical investigations where concentrations of certain constituents exceeded MTCA Method A cleanup levels.

The following data observations were made based on the analytical results for the samples collected and analyzed during the HWA Phase II assessment:

- TPH detected in the soil samples collected from soil borings and test pits were primarily limited to the diesel and heavy oil ranges. TPH concentrations appeared to be more prevalent in the northeast portion of the Site in the vicinity of the historic gasoline station, and in the southwest portion of the Site in the vicinity of USTs and hydraulic lifts associated with the former car dealership.

- TPHg concentrations were detected in only two soil samples. One sample contained a relatively small concentration that did not exceed the MTCA Method A cleanup level. The other sample, collected from boring B43-B1 at a depth of 10 feet bgs, contained 1,500 milligrams per kilogram (mg/kg) TPHg, exceeding the MTCA Method A cleanup level. Boring B43-B1 was advanced in the northeast portion of the Site beneath the central part of the existing Propel Biofuels station. This station is at the same general location as a former gasoline station. TPHg concentrations exceeding MTCA Method A cleanup levels (in soil

and ground water) were detected during previous investigations (Kane, 2003; GEI, 2012).

- TPHd and/or TPHo concentrations were detected in several soil samples, some of which exceeded the MTCA Method A cleanup levels. TPHd concentrations exceeded cleanup levels in 4 of the 35 samples submitted for HCID analysis. TPHd concentrations ranged from 110 mg/kg to 7,200 mg/kg. The only concentration exceeding the MTCA Method A cleanup level was the 7,200 mg/kg detected in sample B-43-B12-3, which was collected from boring B-12 at a depth of 3 feet bgs.

- TPHo concentrations were detected in 17 of the 35 samples submitted for HCID analysis. Detected concentrations ranged from 140 mg/kg in sample B43-TP5-10 to 41,000 mg/kg in sample B43-TP6-4. Concentrations exceeding the MTCA Method A cleanup level were detected in samples collected from borings B-11 and B-12, and from test pits TP-3, TP-4 and TP-6.

- Several different metals were detected in soil samples. The most common metals detected in soil included barium, chromium, and lead. Arsenic, cadmium, mercury, selenium, and silver were not detected or were limited to a single detection. Metals concentrations exceeding MTCA Method A cleanup levels were detected in two samples: B43-B12-3 (cadmium and lead) and B43-TP7-6 (lead).

- Total chromium was detected in all 34 soil samples, at concentrations ranging from 17 to 80 μg/kg, most of which potentially exceed the MTCA Method A cleanup level for chromium+VI (19 mg/kg), but not for the more commonly occurring chromium+III (2,000 mg/kg). The analytical method used measures total (VI+III) chromium, and is used in most cases where there is no reason to suspect the presence of chromium +VI, as is the case at this Site.

- Lead was detected at concentrations exceeding the Method A cleanup level of 250 mg/kg in two samples: 520 mg/kg in sample B43-B12-3, and 340 mg/kg in sample B43-TP7-6. Several other samples had lead exceeding the Dangerous Waste screening criterion of 100 mg/kg. Dangerous waste classification for metals is determined by Toxicity Characteristic Leaching Procedure (TCLP) analysis, per Chapter 173-303 WAC. TCLP involves analysis of a leached extract of the sample. The Dangerous Waste criterion for lead is 5 mg/L in the leachate. Because the TCLP procedure involves a sample dilution factor of 20, there is a minimum total metal concentration in soil (i.e., 100 mg/kg for lead) that could theoretically result in a TCLP concentration exceeding the Dangerous Waste criterion. HWA selected the three soil samples with the highest total lead

concentrations and submitted these samples for TCLP analysis. Results indicated Site soils do not classify as Dangerous Waste for lead.

- Cadmium was detected at a concentration of 12 mg/kg in sample B43-12-3, exceeding the Method A cleanup level of 2 mg/kg.

- Selected VOCs were analyzed in response to positive detections of TPHg in soil samples, and included BTEX, MTBE, EDB, and EDC. Concentrations of these VOCs were detected in only 1 of the 5 samples submitted for analysis. Detected concentrations did not exceed MTCA Method A cleanup levels.

- cPAH concentrations were detected at relatively low concentrations in the samples submitted for chemical analysis. cPAH analysis was performed in response to positive detection of TPHd and/or TPHo in the HCID analyses. None of the detected concentrations of cPAHs exceeded the MTCA Method A cleanup levels for individual or total cPAH concentrations.

- Concentrations of PCBs were not detected in any of the samples submitted for chemical analysis, except for a relatively small quantity of Aroclor 1264 detected in one sample (B43-TP7-6) at a concentration well below cleanup level.

In summary, several soil samples contained concentrations of TPHg, TPHd, TPHo, lead, cadmium, and/or cPAHs that exceed MTCA Method A cleanup levels. The majority of these samples were collected from shallow fill soils (2.5 to 10 feet bgs) located in the northeast and southwest portions of the Site, and one sample located in the northwest portion of the Site.

Based on HWA's understanding of future property development plans, the soil containing these concentrations will be excavated and transported off site to a licensed facility for recycling and/or disposal. Borings and test pit excavations encountered wood waste, concrete foundations, reinforced concrete, and other demolition debris, either historic or recent. These materials do not pose an environmental concern but are expected to require additional time in terms of excavation and handling (e.g., the possible cement-filled USTs described in Section 1.4). Borings and test pit excavations encountered basement foundations at depths of 10 to 12 feet bgs at some locations, and we understand from previous environmental reports that ASTs were located in basements of the previous buildings. There is a potential for encountering petroleum-impacted soil below the basement foundations at some locations, but based on the relatively small sizes of the USTs and the presence of the floor slabs beneath them the potential for a large volume of petroleum-impacted soil beneath the basement floor slabs appears to be relatively small.

4.1.3 ANALYTICAL RESULTS FOR GROUND WATER SAMPLES

Analytical results for ground water samples collected from soil borings and monitoring wells are summarized in Tables 6 and 7, and described below. Detected concentrations listed in the tables are compared to MTCA Method A and B cleanup levels, which are designed for unrestricted land use. Detected concentrations are shown in the table, and are shown in bold type where the concentration exceeds the MTCA cleanup level.

Figure 2 shows ground water sample locations from the HWA Phase II assessment and from historical investigations. Figure 4 shows ground water sampling locations from the HWA Phase II assessment and from historical investigations where concentrations of certain constituents exceeded MTCA Method A cleanup levels.

The following data observations were made based on the analytical results for ground water samples collected and analyzed during the HWA Phase II assessment:

- Fourteen samples were submitted for HCID analysis. TPHd and TPHo concentrations were not detected. TPHg concentrations were detected in 8 samples. Six of the detected concentrations exceeded the MTCA Method A cleanup level, and ranged from 1,300 μg/L to 5,300 μg/L. TPHg concentrations exceeding cleanup levels were detected at borings B43-B1, B43-B2, B43-B5, and B43-B10, and at monitoring well KMW-6. These locations are generally located in the northeast and southwest portions of the Site, and generally confirm the nature and extent of TPH concentrations in ground water detected in previous investigations (Kane, 2003; GEI, 2012). The predominance of TPHg and benzene (see below) in ground water at the Site, where these compounds were generally not detected in soils, suggests a mostly dissolved phase gasoline-range ground water plume, possibly located off-site, or originating on site from a source area not yet sampled or discovered.

- Thirteen samples were submitted for dissolved metals analysis. Dissolved metals were generally not detected or detected at low concentrations. Barium, cadmium, chromium, mercury, selenium and silver were either not detected or were not detected at concentrations exceeding MTCA Method A cleanup levels. Dissolved lead concentrations were detected in only two samples. One of these, the dissolved lead concentration of 20 μg/L in sample B43-B4-GW, exceeded the MTCA Method A cleanup level. Arsenic concentrations were detected in 9 of the 13 samples at concentrations ranging from 3.9 μg/L to 110 μg/L. The detected concentration of 110 μg/L in sample B43-B1-GW is almost ten times the value of the next highest concentration (15 μg/L) and in that respect is a statistical outlier with respect to the data set for dissolved metals and is not considered representative. Seven of the arsenic concentrations exceeded the MTCA Method

A cleanup level. Arsenic concentrations are believed to be present in ground water as a result of arsenic in the shallow fill partitioning to ground water due to reducing conditions in shallow ground water within the fill soils. Increased solubility and mobility of naturally occurring metals (including arsenic) in ground water under reducing conditions has been well documented in the literature (Ferguson and Johnson, 2006). Reducing conditions in ground can be caused by decomposition of naturally occurring organic material (peat and woody debris), emplaced organic waste or debris, and/or organic contaminants (e.g., petroleum hydrocarbons), all of which can produce a low oxygen (anaerobic) environment under reducing conditions. This type of environment tends to mobilize naturally-occurring metals which would otherwise remain insoluble. This is supported by the general absence of detected arsenic in Site soils: one detection out of 34 soil samples, and at a concentration that did not exceed the cleanup level.

- Selected VOCs were detected in several of the ground water samples. Benzene was the only constituent detected at concentrations exceeding MTCA Method A cleanup levels. Benzene concentrations exceeding MTCA Method A cleanup level were detected at 1,100 µg/L in sample B43-B1-GW collected beneath the central portion of the Propel Biofuels station in the northeast portion of the Site, and at 16 µg/L in sample B43-B9-GW collected in the central portion of the Site near the location of USTs associated with the former car dealership.

- Naphthalenes were not detected in ground water samples at concentrations exceeding the MTCA Method A cleanup level for total naphthalenes.

In summary, HWA collected ground water samples from selected borings and existing monitoring wells at the subject property to quantify concentrations of TPH, dissolved metals, selected VOCs, and other constituents in ground water and to compare the nature and extent of these concentrations to those detected during previous investigations. Analytical results and data evaluation results from these activities provide the following observations:

Concentrations of TPHg, TPHd, benzene, dissolved arsenic, and/or dissolved lead were detected in 11 of the 13 ground water samples at concentrations exceeding MTCA Method A cleanup levels. Samples containing these concentrations included:

- B43-B1-GW, B43-B2-GW, B43-B3-GW, B43-B4-GW and B43-KMW-6 collected from the northeast portion of the Site.

- B43-B5-GW and B43-B8-GW collected from the east portion of the Site;

- B43-B9-GW and B43-KMW6-GW collected from the southwest portion of the Site; and,

- B43-B10-GW collected from the northwest portion of the Site.

These concentrations were detected in samples collected from shallow ground water in the fill soils. A ground water sample was also collected from GEI monitoring well B43-4, which is completed in the lower regional aquifer. Petroleum hydrocarbons, dissolved metals, and other constituents were not detected in the sample collected from well B43-4.

Arsenic in ground water may be a natural or area background condition (Ferguson and Johnson, 2006), and soil samples collected above the elevation of ground water generally did not contain arsenic concentrations exceeding the detection limit.

Dissolved lead was detected above the MTCA Method A cleanup level in sample B43-B4-GW, but elevated lead concentrations were not detected in soil samples analyzed from that location. Lead in ground water was also not associated with TPHg detections in soil or ground water. These results indicate that the dissolved lead concentration may be associated with impacted fill elsewhere at the Site, as elevated lead concentrations were detected in soil samples collected at other locations.

A TPHg concentration exceeding the MTCA Method A cleanup level was detected in ground water sample B43-B5-GW collected near the east property boundary (see Figure 4). However, TPH concentrations were not detected in soil samples collected at that location. These results may indicate that the TPHg concentrations in ground water in the vicinity of boring B43-B5 may be associated with an off-site or unidentified source.

A TPHg concentration of 710 µ/L (below cleanup level) was detected in the sample collected from shallow monitoring well B-43-2 located near the southwest corner of the property. TPHd and TPHo concentrations were not detected in this sample. In contrast, a sample collected by GEI in the first quarter of 2012 contained a TPHd concentration 2,760 µg/L (see Figure 4). This well is located in the southwest corner of the Site, at an assumed upgradient location relative to the remainder of the Site. Nearby, presumed upgradient previous borings GEO-18 and GEO-19 did not contain any TPH in soil or water above reporting limits. These results suggest a localized source

5.0 SUMMARY AND CONCLUSIONS

HWA performed a Phase II assessment at the Site for the purpose of evaluating the nature and extent of known and/or suspected constituents of concern in soil and ground water prior to redevelopment of the Site. The results of previous investigations indicated that concentrations of petroleum hydrocarbons and other constituents were present in soil and ground water, and that these constituents were generally located in the northeast and southwest portions of the Site based on historic and recent Site uses.

Field activities included advancing 13 soil borings to collect soil and ground water samples, excavating 11 test pits to evaluate subsurface hydrogeologic conditions, locate former hydraulic lifts, and collect soil samples, and collecting ground water samples from 5 shallow monitoring wells and from 1 relatively deep ground water monitoring well.

Selected soil and ground water samples were submitted for chemical analyses to evaluate concentrations of TPHg, TPHd, TPHo, selected VOCs, cPAHs, naphthalenes, total metals, dissolved metals, and/or PCBs in soil and/or ground water samples.

Analytical results indicate that concentrations of TPHg, TPHd, TPHo, benzene, total lead, and/or cPAHs were detected in 7 of 34 soil samples submitted for chemical analysis. Concentrations appear to be relatively low and are likely attributable to historic land use activities or deposits of uncontrolled fill placed at the Site during early stages of Site development and filling of the south portion of Lake Union. Based on HWA's understanding of future property development plans, the soil containing these concentrations will be excavated and transported off site to a licensed facility for recycling and/or disposal.

Analytical results indicate that concentrations of TPHg, benzene, dissolved arsenic, and/or dissolved lead were detected in ground water samples at concentrations exceeding MTCA Method A cleanup levels. Ground water samples collected from shallow monitoring wells KMW-6 and B-43-2 contained concentrations of TPHg, TPHd, benzene, dissolved arsenic and/or dissolved lead that exceeded MTCA Method A cleanup levels. The sample collected from the deeper monitoring well, B-43-4, did not contain analyte concentrations exceeding MTCA Method A cleanup levels.

A TPHg concentration of 710 µg/L was detected in the ground water sample collected from shallow monitoring well B-43-2 located near the southwest corner of the property. In contrast, a sample collected by GEI in the first quarter of 2012 contained a TPHd concentration 2,760 µg/L (see Figure 4). These conflicting analytical results indicate that the TPHd concentration, and to a lesser extent the TPHg concentration, may potentially represent on-site migration of TPH concentrations in shallow ground water from an

unidentified or unknown source, presumably at an off-site location. Regular sampling of well B-43-2 and/or additional investigation near and upgradient of well B-43-2 may provide information regarding the nature and source of the TPH concentrations.

5.1 CONSTRUCTION / EXCAVATION RECOMMENDATIONS

Construction bid or contract documents (e.g., plans and specifications) should include analytical results and provisions for contaminated soil handling, treatment/disposal, and health and safety requirements. HWA is providing, under separate cover, a Construction Contingency Plan that will summarize these elements.

Excavated soils should be disposed at a facility licensed to dispose, treat, or recycle contaminated soil, e.g., thermal desorption, asphalt or cement incorporation, or Subtitle D landfill disposal. Property owners at all receiving sites should be notified of the results of this study and any additional testing information available at that time.

We understand approximately 75,000 cubic yards (in place) or around 127,500 tons of soil will be excavated for underground parking and require export and off-site disposal. HWA prepared a cost estimate for soil disposal costs based on the results of this Phase II study and the previous investigations (HWA, 2012). The HWA estimate assumed three categories of soil for off-site disposal, as follows:

- Off-site disposal at a "clean" fill site: a facility that meets Ecology end use criteria Class I for unrestricted use (TPHG <5 mg/kg, TPHD <25 mg/kg, TPHO <100 mg/kg, Metals < Method A cleanup levels).
- Off-site disposal at permitted "Class II" fill site: Specifically, the CEMEX Everett facility licensed to accept soils meeting the following permit criteria (TPH-G <100 mg/kg, TPHD, O < 460 mg/kg, Metals < Method A).
- Off-site disposal at permitted RCRA Subtitle D landfill, e.g., Allied Waste or Waste Management (TPH > Class II criteria, Metals < Method A or pass TCLP criteria).

5.2 CONSTRUCTION / WATER DISPOSAL RECOMMENDATIONS

Based on findings of this and previous studies, ground water pumped for construction dewatering is likely to contain elevated concentrations of petroleum hydrocarbons and metals, in addition to varying amount of suspended solids and turbidity (depending on the methods used to extract the water).

Construction bid or contract documents (e.g., plans and specifications) should include all analytical results and provisions for contaminated water handling, treatment/disposal, and health and safety requirements. HWA is providing, under separate cover, a Construction Contingency Plan that will summarize these elements.

Dewatering effluent disposal options include 1) discharge to the storm drainage system (which drains to nearby Lake Union) or 2) discharge to sanitary sewer. Both options have discharge criteria, and require permitting and monitoring. Permitting for sanitary sewer is through King County Industrial Waste Division (KCIWD). Permitting for storm/surface water is through Ecology. Discharge to sanitary sewer under permit has much higher allowable water quality criteria than discharge to storm system, although quantities are limited seasonally (generally under 25,000 gallons per day in winter). Site ground water will likely meet KCIWD discharge limits after pumping and storage (without treatment) therefore this option may be appropriate for localized "hot spots" of contaminated ground water to avoid more costly treatment.

Preliminary discharge criteria are provided below, subject to HWA verifying the surface water criteria for Lake Union.

Selected Water Discharge Permit Criteria
(µg/L unless otherwise indicated)

	Sanitary Sewer KCIWD (May – Oct)	**Storm Drain***
TPH-G	100 ppm as FOG	800
TPH-D,O	100 ppm as FOG	500
Benzene	70	5
Toluene	1400	1300
Ethylbenzene	1700	530
Xylenes	2200	1600
Arsenic	1000 (avg) 4000 (max)	190
Lead	2000 (avg) 8000 (max)	55.6**
Other criteria	No visible sheen	No visible sheen, pH between 6.5 and 8.5
Solids/turbidity	7 ml/L settleable solids	25 NTU
Other contaminants	Meet King County requirements	Meet Storm Drain discharge criteria

* Based on Surface Water Standards, Ch. 173-201A WAC, or MTCA Method A ground water, where no Surface Water Standard

** Preliminary value based on Ecology Lake Union General Boatyard Permit, 2007

Dewatering discharge will likely require storage, testing, and some form of settling, filtration, or treatment to meet storm/surface water quality criteria, foremost of which is turbidity. Additional filtration or treatment (e.g., granular activated carbon) for environmental contaminants (e.g., petroleum, metals) may be need to meet criteria for storm/surface water.

5.3 CONSTRUCTION HEALTH AND SAFETY

HWA recommends that appropriate health and safety measures be taken during excavation in areas where contaminated soils, ground water, or vapors may be present.

These measures may include, but are not limited to, preparation of a Site-specific health and safety plan, air monitoring, Site control/access, protective and decontamination measures, worker training, certification, and medical monitoring. We recommend an industrial hygienist or health and safety specialist be consulted to determine the applicability of these requirements. Construction specifications should include all available analytical results including this and other available reports.

5.4 REGULATORY COMPLIANCE

Due to the planned removal of nearly all soil on the property down to depths of 30 feet or so, well below ground water level, it is very likely that a complete property cleanup under MTCA can be achieved, resulting in a "No Further Action" (NFA) letter. NFA status may help facilitate redevelopment, financing, or property transactions, and would be best achieved at this Site by entering Ecology's Voluntary Cleanup Program (VCP). Sites may enter the VCP at any stage of investigation or cleanup, with Ecology providing technical assistance and issuing written opinions on planned investigations or cleanups as requested by the property owner. Cleanups performed under the VCP must be substantially equivalent to Ecology-conducted or Ecology-supervised cleanups, which includes the process of performing a remedial investigation, feasibility study, cleanup action plan, cleanup, confirmation and compliance monitoring. Criteria for attaining NFA status will likely include collecting soil confirmation samples, as well as conducing post-cleanup ground water monitoring, for at least one year.

6.0 REFERENCES

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EPA, 1996, *Low-Flow (Minimal Drawdown) Ground Water Sampling Procedures*, EPA/540/S-95/504, April, 1996.

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Environmental Partners, Inc, 2000b, *Phase I Site Assessment, Pacific Lincoln Mercury, 601 Westlake Avenue North*, August 23, 2000.

Ferguson, E, and Johnson, K, 2006, *Naturally Occurring Arsenic in Ground Water from Glacial Deposits in King County, Washington,* National Ground Water Association Naturally Occurring Contaminants Conference, February 6, 2006.

GeoEngineers, 2012, *Limited Subsurface Environmental Characterization Block 43 – South Lake Union Development*, April 18, 2012.

HWA GeoSciences Inc. 2012, *Estimated Soil Disposal Costs, Block 43 - South Lake Union Development Project, Seattle, Washington,* June 3, 2012.

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Troost et al., 2005, *The Geologic Map of Seattle, a Progress Report,* Published by the Seattle-Area Geologic Mapping Project.

Washington State Department of Ecology, *Natural Background Soil Metals Concentrations in Washington State*, Toxics Cleanup Program, Publication No. 94-115, Charles San Juan, October 1994.

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Washington State Department of Ecology, *Model Toxics Control Act Cleanup Regulation, Chapter 173-340 WAC*, Publication No. 94-06, November, 2007.

7.0 LIMITATIONS

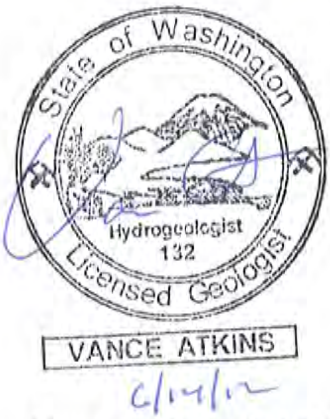
We have prepared this report for use by City Investors XX LLC., in design of a portion of this project. These data and report should be provided to prospective contractors for their bidding or estimating purposes, but the conclusions and interpretations presented should not be construed as a warranty of the subsurface conditions. The conclusions expressed by HWA are based solely on material referenced in this report. Observations were made under the conditions stated. Within the limitations of scope, schedule and budget, our assessment was performed in accordance with generally accepted professional consulting principles and practices in the area at the time the report was prepared. No warranty, expressed or implied, is made. Experience has shown that subsurface soil and ground water conditions can vary significantly over small distances. It is always possible that contamination may exist in areas that were not sampled. If, during future Site operations, subsurface conditions are encountered which vary appreciably from those described herein, HWA should be notified for review of the recommendations of this report, and revision of such if necessary. We are not responsible for the impacts of any changes in environmental standards, practices or regulation subsequent to performance of services. We do not warrant the accuracy of information supplied by others, nor the use of segregated portions of this report.

This firm does not practice or consult in the field of safety engineering. We do not direct the contractor's operations, and we cannot be responsible for the safety of personnel other than our own on the Site; the safety of others is the responsibility of the contractor. The contractor should notify the owner if he/she considers any of the recommended actions presented herein unsafe.

We appreciate the opportunity to provide professional services to City Investors XX LLC on this project. Please feel free to call us at (425) 774-0106 if you have any questions or need more information.

Sincerely,

HWA GEOSCIENCES INC.



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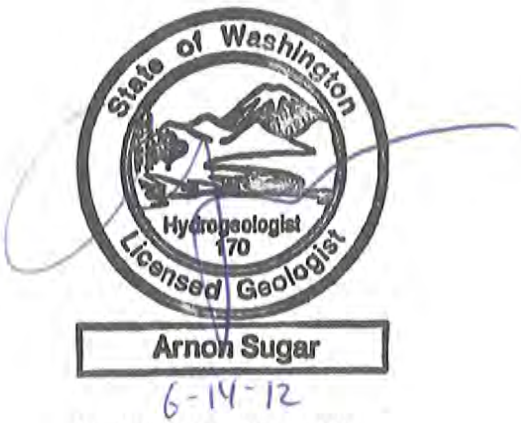


Arnie Sugar, LG, LHG
President

TABLE 1
GROUND WATER ELEVATIONS AND FIELD PARAMETERS FROM EXISTING MONITORING WELLS
BLOCK 43 DEVELOPMENT PROJECT, SOUTH LAKE UNION NEIGHBORHOOD, SEATTLE, WA

Sample ID	Water Depth (ft bgs)	TOC Elevation	Water Level Elevation	Field Parameters			
				pH	Conductivity (ms/cm)	Dissolved Oxygen (mg/L)	Temperature (deg C)
GeoProbe Borings							
B43-B1-GW	12	N/A	N/A	6.65	2.63	1.91	15.8
B43-B3-GW	15	N/A	N/A	6.6	1.82	0.21	14.8
B43-B4-GW	8	N/A	N/A	6.86	1.2	0.18	14.1
B43-B5-GW	7.5	N/A	N/A	6.58	1.8	0.3	13.8
B43-B8-GW	10	N/A	N/A	7.94	0.745	1.86	13.7
B43-B9-GW	10	N/A	N/A	6.35	1.6	0.28	12.9
B43-B10-GW	15	N/A	N/A	NM	NM	NM	NM
B43-B12-GW	13	N/A	N/A	6.82	2.55	0.22	14.9
	Water Depth (ft TOC)						
Monitoring Wells							
B43-1-GW	10.6	30.37	19.77	6.67	2.15	0.75	13.1
B43-2-GW	15.94	37.08	21.14	6.55	1.87	0.34	14
B43-KMW3-GW	11.35	34	22.65	6.78	1.47	0.26	13.6
B43-4-GW[1]	11.15	29.98	18.83	7.49	1.106	0.19	16
B43-KMW6-GW	7.72	29.98	22.26	6.62	1.63	0.25	15

Notes:
ft bgs: feet below ground surface
ft TOC: feet below top of casing
1. Top of casing elevations provided by GeoEngineers (2012). Vertical datum: NAVD 88.
2. Top of casing elevation assumed to be equivalent to KMW-6. Well completed in regional aquifer and not included in ground water gradient evaluations.
ms/cm: millisiemens per centimeter
mg/L: milligrams per liter
deg C: degrees Celsius
N/A: not applicable
NM: not measured

TABLE 2
ANALYTICAL RESULTS FOR ORGANIC COMPOUNDS IN SOIL SAMPLES
BLOCK 43 DEVELOPMENT PROJECT
SOUTH LAKE UNION NEIGHBORHOOD, SEATTLE, WA

		Total Petroleum Hydrocarbons				Volatile Organic Compounds by EPA 8260B [1]					Napthalenes and cPAHs by EPA 8270D/SIM [1]											PCBs by EPA 8082
Sample ID	Sample Depth (ft bgs)	HCID Scan	Gasoline	Diesel	Heavy Oil	Benzene	Toluene	Ethyl-benzene	m,p-Xylene	o-Xylene	Naphtha-lene	2-Methyl-naphthalene	1-Methyl-naphthalene	Benzo[a] anthracene	Chrysene	Benzo[b] fluoranthene	Benzo[j,k] fluoranthene	Benzo[a] pyrene	Indeno(1,2,3-c,d) pyrene	Dibenz[a,h] anthracene	cPAH TEC[5]	Aroclor 1254
GeoProbe Borings																						
B43-B1-10	10-12	GDO	**1,500**	**1,400**	**520**	**0.14**	<0.50	**0.5**	**0.29**	<0.10	**0.13**	**2.2**	**1.4**	**0.037**	**0.035**	**0.036**	**0.0087**	**0.019**	**0.012**	<0.0077	**0.02872**	<0.058
B43-B1-14	14-16	ND																				
B43-B2-4	4-5	O		<29	**160**						<0.0077	**0.0083**	<0.0077	**0.01**	**0.014**	**0.017**	**ND**	**0.0099**	**0.01**	<0.0077	**0.01274**	<0.058
B43-B2-8	8-9	ND																				
B43-B3-3	3-4	ND																				
B43-B3-6	6-8	ND																				
B43-B4-4	4-5	ND																				
B43-B4-5	5-6	ND																				
B43-B5-4	4-5	ND																				
B43-B5-6	6-7	ND																				
B43-B8-6	6-8	O		<98	**610**						**0.0081**	**0.034**	**0.018**	**0.017**	**0.027**	**0.019**	<0.0073	**0.011**	**0.0082**	<0.0073	**0.01569**	<0.055
B43-B9-3	3-4	O		<150	**720**						**0.2**	**0.16**	**0.068**	**0.042**	**0.061**	**0.036**	**0.011**	**0.021**	**0.017**	<0.0079	**0.03221**	<0.060
B43-B9-10	10-12	ND																				
B43-B10-15	15-16	ND																				
B43-B10-19	19-20	GO	**44**	<79	**310**	<0.00096	**0.0052**	**0.015**	**0.027**	**0.037**	**0.089**	<0.0078	<0.0078	**0.048**	**0.037**	**0.037**	**0.012**	**0.026**	**0.016**	<0.0078	**0.03767**	<0.058
B43-B11-2.5	2.5-4	O		<260	**1,000**						**0.086**	**0.085**	**0.059**	**0.34**	**0.3**	**0.4**	**0.12**	**0.33**	**0.31**	**0.049**	**0.4549**	<0.057
B43-B11-6.5	6.5-8	O		<1000	**3,800**						**0.034**	**0.029**	**0.013**	**0.061**	**0.072**	**0.061**	**0.018**	**0.039**	**0.04**	**0.0086**	**0.05858**	<0.057
B43-B12-3	6-4	DO		**7,200**	**16,000**	<0.062	**<0.31**	<0.062	**0.12**	<0.062	**0.52**	**0.5**	**0.17**	**0.36**	**0.52**	**0.29**	**0.24**	**0.29**	**0.18**	<0.041	**0.4022**	<0.061
B43-B12-11	11-12	DO		**230**	**540**	<0.00094	<0.0047	<0.00094	<0.0019	<0.00094	**0.043**	**0.031**	**0.015**	**0.046**	**0.076**	**0.069**	**0.019**	**0.049**	**0.044**	**0.012**	**0.06876**	<0.056
Test Pits																						
B43-TP1-1.5	1.5	O		<350	**1,500**						**0.17**	**0.12**	**0.054**	**0.048**	**0.073**	**0.047**	**0.012**	**0.027**	**0.028**	<0.0077	**0.04123**	<0.058
B43-TP1-9	9	ND																				
B43-TP2-3	3	O		<740	**2,100**						**0.034**	**0.032**	**0.018**	**0.038**	**0.045**	**0.049**	**0.014**	**0.03**	**0.037**	<0.0078	**0.04425**	<0.062
B43-TP2-8	8	O		<63	**240**						<0.0074	<0.0074	<0.0074	<0.0074	<0.0074	<0.0074	<0.0074	<0.0074	<0.0074	<0.0074		<0.056
B43-TP3-5	5	O		<220	**1,100**						**0.0093**	**0.012**	<0.0081	**0.031**	**0.034**	**0.042**	**0.013**	**0.034**	**0.036**	**0.0084**	**0.04738**	<0.061
B43-TP3-8	8	O		<360	**1,700**						**0.011**	**0.011**	<0.0080	**0.02**	**0.026**	**0.023**	**0.013**	**0.018**	**0.02**	<0.0080	**0.02586**	<0.060
B43-TP4-5	5	O		<56	**280**						**0.021**	**0.014**	<0.0092	**0.01**	<0.0092	**0.0097**	<0.0092	<0.0092	<0.0092	<0.0092	**0.00197**	<0.069
B43-TP4-9	9	O		<1500	**8,900**						**0.13**	**0.11**	**0.049**	**0.049**	**0.074**	**0.043**	**0.016**	**0.033**	**0.058**	**0.015**	**0.05184**	<0.065
B43-TP5-6	6	O		<59	**270**						**0.028**	**0.014**	<0.0079	<0.0079	**0.014**	<0.0079	<0.0079	<0.0079	<0.0079	<0.0079	**0.00014**	<0.059
B43-TP5-10	10	O		<33	**140**						**0.02**	<0.0079	<0.0079	<0.0079	**0.0094**	<0.0079	<0.0079	<0.0079	<0.0079	<0.0079	**0.000094**	<0.059
B43-TP6-4	4	O		<11000	**41,000**						**0.77**	**0.82**	**0.33**	**1.1**	**0.51**	**0.088**	<0.038	**0.24**	<0.038	<0.038	**0.3639**	<0.057
B43-TP6-6	6	ND																				
B43-TP7-6	6	O		<310	**1,200**						**0.03**	**0.031**	**0.015**	**0.034**	**0.046**	**0.042**	**0.013**	**0.03**	**0.027**	**0.0082**	**0.04288**	**0.092**
B43-TP-11-5	5	DO		**110**	**580**	<0.0013	<0.0065	<0.0013	<0.0026	<0.0013	**0.37**	**0.088**	**0.052**	**0.019**	**0.026**	**0.02**	<0.0093	**0.013**	**0.012**	<0.0067	**0.01836**	<0.070
B43-TP11-9	9	ND																				
MTCA Method A/B Cleanup Level [2,3]			**100/30 [4]**	**2,000**	**2,000**	**0.03**	**7**	**6**	**9 (total)**		**5 (total)**			**0.1 (TEC) [5]**								**1 (total)**
CEMEX fill site criteria			**100**	**460**	**460**	**0.03**	**7**	**6**	**9 (total)**		**5 (total)**			**0.1 (TEC) [5]**								**1 (total)**
Class II end use criteria			**30**	**200**	**200**	**0.03**	**7**	**6**	**9 (total)**		**5 (total)**			**0.1 (TEC) [5]**								**0.04**

Notes:
ft bgs: feet below ground surface
HCID: hydrocarbon identification
HCID detections: G = Gasoline Range, D = Diesel Range, O -= Lube Oil Range, ND = Not Detected
<: Not detected at laboratory's reporting limit
Bold - Analyte Detected
Bold/Highlighted - Analyte detected above MTCA soil cleanup level
Blank - Sample was not analyzed for this constituent
1. Only detected VOCs and PAHs shown; see Appendix C for complete list of compounds analyzed
2. Washington Model Toxics Control Act Method A (Table 740-1) soil cleanup level for unrestricted land use, shown for reference only
3. Washington Model Toxics Control Act Method B (CLARC) soil cleanup level, shown for reference only
These cleanup levels may not apply at this site, and are provided as a screening level indication of the environmental quality of the site only.
4. The MTCA Method A soil cleanup level for gasoline mixtures without benzene and if the total of ethylbenzene, toluene, plus xylenes is less than 1% of the gasoline mixture is 100 mg/kg. The soil cleanup level for all other gasoline mixtures is 30
5. Toxicity Equivalent Concentration of carcinogenic polynuclear aromatic hydrocarbons (cPAHs) per WAC 173-340-708(e)

TABLE 3
ANALYTICAL RESULTS FOR METALS IN SOIL SAMPLES
BLOCK 43 DEVELOPMENT PROJECT
SOUTH LAKE UNION NEIGHBORHOOD, SEATTLE, WA

Sample ID	Sample Depth (ft bgs)	Total Metals by EPA 6010/7471A [1]						TCLP Metals by EPA 1311/6010B/7470A (mg/l)		
		Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Barium	Cadmium	Lead
GeoProbe Borings										
B43-B1-10	10-12	<12	**94**	<0.58	**34**	**63**	<0.29			
B43-B1-14	14-16	<11	**42**	<0.57	**30**	<5.7	<0.29			
B43-B2-4	4-5	<12	**90**	<0.58	**32**	**44**	<0.29			
B43-B2-8	8-9	<12	**75**	<0.59	**37**	**11**	<0.29			
B43-B3-3	3-4	<12	**95**	<0.58	**46**	**31**	<0.29			
B43-B3-6	6-8	<12	**93**	<0.59	**42**	**11**	<0.29			
B43-B4-4	4-5	<11	**83**	<0.57	**51**	<5.7	<0.28			
B43-B4-5	5-6	<11	**84**	<0.57	**37**	**41**	<0.29			
B43-B5-4	4-5	<11	**83**	<0.57	**38**	<5.7	<0.28			
B43-B5-6	6-7	<11	**110**	<0.57	**41**	**110**	<0.28			
B43-B8-6	6-8	**13**	**120**	<0.55	**17**	**65**	<0.28			
B43-B9-3	3-4	<12	**250**	**1**	**24**	**120**	<0.30			
B43-B9-10	10-12	<11	**45**	<0.57	**28**	<5.7	<0.29			
B43-B10-15	15-16	<12	**65**	<0.58	**33**	**65**	<0.29			
B43-B10-19	19-20	<12	**46**	<0.58	**30**	<5.8	<0.29			
B43-B11-2.5	2.5-4	<11	**110**	<0.57	**28**	**50**	<0.29			
B43-B11-6.5	6.5-8	<11	**98**	<0.57	**36**	**59**	<0.29			
B43-B12-3	6-4	<12	**240**	**12**	**65**	**520**	**0.64**	**0.94**	**0.12**	**0.43**
B43-B12-11	11-12	<11	**110**	**0.94**	**42**	**36**	<0.28			
Test Pits										
B43-TP1-1.5	1.5	<12	**170**	**0.69**	**43**	**130**	<0.29			
B43-TP1-9	9	<12	**63**	<0.58	**47**	<5.8	<0.29			
B43-TP2-3	3	<12	**160**	<0.62	**69**	**23**	<0.31			
B43-TP2-8	8	<11	**45**	<0.56	**46**	<5.6	<0.28			
B43-TP3-5	5	<12	**97**	<0.61	**52**	**44**	<0.30			
B43-TP3-8	8	<12	**130**	<0.60	**51**	**27**	<0.30			
B43-TP4-5	5	<14	**170**	<0.69	**80**	**15**	<0.34			
B43-TP4-9	9	<13	**180**	**1.2**	**57**	**170**	<0.33			
B43-TP5-6	6	<12	**180**	<0.59	**52**	**61**	<0.30			
B43-TP5-10	10	<12	**110**	<0.59	**63**	**7**	<0.29			
B43-TP6-4	4	<11	**260**	**0.63**	**19**	**230**	<0.29	**0.66**	<0.020	**0.99**
B43-TP6-6	6	<11	**120**	<0.57	**61**	<5.7	<0.28			
B43-TP7-6	6	<12	**200**	**1.2**	**46**	**340**	<0.31	**0.85**	<0.020	<0.20
B43-TP-11-5	5	<14	**83**	<0.70	**40**	**20**	<0.35			
B43-TP11-9	9	<12	**140**	<0.60	**64**	<6	<0.30			
MTCA Method A/B Cleanup Level [2,3]		**20**	**16,000 [3]**	**2**	**19/2,000 [4]**	**250**	**2**			
Dangerous Waste Criteria [5]								**100**	**1**	**5**
Background Metals [6]		**7**	**255**	**1**	**48**	**24**	**0.07**			

Notes:
ft bgs: feet below ground surface
<: Not detected at laboratory's reporting limit
Bold - Analyte Detected
Bold/Highlighted - Analyte detected above MTCA soil cleanup level
Blank - Sample was not analyzed for this constituent
1. Only detected metals shown; see Appendix C for complete list of metals analyzed
2. Washington Model Toxics Control Act Method A (Table 740-1) soil cleanup level for unrestricted land use, shown for reference only
3. Washington Model Toxics Control Act Method B (CLARC) soil cleanup level, shown for reference only
These cleanup levels may not apply at this site, and are provided as a screening level indication of the environmental quality of the site only.
4. The Method A soil cleanup levels for Chromium are 19 mg/kg for Cr VI and 2000 mg/kg for Cr III. Analyses are for total chromium.
Geochemical conditions on site would not likely cause oxidation to hexavalent chromium having a cleanup level of 19 mg/kg
5. Dangerous Waste Criteria - Dangerous Waste limit shown for TCLP results, Chapter 173-303 WAC
6. Background metals concentrations per *Natural Background Soil Metals Concentrations in Washington State* (Ecology, 1994) for the Puget Sound area
No other analytes were detected above laboratory reporting limits (see Appendix C for complete list of compounds analyzed).

TABLE 4
ANALYTICAL RESULTS FOR ORGANIC COMPOUNDS IN GROUND WATER SAMPLES
BLOCK 43 DEVELOPMENT PROJECT, SOUTH LAKE UNION NEIGHBORHOOD, SEATTLE, WA

		Total Petroleum Hydrocarbons				Volatiles by EPA 8260B and EDB by EPA 8011[1]						Naphthalenes by EPA 8270D/SIM (ug/L)		
Sample ID	**Water Depth (ft bgs)**	**HCID**	**Gasoline**	**Diesel**	**Heavy Oil**	**MTBE**	**Benzene**	**Toluene**	**Ethyl-benzene**	**m,p-Xylene**	**o-Xylene**	**Naphtha-lene**	**2-Methyl-naphthalene**	**1-Methyl-naphthalene**
GeoProbe Borings														
B43-B1-GW	12	G	**2300**			<10	**1100**	<50	**110**	**110**	<10	**1.4**	**0.69**	**1.3**
B43-B3-GW	15	G	**5300**			<2	<2	<10	**190**	**78**	**5.3**	**1.1**	**0.26**	**0.24**
B43-B4-GW	8	ND												
B43-B5-GW	7.5	G	**1900**			<2	**1.4**	**1.4**	**3.3**	**13**	**0.43**	**0.61**	<0.12	**0.45**
B43-B8-GW	10	ND												
B43-B9-GW	10	G	<400			**0.22**	**16**	**6.6**	**36**	**32**	**5.5**	**12**	**35**	**22**
B43-B10-GW	15	G	**1500**			<0.20	**0.64**	**4.1**	**2.4**	**6.3**	**7.9**			
B43-B12-GW	13	ND												
Monitoring Wells	**Water Depth (ft TOC)**													
B43-1-GW	10.6	ND												
B43-2-GW	15.94	G	**710**			<0.20	**3.9**	<1	**0.33**	**10**	**0.42**	**1.3**	<0.10	**0.18**
B43-KMW3-GW	11.35	ND												
B43-4-GW	11.15	ND												
B43-KMW6-GW	7.72	G	**1400**			<0.20	**1.8**	**1.6**	**3.1**	**3.8**	**0.3**	**0.44**	**0.36**	**1.7**
B43-DUP-GW (duplicate of KMW6)	7.72	G	**1300**			<0.20	**1.8**	**1.6**	**3**	**3.3**	**0.28**	**0.38**	**0.41**	**1.9**
MTCA Method A/B Cleanup Level [2,3]			**800/1000 [4]**	**500**	**500**	**20**	**5**	**1000**	**700**	**1000 (total)**		**160 (total)**		
KCIWD discharge limits		**100 ppm FOG**					**70**	**1400**	**1700**	**2200 (total)**		**3820**		
Surface Water standards [5]		**500**					**2.2**	**1300**	**530**					

Notes:
ft bgs: feet below ground surface
HCID: hydrocarbon identification
HCID detections: G = Gasoline Range, D = Diesel Range, O -= Lube Oil Range, ND = Not Detected
<: Not detected at laboratory's reporting limit
Bold - Analyte Detected
Bold/Highlighted - Analyte detected above MTCA ground water cleanup level
Blank - Sample was not analyzed for this constituent
1. Only detected VOCs shown; see Appendix C for complete list of VOCs analyzed
2. Washington Model Toxics Control Act Method A (Table 720-1) ground water cleanup level, for reference only
3. Washington Model Toxics Control Act Method B (CLARC) soil cleanup level, for reference
these cleanup levels may not apply at this site, and are provided as a screening level indication of the environmental quality of the site only.
4. The MTCA Method A ground water cleanup level for gasoline mixtures without benzene is 1000 µg/kg. The ground water cleanup level for all other gasoline mixtures is 800 µg/kg.
5. Based on human health surface water / fresh water criteria per Clean Water Act §304, or if no CWA criteria, MTCA Method B surface water cleanup levels, or if no surface water criteria, MTCA Ground water cleanup levels, or laboratory practical quantitation limit if lower than standard shown.
KCIWD - King County Industrial Waste Division discharge limits for sanitary sewer

TABLE 5
ANALYTICAL RESULTS FOR METALS IN GROUND WATER SAMPLES
BLOCK 43 DEVELOPMENT PROJECT, SOUTH LAKE UNION NEIGHBORHOOD, SEATTLE, WA

Sample ID	Dissolved Metals by EPA 200.8/7470A [1]			
	Arsenic	Barium	Chromium	Lead
GeoProbe Borings				
B43-B1-GW	**110**	**92**	<10	<1
B43-B3-GW	<3	**53**	<10	<1
B43-B4-GW	**4**	**67**	<10	**20**
B43-B5-GW	<3	**79**	<10	<1
B43-B8-GW	**6.7**	<25	**12**	<1
B43-B9-GW	**30**	**73**	<10	<1
B43-B10-GW				
B43-B12-GW	**7.3**	**87**	<10	**1.5**
Monitoring Wells				
B43-1-GW	**3.9**	**170**	<10	<1
B43-2-GW	**15**	**88**	<10	<1
B43-KMW3-GW	<3	**38**	<10	<1
B43-4-GW	<3	<25	<10	<1
B43-KMW6-GW	**8.7**	**62**	<10	<1
B43-DUP-GW (duplicate of KMW6)	**8.7**	**61**	<10	<1
MTCA Method A/B Cleanup Level [2,3]	**5**	**3200 [3]**	**50**	**15**
KCIWD discharge limits	**4000 [4]**		**5000 [4]**	**4000 [4]**
Surface Water standards [5]	**190**	**1000**	**57**	**55.6 [6]**

Notes:
ft bgs: feet below ground surface
<: Not detected at laboratory's reporting limit
ft TOC: feet below top of casing
Bold: Analyte Detected
Bold/Highlighted: Analyte detected above MTCA ground water cleanup level
Blank (no info/data): Sample was not analyzed for this constituent
1. Only detected metals shown; see Appendix C for complete list of metals analyzed
2. Washington Model Toxics Control Act Method A (Table 720-1) ground water cleanup level, for reference only
3. Washington Model Toxics Control Act Method B (CLARC) soil cleanup level, for
These cleanup levels may not apply at this site, and are provided as a screening level indication of the environmental quality of the site only.
4. Maximum daily
5. Based on Surface Water Standard, Aquatic Life, Fresh/Chronic, Ch. 173-201A WAC, or Surface Water Standard, Human Health, Fresh Water, Clean Water Act §304
6. Ecology Lake Union general boatyard permit, 2007
KCIWD - King County Industrial Waste Division discharge limits for sanitary sewer

Date: 6/9/2012 Source: King County iMAP - Property Information (http://www.metrokc.gov/GIS/iMAP)

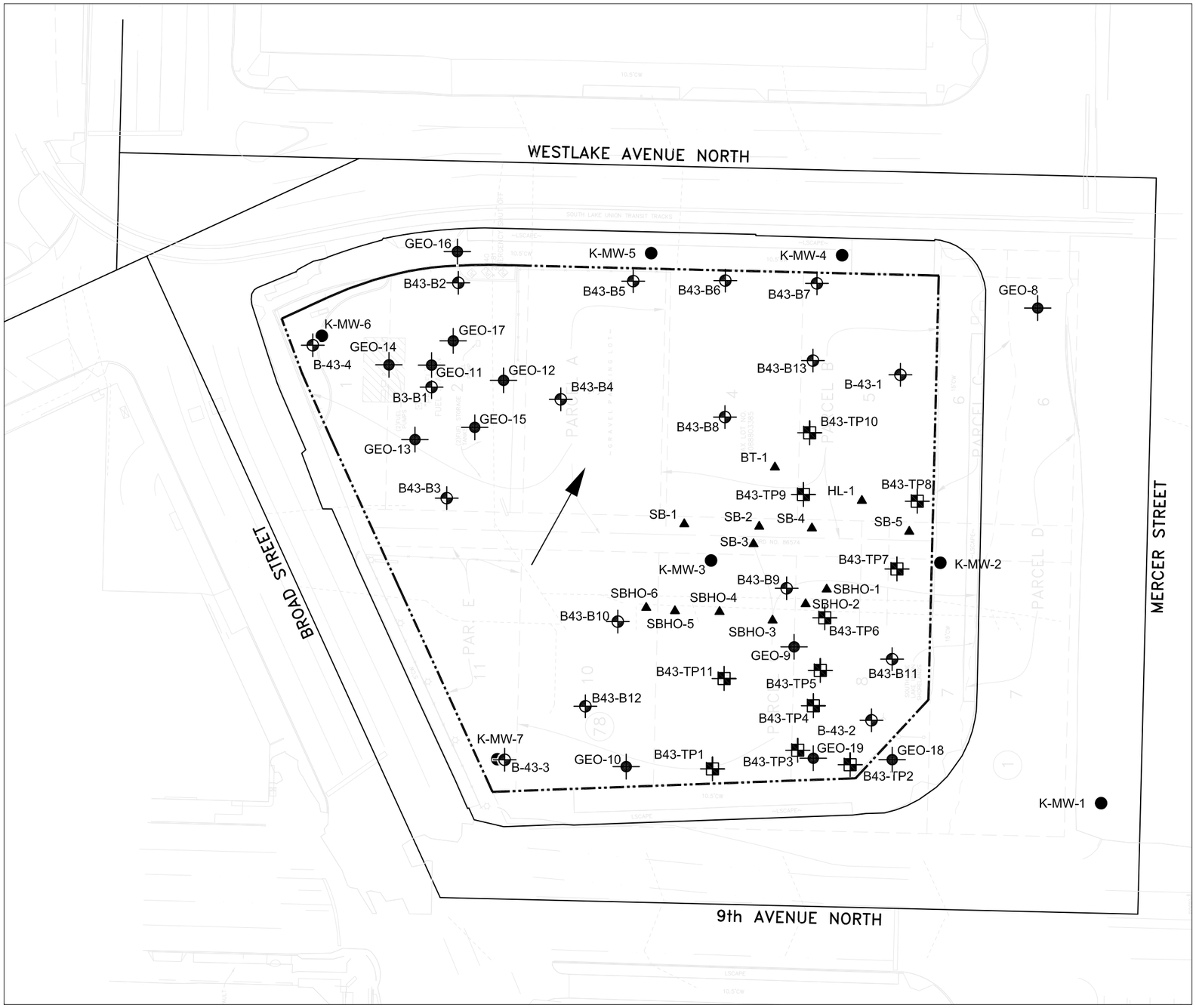
HWA GeoSciences Inc.

VICINITY MAP

PHASE II ENVIRONMENTAL SITE ASSESSMENT
BLOCK 43 - SOUTH LAKE UNION DEVELOPMENT PROJECT
SEATTLE, WASHINGTON

FIGURE NO. 1

PROJECT NO. **2012-046**



Legend

- B43-B13 — Soil boring completed by HWA GeoSciences, Inc (2012)
- B43-TP10 — Test pit completed by HWA GeoSciences, Inc (2012)
- B-43-4 — Boring completed by GeoEngineers Inc. (2012)
- K-MW-7 — Monitoring Well completed Kane Environmental, Inc. (2003)
- GEO-10 — Boring completed Kane Environmental, Inc. (2003)
- SB-5 — Boring completed by Environmental Partners, Inc (2000)
- Inferred direction of ground water flow (as measured by HWA on 5/11/12)

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in the attached document. HWA GeoSciences, Inc. can not guarantee the accuracy and content of electronic files. The master file is stored by HWA GeoSciences, Inc. and will serve as the official record of this communication.

Reference: Base drawing provided by GeoEngineers, Inc. (2012)

0 25 50 75 100

scale: 1"-50 feet

BASE MAP PROVIDED BY: Client

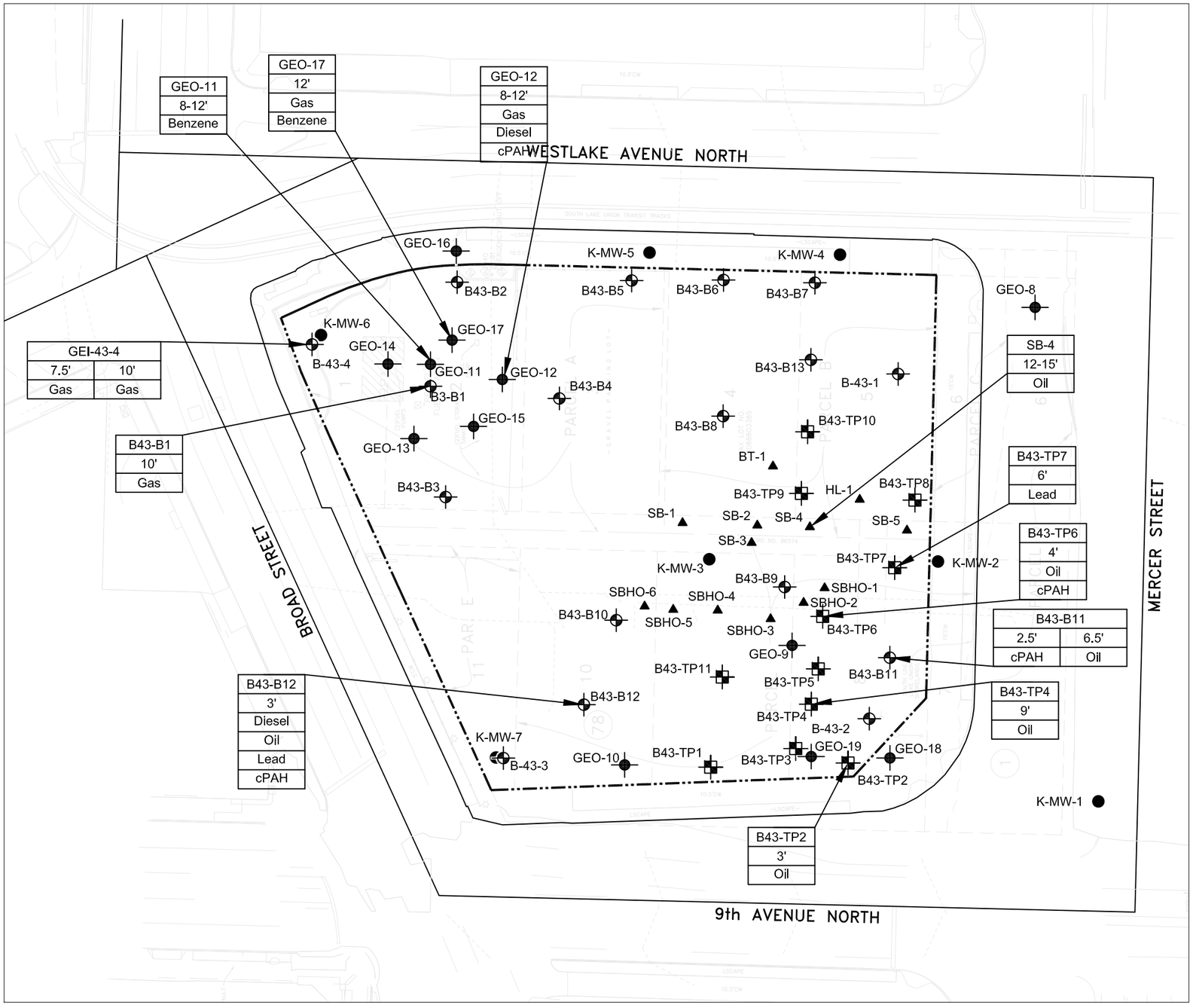
HWA GeoSciences Inc.

PHASE II ENVIRONMENTAL SITE ASSESSMENT
BLOCK 43 DEVELOPMENT PROJECT
SOUTH LAKE UNION NEIGHBORHOOD
SEATTLE, WA

SITE AND EXPLORATION PLAN

DRAWN BY	EFK
CHECK BY	VA
DATE:	06-06-12
FIGURE #	2
PROJECT #	2012-046-22 TASK 0001

S:\2012 PROJECTS\2012-046-22 VULCAN BLOCK 43\CAD\HWA 2012-046 B43.DWG <FIG 2 SOIL AND MTCA> Plotted: 6/14/2012 1:29 PM



Legend

- B43-B13 — Soil boring completed by HWA GeoSciences, Inc. (2012)
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- K-MW-7 — Monitoring Well completed by Kane Environmental, Inc. (2003)
- GEO-10 — Boring completed by Kane Environmental, Inc. (2003)
- SB-5 — Boring completed by Environmental Partners, Inc (2000)

Exceedances of MTCA Method A Cleanup Levels for soil in soil samples

3'	Approximate sample depth in feet below ground surface
Gas	Gasoline-range petroleum hydrocarbons
Diesel	Diesel-range petroleum hydrocarbons
Oil	Heavy Oil-range petroleum hydrocarbons
Benzene	Benzene
Lead	Total lead
cPAH	Carcinogenic polycyclic aromatic hydrocarbons

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in the attached document. HWA GeoSciences, Inc. can not guarantee the accuracy and content of electronic files. The master file is stored by HWA GeoSciences, Inc. and will serve as the official record of this communication.

Reference: Base drawing provided by GeoEngineers, Inc. (2012)

0 25 50 75 100

scale: 1"-50 feet

BASE MAP PROVIDED BY: Client

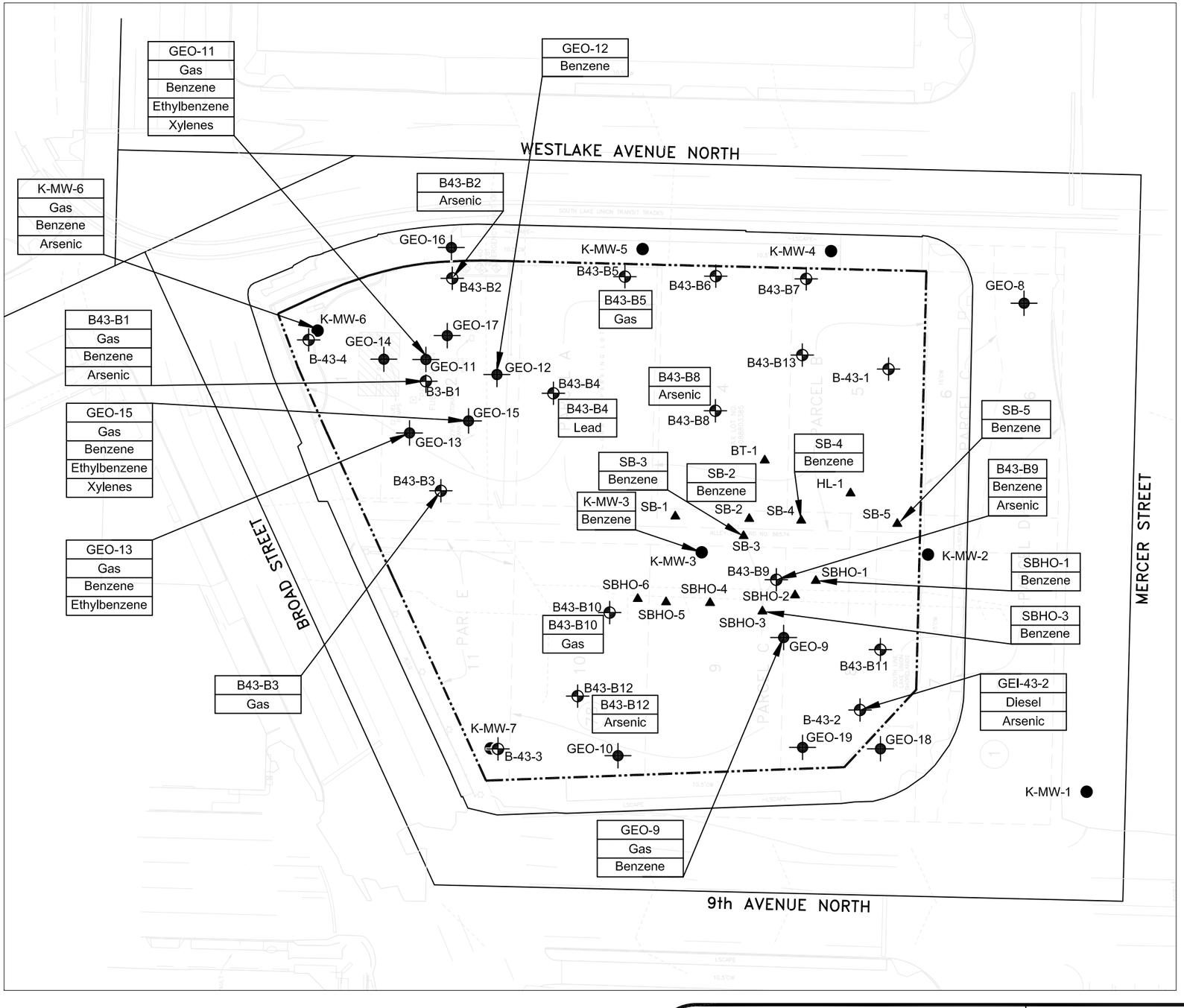
HWA GeoSciences Inc.

PHASE II ENVIRONMENTAL SITE ASSESSMENT
BLOCK 43 DEVELOPMENT PROJECT
SOUTH LAKE UNION NEIGHBORHOOD
SEATTLE, WA

HISTORICAL AND RECENT SOIL SAMPLE LOCATIONS AND MTCA METHOD A EXCEEDANCES

DRAWN BY	EFK
CHECK BY	VA
DATE:	06-06-12
FIGURE #	3
PROJECT #	2012-046-22 TASK 0001

S:\2012 PROJECTS\2012-046-22 VULCAN BLOCK 43\CAD\HWA 2012-046 B43.DWG <FIG 3 SOIL AND MTCA> Plotted: 6/14/2012 1:31 PM



Legend

- B43-B13 — Soil boring completed by HWA GeoSciences, Inc. (2012)
- B-43-4 — Boring completed by GeoEngineers Inc. (2012)
- K-MW-7 — Monitoring Well completed by Kane Environmental, Inc. (2003)
- GEO-10 — Boring completed by Kane Environmental, Inc. (2003)
- SB-5 — Boring completed by Environmental Partners, Inc. (2000)

Exceedances of MTCA Method A Cleanup Levels in groundwater samples

Gas	Gasoline-range petroleum hydrocarbons
Benzene	Benzene (Aromatic hydrocarbon)
Ethylbenzene	Ethylbenzene (Aromatic hydrocarbon)
Xylenes	Xylenes, total (Aromatic hydrocarbon)
Arsenic	Arsenic, Dissolved
Lead	Lead, Dissolved

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in the attached document. HWA GeoSciences, Inc. can not guarantee the accuracy and content of electronic files. The master file is stored by HWA GeoSciences, Inc. and will serve as the official record of this communication.

Reference: Base drawing provided by GeoEngineers, Inc. (2012)

0 25 50 75 100

scale: 1"-50 feet

BASE MAP PROVIDED BY: Client

HWA GeoSciences Inc.

PHASE II ENVIRONMENTAL SITE ASSESSMENT
BLOCK 43 DEVELOPMENT PROJECT
SOUTH LAKE UNION NEIGHBORHOOD
SEATTLE, WA

HISTORICAL AND RECENT GROUND WATER SAMPLE LOCATIONS AND MTCA METHOD A EXCEEDANCES

DRAWN BY: EFK
CHECK BY: VA
DATE: 06-06-12

FIGURE # 4

PROJECT # 2012-046-22 TASK 0001

S:\2012 PROJECTS\2012-046-22 VULCAN BLOCK 43\CAD\HWA 2012-046 B43.DWG <FIG 4 GW AND MTCA> Plotted: 6/14/2012 1:32 PM

APPENDIX A

PHASE II ESA WORK PLAN

PHASE II INVESTIGATION WORK PLAN

VULCAN BLOCK 43

601 WESTLAKE AVENUE NORTH

SEATTLE, WASHINGTON

Prepared for:

City Investors XX, LLC

c/o Vulcan Inc.

505 Union Street, Suite 900

Seattle, WA 98104

HWA Project No. 2012-046-22

April 25, 2012

HWA GEOSCIENCES INC.

21312 30TH DR. SE, #110

BOTHELL, WA 98021

(425) 774-0106

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APPENDICES

PHASE II INVESTIGATION WORK PLAN
VULCAN BLOCK 43
601 WESTLAKE AVENUE NORTH
SEATTLE, WASHINGTON

1.0 INTRODUCTION

This Phase II investigation work plan ("Work Plan") describes the scope of work, methods, procedures, and other information to be used by HWA GeoSciences Inc. (HWA) during Phase II investigation activities at Block 43 in the South Lake Union neighborhood of Seattle, Washington, hereafter referred to as the "site". Site location is shown on Figure 1.

This SAP was prepared for City Investors XX, LLC in response to its Master Services Agreement with HWA for environmental consulting services at the site dated April 25, 2012. HWA prepared this plan in accordance with our understanding of the project, and Chapter 173-340-820 WAC in the Washington State Model Toxics Control Act (MTCA) Cleanup Regulations.

1.1 Purpose

The purpose of this work plan is to describe the methods and procedures that will be used during field and laboratory activities to ensure that data quality objectives for the project are met. Data objectives are to provide field and analytical data of sufficient quality to fulfill MTCA requirements for investigation and cleanup of contaminated sites.

1.2 Project Stakeholders

Companies playing a significant role in the development and/or environmental investigation activities at the site are listed below, along with their role in the project and the contact names and phone numbers for their representatives.

Company and its Role	**Contact Information for Company Representative**
Owner City Investors XX LLC, c/o Vulcan Inc. 505 Union St, #900 Seattle, WA 98107	Jim Broadlick 206-342-2059 (primary contact) Julie DeDonato 206-342-2409 (alternate contact), (206) 351-9657 (cell)
Construction Company and Test Pit Excavator Merlino Construction Co. 9125 10th Ave S. Seattle, WA 98108	Mike Hebert 206-762-9125 (office) 206-255-5443 (cell)
Environmental Consultant HWA Geosciences Inc.	Jeff Thompson, Project Manager 425-774-0106

21312 39th Dr. SE, #110 Bothell, WA 98021	(ext. 233), 206-794-3113 (cell) Vance Atkins, Project Geologist 425-774-0106 (ext. 230), 206-794-3124 (cell)
Geotechnical Consultant GeoEngineers, Inc. 8410 154th Avenue NE Redmond, WA 98052	Matt Smith, Project Manager 425-861-6072 Dan Chao, Project Geologist - 425-861-6000
Drilling Contractor Environmental Services Network 1210 Eastside St. SE, # 200 Olympia, WA 98501	Driller: Don 360-870-4515 Coordinator: Anisa Handen (360) 459-4670
Analytical Laboratory OnSite Environmental 14648 NE 95th Street Redmond, WA 98052	David Baumeister 425-883-3881 (primary contact) Blair Goodrow 425-883-3881 (alternate contact), 206-963-8475 (cell)
Propel Biofuels Station 609 Westlake Avenue North Seattle, WA 98109	Mr. Nai Chao, Facility Manager 206-262-8825 (office) (206) 658-5688 (cell)

1.3 Site Location

The site includes one city block, referred to as Block 43, in the South Lake Union neighborhood of Seattle, Washington. The street address of one parcel within the block is used as the site location by default. The default site address is 601 Westlake Avenue North, Seattle, Washington. The site is bounded on the south by Mercer Street, on the east by Westlake Avenue North, on the north by Broad Street, and on the west by 9th Avenue North. A site plan showing the streets and site boundaries is shown on Figure 1.

1.4 Site Background

City Investors XX LLC owns the subject property and plans to construct one building at the site containing retail space, commercial offices, multi-family residential units, and underground parking stalls. Soil at the site will be excavated from property line to property line to depths ranging from 20 to 25 feet below ground surface (bgs). Excavated soil will be disposed of at a licensed disposal facility depending on the type of soil and potential concentrations of petroleum hydrocarbons and/or other constituents.

Former property uses included automobile sales and service, including vehicle refueling operations and fuel storage. Site investigations conducted to date, among them Kane Environmental, Inc. (May 2003) identified petroleum hydrocarbon constituents in soil and ground water beneath the site. The highest concentrations appear to be in the northeast portion of the site. Other relatively lower concentrations are located in the west, central and south portions of the site. Some petroleum concentrations in the ground water appear to occur in the absence of similar concentrations in soil. These conditions may represent unidentified and localized areas of soil contamination not identified in previous investigations, USTs or associated piping still in-place beneath the property that represent

represent on-going sources, or migration of impacted ground water beneath the site from an off-site source.

Recent activities at the site include demolishing 2 buildings that were part of the former car sales and service facility, and advancing geotechnical and environmental borings. Four environmental borings located near the property corners were converted to groundwater monitoring wells in March 2012.

2.0 SCOPE OF WORK AND SCHEDULE

2.1 Scope of Work

The scope of work for Phase II environmental activities includes:

- Preparing this work plan, which includes a sampling and analysis plan (SAP) and a health and safety plan (HASP).
- Utilizing the services of public utility locators and a private utility locating service to mark the approximate locations of underground utilities near the vicinity of proposed boring and test pit locations.
- Advancing approximately 12 direct-push probes to collect soil and ground water samples beneath the site.
- Excavate approximately 10 test pits to evaluate subsurface hydrogeologic conditions and collect soil samples beneath the site.
- Purge and sample four existing ground water monitoring wells.
- Submit select soil and ground water samples from borings and test pits for laboratory analysis
- Evaluate the data collected during field activities and laboratory analytical results.
- Prepare a written report describing the results of field activities, analytical results, data evaluation activities, and our conclusions and recommendations.

These activities are described in subsequent sections of this work plan.

2.2 Project Schedule

We anticipate the field activities described herein are scheduled to begin on May 8, 2012 and will require approximately 5 business days. Chemical analysis of soil and groundwater samples are expected to require one to two weeks, possibly more depending on the type and quantity of follow-up analyses that are required. Data evaluation and report preparation activities will require approximately three to four weeks. The anticipated date for HWA to submit its final report to the client describing the results of our activities is June 30, 2012.

3.0 FIELD EXPLORATION AND SAMPLING ACTIVITIES

3.1 Underground Utility Locations

In an attempt to avoid contacting underground utilities during field activities the approximate location of underground utilities in the vicinity of soil boring and test pit locations will be identified and marked on ground surface. HWA will contact the Utilities Underground Location Center (UULC) ten days or less prior to intrusive field activities. Because public utility locators only mark their utilities that are within the public rights-of-way, HWA will also subcontract a private locating service (APS, Inc.) to locate and mark the approximate locations of underground utilities that are near proposed boring and test pit locations within the site boundaries. PVC and concrete utilities can not be located, and interference from foundations, footings, metal or other subsurface objects can interfere with accurate location marking and utility identification. HWA will not be held liable in any way for damage to utilities or other underground structures not defined or located for HWA by the owner or by the Utilities Underground Location Center.

3.2 Soil Borings

All borings will be drilled and installed according to Ecology Minimum Standards for Construction and Maintenance of Wells (Chapter 173-160 WAC). HWA will employ a drilling contractor licensed in Washington State to collect soil and groundwater samples using a truck-mounted, direct-push sampling device. The device consists of a hydraulic drive assembly mounted on either a pickup truck or tractor. Steel pipe (1.25-2 inch diameter) is driven into the ground using a hydraulic impact driver, then withdrawn. Soil cores within a glycol modified polyethylene terephthalate (PETG) inner sleeve can then be retrieved from the sampler and removed for logging and sampling.

Soil borings will be advanced to depths of approximately 20 to 25 feet bgs, the depth of refusal, or the depth of groundwater, whichever is less. Boring locations are shown on Figure 2. Soil exploration activities will include collecting continuous core samples (whenever possible) from ground surface to the total depth of exploration.

Borings will be backfilled from the bottom of the boring to ground surface using bentonite chips that will be hydrated at ground surface.

3.3 Test Pits and Sampling

Test pits will be excavated using a backhoe or trackhoe at or near the locations shown on Figure 2. Nine test pits are currently planned. Test pit excavations will extend to the depth of the excavator arm (approximately 12 feet bgs), the depth of refusal, or the depth of groundwater, whichever is less. Test pits will be backfilled using the excavated soil which will be lightly compacted using the excavator bucket.

Unless unexpected or unusual subsurface conditions are encountered, we anticipate submitting one to two soil samples from each test pit for chemical analysis. Samples

selected for chemical analysis will be placed in new, unused sample containers provided by the analytical laboratory. Samples will be delivered to the analytical laboratory within 24 hours of sampling and will employ proper chain-of-custody procedures for identification, tracking and handling of the samples.

Test pits will be photographed and logged by an HWA field representative who will record subsurface hydrogeologic conditions on a test pit log, collect samples from the excavated soil, and record pertinent information on the logs, including: stratigraphy, sample depth, ground water occurrence, total depth of exploration, and visual or other indications of environmental contamination in soil or groundwater.

3.4 Ground Water Sampling

Ground water samples will be collected from direct-push borings and from the four existing on-site monitoring wells. Monitoring wells are located near the four property corners and the locations are shown on Figure 2. Ground water samples will be collected from soil borings and monitoring wells using a peristaltic pump. New pump tubing will be used at each location.

Ground water will be purged from each boring or monitoring well prior to sample collection to obtain groundwater samples that are representative of the formation water. Purging and sampling will be performed using low-flow methods and a peristaltic pump.

3.5 Investigation-Derived Waste (IDW)

Soil cuttings, decontamination water, and other investigation-derived waste (IDW) will be temporarily stored at the site in steel drums until disposed of off site at an approved disposal or recycling facility designated by the owner. IDW containers will be labeled with pertinent information sufficient to identify the contents, site location, and data that the IDW was generated.

4.0 CHEMICAL ANALYSIS OF SOIL AND GROUND WATER SAMPLES

HWA will submit soil and ground water samples to OnSite Environmental, Inc. of Redmond, Washington for chemical analysis. A standard (5 to 10 days) turn-around time (TAT) will be used unless special circumstances require a shorter TAT.

Chemical analysis of soil and groundwater samples is based on recent and historical data for soil and groundwater samples previously collected at the site. These data indicate the following potential constituents of concern (PCOCs) in soil and/or groundwater beneath the site:

- Total petroleum hydrocarbons (TPH) in the gasoline, diesel, and/or heavy oil ranges;
- Specific gasoline constituents: BTEX, EDB, EDC, MTBE;

- Volatile organic compounds (VOC);
- Total and/or dissolved metals; and,
- Total and/or dissolved polycyclic aromatic hydrocarbons (PAH).

PCOCs have been detected in soil and/or groundwater beneath the site. The occurrence of PCOCs is not consistent in terms of media, depth, location or other parameters. Some constituents appear to occur or are known to occur with other compounds, such as BTEX with TPHg, or PAHs with TPHd or TPHo.

Based on these conditions soil and groundwater samples will be submitted for initial analyses to confirm the presence or absence of certain constituents and then resubmitted if associated compounds are suspected. Initial and subsequent analyses are described below.

4.1 Chemical Analysis of Soil Samples

4.1.1 Initial (first round) Analyses

All soil samples will be submitted for the following initial (first-round) analysis:

- TPH identification scan using Ecology Method NWTPH-HCID;
- Total RCRA Metals using EPA 6000/7000 series methods.

4.1.2 Subsequent (second round) Analyses

Follow-up analyses may be required based on analytical results from initial analyses

Soil samples will be resubmitted for one or more of the following analyses pending initial analytical results:

- If NWTPH-HCID results are positive for TPHg, then the sample will be resubmitted for analysis of BTEX/EDB/EDB/MTBE.
- If NWTPH-HCID results are positive for TPHd and/or TPHo, then the sample will be resubmitted for analysis of PAH.
- If total metals analysis is positive and at a high concentration that may potentially warrant special handling or disposal practices, then the sample will be resubmitted for TCLP metals analysis.

Subsequent analyses and/or TCLP testing may result in a total turnaround time of more than two weeks.

Specific sample collection and handling methods are described in the Sampling and Analysis Plan (SAP) included in Appendix A.

5.0 HEALTH AND SAFETY

HWA personnel conducting this field program are required to follow the health and safety protocol presented in the HWA site specific Health and Safety Plan (HASP). The HASP is included in Appendix B.

Subcontractors and other authorized visitors to the site are responsible for their own health and safety and their own site-specific health and safety plan. The Health and Safety Plan will be made available to subcontractors and other site visitors who request to view it. Health and Safety precautions will be communicated to subcontractors by HWA personnel in site safety briefings at the beginning of each field day. To acknowledge review and comprehension of this plan, HWA personnel must sign the appropriate section included in the back of the document.

Date: 6/9/2012 Source: King County iMAP - Property Information (http://www.metrokc.gov/GIS/iMAP)

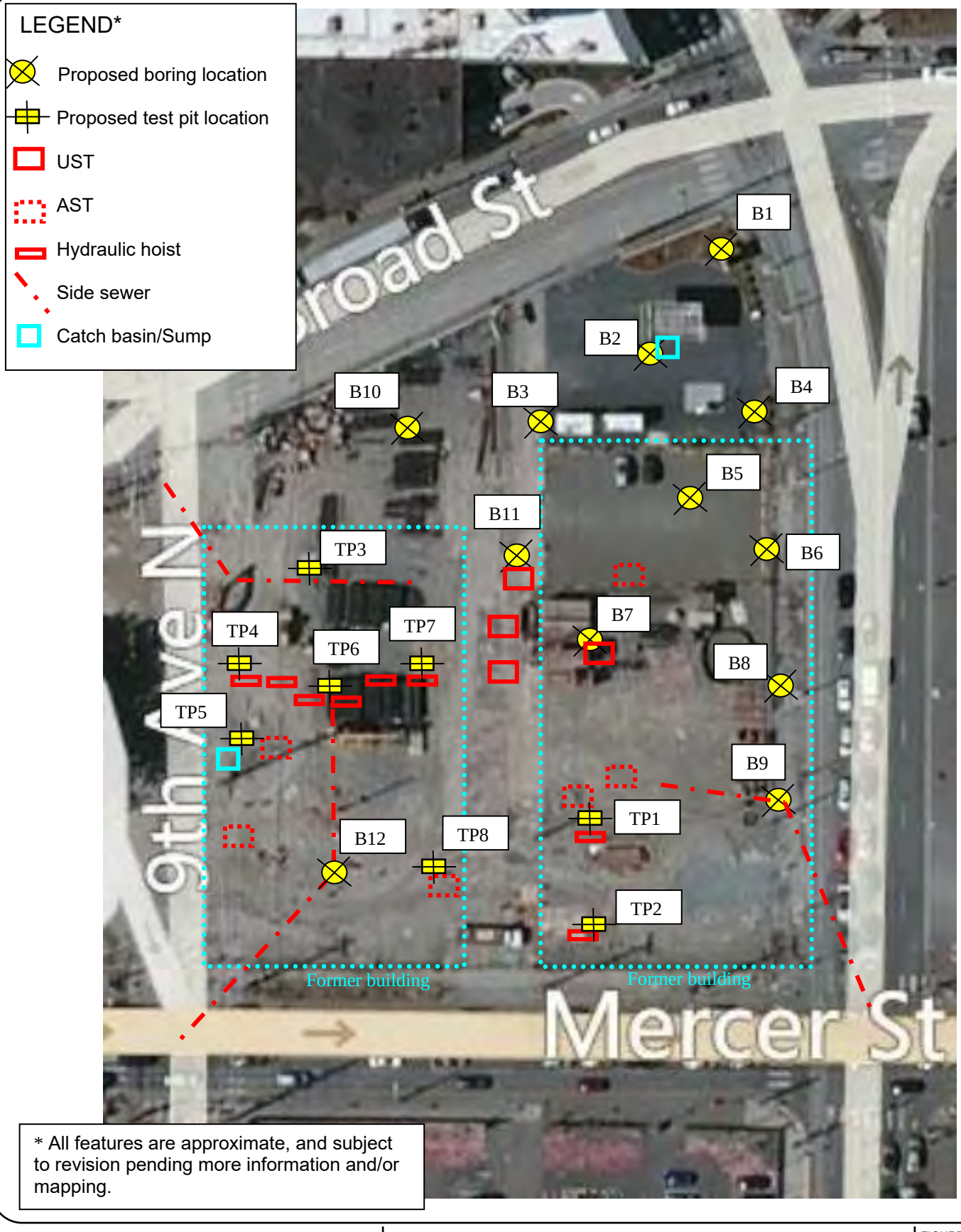
HWA GeoSciences Inc.

VICINITY MAP

PHASE II ENVIRONMENTAL SITE ASSESSMENT
BLOCK 43 - SOUTH LAKE UNION DEVELOPMENT PROJECT
SEATTLE, WASHINGTON

FIGURE NO. 1

PROJECT NO. **2012-046**



HWA GeoSciences Inc.

PROPOSED BORING AND TEST PIT LOCATIONS

PHASE II ENVIRONMENTAL INVESTIGATION
BLOCK 43 – SOUTH LAKE UNION DEVELOPMENT
CITY INVESTORS XX, LLC

FIGURE NO.
2

PROJECT NO.
2012-046-22

WORK PLAN
APPENDIX A

SAMPLING AND ANALYSIS PLAN

SAMPLING AND ANALYSIS PLAN

Vulcan Block 43, South Lake Union Neighborhood
601 Westlake Avenue North, Seattle, Washington

Prepared for:
City Investors XX, LLC
c/o Vulcan Inc.
505 Union Street, Suite 900
Seattle, WA 98104

HWA Project No. 2012-046-22

May 6, 2012

HWA GEOSCIENCES INC.

21312 30TH DR. SE, #110
BOTHELL, WA 98021
(425) 774-0106

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Tables

Figures

Appendices

1.0 INTRODUCTION

This sampling and analysis plan (SAP) is Appendix A to the HWA Geosciences Inc. (HWA) Phase II Investigation Work Plan (Work Plan). This SAP describes the field and laboratory methods for collecting and analyzing soil and ground water samples collected during HWA's Phase II Investigation at Block 43 in the South Lake Union neighborhood of Seattle, Washington (the site). The site includes one city block. Site location is shown on Figure 1.

This SAP was prepared for City Investors XX, LLC ("Owner") in response to its Master Services Agreement with HWA for environmental consulting services dated April 25, 2012. HWA prepared this plan in accordance with our understanding of the project, and Chapter 173-340-820 WAC in the Washington State Model Toxics Control Act (MTCA) Cleanup Regulations. The body of this plan outlines our field sampling and laboratory analytical methods.

2.0 PURPOSE

The purpose of this SAP is to describe the procedures that will be used during field and laboratory activities to ensure that data quality objectives for the project are met. Data quality objectives are to provide accurate quantification of potential constituents of concern in soil and/or ground water beneath the site prior to development by the Owner.

3.0 SITE LOCATION

The site includes one city block, referred to as Block 43, in the South Lake Union neighborhood of Seattle, Washington. The street address of one parcel within the block is used as the site location by default. The default site address is 601 Westlake Avenue North, Seattle, Washington. The site is bounded on the south by Mercer Street, on the east by Westlake Avenue North, on the north by Broad Street, and on the west by 9th Avenue North. A site plan showing the streets and site boundaries is shown on Figure 1.

4.0 SCOPE OF THIS SAMPLING AND ANALYSIS PLAN

The scope of this SAP includes:

- Describing locations where and how soil and/or ground water samples will be collected
- Documentation methods to be used during field activities, sampling activities, and sampling handling/transport activities;
- Sample collection methods and containers;

These activities are described in subsequent sections of this work plan.

5.0 SAMPLING METHODS AND PROCEDURES

5.1 Soil Sampling

Field activities will be supervised by an HWA geologist or engineer. Soil borings will be logged by an HWA field representative who will record subsurface hydrogeologic conditions on a soil boring log, collect samples from the recovered soil cores, and record pertinent information on the soil boring logs, including: soil sample depths, stratigraphy, ground water occurrence, ground water sample depth, total depth of exploration, and visual or other indications of environmental contamination in soil or ground water. HWA will field screen select samples for organic vapors by headspace analysis using a photoionization detector (PID). For each boring, samples with the highest level of organic vapors and/or most discernible visual/olfactory contamination will be shipped to the laboratory for chemical analysis. In the absence of field screening indications, the sample immediately above the level of ground water will be submitted for analysis.

Unless unexpected or unusual subsurface conditions are encountered, we anticipate submitting one to two soil samples from each boring and/or test pit for chemical analysis. Samples selected for chemical analysis will be placed in new, unused sample containers provided by the analytical laboratory. Samples will be delivered to the analytical laboratory within 24 hours of sampling and will employ proper chain-of-custody procedures for identification, tracking and handling of the samples.

5.2 Field Screening of Soil Samples

HWA will screen soil samples using a photoionization detector (PID) headspace analysis. Although the PID is not capable of quantifying or identifying specific organic compounds, this instrument is capable of measuring relative concentrations of a variety of organic vapors. The HWA field representative will place approximately two ounces of soil in a resealable (i.e. Ziploc) plastic bag with ample air headspace. After allowing the sample to rest for up to five minutes at ambient temperature, the sampler will agitate the sample for ten seconds, insert the PID probe through a small opening in the plastic bag, and record the highest reading within ten seconds.

5.3 Ground Water Sampling

One ground water sample will be collected (if present and of sufficient volume) from the bottom of each boring prior to backfilling. Ground water samples will not be collected from test pits. Ground water samples will be collected by installing either a temporary retractable stainless-steel sampling screen, or a temporary ¾-inch-diameter PVC well screen (0.010-inch slot) in the borehole. Ground water from soil borings will be collected using a peristaltic pump and Teflon-lined polyethylene tubing lowered into the screen. New Teflon-lined polyethylene tubing will be used for each ground water sample.

Ground water samples will also be collected from the four existing on-site monitoring wells. Monitoring wells are located near the four property corners and the locations are shown on Figure 2. Ground water samples will be collected from soil borings and monitoring wells using a peristaltic pump. New pump tubing will be used at each location.

Ground water will be purged from each boring or monitoring well prior to sample collection to obtain ground water samples that are representative of the formation water. Purging will be performed using low-flow methods and a peristaltic pump. Ground water levels will be measured to the nearest 0.01-foot during purging using a decontaminated electronic well probe. Prior to collection of ground water samples, the sampling points wells will be purged by pumping a small volume of water to ensure sampled water represents aquifer conditions. The volume pumped will be determined in the field based on stabilization of field parameters: specific conductance, dissolved oxygen, and pH. Sampling points will be purged by very slowly lowering semi-rigid polyethylene tubing to a depth corresponding to roughly the midpoint of the screen, securing the tubing to prevent vertical movement, connecting it to a peristaltic pump, and then pumping at a rate not to exceed 0.5 liters/minute (0.13 gallons/minute). At a minimum, two pump and tubing volumes will be purged (1/2" I.D. tubing = 0.010 gallon/lineal foot, 0.17" I.D. tubing = 0.001 gallon/lineal foot = 5 ml/lineal foot). Samples will be collected once the parameter values have stabilized over the course of three sets of measurements as follows:

specific conductance	10 μS/cm
dissolved oxygen	2 mg/L
pH	0.1

If a sampling point can be pumped dry prior to reaching the desired purge volume, it will be allowed to recover prior to sampling, using the minimum time between purging and sampling that would allow collection of sufficient sample volume. Samples will be pumped directly into the appropriate containers, as provided by the laboratory. A Field Data Sampling Sheet (provided in Appendix A) will be filled out for each sample. New tubing will be used at each location.

All organics and TPH samples will be filtered through a disposable 1-micron filter. The filters will attach directly to the discharge tube of the sampling pump. The filter must be changed between sample points, or more frequently if clogging occurs. Samples that have been field-filtered or that require laboratory filtering must be noted on the Chain-of-Custody forms in the comments section. The laboratory will note which samples require filtering on the individual bottle labels.

5.4 Test Pits and Sampling

Test pits will be excavated using a backhoe or trackhoe at or near the locations shown on Figure 2. Nine test pits are currently planned.

Unless unexpected or unusual subsurface conditions are encountered, we anticipate submitting one to two soil samples from each test pit for chemical analysis. Soil samples will be collected from the excavator bucket. Care will be taken not to collect soil sample adjacent to the sides or bottom of the bucket or to touch the sides or bottom of the bucket with the sampling utensil. A stainless steel sampling utensil will be used, and will be cleaned prior to collecting each sample using standard decontamination procedures.

HWA will field screen select soil samples for organic vapors by headspace analysis using a photoionization detector (PID). For each boring, samples with the highest level of organic vapors and/or most discernible visual/olfactory contamination will be shipped to the laboratory for

chemical analysis. In the absence of field screening indications, the sample immediately above the level of ground water will be submitted for analysis.

Samples selected for chemical analysis will be placed in new, unused sample containers provided by the analytical laboratory. Samples will be delivered to the analytical laboratory within 24 hours of sampling and will employ proper chain-of-custody procedures for identification, tracking and handling of the samples.

5.5 Equipment Decontamination Procedures

HWA will use the following standard environmental decontamination procedures to minimize the potential for cross-contamination of samples. Decontamination procedures will be used to clean field equipment and/or sampling utensils prior to each use and/or between borings as appropriate. Standard decontamination procedures will include:

1. Wash in detergent-potable water solution
2. Wash/rinse using potable water
3. Rinse using deionized or distilled water.

The drilling contractor will steam-clean probe rods and other down-hole equipment and tooling between prior to advancing each boring.

6.0 FIELD DOCUMENTATION AND CHAIN-OF-CUSTODY PROCEDURES

The following sections describe the recording system for documenting all site field activities, and the sample chain-of-custody program.

6.1 Field Documentation

Field documentation will be sufficient to record the general, daily activities that are performed during the Phase II investigation as well as specific activities such as describing soil observed in a sidewall of a test pit.

Daily field logs will be completed for each day that field activities are performed, and will include but not be limited to: start time, objectives/scope, HWA and subcontractor field personnel and visitors, standby time or unexpected conditions.

Boring logs will be completed for each boring regardless of whether or not the boring is completed. Boring logs will include soil description, field-screening results, depth of soil sample(s) selected for chemical analysis, whether ground water was encountered and/or sampled, potential presence of environmental contamination, boring termination depth, and/or other information believed to be pertinent by the field representative.

Test pit logs will be completed for each test pit. Test pit logs will include soil description, field-screening results, depth of soil sample(s) selected for chemical analysis, ground water occurrence,

potential presence of environmental contamination, termination depth, and/or other information believed to be pertinent by the field representative.

A well sampling sheet will be completed for each monitoring well where ground water is gauged and/or sampled.

Examples of field documentation sheets are included in Appendix A to this plan.

6.2 Soil Boring/Test Pit and Sample Identification Numbering System

Soil borings have been assigned temporary identification numbers for planning purposes. Soil boring locations and identification numbers are shown on Figure 2. Soil borings will be assigned final designations in the field. This will allow flexibility in boring designation to prevent out-of-sequence designations, and in the event that borings are added or removed from the work plan in the course of the investigation.

Soil borings will be numbered in numerical order using the designation:

B43-BX

where 'X' is the boring ID number.

Test pits will be numbered in numerical order using the designation:

B43-TPX

where 'X' is the test pit ID number.

Boring and/or test pit ID numbers will be recorded on all field logs.

Soil samples will be designated with the boring or test pit number followed by the designation "SO" for soil, then followed by the sample depth (in feet). For example, a soil sample collected from 10 feet bgs at boring B-2 would be assigned sample identification number B43-B2-SO-10. The depth designation is for the approximate depth at which the sample was collected, as measured by the depth of the sample interval and the distance of the sample from the bottom of the soil core. Sample intervals and depths shall be denoted in the field logs and/or sampling forms.

Ground water samples will be numbered using the designation:

B43-BX-GW

where 'X' is the boring ID number.

6.3 Pertinent Sample Information

Following sample collection, field personnel will affix labels to each sample container. Samplers

will use waterproof ink, plastic bags, or clear tape to ensure labels remain legible even when wet. Samplers will record the following information on the labels:

- Project name and number
- Sample identification number
- Date and time of collection
- Required test methods
- Name of sample collector

6.4 Chain-Of-Custody Records

The objective of the chain-of-custody program is to allow the tracking of possession and handling of individual samples from the time of field collection through laboratory analysis. Once a sample is collected, it becomes part of the chain-of-custody process. A sample is "in custody" when (1) it is in someone's possession, (2) it is within visual proximity of that person, (3) it is in that person's possession, but locked up and sealed (e.g., during transport), or (4) it is in a designated secure sample storage area. Sampling staff will complete a chain-of-custody record which will accompany each batch of samples. The record will contain the following information:

- Project name and number
- Names of sampling team members
- Requested testing program
- Required turnaround time
- Sample number
- Date and time collected
- Sample type
- Number of containers
- Special Instructions
- Signatures of persons involved in the chain of possession

When sample custody is transferred to another individual, the samples must be relinquished by the present custodian and received by the new custodian. This will be recorded at the bottom of the chain-of-custody report where the persons involved will sign, date and note the time of transfer.

Sampling team members will keep sample coolers in locked vehicles while not in active use or visual range. If couriers are used to transport samples, chain of custody seals will be affixed to sample coolers.

Collection Methods for Soil Samples being submitted for VOC Analysis (EPA Method 5035)

Bottle Type	Method	Holding Time
(1) tarred VOA (non-preserved)*	NWTPH-G / 5035A	14 days

(1) tarred VOA (non-preserved) (2) tarred VOAs w/stir bar (low level)** (1) 4 oz. glass jar (moisture)	VOCs / 5035A	48 hrs @4^0C then 14 days freeze at lab

* - if sample containers can not be delivered to lab within 48 hours, OnSite will provide methanol-preserved vials
** - if sample containers can not be delivered to lab within 48 hours, OnSite will provide sodium bisulphate-preserved vials

COLLECT 5 GRAMS OF SOIL PER VOA

VOAs are pre-weighed (tarred) at the lab

- Do not add any labels, tape, etc.
- Keep the same cap with each VOA
- Minimize methanol loss: check cap tightness, minimize open times, etc.
- Weigh VOAs on day of sampling (field or office)
- Visual check for methanol loss - check all VOAs prior to sampling for consistency, reference marks when full
- Discard any suspect VOAs, note weights (w/o soil) on COC, methanol levels, etc. in field notebook

Collect Core Sample

- In place soils, surficial or excavation sidewall (<4' deep) - scrape off to fresh soils w/ clean stainless steel spoon, take core sample
- Backhoe bucket - scrape off to fresh soils w/ clean stainless steel spoon, take core sample
- Split spoon - core immediately after opening split spoon, if using liners, core from middle liner or inside end of outer liners (top one is usually slough)
- Geoprobe liner - slice open acetate liner, core immediately after opening

Soil types:

- Cohesive granular - use core
- Cemented (e.g. till) - break up with stainless steel spoon, place in VOA & cap as soon as possible
- Non cohesive (won't stay in core) - place in VOA & cap as soon as possible

Extrude core into VOA

- Wipe threads with clean tissue or dry wipe
- Cap VOA
- Label - ball point pen (e.g., write in the rain) only, no markers

Note in field notebook:

- Soil type, moisture
- Any bias e.g., gravels, organics (avoid both in core sample)
- Weather (temp, humidity, wind)
- Coring method used
- Preservation and storage method used

Note on COC:

- Empty vial weight

Health and Safety issues - Methanol is toxic and flammable

- Skin contact (use gloves), inhalation hazards (ensure adequate ventilation)
- Check shipping restrictions

Cross contamination: Methanol has a high affinity for VOCs (hence its use as a preservative and extraction solvent) and will adsorb VOCs from other sources, e.g., exhaust fumes, spray paint, sharpie, markers, etc.

7.0 CHEMICAL ANALYSIS OF SOIL AND GROUND WATER SAMPLES

HWA will submit soil and ground water samples to OnSite Environmental, Inc. of Redmond, Washington for chemical analysis. A standard (5 to 10 days) turn-around time (TAT) will be used unless special circumstances require a shorter TAT.

Chemical analysis of soil and ground water samples is based on recent and historical data for soil and ground water samples previously collected at the site. These data indicate the following potential constituents of concern (PCOCs) in soil and/or ground water beneath the site:

- Total petroleum hydrocarbons (TPH) in the gasoline, diesel, and/or heavy oil ranges;
- Specific gasoline constituents: BTEX, EDB, EDC, MTBE;
- Volatile organic compounds (VOC);
- Total and/or dissolved metals; and,
- Total and/or dissolved polycyclic aromatic hydrocarbons (PAH).

PCOCs have been detected in soil and/or ground water beneath the site. The occurrence of PCOCs is not consistent in terms of media, depth, location or other parameters. Some constituents appear to occur or are known to occur with other compounds, such as BTEX with TPHg, or PAHs with TPHd or TPHo.

Based on these conditions soil and ground water samples will be submitted for initial analyses to confirm the presence or absence of certain constituents and then resubmitted if associated compounds are suspected. Initial and subsequent analyses are described below.

7.1 Chemical Analysis of Soil Samples

7.1.1 Initial (first round) Analyses

All soil samples will be submitted for the following initial (first-round) analysis:

- TPH identification scan using Ecology Method NWTPH-HCID;
- Total RCRA Metals using EPA 6000/7000 series methods.

7.1.2 Subsequent (second round) Analyses

Follow-up analyses may be required based on analytical results from initial analyses

Soil samples will be resubmitted for one or more of the following analyses pending initial analytical results:

- If NWTPH-HCID results are positive for TPHg, then the sample will be resubmitted for analysis of BTEX/EDB/EDB/MTBE.
- If NWTPH-HCID results are positive for TPHd and/or TPHo, then the sample will be resubmitted for analysis of PAH.
- If total metals analysis is positive and at a high concentration that may potentially warrant special handling or disposal practices, then the sample will be resubmitted for TCLP metals analysis.

7.2 Chemical Analysis of Ground Water Samples

7.2.1 Initial (first round) Analyses

Ground water samples will be submitted for the following initial (first-round) analyses:

- TPH identification scan using Ecology Method NWTPH-HCID;
- Dissolved RCRA Metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, silver)* using EPA Method 6010/7470A;

In addition, ground water samples collected from monitoring wells will be submitted for PAH using EPA Method 8270D/SIM during initial analysis.

7.2.2 Subsequent (second round) Analyses

Follow-up analyses may be required based on analytical results from initial analyses. Ground water samples will be resubmitted for one or more of the following analyses pending initial analytical results:

- If NWTPH-HCID results are positive for TPHg, then the sample will be resubmitted for analysis of TPH-Gx, and the volatile constituents BTEX/EDB/EDB/MTBE.
- If the volatile constituents are detected then a full VOC analysis using EPA Method 8260 will be performed.
- If NWTPH-HCID results are positive for TPHd and/or TPHo, then the sample will be resubmitted for analysis of TPH-Dx (with silica gel/acid cleanup) and PAH.

Ground water samples will be submitted to the analytical laboratory for one or more of the following analyses:

* Both filtered (dissolved) and unfiltered (total) metals samples will be collected. The filtered sample will be submitted initially. The total metals sample can be filtered if turbid, by initially collecting in an unpreserved poly bottle, allowing to settle in the cooler, then decanting into the preserved bottle or pumping through a 0.045 micron filter.

A sampling and analysis matrix for soil and ground water is shown in Table 1. The sampling and analysis matrix contains information on initial and subsequent analyses, sample container types and quantities, preservatives, and holding times.

After collection, the samples will be labeled, chilled in a cooler to 4^{o}C, and shipped to OnSite for chemical analysis. Samples will be submitted for standard laboratory turnaround time (5-10 days).

8.0 QUALITY ASSURANCE/QUALITY CONTROL

Samples will be collected and analyzed with sufficient quality assurance/quality control (QA/QC) to ensure representative and reliable results. The overall QA objective for this investigation is to ensure that all laboratory and field data on which decisions are based are technically sound, statistically valid, and properly documented. There are two parts to the QA/QC program for this project: field and laboratory.

Field QA/QC includes proper documentation of field activities and sampling/handling procedures, as described in Section 2.5. Field QA/QC samples will consist of the following:

Soil: none

Ground Water: 1 trip blank per water sample shipment (analysis for TPH-Gas/BTEX)
1 field duplicate for ground water, if sample volume is sufficient

Field Duplicates are used to confirm analytical results from a given sample point. Duplicate samples are collected in the field using a matching set of laboratory-supplied bottles and sampling from the selected well, as requested. Each duplicate should be sampled by alternating between the regular and the duplicate sample bottles, proceeding in the designated sampling order (VOCs first). The location where the duplicate is collected must be identified on the field sampling data sheet. All duplicates shall be blind-labeled (i.e., the well designation is not listed on the sample bottle or Chain-of-Custody form). Once a duplicate is collected, it is handled and shipped in the same manner as the rest of the samples. Duplicate results will be reported in the laboratory results as separate samples, using the designation DUP-(#).

Split samples are collected when a location is sampled with a third party. Split samples are not anticipated for this investigation.

Trip blanks are used to detect contamination that may be introduced in bottle preparation, in transit to or from the sampling site, or in the field. Trip blanks are samples of volatile-organic-free, laboratory-quality water (Type II reagent grade) that are prepared at the laboratory. They remain with the sample bottles while in transit to the site, during sampling, and during the return trip to the laboratory. Trip blank sample bottles are not opened at any time during this process. Trip

blanks are to be reported in the laboratory results as separate samples, using the designation TB-(#). Each sample cooler that includes bottles for VOC analysis must include a trip blank, whether it was requested or not.

Field blanks are used to detect contamination that may be introduced in the field. Field blanks are not anticipated for this investigation.

Equipment blanks are used to detect residue from decontaminated equipment. Equipment blanks are not anticipated for this investigation.

Laboratory QA/QC analyses provide information about accuracy, precision, and detection limits. Method-specific QA/QC samples may include the following, depending on the analysis:

- Method blanks
- Duplicates
- Instrument calibration verification standards
- Laboratory control samples
- Surrogate spiked samples
- Performance evaluation QC check samples

Data Evaluation

Data evaluation will include checking holding times, method blank results, surrogate recovery results, field and laboratory duplicate results, completeness, detection limits, laboratory control sample results, and Chain-of-Custody forms.

Table 1 - Sampling and Analysis Matrix for Soil Samples
Block 43 Phase II Investigation
Seattle, Washington

Initial Analytical Testing	Follow-up Analytical Testing	Sample Media and Containers
SOIL Submit all samples for: ▪ NWTPH-HCID ▪ Total RCRA metals	**SOIL** If HCID is pos for TPHg, then submit sample(s) for analysis of: ▪ NWTPH-Gx ▪ BTEX, MTBE, EDB, EDC, ▪ Naphthalenes If HCID is pos for TPHd, then submit sample(s) for analysis of: ▪ NWTPH-Dx (with silica gel/acid cleanup) ▪ BTEX ▪ Naphthalenes ▪ Carcinogenic PAHs If HCID is pos for TPHo, then submit sample(s) for analysis of: ▪ NWTPH-Dx (with silica gel/acid cleanup) ▪ Naphthalenes ▪ Carcinogenic PAHs ▪ PCBs If total metals analysis exceeds RCRA disposal requirements then submit sample for analysis of: ▪ Total RCRA metals using TCLP Method	**SOIL SAMPLES** Two 8oz jars, and four 40mL VOA vials (pre-weighted) per sample. Two of the VOA vials will be with a stir bar and two will be without a stir bar.

Table 2 - Sampling and Analysis Matrix for Ground Water Samples
Block 43 Phase II Investigation
Seattle, Washington

Initial Analytical Testing	Follow-up Analytical Testing	Sample Media and Containers
GROUND WATER Submit all samples for: ▪ NWTPH-HCID ▪ Dissolved RCRA metals (field filtered) ▪ PAHs (field filtered)	**GROUND WATER** If HCID is pos for TPHg, then submit sample(s) for analysis of: ▪ NWTPH-Gx ▪ BTEX, MTBE, EDB, EDC, ▪ Naphthalenes If HCID is pos for TPHd, then submit sample(s) for analysis of: ▪ NWTPH-Dx (with silica gel/acid cleanup) ▪ BTEX ▪ Naphthalenes ▪ Carcinogenic PAHs If HCID is pos for TPHo, then submit sample(s) for analysis of: ▪ NWTPH-Dx (with silica gel/acid cleanup) ▪ NWTPH-Dx (with silica gel/acid cleanup) ▪ Naphthalenes ▪ Carcinogenic PAHs ▪ PCBs	**GROUND WATER SAMPLES** NWTPH-HCID and NWTPH-Dx (2) 500ml amber (HCL preserved) Total RCRA Metals EPA 200.8/7470A (1) 500ml Poly (Nitric preserved) NWTPH-Gx (2) 40mL VOA (HCL preserved) Volatiles EPA 8260B (BTEX, MTBE, EDC) (3) 40mL VOA (HCL preserved) EDB EPA 8011 (2) 40mL VOA (HCL preserved) Naphthalenes and Carcinogenic PAHs EPA 8270D/SIM (2) 1 Liter amber (unpreserved) PCBs EPA 8082 (2) 1 Liter amber (unpreserved)

SAMPLING AND ANALYSIS PLAN
APPENDIX A

FIELD FORMS AND CHAIN OF CUSTODY RECORD

HWA GeoSciences Inc.
21312 30th Drive SE, Suite 110, Bothell, Washington 98021-7010
Tel 425.774.0106 Fax 425.774.2714 www.hwageo.com

Chain of Custody and Laboratory Anaylsis Request

DATE: _____
PAGE: ___ of ___

PROJECT NAME: _____ #: _____
SAMPLERS NAME: _____ PHONE: _____
SAMPLERS SIGNATURE: _____ DATE: _____
HWA CONTACT: _____ PHONE: _____

HWA SAMPLE ID	DATE	TIME	MATRIX	LAB ID	# OF BOTTLE

ANALYSIS REQUESTED

														EDD

TURNAROUND TIME
☐ DAYS
☐ STANDARD

REMARKS

PRINT NAME	SIGNATURE	COMPANY	DATE	TIME	REMARKS
Relinquished by:					
Received by:					
Relinquished by:					
Received by:					

DISTRIBUTION: WHITE - Return to HWA GeoSciences; YELLOW - Retain by Lab; PINK - Retain by Sampler

HWA GEOSCIENCES INC.
21312 30th Drive SE, Suite 110, Bothell, WA 98021
Tel: 425-774-0106 / Fax: 425-774-2714

FIELD SAMPLING DATA SHEET

Project Name: _____ Well Number:_____

Project Number:_____ Sample Number:_____

Project Location:_____ Weather: _____

Client/Contact:_____ Date:_____

WELL MONITORING:

Time	Pump Depth	Depth to Water	Measuring Point (TOC?)	Measuring Point Elevation	Water Level Elevation	Gallons in Well (Case Volume)

(2" dia=0.163 gal/ft)
(4" dia=0.653 gal/ft)

WELL PURGING:

Time	Method	Gallons	Case Volume	pH	Conductivity	Temperature	Dissolved Oxygen		

WELL SAMPLING:

Time	Sampling Method	Sample Analysis	Container Number	Container Volume	Container Type	Field Filtered (Y/N)	Preservative	Iced (Y/N)

COMMENTS/NOTES: (Include equipment used: Bailers, Filters, Well Probe, pH/Conductivity, Meter, etc.)

Total # of Bottles:_____ Sampler**:**_____ Signature:_____

WORK PLAN
APPENDIX B

HEALTH AND SAFETY PLAN
For HWA use only – available upon request

APPENDIX B

BORING AND TEST PIT LOGS

RELATIVE DENSITY OR CONSISTENCY VERSUS SPT N-VALUE

COHESIONLESS SOILS			COHESIVE SOILS		
Density	N (blows/ft)	Approximate Relative Density(%)	Consistency	N (blows/ft)	Approximate Undrained Shear Strength (psf)
Very Loose	0 to 4	0 - 15	Very Soft	0 to 2	<250
Loose	4 to 10	15 - 35	Soft	2 to 4	250 - 500
Medium Dense	10 to 30	35 - 65	Medium Stiff	4 to 8	500 - 1000
Dense	30 to 50	65 - 85	Stiff	8 to 15	1000 - 2000
Very Dense	over 50	85 - 100	Very Stiff	15 to 30	2000 - 4000
			Hard	over 30	>4000

USCS SOIL CLASSIFICATION SYSTEM

MAJOR DIVISIONS			GROUP DESCRIPTIONS	
Coarse Grained Soils	Gravel and Gravelly Soils	Clean Gravel (little or no fines)	GW	Well-graded GRAVEL
	More than 50% of Coarse Fraction Retained on No. 4 Sieve		GP	Poorly-graded GRAVEL
		Gravel with Fines (appreciable amount of fines)	GM	Silty GRAVEL
			GC	Clayey GRAVEL
	Sand and Sandy Soils	Clean Sand (little or no fines)	SW	Well-graded SAND
			SP	Poorly-graded SAND
More than 50% Retained on No. 200 Sieve Size	50% or More of Coarse Fraction Passing No. 4 Sieve	Sand with Fines (appreciable amount of fines)	SM	Silty SAND
			SC	Clayey SAND
Fine Grained Soils	Silt and Clay	Liquid Limit Less than 50%	ML	SILT
			CL	Lean CLAY
			OL	Organic SILT/Organic CLAY
50% or More Passing No. 200 Sieve Size	Silt and Clay	Liquid Limit 50% or More	MH	Elastic SILT
			CH	Fat CLAY
			OH	Organic SILT/Organic CLAY
Highly Organic Soils			PT	PEAT

TEST SYMBOLS

%F	Percent Fines	
AL	Atterberg Limits:	PL = Plastic Limit LL = Liquid Limit
CBR	California Bearing Ratio	
CN	Consolidation	
DD	Dry Density (pcf)	
DS	Direct Shear	
GS	Grain Size Distribution	
K	Permeability	
MD	Moisture/Density Relationship (Proctor)	
MR	Resilient Modulus	
PID	Photoionization Device Reading	
PP	Pocket Penetrometer Approx. Compressive Strength (tsf)	
SG	Specific Gravity	
TC	Triaxial Compression	
TV	Torvane Approx. Shear Strength (tsf)	
UC	Unconfined Compression	

SAMPLE TYPE SYMBOLS

- 2.0" OD Split Spoon (SPT) (140 lb. hammer with 30 in. drop)
- Shelby Tube
- 3-1/4" OD Split Spoon with Brass Rings
- Small Bag Sample
- Large Bag (Bulk) Sample
- Core Run
- Non-standard Penetration Test (3.0" OD split spoon)

GROUNDWATER SYMBOLS

- Groundwater Level (measured at time of drilling)
- Groundwater Level (measured in well or open hole after water level stabilized)

COMPONENT DEFINITIONS

COMPONENT	SIZE RANGE
Boulders	Larger than 12 in
Cobbles	3 in to 12 in
Gravel	3 in to No 4 (4.5mm)
Coarse gravel	3 in to 3/4 in
Fine gravel	3/4 in to No 4 (4.5mm)
Sand	No. 4 (4.5 mm) to No. 200 (0.074 mm)
Coarse sand	No. 4 (4.5 mm) to No. 10 (2.0 mm)
Medium sand	No. 10 (2.0 mm) to No. 40 (0.42 mm)
Fine sand	No. 40 (0.42 mm) to No. 200 (0.074 mm)
Silt and Clay	Smaller than No. 200 (0.074mm)

COMPONENT PROPORTIONS

PROPORTION RANGE	DESCRIPTIVE TERMS
< 5%	Clean
5 - 12%	Slightly (Clayey, Silty, Sandy)
12 - 30%	Clayey, Silty, Sandy, Gravelly
30 - 50%	Very (Clayey, Silty, Sandy, Gravelly)
Components are arranged in order of increasing quantities.	

NOTES: Soil classifications presented on exploration logs are based on visual and laboratory observation.
Soil descriptions are presented in the following general order:

Density/consistency, color, modifier (if any) GROUP NAME, additions to group name (if any), moisture content. Proportion, gradation, and angularity of constituents, additional comments. (GEOLOGIC INTERPRETATION)

Please refer to the discussion in the report text as well as the exploration logs for a more complete description of subsurface conditions.

MOISTURE CONTENT

DRY	Absence of moisture, dusty, dry to the touch.
MOIST	Damp but no visible water.
WET	Visible free water, usually soil is below water table.

HWA GEOSCIENCES INC.

Vulcan Block 43
City Investors XX, LLC
601 Westlake Avenue North
Seattle, Washington

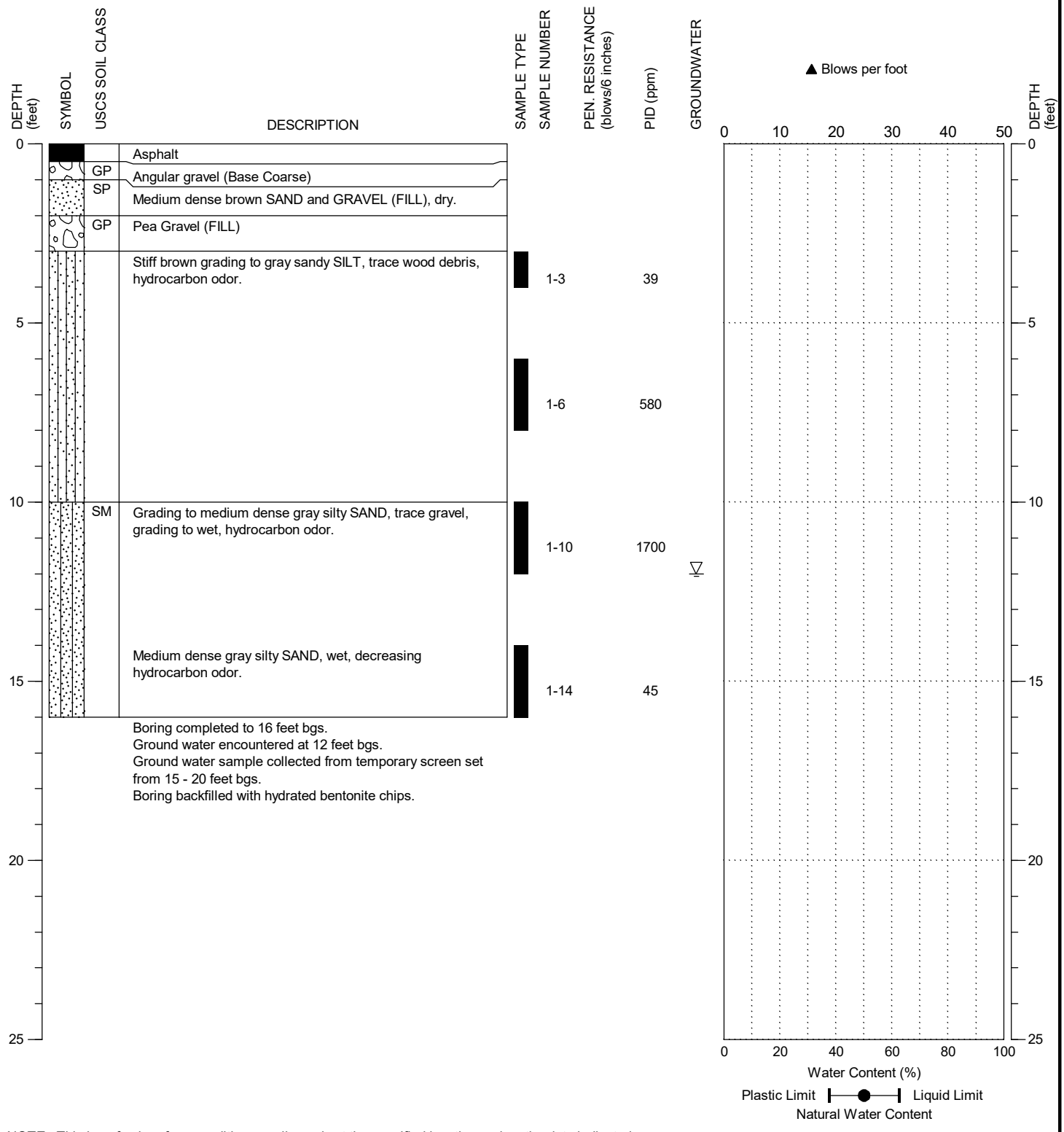
LEGEND OF TERMS AND SYMBOLS USED ON EXPLORATION LOGS

PROJECT NO.: 2012-046-22 FIGURE: B-1

DRILLING COMPANY: ESN Northwest
DRILLING METHOD: GeoProbe
SAMPLING METHOD: 48" Macrocore Sampler with HDPE liner
LOCATION: Center of Propel parcel

SURFACE ELEVATION: ± feet
CASING ELEVATION ± feet

DATE STARTED: 5/8/2012
DATE COMPLETED: 5/8/2012
LOGGED BY: V. Atkins



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HWA GEOSCIENCES INC.

Vulcan Block 43
City Investors XX, LLC
601 Westlake Avenue North
Seattle, Washington

BORING:
B43-B01

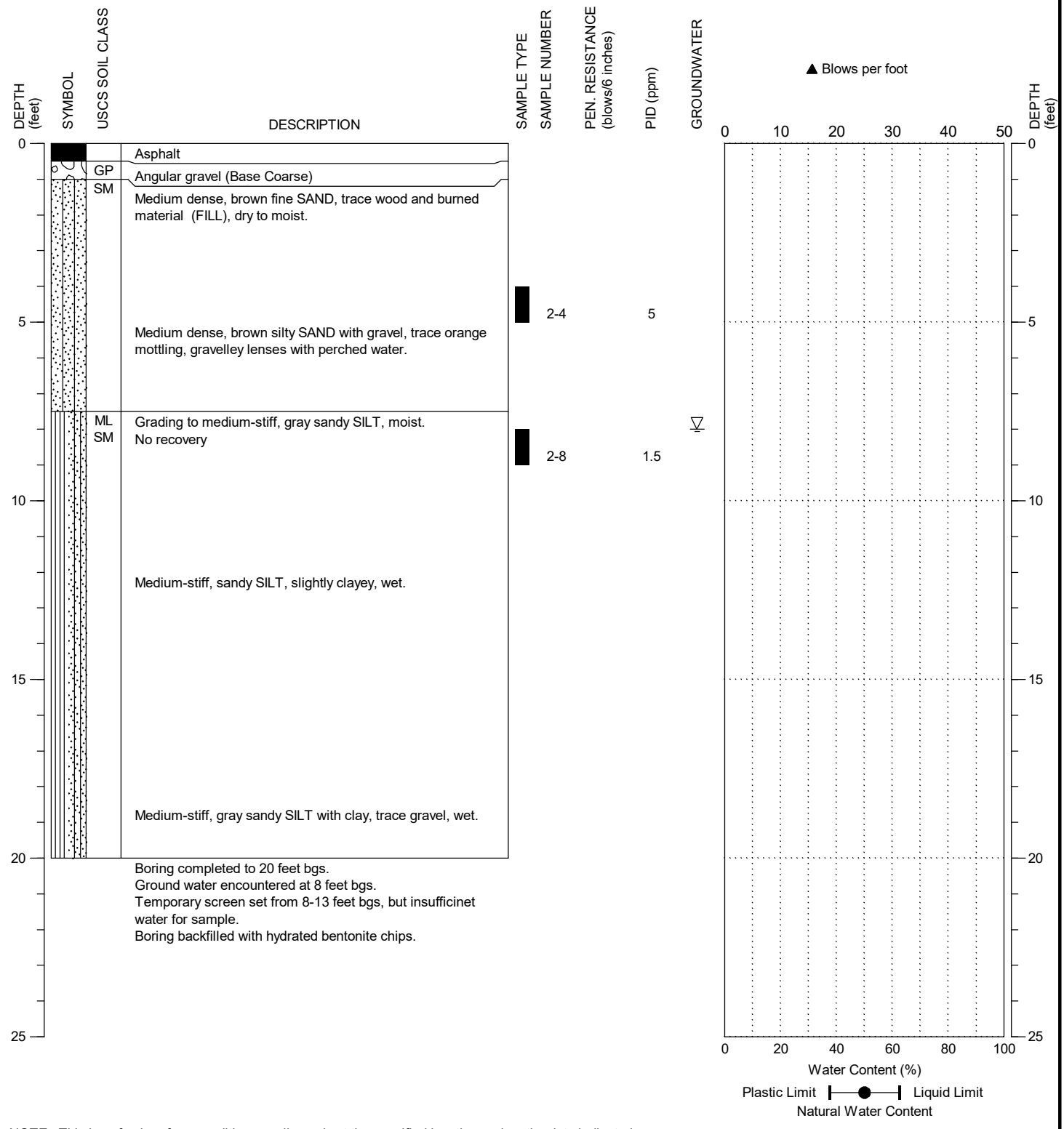
PAGE: 1 of 1

PROJECT NO.: 2012-046-22 FIGURE: B-2

DRILLING COMPANY: ESN Northwest
DRILLING METHOD: GeoProbe
SAMPLING METHOD: 48" Macrocore Sampler with HDPE liner
LOCATION: East side, Propel parcel

SURFACE ELEVATION: ± feet
CASING ELEVATION ± feet

DATE STARTED: 5/8/2012
DATE COMPLETED: 5/8/2012
LOGGED BY: V. Atkins



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HWA GEOSCIENCES INC.

Vulcan Block 43
City Investors XX, LLC
601 Westlake Avenue North
Seattle, Washington

BORING:
B43-B02

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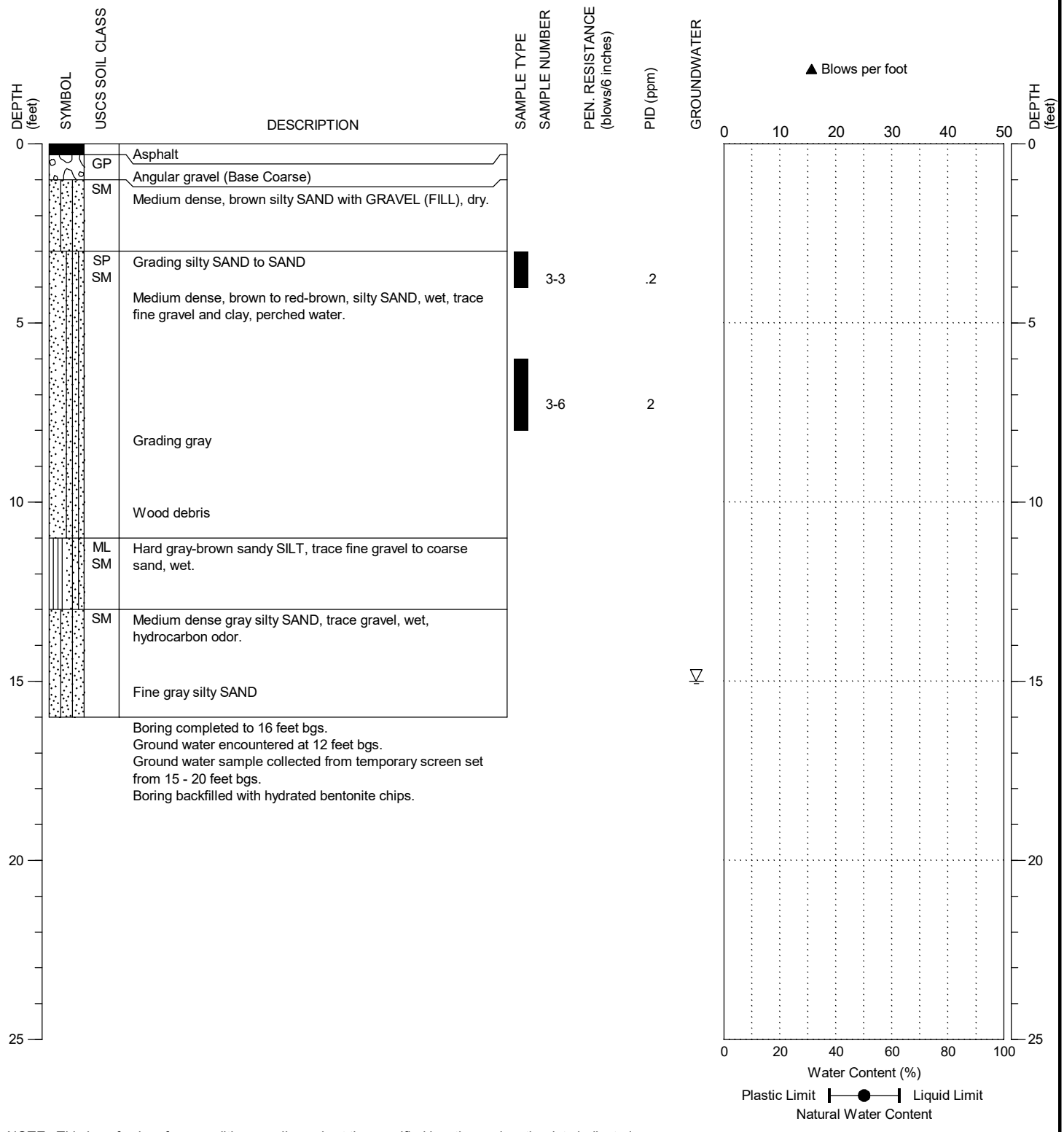
PROJECT NO.: 2012-046-22 FIGURE: B-3

BORINGE 2012-046-22.GPJ 6/8/12

DRILLING COMPANY: ESN Northwest
DRILLING METHOD: GeoProbe
SAMPLING METHOD: 48" Macrocore Sampler with HDPE liner
LOCATION: Southwest corner, Propel parcel

SURFACE ELEVATION: ± feet
CASING ELEVATION ± feet

DATE STARTED: 5/8/2012
DATE COMPLETED: 5/8/2012
LOGGED BY: J. Thompson



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HWA GEOSCIENCES INC.

Vulcan Block 43
City Investors XX, LLC
601 Westlake Avenue North
Seattle, Washington

BORING:
B43-B03

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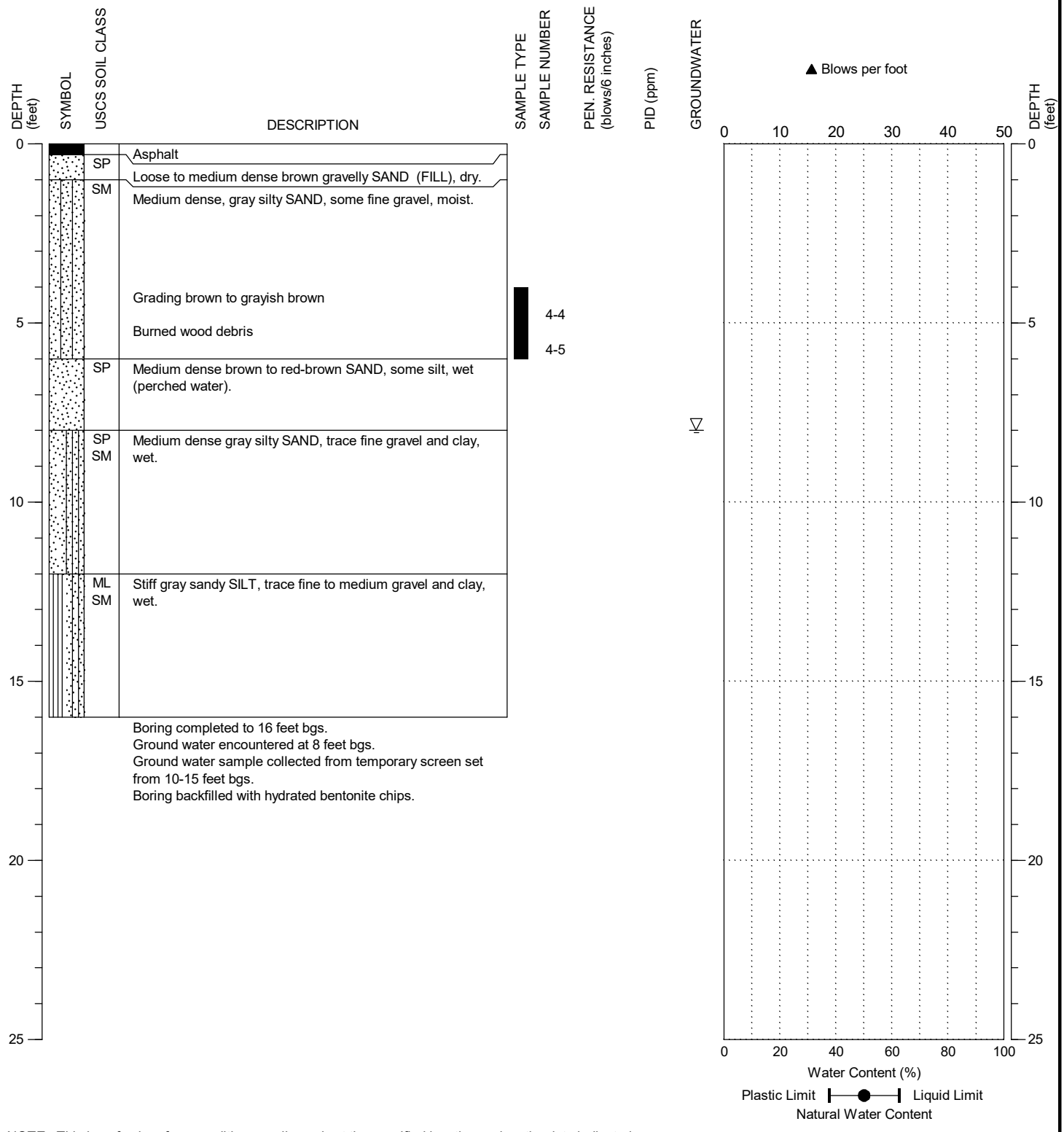
PROJECT NO.: 2012-046-22 FIGURE: B-4

BORINGE 2012-046-22.GPJ 6/8/12

DRILLING COMPANY: ESN Northwest
DRILLING METHOD: GeoProbe
SAMPLING METHOD: 48" Macrocore Sampler with HDPE liner
LOCATION: North center, gravel parking lot

SURFACE ELEVATION: ± feet
CASING ELEVATION ± feet

DATE STARTED: 5/8/2012
DATE COMPLETED: 5/8/2012
LOGGED BY: J. Thompson



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HWA GEOSCIENCES INC.

Vulcan Block 43
City Investors XX, LLC
601 Westlake Avenue North
Seattle, Washington

BORING:
B43-B04

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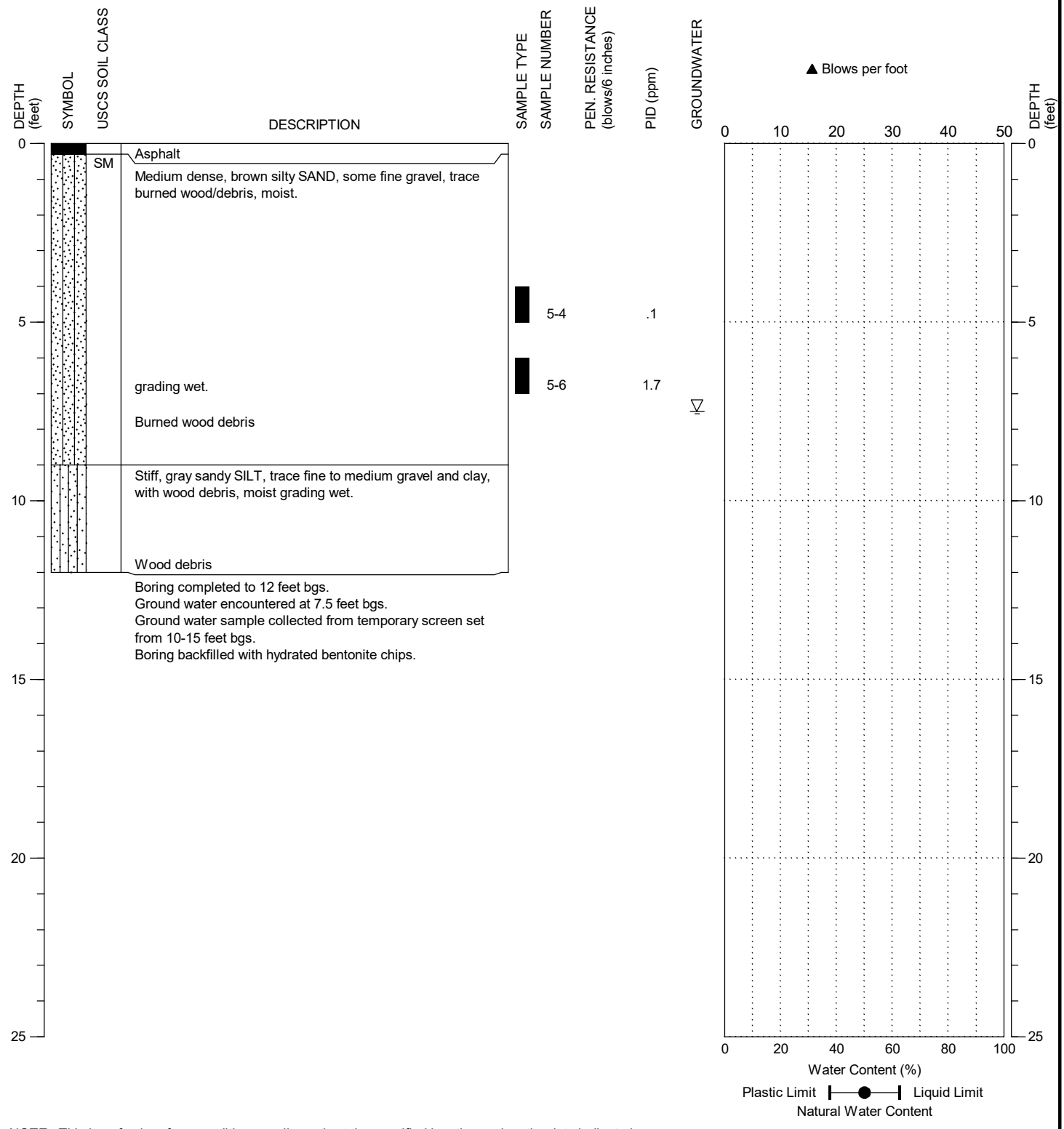
PROJECT NO.: 2012-046-22 FIGURE: B-5

BORINGE 2012-046-22.GPJ 6/8/12

DRILLING COMPANY: ESN Northwest
DRILLING METHOD: GeoProbe
SAMPLING METHOD: 48" Macrocore Sampler with HDPE liner
LOCATION: East side, gravel parking lot

SURFACE ELEVATION: ± feet
CASING ELEVATION ± feet

DATE STARTED: 5/8/2012
DATE COMPLETED: 5/8/2012
LOGGED BY: J. Thompson



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HWA GEOSCIENCES INC.

Vulcan Block 43
City Investors XX, LLC
601 Westlake Avenue North
Seattle, Washington

BORING:
B43-B05

PAGE: 1 of 1

PROJECT NO.: 2012-046-22 FIGURE: B-6

BORINGE 2012-046-22.GPJ 6/8/12

DRILLING COMPANY: ESN Northwest
DRILLING METHOD: GeoProbe
SAMPLING METHOD: 48" Macrocore Sampler with HDPE liner
LOCATION: Northeast corner, Parcel B

SURFACE ELEVATION: ± feet
CASING ELEVATION ± feet

DATE STARTED: 5/8/2012
DATE COMPLETED: 5/8/2012
LOGGED BY: J. Thompson

DEPTH (feet)	SYMBOL	USCS SOIL CLASS	DESCRIPTION
0		SP	Medium dense, brown gravelly SAND with debris (glass and plastic) dry to moist.
5		SP	Limited recovery. Loose to medium dense, brown SAND with fine gravel, moist.
		GP	Loose pea GRAVEL backfill. Move boring 8 feet northwest of original location. Encounter same materials.
10			Boring completed to 10 feet bgs. Ground water not encountered. Boring backfilled with hydrated bentonite chips.
15			
20			
25			

SAMPLE TYPE
SAMPLE NUMBER
PEN. RESISTANCE (blows/6 inches)
PID (ppm)
GROUNDWATER

▲ Blows per foot

0 10 20 30 40 50

DEPTH (feet)

0 5 10 15 20 25

0 20 40 60 80 100

Water Content (%)

Plastic Limit — Liquid Limit

Natural Water Content

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HWA GEOSCIENCES INC.

Vulcan Block 43
City Investors XX, LLC
601 Westlake Avenue North
Seattle, Washington

BORING:
B43-B06

PAGE: 1 of 1

PROJECT NO.: 2012-046-22 FIGURE: B-7

DRILLING COMPANY: ESN Northwest
DRILLING METHOD: GeoProbe
SAMPLING METHOD: 48" Macrocore Sampler with HDPE liner
LOCATION: East side, Parcel B

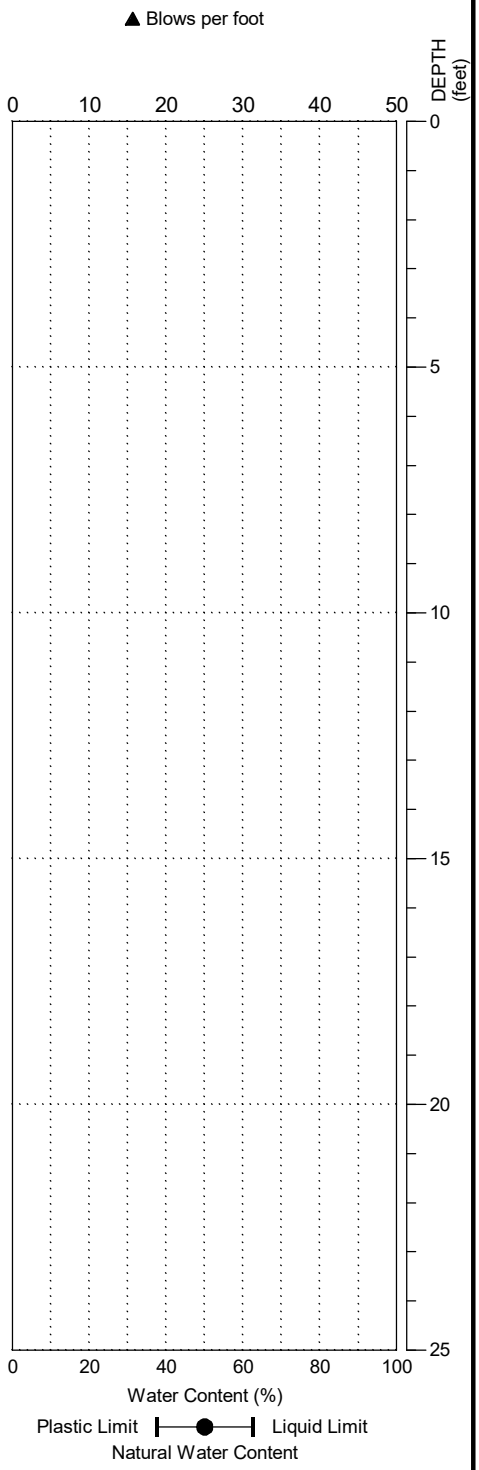
SURFACE ELEVATION: ± feet
CASING ELEVATION ± feet

DATE STARTED: 5/8/2012
DATE COMPLETED: 5/8/2012
LOGGED BY: J. Thompson

DEPTH (feet)	SYMBOL	USCS SOIL CLASS	DESCRIPTION
0		SP	Loose to medium dense, brown SAND, trace fine gravel, dry to moist.
			Medium dense, brown gravelly SAND, trace sitl and clay, moist.
5		GP	Loose pea GRAVEL backfill.

Boring completed to 8 feet bgs.
Ground water not encountered.
Boring backfilled with hydrated bentonite chips.

SAMPLE TYPE
SAMPLE NUMBER
PEN. RESISTANCE (blows/6 inches)
PID (ppm)
GROUNDWATER



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HWA GEOSCIENCES INC.

Vulcan Block 43
City Investors XX, LLC
601 Westlake Avenue North
Seattle, Washington

BORING:
B43-B07

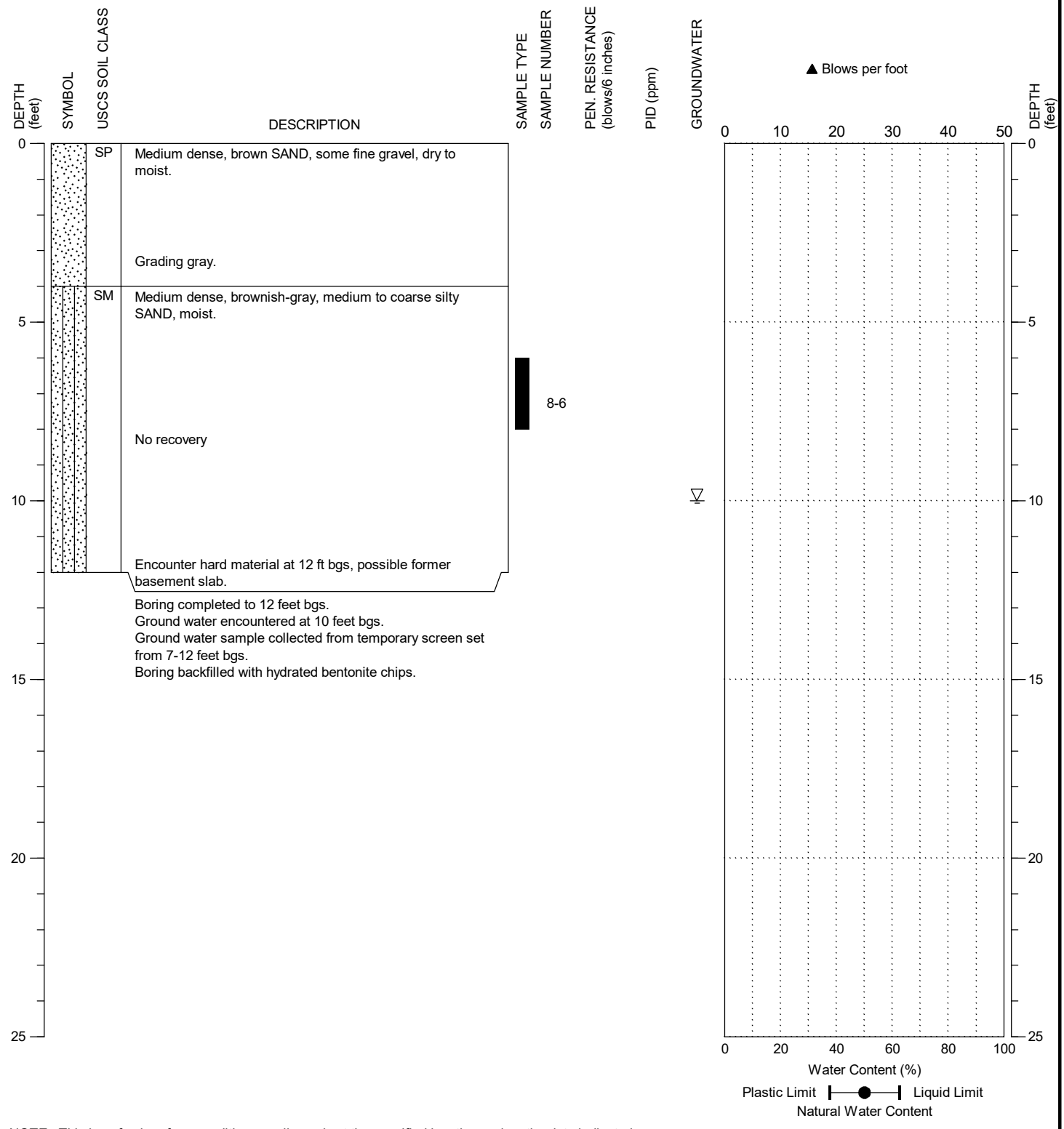
PAGE: 1 of 1

PROJECT NO.: 2012-046-22 FIGURE: B-8

DRILLING COMPANY: ESN Northwest
DRILLING METHOD: GeoProbe
SAMPLING METHOD: 48" Macrocore Sampler with HDPE liner
LOCATION: North center, Parcel B

SURFACE ELEVATION: ± feet
CASING ELEVATION ± feet

DATE STARTED: 5/8/2012
DATE COMPLETED: 5/8/2012
LOGGED BY: J. Thompson



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HWA GEOSCIENCES INC.

Vulcan Block 43
City Investors XX, LLC
601 Westlake Avenue North
Seattle, Washington

BORING:
B43-B08

PAGE: 1 of 1

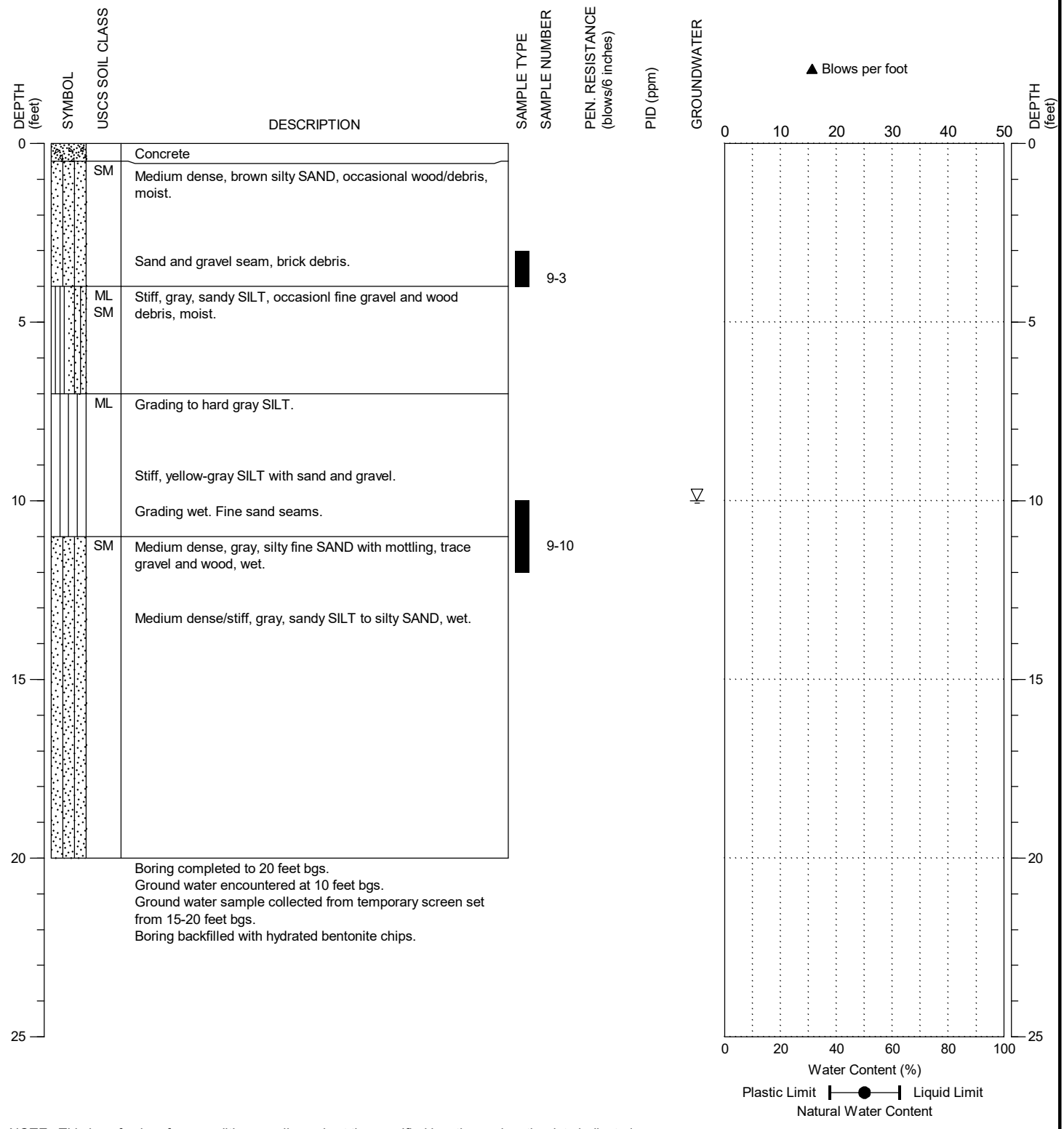
PROJECT NO.: 2012-046-22 FIGURE: B-9

BORINGE 2012-046-22.GPJ 6/8/12

DRILLING COMPANY: ESN Northwest
DRILLING METHOD: GeoProbe
SAMPLING METHOD: 48" Macrocore Sampler with HDPE liner
LOCATION: Adjacent west of USTs, Parcel B alleyway

SURFACE ELEVATION: ± feet
CASING ELEVATION ± feet

DATE STARTED: 5/9/2012
DATE COMPLETED: 5/9/2012
LOGGED BY: V. Atkins



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HWA GEOSCIENCES INC.

Vulcan Block 43
City Investors XX, LLC
601 Westlake Avenue North
Seattle, Washington

BORING:
B43-B09

PAGE: 1 of 1

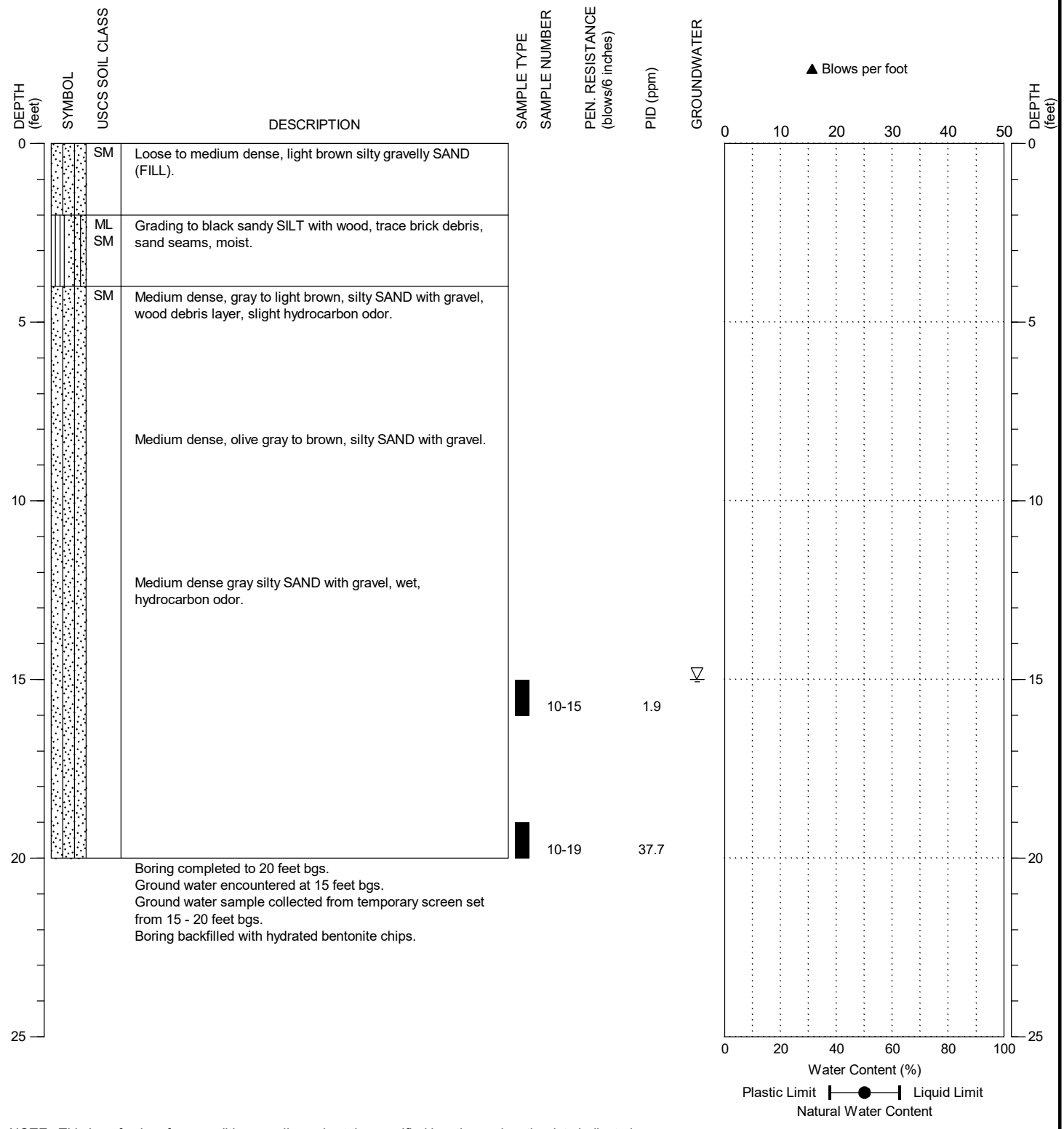
PROJECT NO.: 2012-046-22 FIGURE: B-10

BORINGE 2012-046-22.GPJ 6/8/12

DRILLING COMPANY: ESN Northwest
DRILLING METHOD: GeoProbe
SAMPLING METHOD: 48" Macrocore Sampler with HDPE liner
LOCATION: Adjacent northwest of OWS, Parcel C

SURFACE ELEVATION: ± feet
CASING ELEVATION ± feet

DATE STARTED: 5/9/2012
DATE COMPLETED: 5/9/2012
LOGGED BY: D. Coltrane



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HWA GEOSCIENCES INC.

Vulcan Block 43
City Investors XX, LLC
601 Westlake Avenue North
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BORING:
B43-B10

PAGE: 1 of 1

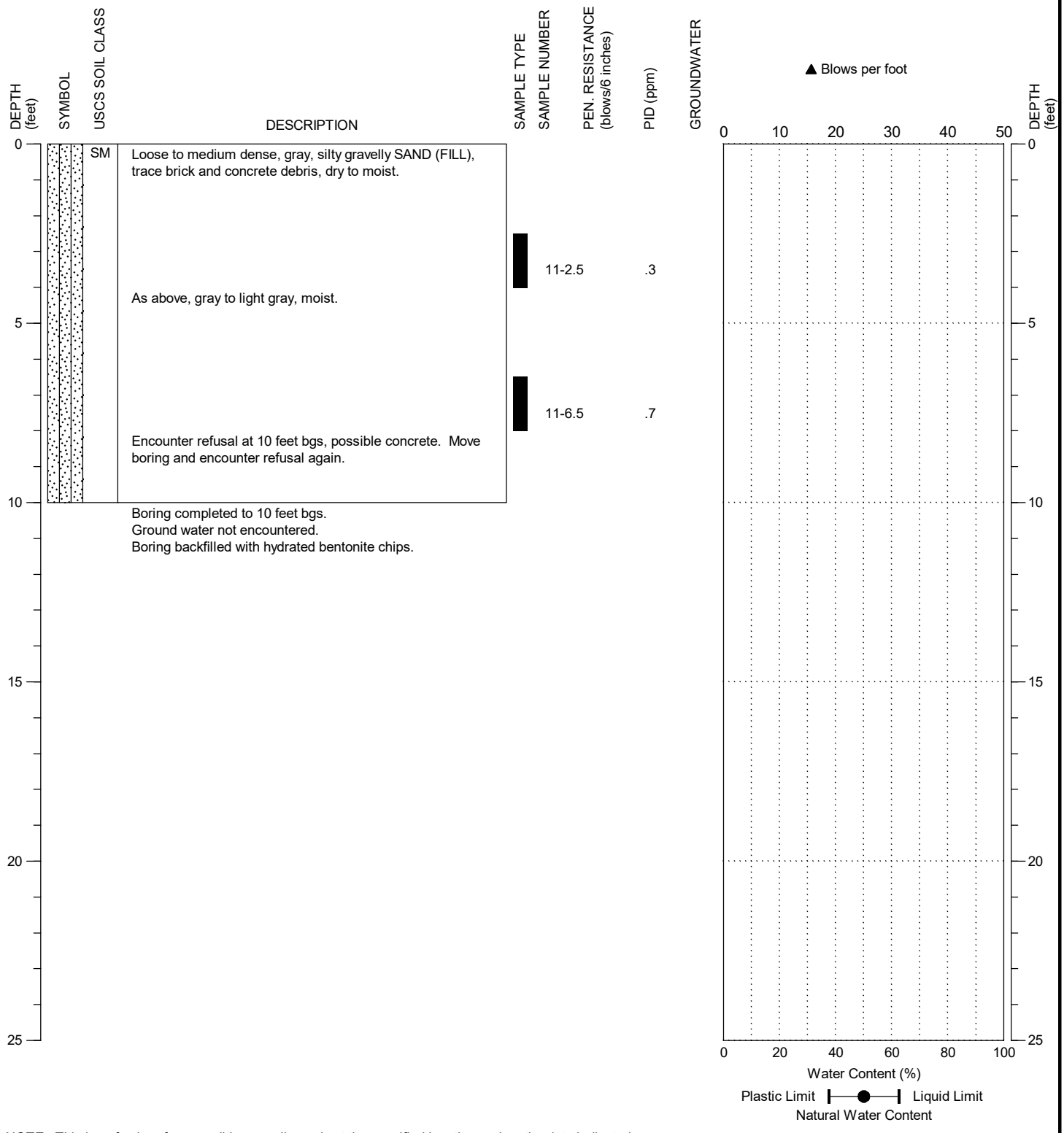
PROJECT NO.: 2012-046-22 FIGURE: B-11

BORINGE 2012-046-22.GPJ 6/8/12

DRILLING COMPANY: ESN Northwest
DRILLING METHOD: GeoProbe
SAMPLING METHOD: 48" Macrocore Sampler with HDPE liner
LOCATION: Sothwest corner , Parcel C

SURFACE ELEVATION: ± feet
CASING ELEVATION ± feet

DATE STARTED: 5/9/2012
DATE COMPLETED: 5/9/2012
LOGGED BY: D. Coltrane



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HWA GEOSCIENCES INC.

Vulcan Block 43
City Investors XX, LLC
601 Westlake Avenue North
Seattle, Washington

BORING:
B43-B11

PAGE: 1 of 1

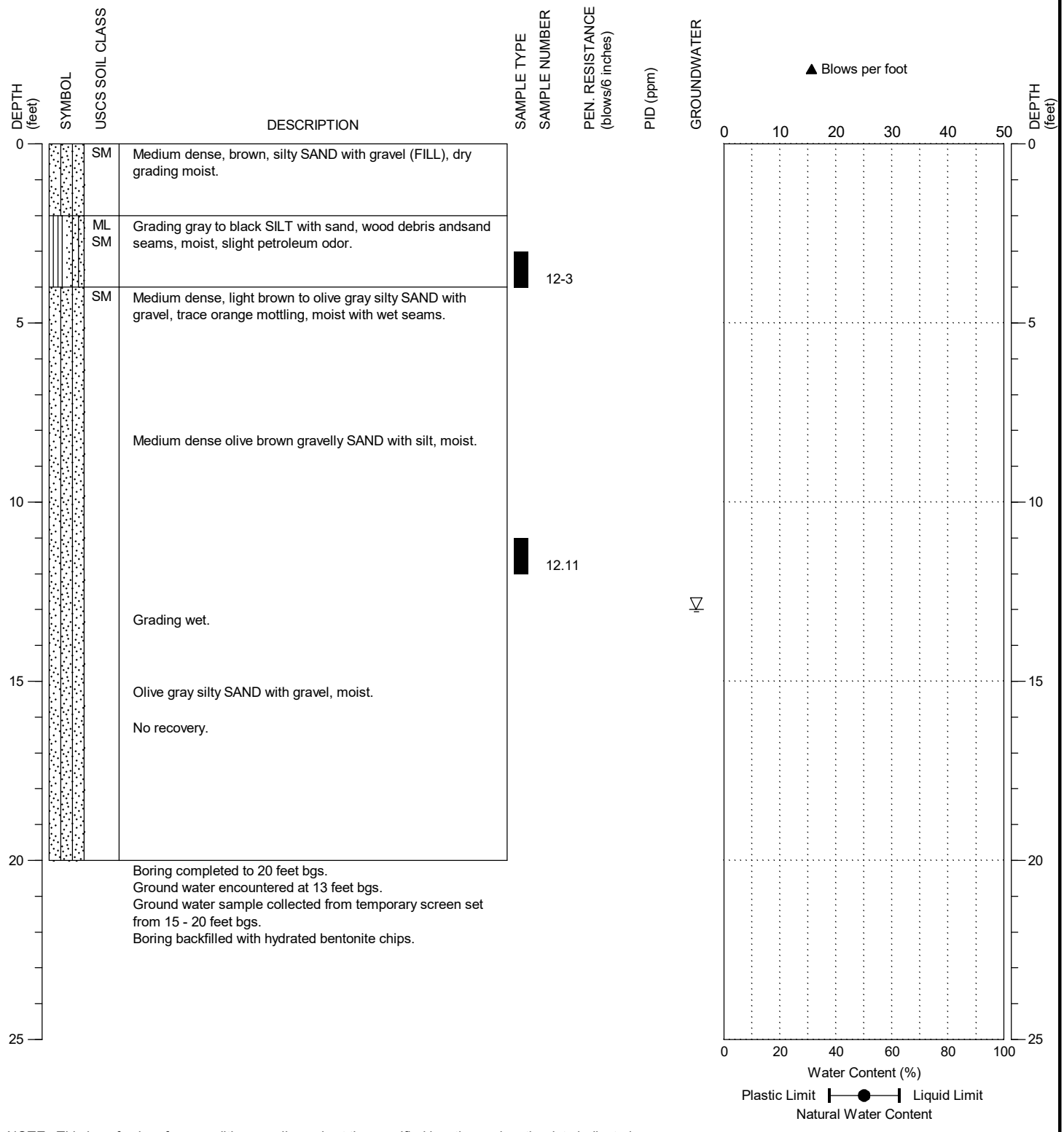
PROJECT NO.: 2012-046-22 FIGURE: B-12

BORINGE 2012-046-22.GPJ 6/8/12

DRILLING COMPANY: ESN Northwest
DRILLING METHOD: GeoProbe
SAMPLING METHOD: 48" Macrocore Sampler with HDPE liner
LOCATION: North center, Parcel C

SURFACE ELEVATION: ± feet
CASING ELEVATION ± feet

DATE STARTED: 5/9/2012
DATE COMPLETED: 5/9/2012
LOGGED BY: D. Coltrane



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HWA GEOSCIENCES INC.

Vulcan Block 43
City Investors XX, LLC
601 Westlake Avenue North
Seattle, Washington

BORING:
B43-B12

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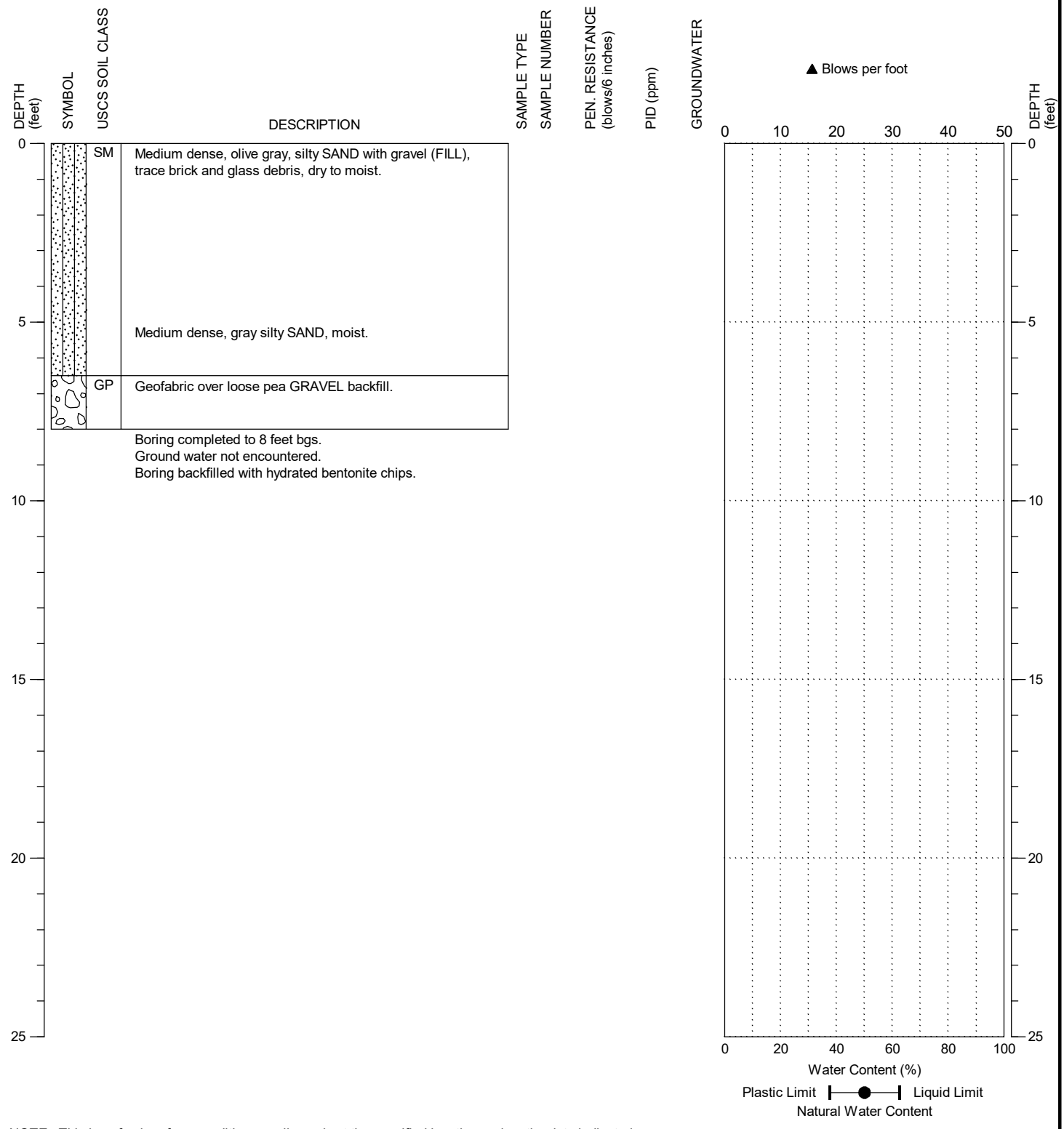
PROJECT NO.: 2012-046-22 FIGURE: B-13

BORINGE 2012-046-22.GPJ 6/8/12

DRILLING COMPANY: ESN Northwest
DRILLING METHOD: GeoProbe
SAMPLING METHOD: 48" Macrocore Sampler with HDPE liner
LOCATION: East center. Parcel E

SURFACE ELEVATION: ± feet
CASING ELEVATION ± feet

DATE STARTED: 5/9/2012
DATE COMPLETED: 5/9/2012
LOGGED BY: D. Coltrane



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HWA GEOSCIENCES INC.

Vulcan Block 43
City Investors XX, LLC
601 Westlake Avenue North
Seattle, Washington

BORING:
B43-B13

PAGE: 1 of 1

PROJECT NO.: 2012-046-22 FIGURE: B-14

BORINGE 2012-046-22.GPJ 6/8/12

EXCAVATION COMPANY: Gary Merlino Construction
EXCAVATING EQUIPMENT: Komatsu PC78 Trackhoe
SURFACE ELEVATION: ± Feet

LOCATION: West prop line, Parcel C
DATE COMPLETED: 5/10/12
LOGGED BY: V. Atkins

DEPTH (feet)	SYMBOL	USCS SOIL CLASS.	DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	MOISTURE CONTENT(%)	OTHER TESTS
0		GP	Angular GRAVEL (FILL), dry.				
		GM	Medium dense, brown silty SAND and GRAVEL (FILL), trace brick and debris, dry to moist.		1-1.5		
		SM	Medium dense, gray SILT and SAND (FILL), slight hydrocarbon odor.				
		SM	Medium dense, brown silty SAND, with gravel, occasional oxidation or mottling, moist.				
3							
6							
9			Occasional dense gray-brown silty SAND layers		1-9		
12			Test pit completed to 10.5 feet bgs. Ground water not encountered. Test pit backfilled with excavated material and bucket compacted.				
15							

TEST PIT PHOTO

NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

HWA GEOSCIENCES INC.

Vulcan Block 43
City Investors XX, LLC
601 Westlake Avenue North
Seattle, Washington

LOG OF TEST PIT
B43-TP01

PROJECT NO.: 2012-046-22 FIGURE: B-1

PICTURE 2012-046-22.GPJ 6/8/12

EXCAVATION COMPANY: Gary Merlino Construction
EXCAVATING EQUIPMENT: Komatsu PC78 Trackhoe
SURFACE ELEVATION: ± Feet

LOCATION: Southwest property corner
DATE COMPLETED: 5/10/12
LOGGED BY: V. Atkins

DEPTH (feet)	SYMBOL	USCS SOIL CLASS.	DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	MOISTURE CONTENT(%)	OTHER TESTS
0		GP	Dense gray angular GRAVEL (FILL), dry.				
3		SM	Medium dense, dark gray silty SAND with gravel (FILL), trace debris (brick and pipe), dry to moist. Slight hydrocarbon odor.			2.3	
6		SM	Medium dense, red brown to brown silty SAND and GRAVEL, occasional oxidation or mottling, moist.			2.8	
9							
12			Test pit completed to 11 feet bgs. Ground water not encountered. Test pit backfilled with excavated material and bucket compacted.				
15							

TEST PIT PHOTO

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HWA GEOSCIENCES INC.

Vulcan Block 43
City Investors XX, LLC
601 Westlake Avenue North
Seattle, Washington

LOG OF TEST PIT
B43-TP02

PROJECT NO.: 2012-046-22 FIGURE: B-2

PICTURE 2012-046-22.GPJ 6/8/12

EXCAVATION COMPANY: Gary Merlino Construction
EXCAVATING EQUIPMENT: Komatsu PC78 Trackhoe
SURFACE ELEVATION: ± Feet

LOCATION: West side Parcel C, former hydraulic lift area
DATE COMPLETED: 5/10/12
LOGGED BY: V. Atkins

DEPTH (feet)	SYMBOL	USCS SOIL CLASS.	DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	MOISTURE CONTENT(%)	OTHER TESTS
0		GP	Dense gray angular GRAVEL (FILL), dry.				
3		SM	Medium dense, dark gray silty SAND with gravel (FILL), trace debris (brick and pipe), dry to moist. Slight hydrocarbon odor.				
					3-5		
6			Medium dense, gray- brown silty SAND with GRAVEL, with sandy SILT layers, moist, occasional wet seams.				
			Concrete and wood debris.		3-8		
9			Sidewalls caving.				
12			Test pit completed to 11 feet bgs. Ground water not encountered. Test pit backfilled with excavated material and bucket compacted.				
15							

TEST PIT PHOTO

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HWA GEOSCIENCES INC.

Vulcan Block 43
City Investors XX, LLC
601 Westlake Avenue North
Seattle, Washington

LOG OF TEST PIT
B43-TP03

PROJECT NO.: 2012-046-22 FIGURE: B-3

PICTURE 2012-046-22.GPJ 6/8/12

EXCAVATION COMPANY: Gary Merlino Construction
EXCAVATING EQUIPMENT: Komatsu PC78 Trackhoe
SURFACE ELEVATION: ± Feet

LOCATION: Center Parcel C, former hydraulic lift area
DATE COMPLETED: 5/10/12
LOGGED BY: V. Atkins

DEPTH (feet)	SYMBOL	USCS SOIL CLASS.	DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	MOISTURE CONTENT(%)	OTHER TESTS
0		GP	Dense, gray angular GRAVEL (FILL), dry.				
		GM	Very dense, gray silty GRAVEL (FILL) with concrete debris.				
3		SM	Medium dense, gray to brown silty SAND with gravel (FILL), trace debris, dry to moist. In-place hydraulic lift encountered in west end of test pit. Lift surrounded by fine gravel backfill and extendeds to 9 feet bgs. Lift was left in place and is located 22' north and 8' east of GEI well B-43-2. Clay pipe		4-5		
6			Woody debris layer				
9			Large concrete debris or footing.		4-9		
12			Test pit completed to 10.5 feet bgs. Ground water not encountered. Test pit backfilled with excavated material and bucket compacted.				
15							

TEST PIT PHOTO

NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

HWA GEOSCIENCES INC.

Vulcan Block 43
City Investors XX, LLC
601 Westlake Avenue North
Seattle, Washington

LOG OF TEST PIT
B43-TP04

PROJECT NO.: 2012-046-22 FIGURE: B-4

PICTURE 2012-046-22.GPJ 6/8/12

EXCAVATION COMPANY: Gary Merlino Construction
EXCAVATING EQUIPMENT: Komatsu PC78 Trackhoe
SURFACE ELEVATION: ± Feet

LOCATION: Center Parcel C, former hydraulic lift area
DATE COMPLETED: 5/10/12
LOGGED BY: V. Atkins

DEPTH (feet)	SYMBOL	USCS SOIL CLASS.	DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	MOISTURE CONTENT(%)	OTHER TESTS
0		GP	Angular GRAVEL (FILL), dry.				
		GM	Dense brown, silty SAND and GRAVEL (FILL), dry to moist.				
3		SM	Medium dense, gray silty SAND (FILL), with debris (brick), moist, slight hydrocarbon odor.				
		SM	Medium dense, gray silty SAND, with wood debris, moist.				
6					5-6		
		ML SM	Medium dense, gray silty SAND to sandy SILT, moist with occasional wet seams. Large concrete debris. Occasional dense gray-brown silty SAND layers				
9					5-10		
12			Test pit completed to 10.5 feet bgs. Ground water not encountered. Test pit backfilled with excavated material and bucket compacted.				
15							

TEST PIT PHOTO

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HWA GEOSCIENCES INC.

Vulcan Block 43
City Investors XX, LLC
601 Westlake Avenue North
Seattle, Washington

LOG OF TEST PIT
B43-TP05

PROJECT NO.: 2012-046-22 FIGURE: B-5

PICTURE 2012-046-22.GPJ 6/8/12

EXCAVATION COMPANY: Gary Merlino Construction
EXCAVATING EQUIPMENT: Komatsu PC78 Trackhoe
SURFACE ELEVATION: ± Feet

LOCATION: East Parcel C, former hydraulic lift area
DATE COMPLETED: 5/10/12
LOGGED BY: V. Atkins

DEPTH (feet)	SYMBOL	USCS SOIL CLASS.	DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	MOISTURE CONTENT(%)	OTHER TESTS
0		GP	Dense, gray angular GRAVEL (FILL), dry.				
		SM	Dense, gray silty SAND (FILL) with debris (brick).				
3		SM	Grading medium dense, brown to red-brown silty SAND, moist. Rebar and metal debris Caving at 4 feet				
		PT	Woody debris layer		6-4		
6		ML	Stiff, gray SILT with sand and clay, moist.		6-6		
			Concrete debris				
9			Test pit completed to 9.5 feet bgs. Ground water not encountered. Test pit backfilled with excavated material and bucket compacted.				
12							
15							

TEST PIT PHOTO

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HWA GEOSCIENCES INC.

Vulcan Block 43
City Investors XX, LLC
601 Westlake Avenue North
Seattle, Washington

LOG OF TEST PIT
B43-TP06

PROJECT NO.: 2012-046-22 FIGURE: B-6

PICTURE 2012-046-22.GPJ 6/8/12

EXCAVATION COMPANY: Gary Merlino Construction
EXCAVATING EQUIPMENT: Komatsu PC78 Trackhoe
SURFACE ELEVATION: ± Feet

LOCATION: Southeast Parcel C, former hydraulic lift area
DATE COMPLETED: 5/10/12
LOGGED BY: V. Atkins

DEPTH (feet)	SYMBOL	USCS SOIL CLASS.	DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	MOISTURE CONTENT(%)	OTHER TESTS
0			Concrete slab				
		SM	Medium dense, gray-brown silty SAND (FILL) with debris.				
3			Rebar				
			Concrete slab/footing				
6					7-6		
			Large concrete debris.				
			Test pit completed to 7.5 feet bgs. Ground water not encountered. Test pit backfilled with excavated material and bucket compacted.				
9							
12							
15							

TEST PIT PHOTO

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HWA GEOSCIENCES INC.

Vulcan Block 43
City Investors XX, LLC
601 Westlake Avenue North
Seattle, Washington

LOG OF TEST PIT
B43-TP07

PAGE: 1 of 1

PROJECT NO.: 2012-046-22 FIGURE: B-7

PICTURE 2012-046-22.GPJ 6/8/12

EXCAVATION COMPANY: Gary Merlino Construction
EXCAVATING EQUIPMENT: Komatsu PC78 Trackhoe
SURFACE ELEVATION: ± Feet

LOCATION: Southwest parcel B
DATE COMPLETED: 5/10/12
LOGGED BY: V. Atkins

DEPTH (feet)	SYMBOL	USCS SOIL CLASS.	DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	MOISTURE CONTENT(%)	OTHER TESTS
0		GP	Angular GRAVEL (FILL)				
		SP	Medium dense, brown SAND with silt (FILL), dry to moist.				
			Caving.				
3			Concrete rubble.				
			Concrete slab at 4 feet bgs.				
			Test pit completed to 4 feet bgs. Ground water not encountered. Test pit backfilled with excavated material and bucket compacted.				
6							
9							
12							
15							

TEST PIT PHOTO

NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

HWA GEOSCIENCES INC.

Vulcan Block 43
City Investors XX, LLC
601 Westlake Avenue North
Seattle, Washington

LOG OF TEST PIT
B43-TP08

PROJECT NO.: 2012-046-22 FIGURE: B-8

PICTURE 2012-046-22.GPJ 6/8/12

EXCAVATION COMPANY: Gary Merlino Construction
EXCAVATING EQUIPMENT: Komatsu PC78 Trackhoe
SURFACE ELEVATION: ± Feet

LOCATION: West side Parcel B
DATE COMPLETED: 5/10/12
LOGGED BY: V. Atkins

DEPTH (feet)	SYMBOL	USCS SOIL CLASS.	DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	MOISTURE CONTENT(%)	OTHER TESTS
0		GP	Angular GRAVEL (FILL)				
		SP	Medium dense, yellow-brown SAND with silt (FILL), dry to moist.				
3			Concrete rubble.				
			Concrete slab at 4 feet bgs.				
			Test pit completed to 4 feet bgs. Ground water not encountered. Test pit backfilled with excavated material and bucket compacted.				
6							
9							
12							
15							

TEST PIT PHOTO

NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

HWA GEOSCIENCES INC.

Vulcan Block 43
City Investors XX, LLC
601 Westlake Avenue North
Seattle, Washington

LOG OF TEST PIT
B43-TP09

PROJECT NO.: 2012-046-22 FIGURE: B-9

PICTURE 2012-046-22.GPJ 6/8/12

EXCAVATION COMPANY: Gary Merlino Construction
EXCAVATING EQUIPMENT: Komatsu PC78 Trackhoe
SURFACE ELEVATION: ± Feet

LOCATION: Center Parcel B
DATE COMPLETED: 5/10/12
LOGGED BY: V. Atkins

DEPTH (feet)	SYMBOL	USCS SOIL CLASS.	DESCRIPTION
0		GP	Angular GRAVEL (FILL)
		SP	Medium dense, yellow-brown SAND with silt (FILL), dry to moist.
3			Concrete rubble.
			Concrete slab at 4 feet bgs.
			Test pit completed to 4 feet bgs. Ground water not encountered. Test pit backfilled with excavated material and bucket compacted.
6			
9			
12			
15			

SAMPLE TYPE
SAMPLE NUMBER
MOISTURE CONTENT(%)
OTHER TESTS

TEST PIT PHOTO

NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

HWA GEOSCIENCES INC.

Vulcan Block 43
City Investors XX, LLC
601 Westlake Avenue North
Seattle, Washington

LOG OF TEST PIT
B43-TP10

PROJECT NO.: 2012-046-22 FIGURE: B-10

PICTURE 2012-046-22.GPJ 6/8/12

EXCAVATION COMPANY: Gary Merlino Construction
EXCAVATING EQUIPMENT: Komatsu PC78 Trackhoe
SURFACE ELEVATION: ± Feet

LOCATION: North center Parcel C
DATE COMPLETED: 5/10/12
LOGGED BY: V. Atkins

DEPTH (feet)	SYMBOL	USCS SOIL CLASS.	DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	MOISTURE CONTENT(%)	OTHER TESTS
0		GP	Dense, gray angular GRAVEL (FILL), dry.				
		SM	Medium dense, brown silty SAND (FILL) with debris (brick).				
		ML SM	Grading to medium gray silty SAND to sandy SILT, with debris, moist. Slight hydrocarbon odor.				
3		SP	Medium dense, brown SAND with silt, wood debris, moist.		11-3		
		SM	Medium dense, gray silty SAND with wood debris, moist, slight hydrocarbon odor.		11-5		
6			Layer of dimensional wood debris.				
			Grading gray-brown silty SAND.				
9			Grading to very dense, gray silty SAND with gravel, moist.		11-9		
12			Test pit completed to 10 feet bgs. Ground water not encountered. Test pit backfilled with excavated material and bucket compacted.				
15							

TEST PIT PHOTO

NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

HWA GEOSCIENCES INC.

Vulcan Block 43
City Investors XX, LLC
601 Westlake Avenue North
Seattle, Washington

LOG OF TEST PIT
B43-TP11

PROJECT NO.: 2012-046-22 FIGURE: B-11

PICTURE 2012-046-22.GPJ 6/8/12

APPENDIX C

ANALYTICAL LABORATORY REPORTS

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

May 21, 2012

Jeff Thompson
HWA GeoSciences, Inc.
21312 30th Drive SE, Suite 110
Bothell, WA 98021

Re: Analytical Data for Project 2012-046-22
Laboratory Reference No. 1205-065

Dear Jeff:

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

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

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

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: May 21, 2012
Samples Submitted: May 8, 2012
Laboratory Reference: 1205-065
Project: 2012-046-22

Case Narrative

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

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

NWTPH Gx (water) Analysis

The surrogate recovery is outside of the control limits on the high-end due to the co-elution of non-target analytes in sample B43-B1-GW. The sample was re-extracted and re-analyzed with similar results.

BTEX, EDB, EDC,and MTBE EPA 8260B (soil) Analysis

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

Some MTCA Method A cleanup levels are non-achievable for sample B43-B1-10 due to the necessary dilution of the sample.

BTEX, EDC,and MTBE EPA 8260B (water) Analysis

Some MTCA Method A cleanup levels are non-achievable for sample B43-B1-10 due to the necessary dilution of the sample.

Please note that any other QA/QC issues associated with these extractions and analyses will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

Date of Report: May 21, 2012
Samples Submitted: May 8, 2012
Laboratory Reference: 1205-065
Project: 2012-046-22

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

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B43-B1-10**					
Laboratory ID:	05-065-01					
Gasoline Range Organics	**Detected**	23	NWTPH-HCID	5-9-12	5-9-12	
Diesel Range Organics	**Detected**	58	NWTPH-HCID	5-9-12	5-9-12	
Lube Oil	**Detected**	120	NWTPH-HCID	5-9-12	5-9-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*95*	*50-150*				
Client ID:	**B43-B1-14**					
Laboratory ID:	05-065-02					
Gasoline Range Organics	**ND**	23	NWTPH-HCID	5-9-12	5-9-12	
Diesel Range Organics	**ND**	57	NWTPH-HCID	5-9-12	5-9-12	
Lube Oil Range Organics	**ND**	110	NWTPH-HCID	5-9-12	5-9-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*108*	*50-150*				
Client ID:	**B43-B2-4**					
Laboratory ID:	05-065-04					
Gasoline Range Organics	**ND**	23	NWTPH-HCID	5-9-12	5-9-12	
Diesel Range Organics	**ND**	58	NWTPH-HCID	5-9-12	5-9-12	
Lube Oil	**Detected**	120	NWTPH-HCID	5-9-12	5-9-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*99*	*50-150*				
Client ID:	**B43-B2-8**					
Laboratory ID:	05-065-05					
Gasoline Range Organics	**ND**	24	NWTPH-HCID	5-9-12	5-9-12	
Diesel Range Organics	**ND**	59	NWTPH-HCID	5-9-12	5-9-12	
Lube Oil Range Organics	**ND**	120	NWTPH-HCID	5-9-12	5-9-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*83*	*50-150*				
Client ID:	**B43-B3-3**					
Laboratory ID:	05-065-06					
Gasoline Range Organics	**ND**	23	NWTPH-HCID	5-9-12	5-9-12	
Diesel Range Organics	**ND**	58	NWTPH-HCID	5-9-12	5-9-12	
Lube Oil Range Organics	**ND**	120	NWTPH-HCID	5-9-12	5-9-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*85*	*50-150*				

Date of Report: May 21, 2012
Samples Submitted: May 8, 2012
Laboratory Reference: 1205-065
Project: 2012-046-22

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

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B43-B3-6**					
Laboratory ID:	05-065-07					
Gasoline Range Organics	**ND**	24	NWTPH-HCID	5-9-12	5-9-12	
Diesel Range Organics	**ND**	59	NWTPH-HCID	5-9-12	5-9-12	
Lube Oil Range Organics	**ND**	120	NWTPH-HCID	5-9-12	5-9-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*104*	*50-150*				
Client ID:	**B43-B4-4**					
Laboratory ID:	05-065-09					
Gasoline Range Organics	**ND**	23	NWTPH-HCID	5-9-12	5-9-12	
Diesel Range Organics	**ND**	57	NWTPH-HCID	5-9-12	5-9-12	
Lube Oil Range Organics	**ND**	110	NWTPH-HCID	5-9-12	5-9-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*99*	*50-150*				
Client ID:	**B43-B4-5**					
Laboratory ID:	05-065-10					
Gasoline Range Organics	**ND**	23	NWTPH-HCID	5-9-12	5-9-12	
Diesel Range Organics	**ND**	57	NWTPH-HCID	5-9-12	5-9-12	
Lube Oil Range Organics	**ND**	120	NWTPH-HCID	5-9-12	5-9-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*103*	*50-150*				
Client ID:	**B43-B5-4**					
Laboratory ID:	05-065-11					
Gasoline Range Organics	**ND**	23	NWTPH-HCID	5-9-12	5-9-12	
Diesel Range Organics	**ND**	57	NWTPH-HCID	5-9-12	5-9-12	
Lube Oil Range Organics	**ND**	110	NWTPH-HCID	5-9-12	5-9-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*127*	*50-150*				
Client ID:	**B43-B5-6**					
Laboratory ID:	05-065-12					
Gasoline Range Organics	**ND**	23	NWTPH-HCID	5-9-12	5-9-12	
Diesel Range Organics	**ND**	57	NWTPH-HCID	5-9-12	5-9-12	
Lube Oil Range Organics	**ND**	110	NWTPH-HCID	5-9-12	5-9-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*120*	*50-150*				

Date of Report: May 21, 2012
Samples Submitted: May 8, 2012
Laboratory Reference: 1205-065
Project: 2012-046-22

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

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B43-B8-6**					
Laboratory ID:	05-065-14					
Gasoline Range Organics	**ND**	22	NWTPH-HCID	5-9-12	5-9-12	
Diesel Range Organics	**ND**	55	NWTPH-HCID	5-9-12	5-9-12	
Lube Oil	**Detected**	110	NWTPH-HCID	5-9-12	5-9-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*118*	*50-150*				

Date of Report: May 21, 2012
Samples Submitted: May 8, 2012
Laboratory Reference: 1205-065
Project: 2012-046-22

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

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0509S1					
Gasoline Range Organics	**ND**	20	NWTPH-HCID	5-9-12	5-9-12	
Diesel Range Organics	**ND**	50	NWTPH-HCID	5-9-12	5-9-12	
Lube Oil Range Organics	**ND**	100	NWTPH-HCID	5-9-12	5-9-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*133*	*50-150*				

Date of Report: May 21, 2012
Samples Submitted: May 8, 2012
Laboratory Reference: 1205-065
Project: 2012-046-22

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

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B43-B1-GW**					
Laboratory ID:	05-065-03					
Gasoline Range Organics	**Detected**	0.12	NWTPH-HCID	5-9-12	5-9-12	
Diesel Range Organics	**ND**	0.66	NWTPH-HCID	5-9-12	5-9-12	U1
Lube Oil Range Organics	**ND**	0.49	NWTPH-HCID	5-9-12	5-9-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*104*	*50-150*				
Client ID:	**B43-B3-9w**					
Laboratory ID:	05-065-08					
Gasoline Range Organics	**Detected**	0.12	NWTPH-HCID	5-9-12	5-9-12	
Diesel Range Organics	**ND**	0.90	NWTPH-HCID	5-9-12	5-9-12	U1
Lube Oil Range Organics	**ND**	0.46	NWTPH-HCID	5-9-12	5-9-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*107*	*50-150*				
Client ID:	**B43-B4-GW**					
Laboratory ID:	05-065-13					
Gasoline Range Organics	**ND**	0.13	NWTPH-HCID	5-9-12	5-9-12	
Diesel Range Organics	**ND**	0.31	NWTPH-HCID	5-9-12	5-9-12	
Lube Oil Range Organics	**ND**	0.50	NWTPH-HCID	5-9-12	5-9-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*106*	*50-150*				
Client ID:	**B43-B5-GW**					
Laboratory ID:	05-065-15					
Gasoline Range Organics	**Detected**	0.12	NWTPH-HCID	5-9-12	5-9-12	
Diesel Range Organics	**ND**	0.73	NWTPH-HCID	5-9-12	5-9-12	U1
Lube Oil Range Organics	**ND**	0.47	NWTPH-HCID	5-9-12	5-9-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*103*	*50-150*				

Date of Report: May 21, 2012
Samples Submitted: May 8, 2012
Laboratory Reference: 1205-065
Project: 2012-046-22

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

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0509W1					
Gasoline Range Organics	**ND**	0.10	NWTPH-HCID	5-9-12	5-9-12	
Diesel Range Organics	**ND**	0.25	NWTPH-HCID	5-9-12	5-9-12	
Lube Oil Range Organics	**ND**	0.40	NWTPH-HCID	5-9-12	5-9-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*93*	*50-150*				

Date of Report: May 21, 2012
Samples Submitted: May 8, 2012
Laboratory Reference: 1205-065
Project: 2012-046-22

NWTPH-Gx

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B43-B1-10**					
Laboratory ID:	05-065-01					
Gasoline	**1500**	52	NWTPH-Gx	5-15-12	5-15-12	O
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*77*	*68-124*				

Date of Report: May 21, 2012
Samples Submitted: May 8, 2012
Laboratory Reference: 1205-065
Project: 2012-046-22

NWTPH-Gx
QUALITY CONTROL

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0515S1					
Gasoline	**ND**	5.0	NWTPH-Gx	5-15-12	5-15-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*86*	*68-124*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	05-133-04										
	ORIG	DUP									
Gasoline	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Surrogate:											
Fluorobenzene						*99*	*105*	*68-124*			

Date of Report: May 21, 2012
Samples Submitted: May 8, 2012
Laboratory Reference: 1205-065
Project: 2012-046-22

NWTPH-Gx

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B43-B1-GW**					
Laboratory ID:	05-065-03					
Gasoline	**2300**	400	NWTPH-Gx	5-15-12	5-15-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*131*	*73-121*				Q
Client ID:	**B43-B3-GW**					
Laboratory ID:	05-065-08					
Gasoline	**5300**	400	NWTPH-Gx	5-15-12	5-15-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*95*	*73-121*				
Client ID:	**B43-B5-GW**					
Laboratory ID:	05-065-15					
Gasoline	**1900**	100	NWTPH-Gx	5-15-12	5-15-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*82*	*73-121*				

Date of Report: May 21, 2012
Samples Submitted: May 8, 2012
Laboratory Reference: 1205-065
Project: 2012-046-22

NWTPH-Gx
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0515W2					
Gasoline	**ND**	100	NWTPH-Gx	5-15-12	5-15-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*83*	*73-121*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	05-126-03										
	ORIG	DUP									
Gasoline	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Surrogate:											
Fluorobenzene						*81*	*81*	*73-121*			

Date of Report: May 21, 2012
Samples Submitted: May 8, 2012
Laboratory Reference: 1205-065
Project: 2012-046-22

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

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B43-B1-10**					
Laboratory ID:	05-065-01					
Diesel Range Organics	**1400**	29	NWTPH-Dx	5-15-12	5-15-12	M
Lube Oil	**520**	58	NWTPH-Dx	5-15-12	5-15-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*93*	*50-150*				
Client ID:	**B43-B2-4**					
Laboratory ID:	05-065-04					
Diesel Range Organics	**ND**	29	NWTPH-Dx	5-15-12	5-16-12	
Lube Oil	**160**	58	NWTPH-Dx	5-15-12	5-16-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*89*	*50-150*				
Client ID:	**B43-B8-6**					
Laboratory ID:	05-065-14					
Diesel Range Organics	**ND**	98	NWTPH-Dx	5-15-12	5-15-12	U1
Lube Oil	**610**	55	NWTPH-Dx	5-15-12	5-15-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*107*	*50-150*				

Date of Report: May 21, 2012
Samples Submitted: May 8, 2012
Laboratory Reference: 1205-065
Project: 2012-046-22

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

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0515S2					
Diesel Range Organics	**ND**	25	NWTPH-Dx	5-15-12	5-15-12	
Lube Oil Range Organics	**ND**	50	NWTPH-Dx	5-15-12	5-15-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*117*	*50-150*				

Analyte	Result		Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE							
Laboratory ID:	05-065-14						
	ORIG	DUP					
Diesel Range Organics	**ND**	**ND**			NA	NA	U1
Lube Oil	**551**	**429**			25	NA	
Surrogate:							
o-Terphenyl			*107* *90*	*50-150*			

Date of Report: May 21, 2012
Samples Submitted: May 8, 2012
Laboratory Reference: 1205-065
Project: 2012-046-22

VOLATILES by EPA 8260B

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B43-B1-10**					
Laboratory ID:	05-065-01					
Methyl t-Butyl Ether	ND	0.10	EPA 8260	5-14-12	5-14-12	
Benzene	0.14	0.10	EPA 8260	5-14-12	5-14-12	
1,2-Dichloroethane	ND	0.10	EPA 8260	5-14-12	5-14-12	
Toluene	ND	0.50	EPA 8260	5-14-12	5-14-12	
1,2-Dibromoethane	ND	0.10	EPA 8260	5-14-12	5-14-12	
Ethylbenzene	0.50	0.10	EPA 8260	5-14-12	5-14-12	
m,p-Xylene	0.29	0.20	EPA 8260	5-14-12	5-14-12	
o-Xylene	ND	0.10	EPA 8260	5-14-12	5-14-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*98*	*63-127*				
Toluene-d8	*112*	*65-129*				
4-Bromofluorobenzene	*104*	*55-121*				

Date of Report: May 21, 2012
Samples Submitted: May 8, 2012
Laboratory Reference: 1205-065
Project: 2012-046-22

VOLATILES by EPA 8260B
QUALITY CONTROL

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0514S1					
Methyl t-Butyl Ether	ND	0.0010	EPA 8260	5-14-12	5-14-12	
Benzene	ND	0.0010	EPA 8260	5-14-12	5-14-12	
1,2-Dichloroethane	ND	0.0010	EPA 8260	5-14-12	5-14-12	
Toluene	ND	0.0050	EPA 8260	5-14-12	5-14-12	
1,2-Dibromoethane	ND	0.0010	EPA 8260	5-14-12	5-14-12	
Ethylbenzene	ND	0.0010	EPA 8260	5-14-12	5-14-12	
m,p-Xylene	ND	0.0020	EPA 8260	5-14-12	5-14-12	
o-Xylene	ND	0.0010	EPA 8260	5-14-12	5-14-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*95*	*63-127*				
Toluene-d8	*97*	*65-129*				
4-Bromofluorobenzene	*102*	*55-121*				

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0514S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**0.0441**	**0.0454**	0.0500	0.0500	88	91	70-130	3	19	
Benzene	**0.0448**	**0.0449**	0.0500	0.0500	90	90	70-125	0	15	
Trichloroethene	**0.0507**	**0.0484**	0.0500	0.0500	101	97	70-122	5	14	
Toluene	**0.0485**	**0.0483**	0.0500	0.0500	97	97	73-120	0	16	
Chlorobenzene	**0.0517**	**0.0527**	0.0500	0.0500	103	105	74-120	2	12	
Surrogate:										
Dibromofluoromethane					*97*	*99*	*63-127*			
Toluene-d8					*103*	*101*	*65-129*			
4-Bromofluorobenzene					*103*	*102*	*55-121*			

Date of Report: May 21, 2012
Samples Submitted: May 8, 2012
Laboratory Reference: 1205-065
Project: 2012-046-22

VOLATILES by EPA 8260B

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B43-B1-GW**					
Laboratory ID:	05-065-03					
Methyl t-Butyl Ether	ND	10	EPA 8260	5-14-12	5-14-12	
Benzene	1100	10	EPA 8260	5-14-12	5-14-12	
1,2-Dichloroethane	ND	100	EPA 8260	5-14-12	5-14-12	
Toluene	ND	50	EPA 8260	5-14-12	5-14-12	
Ethylbenzene	110	10	EPA 8260	5-14-12	5-14-12	
m,p-Xylene	110	20	EPA 8260	5-14-12	5-14-12	
o-Xylene	ND	10	EPA 8260	5-14-12	5-14-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*89*	*68-120*				
Toluene-d8	*85*	*73-120*				
4-Bromofluorobenzene	*90*	*65-120*				
Client ID:	**B43-B3-GW**					
Laboratory ID:	05-065-08					
Methyl t-Butyl Ether	ND	2.0	EPA 8260	5-14-12	5-14-12	
Benzene	ND	2.0	EPA 8260	5-14-12	5-14-12	
1,2-Dichloroethane	ND	20	EPA 8260	5-14-12	5-14-12	
Toluene	ND	10	EPA 8260	5-14-12	5-14-12	
Ethylbenzene	190	2.0	EPA 8260	5-14-12	5-14-12	
m,p-Xylene	78	4.0	EPA 8260	5-14-12	5-14-12	
o-Xylene	5.3	2.0	EPA 8260	5-14-12	5-14-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*87*	*68-120*				
Toluene-d8	*88*	*73-120*				
4-Bromofluorobenzene	*88*	*65-120*				
Client ID:	**B43-B5-GW**					
Laboratory ID:	05-065-15					
Methyl t-Butyl Ether	ND	0.20	EPA 8260	5-14-12	5-14-12	
Benzene	1.4	0.20	EPA 8260	5-14-12	5-14-12	
1,2-Dichloroethane	ND	2.0	EPA 8260	5-14-12	5-14-12	
Toluene	1.4	1.0	EPA 8260	5-14-12	5-14-12	
Ethylbenzene	3.3	0.20	EPA 8260	5-14-12	5-14-12	
m,p-Xylene	1.3	0.40	EPA 8260	5-14-12	5-14-12	
o-Xylene	0.43	0.20	EPA 8260	5-14-12	5-14-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*86*	*68-120*				
Toluene-d8	*93*	*73-120*				
4-Bromofluorobenzene	*88*	*65-120*				

Date of Report: May 21, 2012
Samples Submitted: May 8, 2012
Laboratory Reference: 1205-065
Project: 2012-046-22

VOLATILES by EPA 8260B
QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0514W1					
Methyl t-Butyl Ether	ND	0.20	EPA 8260	5-14-12	5-14-12	
Benzene	ND	0.20	EPA 8260	5-14-12	5-14-12	
1,2-Dichloroethane	ND	2.0	EPA 8260	5-14-12	5-14-12	
Toluene	ND	1.0	EPA 8260	5-14-12	5-14-12	
Ethylbenzene	ND	0.20	EPA 8260	5-14-12	5-14-12	
m,p-Xylene	ND	0.40	EPA 8260	5-14-12	5-14-12	
o-Xylene	ND	0.20	EPA 8260	5-14-12	5-14-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*90*	*68-120*				
Toluene-d8	*86*	*73-120*				
4-Bromofluorobenzene	*85*	*65-120*				

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0514W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**9.38**	**9.34**	10.0	10.0	94	93	70-130	0	11	
Benzene	**9.39**	**9.79**	10.0	10.0	94	98	75-123	4	8	
Trichloroethene	**9.60**	**9.69**	10.0	10.0	96	97	80-113	1	9	
Toluene	**9.91**	**10.0**	10.0	10.0	99	100	80-113	1	8	
Chlorobenzene	**11.1**	**11.0**	10.0	10.0	111	110	80-115	1	8	
Surrogate:										
Dibromofluoromethane					*86*	*93*	*68-120*			
Toluene-d8					*84*	*85*	*73-120*			
4-Bromofluorobenzene					*83*	*85*	*65-120*			

Date of Report: May 21, 2012
Samples Submitted: May 8, 2012
Laboratory Reference: 1205-065
Project: 2012-046-22

PAHs by EPA 8270D/SIM
(with silica gel clean-up)

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B43-B1-10**					
Laboratory ID:	05-065-01					
Naphthalene	**0.13**	0.0077	EPA 8270/SIM	5-17-12	5-18-12	
2-Methylnaphthalene	**2.2**	0.077	EPA 8270/SIM	5-17-12	5-21-12	
1-Methylnaphthalene	**1.4**	0.077	EPA 8270/SIM	5-17-12	5-21-12	
Benzo[a]anthracene	**0.037**	0.0077	EPA 8270/SIM	5-17-12	5-18-12	
Chrysene	**0.035**	0.0077	EPA 8270/SIM	5-17-12	5-18-12	
Benzo[b]fluoranthene	**0.036**	0.0077	EPA 8270/SIM	5-17-12	5-18-12	
Benzo(j,k)fluoranthene	**0.0087**	0.0077	EPA 8270/SIM	5-17-12	5-18-12	
Benzo[a]pyrene	**0.019**	0.0077	EPA 8270/SIM	5-17-12	5-18-12	
Indeno(1,2,3-c,d)pyrene	**0.012**	0.0077	EPA 8270/SIM	5-17-12	5-18-12	
Dibenz[a,h]anthracene	**ND**	0.0077	EPA 8270/SIM	5-17-12	5-18-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*79*	*43 - 109*				
Pyrene-d10	*90*	*38 - 128*				
Terphenyl-d14	*93*	*33 - 119*				

Date of Report: May 21, 2012
Samples Submitted: May 8, 2012
Laboratory Reference: 1205-065
Project: 2012-046-22

PAHs by EPA 8270D/SIM
(with silica gel clean-up)

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B43-B2-4**					
Laboratory ID:	05-065-04					
Naphthalene	**ND**	0.0077	EPA 8270/SIM	5-17-12	5-18-12	
2-Methylnaphthalene	**0.0083**	0.0077	EPA 8270/SIM	5-17-12	5-18-12	
1-Methylnaphthalene	**ND**	0.0077	EPA 8270/SIM	5-17-12	5-18-12	
Benzo[a]anthracene	**0.010**	0.0077	EPA 8270/SIM	5-17-12	5-18-12	
Chrysene	**0.014**	0.0077	EPA 8270/SIM	5-17-12	5-18-12	
Benzo[b]fluoranthene	**0.017**	0.0077	EPA 8270/SIM	5-17-12	5-18-12	
Benzo(j,k)fluoranthene	**ND**	0.0077	EPA 8270/SIM	5-17-12	5-18-12	
Benzo[a]pyrene	**0.0099**	0.0077	EPA 8270/SIM	5-17-12	5-18-12	
Indeno(1,2,3-c,d)pyrene	**0.010**	0.0077	EPA 8270/SIM	5-17-12	5-18-12	
Dibenz[a,h]anthracene	**ND**	0.0077	EPA 8270/SIM	5-17-12	5-18-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*87*	*43 - 109*				
Pyrene-d10	*90*	*38 - 128*				
Terphenyl-d14	*104*	*33 - 119*				

Date of Report: May 21, 2012
Samples Submitted: May 8, 2012
Laboratory Reference: 1205-065
Project: 2012-046-22

PAHs by EPA 8270D/SIM
(with silica gel clean-up)

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B43-B8-6**					
Laboratory ID:	05-065-14					
Naphthalene	**0.0081**	0.0073	EPA 8270/SIM	5-17-12	5-18-12	
2-Methylnaphthalene	**0.034**	0.0073	EPA 8270/SIM	5-17-12	5-18-12	
1-Methylnaphthalene	**0.018**	0.0073	EPA 8270/SIM	5-17-12	5-18-12	
Benzo[a]anthracene	**0.017**	0.0073	EPA 8270/SIM	5-17-12	5-18-12	
Chrysene	**0.027**	0.0073	EPA 8270/SIM	5-17-12	5-18-12	
Benzo[b]fluoranthene	**0.019**	0.0073	EPA 8270/SIM	5-17-12	5-18-12	
Benzo(j,k)fluoranthene	**ND**	0.0073	EPA 8270/SIM	5-17-12	5-18-12	
Benzo[a]pyrene	**0.011**	0.0073	EPA 8270/SIM	5-17-12	5-18-12	
Indeno(1,2,3-c,d)pyrene	**0.0082**	0.0073	EPA 8270/SIM	5-17-12	5-18-12	
Dibenz[a,h]anthracene	**ND**	0.0073	EPA 8270/SIM	5-17-12	5-18-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*77*	*43 - 109*				
Pyrene-d10	*82*	*38 - 128*				
Terphenyl-d14	*105*	*33 - 119*				

Date of Report: May 21, 2012
Samples Submitted: May 8, 2012
Laboratory Reference: 1205-065
Project: 2012-046-22

PAHs by EPA 8270D/SIM
QUALITY CONTROL
(with silica gel clean-up)

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0517S1					
Naphthalene	**ND**	0.0067	EPA 8270/SIM	5-17-12	5-17-12	
2-Methylnaphthalene	**ND**	0.0067	EPA 8270/SIM	5-17-12	5-17-12	
1-Methylnaphthalene	**ND**	0.0067	EPA 8270/SIM	5-17-12	5-17-12	
Benzo[a]anthracene	**ND**	0.0067	EPA 8270/SIM	5-17-12	5-17-12	
Chrysene	**ND**	0.0067	EPA 8270/SIM	5-17-12	5-17-12	
Benzo[b]fluoranthene	**ND**	0.0067	EPA 8270/SIM	5-17-12	5-17-12	
Benzo(j,k)fluoranthene	**ND**	0.0067	EPA 8270/SIM	5-17-12	5-17-12	
Benzo[a]pyrene	**ND**	0.0067	EPA 8270/SIM	5-17-12	5-17-12	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0067	EPA 8270/SIM	5-17-12	5-17-12	
Dibenz[a,h]anthracene	**ND**	0.0067	EPA 8270/SIM	5-17-12	5-17-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*78*	*43 - 109*				
Pyrene-d10	*87*	*38 - 128*				
Terphenyl-d14	*88*	*33 - 119*				

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0517S1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	**0.0654**	**0.0644**	0.0833	0.0833	79	77	43 - 108	2	27	
Benzo[a]anthracene	**0.0808**	**0.0796**	0.0833	0.0833	97	96	63 - 116	1	12	
Chrysene	**0.0760**	**0.0747**	0.0833	0.0833	91	90	67 - 118	2	12	
Benzo[b]fluoranthene	**0.0726**	**0.0726**	0.0833	0.0833	87	87	58 - 127	0	20	
Benzo(j,k)fluoranthene	**0.0759**	**0.0727**	0.0833	0.0833	91	87	42 - 134	4	26	
Benzo[a]pyrene	**0.0647**	**0.0624**	0.0833	0.0833	78	75	55 - 111	4	19	
Indeno(1,2,3-c,d)pyrene	**0.0699**	**0.0700**	0.0833	0.0833	84	84	60 - 125	0	20	
Dibenz[a,h]anthracene	**0.0745**	**0.0722**	0.0833	0.0833	89	87	62 - 125	3	19	
Surrogate:										
2-Fluorobiphenyl					*76*	*83*	*43 - 109*			
Pyrene-d10					*89*	*88*	*38 - 128*			
Terphenyl-d14					*88*	*86*	*33 - 119*			

Date of Report: May 21, 2012
Samples Submitted: May 8, 2012
Laboratory Reference: 1205-065
Project: 2012-046-22

NAPTHALENES by EPA 8270D/SIM
(with silica gel clean-up)

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B43-B1-GW**					
Laboratory ID:	05-065-03					
Naphthalene	**1.4**	0.13	EPA 8270/SIM	5-14-12	5-16-12	
2-Methylnaphthalene	**0.69**	0.13	EPA 8270/SIM	5-14-12	5-16-12	
1-Methylnaphthalene	**1.3**	0.13	EPA 8270/SIM	5-14-12	5-16-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*70*	*38 - 105*				
Pyrene-d10	*83*	*37 - 121*				
Terphenyl-d14	*79*	*32 - 112*				
Client ID:	**B43-B3-GW**					
Laboratory ID:	05-065-08					
Naphthalene	**1.1**	0.12	EPA 8270/SIM	5-14-12	5-16-12	
2-Methylnaphthalene	**0.26**	0.12	EPA 8270/SIM	5-14-12	5-16-12	
1-Methylnaphthalene	**0.24**	0.12	EPA 8270/SIM	5-14-12	5-16-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*91*	*38 - 105*				
Pyrene-d10	*101*	*37 - 121*				
Terphenyl-d14	*100*	*32 - 112*				
Client ID:	**B43-B5-GW**					
Laboratory ID:	05-065-15					
Naphthalene	**0.61**	0.12	EPA 8270/SIM	5-14-12	5-16-12	
2-Methylnaphthalene	**ND**	0.12	EPA 8270/SIM	5-14-12	5-16-12	
1-Methylnaphthalene	**0.45**	0.12	EPA 8270/SIM	5-14-12	5-16-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*63*	*38 - 105*				
Pyrene-d10	*90*	*37 - 121*				
Terphenyl-d14	*94*	*32 - 112*				

Date of Report: May 21, 2012
Samples Submitted: May 8, 2012
Laboratory Reference: 1205-065
Project: 2012-046-22

NAPTHALENES by EPA 8270D/SIM
QUALITY CONTROL
(with silica gel clean-up)

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0514W1					
Naphthalene	**ND**	0.10	EPA 8270/SIM	5-14-12	5-15-12	
2-Methylnaphthalene	**ND**	0.10	EPA 8270/SIM	5-14-12	5-15-12	
1-Methylnaphthalene	**ND**	0.10	EPA 8270/SIM	5-14-12	5-15-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*87*	*38 - 105*				
Pyrene-d10	*92*	*37 - 121*				
Terphenyl-d14	*98*	*32 - 112*				

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0514W1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	**0.386**	**0.336**	0.500	0.500	77	67	38 - 110	14	35	
Acenaphthylene	**0.443**	**0.401**	0.500	0.500	89	80	47 - 120	10	30	
Acenaphthene	**0.433**	**0.387**	0.500	0.500	87	77	46 - 113	11	26	
Fluorene	**0.448**	**0.426**	0.500	0.500	90	85	58 - 104	5	25	
Phenanthrene	**0.487**	**0.463**	0.500	0.500	97	93	61 - 99	5	19	
Anthracene	**0.465**	**0.445**	0.500	0.500	93	89	55 - 122	4	19	
Fluoranthene	**0.509**	**0.481**	0.500	0.500	102	96	58 - 129	6	18	
Pyrene	**0.520**	**0.483**	0.500	0.500	104	97	57 - 126	7	25	
Benzo[a]anthracene	**0.481**	**0.450**	0.500	0.500	96	90	51 - 124	7	18	
Chrysene	**0.510**	**0.478**	0.500	0.500	102	96	53 - 123	6	20	
Benzo[b]fluoranthene	**0.506**	**0.476**	0.500	0.500	101	95	53 - 126	6	18	
Benzo(j,k)fluoranthene	**0.505**	**0.482**	0.500	0.500	101	96	51 - 126	5	23	
Benzo[a]pyrene	**0.508**	**0.478**	0.500	0.500	102	96	52 - 127	6	21	
Indeno(1,2,3-c,d)pyrene	**0.495**	**0.464**	0.500	0.500	99	93	49 - 123	6	26	
Dibenz[a,h]anthracene	**0.503**	**0.468**	0.500	0.500	101	94	39 - 125	7	31	
Benzo[g,h,i]perylene	**0.485**	**0.448**	0.500	0.500	97	90	40 - 125	8	30	
Surrogate:										
2-Fluorobiphenyl					*77*	*75*	*38 - 105*			
Pyrene-d10					*98*	*93*	*37 - 121*			
Terphenyl-d14					*103*	*102*	*32 - 112*			

Date of Report: May 21, 2012
Samples Submitted: May 8, 2012
Laboratory Reference: 1205-065
Project: 2012-046-22

PCBs by EPA 8082

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B43-B1-10**					
Laboratory ID:	05-065-01					
Aroclor 1016	**ND**	0.058	EPA 8082	5-18-12	5-18-12	
Aroclor 1221	**ND**	0.058	EPA 8082	5-18-12	5-18-12	
Aroclor 1232	**ND**	0.058	EPA 8082	5-18-12	5-18-12	
Aroclor 1242	**ND**	0.058	EPA 8082	5-18-12	5-18-12	
Aroclor 1248	**ND**	0.058	EPA 8082	5-18-12	5-18-12	
Aroclor 1254	**ND**	0.058	EPA 8082	5-18-12	5-18-12	
Aroclor 1260	**ND**	0.058	EPA 8082	5-18-12	5-18-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*110*	*42-123*				
Client ID:	**B43-B2-4**					
Laboratory ID:	05-065-04					
Aroclor 1016	**ND**	0.058	EPA 8082	5-18-12	5-18-12	
Aroclor 1221	**ND**	0.058	EPA 8082	5-18-12	5-18-12	
Aroclor 1232	**ND**	0.058	EPA 8082	5-18-12	5-18-12	
Aroclor 1242	**ND**	0.058	EPA 8082	5-18-12	5-18-12	
Aroclor 1248	**ND**	0.058	EPA 8082	5-18-12	5-18-12	
Aroclor 1254	**ND**	0.058	EPA 8082	5-18-12	5-18-12	
Aroclor 1260	**ND**	0.058	EPA 8082	5-18-12	5-18-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*98*	*42-123*				
Client ID:	**B43-B8-6**					
Laboratory ID:	05-065-14					
Aroclor 1016	**ND**	0.055	EPA 8082	5-18-12	5-18-12	
Aroclor 1221	**ND**	0.055	EPA 8082	5-18-12	5-18-12	
Aroclor 1232	**ND**	0.055	EPA 8082	5-18-12	5-18-12	
Aroclor 1242	**ND**	0.055	EPA 8082	5-18-12	5-18-12	
Aroclor 1248	**ND**	0.055	EPA 8082	5-18-12	5-18-12	
Aroclor 1254	**ND**	0.055	EPA 8082	5-18-12	5-18-12	
Aroclor 1260	**ND**	0.055	EPA 8082	5-18-12	5-18-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*107*	*42-123*				

Date of Report: May 21, 2012
Samples Submitted: May 8, 2012
Laboratory Reference: 1205-065
Project: 2012-046-22

PCBs by EPA 8082
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0518S1					
Aroclor 1016	**ND**	0.050	EPA 8082	5-18-12	5-18-12	
Aroclor 1221	**ND**	0.050	EPA 8082	5-18-12	5-18-12	
Aroclor 1232	**ND**	0.050	EPA 8082	5-18-12	5-18-12	
Aroclor 1242	**ND**	0.050	EPA 8082	5-18-12	5-18-12	
Aroclor 1248	**ND**	0.050	EPA 8082	5-18-12	5-18-12	
Aroclor 1254	**ND**	0.050	EPA 8082	5-18-12	5-18-12	
Aroclor 1260	**ND**	0.050	EPA 8082	5-18-12	5-18-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*115*	*42-123*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
MATRIX SPIKES											
Laboratory ID:	05-099-04										
	MS	MSD	MS	MSD		MS	MSD				
Aroclor 1260	**0.600**	**0.605**	0.500	0.500	ND	**120**	**121**	44-125	1	15	
Surrogate:											
DCB						*100*	*105*	*42-123*			

Date of Report: May 21, 2012
Samples Submitted: May 8, 2012
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Project: 2012-046-22

TOTAL METALS
EPA 6010B/7471A

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	05-065-01					
Client ID:	**B43-B1-10**					
Arsenic	**ND**	12	6010B	5-17-12	5-17-12	
Barium	**94**	2.9	6010B	5-17-12	5-17-12	
Cadmium	**ND**	0.58	6010B	5-17-12	5-17-12	
Chromium	**34**	0.58	6010B	5-17-12	5-17-12	
Lead	**63**	5.8	6010B	5-17-12	5-17-12	
Mercury	**ND**	0.29	7471A	5-16-12	5-16-12	
Selenium	**ND**	12	6010B	5-17-12	5-17-12	
Silver	**ND**	0.58	6010B	5-17-12	5-17-12	
Lab ID:	05-065-02					
Client ID:	**B43-B1-14**					
Arsenic	**ND**	11	6010B	5-17-12	5-17-12	
Barium	**42**	2.9	6010B	5-17-12	5-17-12	
Cadmium	**ND**	0.57	6010B	5-17-12	5-17-12	
Chromium	**30**	0.57	6010B	5-17-12	5-17-12	
Lead	**ND**	5.7	6010B	5-17-12	5-17-12	
Mercury	**ND**	0.29	7471A	5-16-12	5-16-12	
Selenium	**ND**	11	6010B	5-17-12	5-17-12	
Silver	**ND**	0.57	6010B	5-17-12	5-17-12	

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Project: 2012-046-22

TOTAL METALS
EPA 6010B/7471A

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	05-065-04					
Client ID:	**B43-B2-4**					
Arsenic	**ND**	12	6010B	5-17-12	5-17-12	
Barium	**90**	2.9	6010B	5-17-12	5-17-12	
Cadmium	**ND**	0.58	6010B	5-17-12	5-17-12	
Chromium	**32**	0.58	6010B	5-17-12	5-17-12	
Lead	**44**	5.8	6010B	5-17-12	5-17-12	
Mercury	**ND**	0.29	7471A	5-16-12	5-16-12	
Selenium	**ND**	12	6010B	5-17-12	5-17-12	
Silver	**ND**	0.58	6010B	5-17-12	5-17-12	
Lab ID:	05-065-05					
Client ID:	**B43-B2-8**					
Arsenic	**ND**	12	6010B	5-17-12	5-17-12	
Barium	**75**	2.9	6010B	5-17-12	5-17-12	
Cadmium	**ND**	0.59	6010B	5-17-12	5-17-12	
Chromium	**37**	0.59	6010B	5-17-12	5-17-12	
Lead	**11**	5.9	6010B	5-17-12	5-17-12	
Mercury	**ND**	0.29	7471A	5-16-12	5-16-12	
Selenium	**ND**	12	6010B	5-17-12	5-17-12	
Silver	**ND**	0.59	6010B	5-17-12	5-17-12	

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TOTAL METALS
EPA 6010B/7471A

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	05-065-06					
Client ID:	**B43-B3-3**					
Arsenic	**ND**	12	6010B	5-17-12	5-17-12	
Barium	**95**	2.9	6010B	5-17-12	5-17-12	
Cadmium	**ND**	0.58	6010B	5-17-12	5-17-12	
Chromium	**46**	0.58	6010B	5-17-12	5-17-12	
Lead	**31**	5.8	6010B	5-17-12	5-17-12	
Mercury	**ND**	0.29	7471A	5-16-12	5-16-12	
Selenium	**ND**	12	6010B	5-17-12	5-17-12	
Silver	**ND**	0.58	6010B	5-17-12	5-17-12	
Lab ID:	05-065-07					
Client ID:	**B43-B3-6**					
Arsenic	**ND**	12	6010B	5-17-12	5-17-12	
Barium	**93**	2.9	6010B	5-17-12	5-17-12	
Cadmium	**ND**	0.59	6010B	5-17-12	5-17-12	
Chromium	**42**	0.59	6010B	5-17-12	5-17-12	
Lead	**11**	5.9	6010B	5-17-12	5-17-12	
Mercury	**ND**	0.29	7471A	5-16-12	5-16-12	
Selenium	**ND**	12	6010B	5-17-12	5-17-12	
Silver	**ND**	0.59	6010B	5-17-12	5-17-12	

Date of Report: May 21, 2012
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TOTAL METALS
EPA 6010B/7471A

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	05-065-09					
Client ID:	**B43-B4-4**					
Arsenic	**ND**	11	6010B	5-17-12	5-17-12	
Barium	**83**	2.8	6010B	5-17-12	5-17-12	
Cadmium	**ND**	0.57	6010B	5-17-12	5-17-12	
Chromium	**51**	0.57	6010B	5-17-12	5-17-12	
Lead	**ND**	5.7	6010B	5-17-12	5-17-12	
Mercury	**ND**	0.28	7471A	5-16-12	5-16-12	
Selenium	**ND**	11	6010B	5-17-12	5-17-12	
Silver	**ND**	0.57	6010B	5-17-12	5-17-12	
Lab ID:	05-065-10					
Client ID:	**B43-B4-5**					
Arsenic	**ND**	11	6010B	5-17-12	5-17-12	
Barium	**84**	2.9	6010B	5-17-12	5-17-12	
Cadmium	**ND**	0.57	6010B	5-17-12	5-17-12	
Chromium	**37**	0.57	6010B	5-17-12	5-17-12	
Lead	**41**	5.7	6010B	5-17-12	5-17-12	
Mercury	**ND**	0.29	7471A	5-16-12	5-16-12	
Selenium	**ND**	11	6010B	5-17-12	5-17-12	
Silver	**ND**	0.57	6010B	5-17-12	5-17-12	

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TOTAL METALS
EPA 6010B/7471A

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	05-065-11					
Client ID:	**B43-B5-4**					
Arsenic	**ND**	11	6010B	5-17-12	5-17-12	
Barium	**83**	2.8	6010B	5-17-12	5-17-12	
Cadmium	**ND**	0.57	6010B	5-17-12	5-17-12	
Chromium	**38**	0.57	6010B	5-17-12	5-17-12	
Lead	**ND**	5.7	6010B	5-17-12	5-17-12	
Mercury	**ND**	0.28	7471A	5-16-12	5-16-12	
Selenium	**ND**	11	6010B	5-17-12	5-17-12	
Silver	**ND**	0.57	6010B	5-17-12	5-17-12	
Lab ID:	05-065-12					
Client ID:	**B43-B5-6**					
Arsenic	**ND**	11	6010B	5-17-12	5-17-12	
Barium	**110**	2.8	6010B	5-17-12	5-17-12	
Cadmium	**ND**	0.57	6010B	5-17-12	5-17-12	
Chromium	**41**	0.57	6010B	5-17-12	5-17-12	
Lead	**110**	5.7	6010B	5-17-12	5-17-12	
Mercury	**ND**	0.28	7471A	5-16-12	5-16-12	
Selenium	**ND**	11	6010B	5-17-12	5-17-12	
Silver	**ND**	0.57	6010B	5-17-12	5-17-12	

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TOTAL METALS
EPA 6010B/7471A

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	05-065-14					
Client ID:	**B43-B8-6**					
Arsenic	**13**	11	6010B	5-17-12	5-17-12	
Barium	**120**	2.8	6010B	5-17-12	5-17-12	
Cadmium	**ND**	0.55	6010B	5-17-12	5-17-12	
Chromium	**17**	0.55	6010B	5-17-12	5-17-12	
Lead	**65**	5.5	6010B	5-17-12	5-17-12	
Mercury	**ND**	0.28	7471A	5-16-12	5-16-12	
Selenium	**ND**	11	6010B	5-17-12	5-17-12	
Silver	**ND**	0.55	6010B	5-17-12	5-17-12	

Date of Report: May 21, 2012
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Project: 2012-046-22

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

Date Extracted: 5-16&17-12
Date Analyzed: 5-16&17-12

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: MB0516S1&MB0517SM1

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

Date of Report: May 21, 2012
Samples Submitted: May 8, 2012
Laboratory Reference: 1205-065
Project: 2012-046-22

TOTAL METALS
EPA 6010B/7471A
DUPLICATE QUALITY CONTROL

Date Extracted: 5-16&17-12
Date Analyzed: 5-16&17-12

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 05-065-11

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**ND**	**ND**	NA	10	
Barium	**73.3**	**80.2**	9	2.5	
Cadmium	**ND**	**ND**	NA	0.50	
Chromium	**33.6**	**34.8**	4	0.50	
Lead	**ND**	**ND**	NA	5.0	
Mercury	**ND**	**ND**	NA	0.25	
Selenium	**ND**	**ND**	NA	10	
Silver	**ND**	**ND**	NA	0.50	

Date of Report: May 21, 2012
Samples Submitted: May 8, 2012
Laboratory Reference: 1205-065
Project: 2012-046-22

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

Date Extracted: 5-16&17-12
Date Analyzed: 5-16&17-12

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 05-065-11

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	**87.6**	88	**87.0**	87	1	
Barium	100	**175**	102	**169**	96	3	
Cadmium	50.0	**45.8**	92	**45.6**	91	0	
Chromium	100	**128**	94	**124**	90	3	
Lead	250	**223**	89	**221**	89	1	
Mercury	0.500	**0.510**	102	**0.506**	101	1	
Selenium	100	**92.1**	92	**91.7**	92	0	
Silver	25.0	**20.6**	82	**20.4**	82	1	

Date of Report: May 21, 2012
Samples Submitted: May 8, 2012
Laboratory Reference: 1205-065
Project: 2012-046-22

DISSOLVED METALS
EPA 200.8/7470A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	05-065-03					
Client ID:	**B43-B1-GW**					
Arsenic	**110**	3.0	200.8		5-18-12	
Barium	**92**	25	200.8		5-16-12	
Cadmium	**ND**	4.0	200.8		5-16-12	
Chromium	**ND**	10	200.8		5-16-12	
Lead	**ND**	1.0	200.8		5-16-12	
Mercury	**ND**	0.50	7470A		5-10-12	
Selenium	**ND**	5.0	200.8		5-16-12	
Silver	**ND**	10	200.8		5-16-12	
Lab ID:	05-065-08					
Client ID:	**B43-B3-GW**					
Arsenic	**ND**	3.0	200.8		5-16-12	
Barium	**53**	25	200.8		5-16-12	
Cadmium	**ND**	4.0	200.8		5-16-12	
Chromium	**ND**	10	200.8		5-16-12	
Lead	**ND**	1.0	200.8		5-16-12	
Mercury	**ND**	0.50	7470A		5-10-12	
Selenium	**ND**	5.0	200.8		5-16-12	
Silver	**ND**	10	200.8		5-16-12	

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DISSOLVED METALS
EPA 200.8/7470A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	05-065-13					
Client ID:	**B43-B4-GW**					
Arsenic	**4.0**	3.0	200.8		5-18-12	
Barium	**67**	25	200.8		5-16-12	
Cadmium	**ND**	4.0	200.8		5-16-12	
Chromium	**ND**	10	200.8		5-16-12	
Lead	**20**	1.0	200.8		5-16-12	
Mercury	**ND**	0.50	7470A		5-10-12	
Selenium	**ND**	5.0	200.8		5-16-12	
Silver	**ND**	10	200.8		5-16-12	
Lab ID:	05-065-15					
Client ID:	**B43-B5-GW**					
Arsenic	**ND**	3.0	200.8		5-16-12	
Barium	**79**	25	200.8		5-16-12	
Cadmium	**ND**	4.0	200.8		5-16-12	
Chromium	**ND**	10	200.8		5-16-12	
Lead	**ND**	1.0	200.8		5-16-12	
Mercury	**ND**	0.50	7470A		5-10-12	
Selenium	**ND**	5.0	200.8		5-16-12	
Silver	**ND**	10	200.8		5-16-12	

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DISSOLVED METALS
EPA 200.8
METHOD BLANK QUALITY CONTROL

Date Analyzed: 5-16&18-12

Matrix: Water
Units: ug/L (ppb)

Lab ID: MB0516D2

Analyte	Method	Result	PQL
Arsenic	200.8	**ND**	3.0
Barium	200.8	**ND**	25
Cadmium	200.8	**ND**	4.0
Chromium	200.8	**ND**	10
Lead	200.8	**ND**	1.0
Selenium	200.8	**ND**	5.0
Silver	200.8	**ND**	10

Date of Report: May 21, 2012
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DISSOLVED MERCURY
EPA 7470A
METHOD BLANK QUALITY CONTROL

Date Analyzed: 5-10-12

Matrix: Water
Units: ug/L (ppb)

Lab ID: MB0510D1

Analyte	Method	Result	PQL
Mercury	7470A	**ND**	0.50

Date of Report: May 21, 2012
Samples Submitted: May 8, 2012
Laboratory Reference: 1205-065
Project: 2012-046-22

DISSOLVED METALS
EPA 200.8
DUPLICATE QUALITY CONTROL

Date Analyzed: 5-16&18-12

Matrix: Water
Units: ug/L (ppb)

Lab ID: 05-065-03

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**105**	**108**	3	3.0	
Barium	**91.6**	**91.4**	0	25	
Cadmium	**ND**	**ND**	NA	4.0	
Chromium	**ND**	**ND**	NA	10	
Lead	**ND**	**ND**	NA	1.0	
Selenium	**ND**	**ND**	NA	5.0	
Silver	**ND**	**ND**	NA	10	

Date of Report: May 21, 2012
Samples Submitted: May 8, 2012
Laboratory Reference: 1205-065
Project: 2012-046-22

DISSOLVED MERCURY
EPA 7470A
DUPLICATE QUALITY CONTROL

Date Analyzed: 5-10-12

Matrix: Water
Units: ug/L (ppb)

Lab ID: 05-028-01

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Mercury	**ND**	**ND**	NA	0.50	

Date of Report: May 21, 2012
Samples Submitted: May 8, 2012
Laboratory Reference: 1205-065
Project: 2012-046-22

DISSOLVED METALS
EPA 200.8
MS/MSD QUALITY CONTROL

Date Analyzed: 5-16&18-12

Matrix: Water
Units: ug/L (ppb)

Lab ID: 05-065-03

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	200	**315**	105	**318**	107	1	
Barium	200	**290**	99	**296**	102	2	
Cadmium	200	**211**	106	**211**	106	0	
Chromium	200	**191**	95	**219**	109	14	
Lead	200	**192**	96	**195**	97	1	
Selenium	200	**221**	110	**224**	112	2	
Silver	200	**183**	91	**186**	93	2	

Date of Report: May 21, 2012
Samples Submitted: May 8, 2012
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DISSOLVED MERCURY
EPA 7470A
MS/MSD QUALITY CONTROL

Date Analyzed: 5-10-12

Matrix: Water
Units: ug/L (ppb)

Lab ID: 05-028-01

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Mercury	12.5	**12.1**	97	**12.2**	98	1	

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EDB by EPA 8011

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B43-B1-GW**					
Laboratory ID:	05-065-03					
EDB	**ND**	0.0096	EPA 8011	5-21-12	5-21-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*71*	*31-144*				
Client ID:	**B43-B3-GW**					
Laboratory ID:	05-065-08					
EDB	**ND**	0.0097	EPA 8011	5-21-12	5-21-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*113*	*31-144*				
Client ID:	**B43-B5-GW**					
Laboratory ID:	05-065-15					
EDB	**ND**	0.0097	EPA 8011	5-21-12	5-21-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*78*	*31-144*				

Date of Report: May 21, 2012
Samples Submitted: May 8, 2012
Laboratory Reference: 1205-065
Project: 2012-046-22

EDB by EPA 8011
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0521W1					
EDB	**ND**	0.010	EPA 8011	5-21-12	5-21-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*101*	*31-144*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS											
Laboratory ID:	SB0521W1										
	SB	SBD	SB	SBD		SB	SBD				
EDB	**0.100**	**0.0966**	0.100	0.100	N/A	**100**	**97**	78-122	3	8	
Surrogate:											
TCMX						*121*	*108*	*31-144*			

Date of Report: May 21, 2012
Samples Submitted: May 8, 2012
Laboratory Reference: 1205-065
Project: 2012-046-22

% MOISTURE

Date Analyzed: 5-9-12

Client ID	Lab ID	% Moisture
B43-B1-10	05-065-01	13
B43-B1-14	05-065-02	12
B43-B2-4	05-065-04	13
B43-B2-8	05-065-05	15
B43-B3-3	05-065-06	14
B43-B3-6	05-065-07	15
B43-B4-4	05-065-09	12
B43-B4-5	05-065-10	13
B43-B5-4	05-065-11	12
B43-B5-6	05-065-12	12
B43-B8-6	05-065-14	9

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

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

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

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

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

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

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

I - Compound recovery is outside of the control limits.

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

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

L - The RPD is outside of the control limits.

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

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

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

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

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

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

Q - Surrogate recovery is outside of the control limits.

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

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

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

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

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

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

X - Sample extract treated with a mercury cleanup procedure.

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

Z -

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

Chain of Custody

Page 1 of 2

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

Company: HWA
Project Number: 2012-043-22
Project Name: Vulcan Block 43
Project Manager: J. Thompson
Sampled by: Atkins

Turnaround Request (in working days)

(Check One)

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

Laboratory Number: 05-065

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	No. of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (acid SG)	Volatiles 8260B BTEX, MTBE, EDB EDC	Halogenated Volatiles 8260B	Semivolatiles 8270D/SIM (with low-level PAHs) NAPHTHALENES	PAHs 8270D/SIM (low-level) cPAHs + Naphthalenes	PCBs 8082	Organochlorine Pesticides 8081A	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664	Dis. RCRA Metals		EDB (low level EPA 8011)		% Moisture
1	B43-B1-10	5/8/12	845	Soil	6	X		⊗	⊗	⊗			⊗	⊗				X								X
2	B43-B1-14	5/8/12	850	↓	6																					↓
3	B43-B1-GW		900	Water	14			⊗		⊗		⊗										X		⊗		
4	B43-B2-4		1015	Soil	4				⊗				⊗	⊗												X
5	B43-B2-8		1020		4																					
6	B43-B3-3		1050		4																					
7	B43-B3-6		1100	↓	6																					↓
8	B43-B3-GW		1130	Water	14			⊗		⊗		⊗										X		⊗		
9	B43-B4-4		1130	Soil	6																					X
10	B43-B4-5	↓	1145	Soil	5																					↓

	Signature	Company	Date	Time
Relinquished		HWA	5/8/12	1512
Received		Speedy Messenger	5-8-12	312
Relinquished		Speedy Messenger	5/8/12	4:40
Received		OSE	5/8/12	1640
Relinquished				
Received				

Comments/Special Instructions

Archive remaining volume/containers for follow-up analyses if needed.
Field Filtered
(X) Added 5/11/12. PB (STA)

Reviewed/Date

Reviewed/Date

Chromatograms with final report ☑

Data Package: Level III ☐ Level IV ☐

Electronic Data Deliverables (EDDs) ☐ _____

Chain of Custody

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

Company: HWA Geosciences
Project Number: 2012-046-22
Project Name: Vulcan / Block 43
Project Manager: Jeff Thompson
Sampled by: Vance Atkins

Turnaround Request (in working days)

(Check One)

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

Laboratory Number: 05-065

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	No. of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (Acid SG)	Volatiles 8260B BTEX EDB EDC MTBE	Halogenated Volatiles 8260B	Semivolatiles 8270D/SIM (with low-level PAHs) NAPHTHALENES ONLY	PAHs 8270D/SIM (low-level) cPAHs + Naphthalenes	PCBs 8082	Organochlorine Pesticides 8081A	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664	Dis. RCRA Metals		EDB (low level EPA 8011)		% Moisture
11	B43-B5-4	5/8/12	1200	Soil	6	X												X								X
12	B43-B5-6	↓	1215	Soil	6	X												X								↓
13	B43-B4-GW		1240	W	14	X												X				X				
14	B43-B8-6		1445	Soil	6	X			(X)				(X)	(X)				X								X
15	B43-B5-9W		1340	W	14	X		(X)		(X)		(X)						X				X		(X)		

	Signature	Company	Date	Time
Relinquished		HWA	5/8/12	1512
Received		Speedy messenger	5-8-12	3:13
Relinquished		Speedy messenger	5/8/12	4:40
Received			5/8/12	1640
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Archive remaining volume/containers for followup analyses if needed.

(X) Added 5/11/12 - DB (STA)

Chromatograms with final report ☑

Data Package: Level III ☐ Level IV ☐

Electronic Data Deliverables (EDDs) ☐ _____

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

May 25, 2012

Jeff Thompson
HWA GeoSciences, Inc.
21312 30th Drive SE, Suite 110
Bothell, WA 98021

Re: Analytical Data for Project 2012-046-22
Laboratory Reference No. 1205-078

Dear Jeff:

Enclosed are the analytical results and associated quality control data for samples submitted on May 9, 2012.

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

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

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: May 25, 2012
Samples Submitted: May 9, 2012
Laboratory Reference: 1205-078
Project: 2012-046-22

Case Narrative

Samples were collected on May 8 and 9, 2012 and received by the laboratory on May 9, 2012. They were maintained at the laboratory at a temperature of 2°C to 6°C.

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

NWTPH-Gx (soil) Analysis

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

The chromatogram for sample B43-B10-19 is similar to mineral spirits.

BTEX, EDB, EDC,and MTBE EPA 8260B (soil) Analysis

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

Some MTCA Method A cleanup levels are non-achievable for sample B43-B12-3 due to the necessary dilution of the sample.

Surrogate Standard 4-Bromofluorobenzene is outside control limits for sample B43-B10-19 due to co-eluting non-target analytes.

PAHs EPA 8270D/SIM (water) Analysis

The sample B43-B9-GW was extracted 2 days out of holding time.

PAHs EPA 8270D/SIM (soil) Analysis

Sample B43-B9-3 had one surrogate recovery out of control limits. This is within allowance of our standard operating procedure as long as the recovery is above 10%.

Please note that any other QA/QC issues associated with these extractions and analyses will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

Date of Report: May 25, 2012
Samples Submitted: May 9, 2012
Laboratory Reference: 1205-078
Project: 2012-046-22

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

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B43-B8-GW**					
Laboratory ID:	05-078-01					
Gasoline Range Organics	**ND**	0.11	NWTPH-HCID	5-14-12	5-14-12	
Diesel Range Organics	**ND**	0.27	NWTPH-HCID	5-14-12	5-14-12	
Lube Oil Range Organics	**ND**	0.43	NWTPH-HCID	5-14-12	5-14-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***89***	***50-150***				
Client ID:	**B43-B9-GW**					
Laboratory ID:	05-078-04					
Gasoline Range Organics	**Detected**	0.11	NWTPH-HCID	5-14-12	5-14-12	
Diesel Range Organics	**ND**	0.47	NWTPH-HCID	5-14-12	5-14-12	U1
Lube Oil Range Organics	**ND**	0.44	NWTPH-HCID	5-14-12	5-14-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***105***	***50-150***				
Client ID:	**B43-B10-GW**					
Laboratory ID:	05-078-07					
Gasoline Range Organics	**Detected**	0.064	NWTPH-HCID	5-14-12	5-14-12	
Diesel Range Organics	**ND**	1.5	NWTPH-HCID	5-14-12	5-14-12	U1
Lube Oil Range Organics	**ND**	0.26	NWTPH-HCID	5-14-12	5-14-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***107***	***50-150***				
Client ID:	**B43-B12-GW**					
Laboratory ID:	05-078-12					
Gasoline Range Organics	**ND**	0.11	NWTPH-HCID	5-14-12	5-14-12	
Diesel Range Organics	**ND**	0.28	NWTPH-HCID	5-14-12	5-14-12	
Lube Oil Range Organics	**ND**	0.44	NWTPH-HCID	5-14-12	5-14-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***99***	***50-150***				

Date of Report: May 25, 2012
Samples Submitted: May 9, 2012
Laboratory Reference: 1205-078
Project: 2012-046-22

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

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0514W1					
Gasoline Range Organics	**ND**	0.10	NWTPH-HCID	5-14-12	5-14-12	
Diesel Range Organics	**ND**	0.25	NWTPH-HCID	5-14-12	5-14-12	
Lube Oil Range Organics	**ND**	0.40	NWTPH-HCID	5-14-12	5-14-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***91***	***50-150***				

Date of Report: May 25, 2012
Samples Submitted: May 9, 2012
Laboratory Reference: 1205-078
Project: 2012-046-22

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

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B43-B9-3**					
Laboratory ID:	05-078-02					
Gasoline Range Organics	**ND**	24	NWTPH-HCID	5-14-12	5-14-12	
Diesel Range Organics	**ND**	280	NWTPH-HCID	5-14-12	5-14-12	U1
Lube Oil	**Detected**	120	NWTPH-HCID	5-14-12	5-14-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***109***	***50-150***				
Client ID:	**B43-B9-10**					
Laboratory ID:	05-078-03					
Gasoline Range Organics	**ND**	23	NWTPH-HCID	5-14-12	5-14-12	
Diesel Range Organics	**ND**	57	NWTPH-HCID	5-14-12	5-14-12	
Lube Oil Range Organics	**ND**	110	NWTPH-HCID	5-14-12	5-14-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***107***	***50-150***				
Client ID:	**B43-B10-15**					
Laboratory ID:	05-078-05					
Gasoline Range Organics	**ND**	23	NWTPH-HCID	5-14-12	5-14-12	
Diesel Range Organics	**ND**	58	NWTPH-HCID	5-14-12	5-14-12	
Lube Oil Range Organics	**ND**	120	NWTPH-HCID	5-14-12	5-14-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***103***	***50-150***				
Client ID:	**B43-B10-19**					
Laboratory ID:	05-078-06					
Gasoline Range Organics	**Detected**	23	NWTPH-HCID	5-14-12	5-14-12	
Diesel Range Organics	**ND**	130	NWTPH-HCID	5-14-12	5-14-12	U1
Lube Oil	**Detected**	120	NWTPH-HCID	5-14-12	5-14-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***102***	***50-150***				
Client ID:	**B43-B11-2.5**					
Laboratory ID:	05-078-08					
Gasoline Range Organics	**ND**	23	NWTPH-HCID	5-14-12	5-14-12	
Diesel Range Organics	**ND**	190	NWTPH-HCID	5-14-12	5-14-12	U1
Lube Oil	**Detected**	120	NWTPH-HCID	5-14-12	5-14-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***114***	***50-150***				

Date of Report: May 25, 2012
Samples Submitted: May 9, 2012
Laboratory Reference: 1205-078
Project: 2012-046-22

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

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B43-B11-6.5**					
Laboratory ID:	05-078-09					
Gasoline Range Organics	**ND**	23	NWTPH-HCID	5-14-12	5-14-12	
Diesel Range Organics	**ND**	830	NWTPH-HCID	5-14-12	5-14-12	U1
Lube Oil	**Detected**	110	NWTPH-HCID	5-14-12	5-14-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***122***	***50-150***				
Client ID:	**B43-B12-3**					
Laboratory ID:	05-078-10					
Gasoline Range Organics	**ND**	410	NWTPH-HCID	5-14-12	5-14-12	U1
Diesel Range Organics	**Detected**	61	NWTPH-HCID	5-14-12	5-14-12	
Lube Oil	**Detected**	120	NWTPH-HCID	5-14-12	5-14-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***141***	***50-150***				
Client ID:	**B43-B12-11**					
Laboratory ID:	05-078-11					
Gasoline Range Organics	**ND**	72	NWTPH-HCID	5-14-12	5-14-12	U1
Diesel Range Organics	**Detected**	56	NWTPH-HCID	5-14-12	5-14-12	
Lube Oil	**Detected**	110	NWTPH-HCID	5-14-12	5-14-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***149***	***50-150***				

Date of Report: May 25, 2012
Samples Submitted: May 9, 2012
Laboratory Reference: 1205-078
Project: 2012-046-22

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

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0514S1					
Gasoline Range Organics	**ND**	20	NWTPH-HCID	5-14-12	5-14-12	
Diesel Range Organics	**ND**	50	NWTPH-HCID	5-14-12	5-14-12	
Lube Oil Range Organics	**ND**	100	NWTPH-HCID	5-14-12	5-14-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***110***	***50-150***				

Date of Report: May 25, 2012
Samples Submitted: May 9, 2012
Laboratory Reference: 1205-078
Project: 2012-046-22

TOTAL METALS
EPA 6010B/7471A

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	05-078-02					
Client ID:	**B43-B9-3**					
Arsenic	**ND**	12	6010B	5-11-12	5-14-12	
Barium	**250**	3.0	6010B	5-11-12	5-14-12	
Cadmium	**1.0**	0.60	6010B	5-11-12	5-14-12	
Chromium	**24**	0.60	6010B	5-11-12	5-14-12	
Lead	**120**	6.0	6010B	5-11-12	5-14-12	
Mercury	**ND**	0.30	7471A	5-16-12	5-16-12	
Selenium	**ND**	12	6010B	5-11-12	5-14-12	
Silver	**ND**	0.60	6010B	5-11-12	5-14-12	
Lab ID:	05-078-03					
Client ID:	**B43-B9-10**					
Arsenic	**ND**	11	6010B	5-11-12	5-14-12	
Barium	**45**	2.9	6010B	5-11-12	5-14-12	
Cadmium	**ND**	0.57	6010B	5-11-12	5-14-12	
Chromium	**28**	0.57	6010B	5-11-12	5-14-12	
Lead	**ND**	5.7	6010B	5-11-12	5-14-12	
Mercury	**ND**	0.29	7471A	5-16-12	5-16-12	
Selenium	**ND**	11	6010B	5-11-12	5-14-12	
Silver	**ND**	0.57	6010B	5-11-12	5-14-12	

Date of Report: May 25, 2012
Samples Submitted: May 9, 2012
Laboratory Reference: 1205-078
Project: 2012-046-22

TOTAL METALS
EPA 6010B/7471A

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	05-078-05					
Client ID:	**B43-B10-15**					
Arsenic	**ND**	12	6010B	5-11-12	5-14-12	
Barium	**65**	2.9	6010B	5-11-12	5-14-12	
Cadmium	**ND**	0.58	6010B	5-11-12	5-14-12	
Chromium	**33**	0.58	6010B	5-11-12	5-14-12	
Lead	**6.5**	5.8	6010B	5-11-12	5-14-12	
Mercury	**ND**	0.29	7471A	5-16-12	5-16-12	
Selenium	**ND**	12	6010B	5-11-12	5-14-12	
Silver	**ND**	0.58	6010B	5-11-12	5-14-12	
Lab ID:	05-078-06					
Client ID:	**B43-B10-19**					
Arsenic	**ND**	12	6010B	5-11-12	5-14-12	
Barium	**46**	2.9	6010B	5-11-12	5-14-12	
Cadmium	**ND**	0.58	6010B	5-11-12	5-14-12	
Chromium	**30**	0.58	6010B	5-11-12	5-14-12	
Lead	**ND**	5.8	6010B	5-11-12	5-14-12	
Mercury	**ND**	0.29	7471A	5-16-12	5-16-12	
Selenium	**ND**	12	6010B	5-11-12	5-14-12	
Silver	**ND**	0.58	6010B	5-11-12	5-14-12	

Date of Report: May 25, 2012
Samples Submitted: May 9, 2012
Laboratory Reference: 1205-078
Project: 2012-046-22

TOTAL METALS
EPA 6010B/7471A

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	05-078-08					
Client ID:	**B43-B11-2.5**					
Arsenic	**ND**	11	6010B	5-11-12	5-14-12	
Barium	**110**	2.9	6010B	5-11-12	5-14-12	
Cadmium	**ND**	0.57	6010B	5-11-12	5-14-12	
Chromium	**28**	0.57	6010B	5-11-12	5-14-12	
Lead	**50**	5.7	6010B	5-11-12	5-14-12	
Mercury	**ND**	0.29	7471A	5-16-12	5-16-12	
Selenium	**ND**	11	6010B	5-11-12	5-14-12	
Silver	**ND**	0.57	6010B	5-11-12	5-14-12	
Lab ID:	05-078-09					
Client ID:	**B43-B11-6.5**					
Arsenic	**ND**	11	6010B	5-11-12	5-14-12	
Barium	**98**	2.9	6010B	5-11-12	5-14-12	
Cadmium	**ND**	0.57	6010B	5-11-12	5-14-12	
Chromium	**36**	0.57	6010B	5-11-12	5-14-12	
Lead	**59**	5.7	6010B	5-11-12	5-14-12	
Mercury	**ND**	0.29	7471A	5-16-12	5-16-12	
Selenium	**ND**	11	6010B	5-11-12	5-14-12	
Silver	**ND**	0.57	6010B	5-11-12	5-14-12	

Date of Report: May 25, 2012
Samples Submitted: May 9, 2012
Laboratory Reference: 1205-078
Project: 2012-046-22

TOTAL METALS
EPA 6010B/7471A

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	05-078-10					
Client ID:	**B43-B12-3**					
Arsenic	**ND**	12	6010B	5-11-12	5-14-12	
Barium	**240**	3.1	6010B	5-11-12	5-14-12	
Cadmium	**12**	0.61	6010B	5-11-12	5-14-12	
Chromium	**65**	0.61	6010B	5-11-12	5-14-12	
Lead	**520**	6.1	6010B	5-11-12	5-14-12	
Mercury	**0.64**	0.31	7471A	5-16-12	5-16-12	
Selenium	**ND**	12	6010B	5-11-12	5-14-12	
Silver	**ND**	0.61	6010B	5-11-12	5-14-12	
Lab ID:	05-078-11					
Client ID:	**B43-B12-11**					
Arsenic	**ND**	11	6010B	5-11-12	5-14-12	
Barium	**110**	2.8	6010B	5-11-12	5-14-12	
Cadmium	**0.94**	0.56	6010B	5-11-12	5-14-12	
Chromium	**42**	0.56	6010B	5-11-12	5-14-12	
Lead	**36**	5.6	6010B	5-11-12	5-14-12	
Mercury	**ND**	0.28	7471A	5-16-12	5-16-12	
Selenium	**ND**	11	6010B	5-11-12	5-14-12	
Silver	**ND**	0.56	6010B	5-11-12	5-14-12	

Date of Report: May 25, 2012
Samples Submitted: May 9, 2012
Laboratory Reference: 1205-078
Project: 2012-046-22

TOTAL METALS
EPA 6010B
METHOD BLANK QUALITY CONTROL

Date Extracted: 5-11-12
Date Analyzed: 5-11-12

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: MB0511SM1

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

Date of Report: May 25, 2012
Samples Submitted: May 9, 2012
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Project: 2012-046-22

TOTAL METALS
EPA 7471A
METHOD BLANK QUALITY CONTROL

Date Extracted:	5-16-12
Date Analyzed:	5-16-12
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	MB0516S1

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

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Project: 2012-046-22

TOTAL METALS
EPA 6010B
DUPLICATE QUALITY CONTROL

Date Extracted: 5-11-12
Date Analyzed: 5-11-12

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 05-108-01

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**ND**	**ND**	NA	10	
Barium	**56.4**	**53.8**	5	2.5	
Cadmium	**ND**	**ND**	NA	0.50	
Chromium	**44.0**	**39.4**	11	0.50	
Lead	**ND**	**ND**	NA	5.0	
Selenium	**ND**	**ND**	NA	10	
Silver	**ND**	**ND**	NA	0.50	

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TOTAL METALS
EPA 7471A
DUPLICATE QUALITY CONTROL

Date Extracted: 5-16-12
Date Analyzed: 5-16-12

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 05-065-11

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

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TOTAL METALS
EPA 6010B
MS/MSD QUALITY CONTROL

Date Extracted: 5-11-12
Date Analyzed: 5-11-12

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 05-108-01

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	**93.9**	94	**93.5**	93	0	
Barium	100	**169**	113	**164**	108	3	
Cadmium	50.0	**49.3**	99	**48.9**	98	1	
Chromium	100	**145**	100	**141**	97	2	
Lead	250	**248**	99	**243**	97	2	
Selenium	100	**99.9**	100	**97.4**	97	3	
Silver	25.0	**21.9**	88	**21.8**	87	0	

Date of Report: May 25, 2012
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TOTAL METALS
EPA 7471A
MS/MSD QUALITY CONTROL

Date Extracted: 5-16-12
Date Analyzed: 5-16-12

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 05-065-11

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Mercury	0.500	**0.510**	102	**0.506**	101	1	

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Samples Submitted: May 9, 2012
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Project: 2012-046-22

DISSOLVED METALS
EPA 200.8/7470A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	05-078-01					
Client ID:	**B43-B8-GW**					
Arsenic	**6.7**	3.0	200.8		5-18-12	
Barium	**ND**	25	200.8		5-16-12	
Cadmium	**ND**	4.0	200.8		5-16-12	
Chromium	**12**	10	200.8		5-16-12	
Lead	**ND**	1.0	200.8		5-16-12	
Mercury	**ND**	0.50	7470A		5-10-12	
Selenium	**ND**	5.0	200.8		5-16-12	
Silver	**ND**	10	200.8		5-16-12	
Lab ID:	05-078-04					
Client ID:	**B43-B9-GW**					
Arsenic	**30**	3.0	200.8		5-18-12	
Barium	**73**	25	200.8		5-16-12	
Cadmium	**ND**	4.0	200.8		5-16-12	
Chromium	**ND**	10	200.8		5-16-12	
Lead	**ND**	1.0	200.8		5-16-12	
Mercury	**ND**	0.50	7470A		5-10-12	
Selenium	**ND**	5.0	200.8		5-16-12	
Silver	**ND**	10	200.8		5-16-12	

Date of Report: May 25, 2012
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DISSOLVED METALS
EPA 200.8/7470A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	05-078-12					
Client ID:	**B43-B12-GW**					
Arsenic	**7.3**	3.0	200.8		5-18-12	
Barium	**87**	25	200.8		5-16-12	
Cadmium	**ND**	4.0	200.8		5-16-12	
Chromium	**ND**	10	200.8		5-16-12	
Lead	**1.5**	1.0	200.8		5-16-12	
Mercury	**ND**	0.50	7470A		5-10-12	
Selenium	**ND**	5.0	200.8		5-16-12	
Silver	**ND**	10	200.8		5-16-12	

Date of Report: May 25, 2012
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DISSOLVED METALS
EPA 200.8
METHOD BLANK QUALITY CONTROL

Date Analyzed: 5-16&18-12

Matrix: Water
Units: ug/L (ppb)

Lab ID: MB0516D2

Analyte	Method	Result	PQL
Arsenic	200.8	**ND**	3.0
Barium	200.8	**ND**	25
Cadmium	200.8	**ND**	4.0
Chromium	200.8	**ND**	10
Lead	200.8	**ND**	1.0
Selenium	200.8	**ND**	5.0
Silver	200.8	**ND**	10

Date of Report: May 25, 2012
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Laboratory Reference: 1205-078
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DISSOLVED MERCURY
EPA 7470A
METHOD BLANK QUALITY CONTROL

Date Analyzed: 5-10-12

Matrix: Water
Units: ug/L (ppb)

Lab ID: MB0510D1

Analyte	Method	Result	PQL
Mercury	7470A	**ND**	0.50

Date of Report: May 25, 2012
Samples Submitted: May 9, 2012
Laboratory Reference: 1205-078
Project: 2012-046-22

DISSOLVED METALS
EPA 200.8
DUPLICATE QUALITY CONTROL

Date Analyzed: 5-16&18-12

Matrix: Water
Units: ug/L (ppb)

Lab ID: 05-065-03

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**105**	**108**	3	3.0	
Barium	**91.6**	**91.4**	0	25	
Cadmium	**ND**	**ND**	NA	4.0	
Chromium	**ND**	**ND**	NA	10	
Lead	**ND**	**ND**	NA	1.0	
Selenium	**ND**	**ND**	NA	5.0	
Silver	**ND**	**ND**	NA	10	

Date of Report: May 25, 2012
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DISSOLVED MERCURY
EPA 7470A
DUPLICATE QUALITY CONTROL

Date Analyzed: 5-10-12

Matrix: Water
Units: ug/L (ppb)

Lab ID: 05-028-01

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Mercury	**ND**	**ND**	NA	0.50	

Date of Report: May 25, 2012
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Project: 2012-046-22

DISSOLVED METALS
EPA 200.8
MS/MSD QUALITY CONTROL

Date Analyzed: 5-16&18-12

Matrix: Water
Units: ug/L (ppb)

Lab ID: 05-065-03

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	200	**315**	105	**318**	107	1	
Barium	200	**290**	99	**296**	102	2	
Cadmium	200	**211**	106	**211**	106	0	
Chromium	200	**191**	95	**219**	109	14	
Lead	200	**192**	96	**195**	97	1	
Selenium	200	**221**	110	**224**	112	2	
Silver	200	**183**	91	**186**	93	2	

Date of Report: May 25, 2012
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Project: 2012-046-22

DISSOLVED MERCURY
EPA 7470A
MS/MSD QUALITY CONTROL

Date Analyzed: 5-10-12

Matrix: Water
Units: ug/L (ppb)

Lab ID: 05-028-01

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Mercury	12.5	**12.1**	97	**12.2**	98	1	

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Samples Submitted: May 9, 2012
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Project: 2012-046-22

NWTPH-Gx/BTEX

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Trip Blank 050912**					
Laboratory ID:	05-078-13					
Benzene	**ND**	1.0	EPA 8021	5-11-12	5-11-12	
Toluene	**ND**	1.0	EPA 8021	5-11-12	5-11-12	
Ethyl Benzene	**ND**	1.0	EPA 8021	5-11-12	5-11-12	
m,p-Xylene	**ND**	1.0	EPA 8021	5-11-12	5-11-12	
o-Xylene	**ND**	1.0	EPA 8021	5-11-12	5-11-12	
Gasoline	**ND**	100	NWTPH-Gx	5-11-12	5-11-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
Fluorobenzene	***76***	***73-121***				

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NWTPH-Gx/BTEX
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0511W1					
Benzene	**ND**	1.0	EPA 8021	5-11-12	5-11-12	
Toluene	**ND**	1.0	EPA 8021	5-11-12	5-11-12	
Ethyl Benzene	**ND**	1.0	EPA 8021	5-11-12	5-11-12	
m,p-Xylene	**ND**	1.0	EPA 8021	5-11-12	5-11-12	
o-Xylene	**ND**	1.0	EPA 8021	5-11-12	5-11-12	
Gasoline	**ND**	100	NWTPH-Gx	5-11-12	5-11-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
Fluorobenzene	***77***	***73-121***				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	05-069-01										
	ORIG	DUP									
Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Toluene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Ethyl Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
m,p-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
o-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Gasoline	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Surrogate:											
Fluorobenzene						***75***	***75***	***73-121***			
MATRIX SPIKES											
Laboratory ID:	05-069-01										
	MS	MSD	MS	MSD		MS	MSD				
Benzene	**50.0**	**49.5**	50.0	50.0	ND	**100**	**99**	82-120	1	8	
Toluene	**50.8**	**50.2**	50.0	50.0	ND	**102**	**100**	84-119	1	8	
Ethyl Benzene	**51.1**	**50.5**	50.0	50.0	ND	**102**	**101**	84-122	1	9	
m,p-Xylene	**51.2**	**50.8**	50.0	50.0	ND	**102**	**102**	85-121	1	9	
o-Xylene	**51.1**	**50.6**	50.0	50.0	ND	**102**	**101**	84-121	1	9	
Surrogate:											
Fluorobenzene						***99***	***96***	***73-121***			

Date of Report: May 25, 2012
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NWTPH-Gx

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B43-B9-GW**					
Laboratory ID:	05-078-04					
Gasoline	**ND**	400	NWTPH-Gx	5-21-12	5-21-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
Fluorobenzene	***89***	***73-121***				
Client ID:	**B43-B10-GW**					
Laboratory ID:	05-078-07					
Gasoline	**1500**	400	NWTPH-Gx	5-21-12	5-21-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
Fluorobenzene	***92***	***73-121***				

Date of Report: May 25, 2012
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NWTPH-Gx
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0521W1					
Gasoline	**ND**	100	NWTPH-Gx	5-21-12	5-21-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
Fluorobenzene	***90***	***73-121***				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	05-172-02										
	ORIG	DUP									
Gasoline	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Surrogate:											
Fluorobenzene						***89***	***90***	***73-121***			

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NWTPH-Gx

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B43-B10-19**					
Laboratory ID:	05-078-06					
Gasoline	***44***	11	NWTPH-Gx	5-21-12	5-21-12	Z
Surrogate:	***Percent Recovery***	***Control Limits***				
Fluorobenzene	***101***	***68-124***				

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NWTPH-Gx
QUALITY CONTROL

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0521S1					
Gasoline	**ND**	5.0	NWTPH-Gx	5-21-12	5-21-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
Fluorobenzene	***94***	***68-124***				

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	05-193-02								
	ORIG	DUP							
Gasoline	**ND**	**ND**	NA	NA	NA	NA	NA	30	
Surrogate:									
Fluorobenzene					***100***	***95***	***68-124***		

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

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B43-B9-3**					
Laboratory ID:	05-078-02					
Diesel Range Organics	**ND**	150	NWTPH-Dx	5-19-12	5-21-12	U1
Lube Oil	**720**	60	NWTPH-Dx	5-19-12	5-21-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***100***	***50-150***				
Client ID:	**B43-B10-19**					
Laboratory ID:	05-078-06					
Diesel Range Organics	**ND**	79	NWTPH-Dx	5-19-12	5-21-12	U1
Lube Oil	**310**	59	NWTPH-Dx	5-19-12	5-21-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***84***	***50-150***				
Client ID:	**B43-B11-2.5**					
Laboratory ID:	05-078-08					
Diesel Range Organics	**ND**	260	NWTPH-Dx	5-19-12	5-21-12	U1
Lube Oil	**1000**	57	NWTPH-Dx	5-19-12	5-21-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***117***	***50-150***				
Client ID:	**B43-B11-6.5**					
Laboratory ID:	05-078-09					
Diesel Range Organics	**ND**	1000	NWTPH-Dx	5-19-12	5-22-12	U1
Lube Oil	**3800**	290	NWTPH-Dx	5-19-12	5-22-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***121***	***50-150***				
Client ID:	**B43-B12-3**					
Laboratory ID:	05-078-10					
Diesel Range Organics	**7200**	310	NWTPH-Dx	5-19-12	5-21-12	N
Lube Oil	**16000**	610	NWTPH-Dx	5-19-12	5-21-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***---***	***50-150***				S
Client ID:	**B43-B12-11**					
Laboratory ID:	05-078-11					
Diesel Range Organics	**230**	28	NWTPH-Dx	5-19-12	5-22-12	N
Lube Oil	**540**	56	NWTPH-Dx	5-19-12	5-22-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***107***	***50-150***				

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

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0519S1					
Diesel Range Organics	**ND**	25	NWTPH-Dx	5-19-12	5-21-12	
Lube Oil Range Organics	**ND**	50	NWTPH-Dx	5-19-12	5-21-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***115***	***50-150***				

Analyte	Result		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	05-189-01							
	ORIG	DUP						
Diesel Range Organics	**ND**	**ND**				NA	NA	
Lube Oil Range Organics	**ND**	**ND**				NA	NA	
Surrogate:								
o-Terphenyl			***98***	***87***	***50-150***			

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VOLATILES by EPA 8260B

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B43-B9-GW**					
Laboratory ID:	05-078-04					
Methyl t-Butyl Ether	0.22	0.20	EPA 8260	5-17-12	5-17-12	
Benzene	16	0.20	EPA 8260	5-17-12	5-17-12	
1,2-Dichloroethane	ND	2.0	EPA 8260	5-17-12	5-17-12	
Toluene	6.6	1.0	EPA 8260	5-17-12	5-17-12	
Ethylbenzene	36	0.20	EPA 8260	5-17-12	5-17-12	
m,p-Xylene	32	0.40	EPA 8260	5-17-12	5-17-12	
o-Xylene	5.5	0.20	EPA 8260	5-17-12	5-17-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
Dibromofluoromethane	***86***	***68-120***				
Toluene-d8	***84***	***73-120***				
4-Bromofluorobenzene	***88***	***65-120***				

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VOLATILES by EPA 8260B

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B43-B10-GW**					
Laboratory ID:	05-078-07					
Methyl t-Butyl Ether	ND	0.20	EPA 8260	5-17-12	5-17-12	
Benzene	0.64	0.20	EPA 8260	5-17-12	5-17-12	
1,2-Dichloroethane	ND	2.0	EPA 8260	5-17-12	5-17-12	
Toluene	4.1	1.0	EPA 8260	5-17-12	5-17-12	
Ethylbenzene	2.4	0.20	EPA 8260	5-17-12	5-17-12	
m,p-Xylene	6.3	0.40	EPA 8260	5-17-12	5-17-12	
o-Xylene	7.9	0.20	EPA 8260	5-17-12	5-17-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
Dibromofluoromethane	***87***	***68-120***				
Toluene-d8	***84***	***73-120***				
4-Bromofluorobenzene	***86***	***65-120***				

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Project: 2012-046-22

VOLATILES by EPA 8260B
METHOD BLANK QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0517W1					
Methyl t-Butyl Ether	ND	0.20	EPA 8260	5-17-12	5-17-12	
Benzene	ND	0.20	EPA 8260	5-17-12	5-17-12	
1,2-Dichloroethane	ND	2.0	EPA 8260	5-17-12	5-17-12	
Toluene	ND	1.0	EPA 8260	5-17-12	5-17-12	
Ethylbenzene	ND	0.20	EPA 8260	5-17-12	5-17-12	
m,p-Xylene	ND	0.40	EPA 8260	5-17-12	5-17-12	
o-Xylene	ND	0.20	EPA 8260	5-17-12	5-17-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
Dibromofluoromethane	***89***	***68-120***				
Toluene-d8	***84***	***73-120***				
4-Bromofluorobenzene	***84***	***65-120***				

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VOLATILES by EPA 8260B
SB/SBD QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0517W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**8.69**	**8.49**	10.0	10.0	87	85	70-130	2	11	
Benzene	**9.22**	**9.32**	10.0	10.0	92	93	75-123	1	8	
Trichloroethene	**9.26**	**9.52**	10.0	10.0	93	95	80-113	3	9	
Toluene	**9.25**	**9.60**	10.0	10.0	93	96	80-113	4	8	
Chlorobenzene	**10.6**	**10.8**	10.0	10.0	106	108	80-115	2	8	
Surrogate:										
Dibromofluoromethane					***89***	***91***	***68-120***			
Toluene-d8					***82***	***84***	***73-120***			
4-Bromofluorobenzene					***83***	***86***	***65-120***			

Date of Report: May 25, 2012
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VOLATILES by EPA 8260B

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B43-B10-19**					
Laboratory ID:	05-078-06					
Methyl t-Butyl Ether	ND	0.00096	EPA 8260	5-18-12	5-18-12	
Benzene	ND	0.00096	EPA 8260	5-18-12	5-18-12	
1,2-Dichloroethane	ND	0.00096	EPA 8260	5-18-12	5-18-12	
Toluene	0.0052	0.0048	EPA 8260	5-18-12	5-18-12	
1,2-Dibromoethane	ND	0.00096	EPA 8260	5-18-12	5-18-12	
Ethylbenzene	0.015	0.00096	EPA 8260	5-18-12	5-18-12	
m,p-Xylene	0.027	0.0019	EPA 8260	5-18-12	5-18-12	
o-Xylene	0.037	0.00096	EPA 8260	5-18-12	5-18-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
Dibromofluoromethane	***98***	***63-127***				
Toluene-d8	***100***	***65-129***				
4-Bromofluorobenzene	***137***	***55-121***				Q

Date of Report: May 25, 2012
Samples Submitted: May 9, 2012
Laboratory Reference: 1205-078
Project: 2012-046-22

VOLATILES by EPA 8260B

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B43-B12-3**					
Laboratory ID:	05-078-10					
Benzene	ND	0.062	EPA 8260	5-18-12	5-18-12	
Toluene	ND	0.31	EPA 8260	5-18-12	5-18-12	
Ethylbenzene	ND	0.062	EPA 8260	5-18-12	5-18-12	
m,p-Xylene	ND	0.12	EPA 8260	5-18-12	5-18-12	
o-Xylene	ND	0.062	EPA 8260	5-18-12	5-18-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
Dibromofluoromethane	***90***	***63-127***				
Toluene-d8	***94***	***65-129***				
4-Bromofluorobenzene	***102***	***55-121***				

Date of Report: May 25, 2012
Samples Submitted: May 9, 2012
Laboratory Reference: 1205-078
Project: 2012-046-22

VOLATILES by EPA 8260B

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B43-B12-11**					
Laboratory ID:	05-078-11					
Benzene	ND	0.00094	EPA 8260	5-18-12	5-18-12	
Toluene	ND	0.0047	EPA 8260	5-18-12	5-18-12	
Ethylbenzene	ND	0.00094	EPA 8260	5-18-12	5-18-12	
m,p-Xylene	ND	0.0019	EPA 8260	5-18-12	5-18-12	
o-Xylene	ND	0.00094	EPA 8260	5-18-12	5-18-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
Dibromofluoromethane	***88***	***63-127***				
Toluene-d8	***92***	***65-129***				
4-Bromofluorobenzene	***93***	***55-121***				

Date of Report: May 25, 2012
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Project: 2012-046-22

VOLATILES by EPA 8260B
METHOD BLANK QUALITY CONTROL

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0518S1					
Methyl t-Butyl Ether	ND	0.0010	EPA 8260	5-18-12	5-18-12	
Benzene	ND	0.0010	EPA 8260	5-18-12	5-18-12	
1,2-Dichloroethane	ND	0.0010	EPA 8260	5-18-12	5-18-12	
Toluene	ND	0.0050	EPA 8260	5-18-12	5-18-12	
1,2-Dibromoethane	ND	0.0010	EPA 8260	5-18-12	5-18-12	
Ethylbenzene	ND	0.0010	EPA 8260	5-18-12	5-18-12	
m,p-Xylene	ND	0.0020	EPA 8260	5-18-12	5-18-12	
o-Xylene	ND	0.0010	EPA 8260	5-18-12	5-18-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
Dibromofluoromethane	***98***	***63-127***				
Toluene-d8	***101***	***65-129***				
4-Bromofluorobenzene	***107***	***55-121***				

Date of Report: May 25, 2012
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Project: 2012-046-22

VOLATILES by EPA 8260B
SB/SBD QUALITY CONTROL

Matrix: Soil
Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0518S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**0.0394**	**0.0397**	0.0500	0.0500	79	79	70-130	1	19	
Benzene	**0.0438**	**0.0434**	0.0500	0.0500	88	87	70-125	1	15	
Trichloroethene	**0.0486**	**0.0486**	0.0500	0.0500	97	97	70-122	0	14	
Toluene	**0.0477**	**0.0507**	0.0500	0.0500	95	101	73-120	6	16	
Chlorobenzene	**0.0517**	**0.0507**	0.0500	0.0500	103	101	74-120	2	12	
Surrogate:										
Dibromofluoromethane					***93***	***94***	***63-127***			
Toluene-d8					***96***	***105***	***65-129***			
4-Bromofluorobenzene					***102***	***104***	***55-121***			

Date of Report: May 25, 2012
Samples Submitted: May 9, 2012
Laboratory Reference: 1205-078
Project: 2012-046-22

cPAHs by EPA 8270D/SIM
(with silica gel clean-up)

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B43-B9-3**					
Laboratory ID:	05-078-02					
Naphthalene	**0.20**	0.0079	EPA 8270/SIM	5-22-12	5-23-12	
2-Methylnaphthalene	**0.16**	0.0079	EPA 8270/SIM	5-22-12	5-23-12	
1-Methylnaphthalene	**0.068**	0.0079	EPA 8270/SIM	5-22-12	5-23-12	
Benzo[a]anthracene	**0.042**	0.0079	EPA 8270/SIM	5-22-12	5-23-12	
Chrysene	**0.061**	0.0079	EPA 8270/SIM	5-22-12	5-23-12	
Benzo[b]fluoranthene	**0.036**	0.0079	EPA 8270/SIM	5-22-12	5-23-12	
Benzo(j,k)fluoranthene	**0.011**	0.0079	EPA 8270/SIM	5-22-12	5-23-12	
Benzo[a]pyrene	**0.021**	0.0079	EPA 8270/SIM	5-22-12	5-23-12	
Indeno(1,2,3-c,d)pyrene	**0.017**	0.0079	EPA 8270/SIM	5-22-12	5-23-12	
Dibenz[a,h]anthracene	**ND**	0.0079	EPA 8270/SIM	5-22-12	5-23-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
2-Fluorobiphenyl	***45***	***43 - 109***				
Pyrene-d10	***35***	***38 - 128***				Q
Terphenyl-d14	***50***	***33 - 119***				

Date of Report: May 25, 2012
Samples Submitted: May 9, 2012
Laboratory Reference: 1205-078
Project: 2012-046-22

cPAHs by EPA 8270D/SIM
(with silica gel clean-up)

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B43-B10-19**					
Laboratory ID:	05-078-06					
Naphthalene	**0.089**	0.0078	EPA 8270/SIM	5-22-12	5-23-12	
2-Methylnaphthalene	**ND**	0.0078	EPA 8270/SIM	5-22-12	5-23-12	
1-Methylnaphthalene	**ND**	0.0078	EPA 8270/SIM	5-22-12	5-23-12	
Benzo[a]anthracene	**0.048**	0.0078	EPA 8270/SIM	5-22-12	5-23-12	
Chrysene	**0.037**	0.0078	EPA 8270/SIM	5-22-12	5-23-12	
Benzo[b]fluoranthene	**0.037**	0.0078	EPA 8270/SIM	5-22-12	5-23-12	
Benzo(j,k)fluoranthene	**0.012**	0.0078	EPA 8270/SIM	5-22-12	5-23-12	
Benzo[a]pyrene	**0.026**	0.0078	EPA 8270/SIM	5-22-12	5-23-12	
Indeno(1,2,3-c,d)pyrene	**0.016**	0.0078	EPA 8270/SIM	5-22-12	5-23-12	
Dibenz[a,h]anthracene	**ND**	0.0078	EPA 8270/SIM	5-22-12	5-23-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
2-Fluorobiphenyl	***56***	***43 - 109***				
Pyrene-d10	***56***	***38 - 128***				
Terphenyl-d14	***61***	***33 - 119***				

Date of Report: May 25, 2012
Samples Submitted: May 9, 2012
Laboratory Reference: 1205-078
Project: 2012-046-22

cPAHs by EPA 8270D/SIM
(with silica gel clean-up)

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B43-B11-2.5**					
Laboratory ID:	05-078-08					
Naphthalene	**0.086**	0.0076	EPA 8270/SIM	5-22-12	5-23-12	
2-Methylnaphthalene	**0.085**	0.0076	EPA 8270/SIM	5-22-12	5-23-12	
1-Methylnaphthalene	**0.059**	0.0076	EPA 8270/SIM	5-22-12	5-23-12	
Benzo[a]anthracene	**0.34**	0.0076	EPA 8270/SIM	5-22-12	5-23-12	
Chrysene	**0.30**	0.0076	EPA 8270/SIM	5-22-12	5-23-12	
Benzo[b]fluoranthene	**0.40**	0.0076	EPA 8270/SIM	5-22-12	5-23-12	
Benzo(j,k)fluoranthene	**0.12**	0.0076	EPA 8270/SIM	5-22-12	5-23-12	
Benzo[a]pyrene	**0.33**	0.0076	EPA 8270/SIM	5-22-12	5-23-12	
Indeno(1,2,3-c,d)pyrene	**0.31**	0.0076	EPA 8270/SIM	5-22-12	5-23-12	
Dibenz[a,h]anthracene	**0.049**	0.0076	EPA 8270/SIM	5-22-12	5-23-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
2-Fluorobiphenyl	***60***	***43 - 109***				
Pyrene-d10	***52***	***38 - 128***				
Terphenyl-d14	***65***	***33 - 119***				

Date of Report: May 25, 2012
Samples Submitted: May 9, 2012
Laboratory Reference: 1205-078
Project: 2012-046-22

cPAHs by EPA 8270D/SIM
(with silica gel clean-up)

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B43-B11-6.5**					
Laboratory ID:	05-078-09					
Naphthalene	**0.034**	0.0076	EPA 8270/SIM	5-22-12	5-23-12	
2-Methylnaphthalene	**0.029**	0.0076	EPA 8270/SIM	5-22-12	5-23-12	
1-Methylnaphthalene	**0.013**	0.0076	EPA 8270/SIM	5-22-12	5-23-12	
Benzo[a]anthracene	**0.061**	0.0076	EPA 8270/SIM	5-22-12	5-23-12	
Chrysene	**0.072**	0.0076	EPA 8270/SIM	5-22-12	5-23-12	
Benzo[b]fluoranthene	**0.061**	0.0076	EPA 8270/SIM	5-22-12	5-23-12	
Benzo(j,k)fluoranthene	**0.018**	0.0076	EPA 8270/SIM	5-22-12	5-23-12	
Benzo[a]pyrene	**0.039**	0.0076	EPA 8270/SIM	5-22-12	5-23-12	
Indeno(1,2,3-c,d)pyrene	**0.040**	0.0076	EPA 8270/SIM	5-22-12	5-23-12	
Dibenz[a,h]anthracene	**0.0086**	0.0076	EPA 8270/SIM	5-22-12	5-23-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
2-Fluorobiphenyl	***56***	***43 - 109***				
Pyrene-d10	***47***	***38 - 128***				
Terphenyl-d14	***59***	***33 - 119***				

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Project: 2012-046-22

cPAHs by EPA 8270D/SIM
(with silica gel clean-up)

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B43-B12-3**					
Laboratory ID:	05-078-10					
Naphthalene	**0.52**	0.041	EPA 8270/SIM	5-22-12	5-24-12	
2-Methylnaphthalene	**0.50**	0.041	EPA 8270/SIM	5-22-12	5-24-12	
1-Methylnaphthalene	**0.17**	0.041	EPA 8270/SIM	5-22-12	5-24-12	
Benzo[a]anthracene	**0.36**	0.041	EPA 8270/SIM	5-22-12	5-24-12	
Chrysene	**0.52**	0.041	EPA 8270/SIM	5-22-12	5-24-12	
Benzo[b]fluoranthene	**0.29**	0.041	EPA 8270/SIM	5-22-12	5-24-12	
Benzo(j,k)fluoranthene	**0.24**	0.041	EPA 8270/SIM	5-22-12	5-24-12	
Benzo[a]pyrene	**0.29**	0.041	EPA 8270/SIM	5-22-12	5-24-12	
Indeno(1,2,3-c,d)pyrene	**0.18**	0.041	EPA 8270/SIM	5-22-12	5-24-12	
Dibenz[a,h]anthracene	**ND**	0.041	EPA 8270/SIM	5-22-12	5-24-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
2-Fluorobiphenyl	***44***	***43 - 109***				
Pyrene-d10	***56***	***38 - 128***				
Terphenyl-d14	***40***	***33 - 119***				

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Project: 2012-046-22

cPAHs by EPA 8270D/SIM
(with silica gel clean-up)

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B43-B12-11**					
Laboratory ID:	05-078-11					
Naphthalene	**0.043**	0.0075	EPA 8270/SIM	5-22-12	5-23-12	
2-Methylnaphthalene	**0.031**	0.0075	EPA 8270/SIM	5-22-12	5-23-12	
1-Methylnaphthalene	**0.015**	0.0075	EPA 8270/SIM	5-22-12	5-23-12	
Benzo[a]anthracene	**0.046**	0.0075	EPA 8270/SIM	5-22-12	5-23-12	
Chrysene	**0.076**	0.0075	EPA 8270/SIM	5-22-12	5-23-12	
Benzo[b]fluoranthene	**0.069**	0.0075	EPA 8270/SIM	5-22-12	5-23-12	
Benzo(j,k)fluoranthene	**0.019**	0.0075	EPA 8270/SIM	5-22-12	5-23-12	
Benzo[a]pyrene	**0.049**	0.0075	EPA 8270/SIM	5-22-12	5-23-12	
Indeno(1,2,3-c,d)pyrene	**0.044**	0.0075	EPA 8270/SIM	5-22-12	5-23-12	
Dibenz[a,h]anthracene	**0.012**	0.0075	EPA 8270/SIM	5-22-12	5-23-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
2-Fluorobiphenyl	***59***	***43 - 109***				
Pyrene-d10	***61***	***38 - 128***				
Terphenyl-d14	***69***	***33 - 119***				

Date of Report: May 25, 2012
Samples Submitted: May 9, 2012
Laboratory Reference: 1205-078
Project: 2012-046-22

cPAHs by EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
(with silica gel clean-up)

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0522S1					
Naphthalene	**ND**	0.0067	EPA 8270/SIM	5-22-12	5-23-12	
2-Methylnaphthalene	**ND**	0.0067	EPA 8270/SIM	5-22-12	5-23-12	
1-Methylnaphthalene	**ND**	0.0067	EPA 8270/SIM	5-22-12	5-23-12	
Benzo[a]anthracene	**ND**	0.0067	EPA 8270/SIM	5-22-12	5-23-12	
Chrysene	**ND**	0.0067	EPA 8270/SIM	5-22-12	5-23-12	
Benzo[b]fluoranthene	**ND**	0.0067	EPA 8270/SIM	5-22-12	5-23-12	
Benzo(j,k)fluoranthene	**ND**	0.0067	EPA 8270/SIM	5-22-12	5-23-12	
Benzo[a]pyrene	**ND**	0.0067	EPA 8270/SIM	5-22-12	5-23-12	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0067	EPA 8270/SIM	5-22-12	5-23-12	
Dibenz[a,h]anthracene	**ND**	0.0067	EPA 8270/SIM	5-22-12	5-23-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
2-Fluorobiphenyl	***87***	***43 - 109***				
Pyrene-d10	***87***	***38 - 128***				
Terphenyl-d14	***87***	***33 - 119***				

Date of Report: May 25, 2012
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Project: 2012-046-22

cPAHs by EPA 8270D/SIM
SB/SBD QUALITY CONTROL
(with silica gel clean-up)

Matrix: Soil
Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0522S1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	**0.0721**	**0.0696**	0.0833	0.0833	87	84	43 - 108	4	27	
Benzo[a]anthracene	**0.0845**	**0.0834**	0.0833	0.0833	101	100	63 - 116	1	12	
Chrysene	**0.0739**	**0.0726**	0.0833	0.0833	89	87	67 - 118	2	12	
Benzo[b]fluoranthene	**0.0705**	**0.0695**	0.0833	0.0833	85	83	58 - 127	1	20	
Benzo(j,k)fluoranthene	**0.0699**	**0.0688**	0.0833	0.0833	84	83	42 - 134	2	26	
Benzo[a]pyrene	**0.0684**	**0.0673**	0.0833	0.0833	82	81	55 - 111	2	19	
Indeno(1,2,3-c,d)pyrene	**0.0743**	**0.0712**	0.0833	0.0833	89	85	60 - 125	4	20	
Dibenz[a,h]anthracene	**0.0721**	**0.0711**	0.0833	0.0833	87	85	62 - 125	1	19	
Surrogate:										
2-Fluorobiphenyl					***88***	***84***	***43 - 109***			
Pyrene-d10					***88***	***88***	***38 - 128***			
Terphenyl-d14					***85***	***85***	***33 - 119***			

Date of Report: May 25, 2012
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Project: 2012-046-22

PCBs by EPA 8082

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B43-B9-3**					
Laboratory ID:	05-078-02					
Aroclor 1016	**ND**	0.060	EPA 8082	5-23-12	5-23-12	
Aroclor 1221	**ND**	0.060	EPA 8082	5-23-12	5-23-12	
Aroclor 1232	**ND**	0.060	EPA 8082	5-23-12	5-23-12	
Aroclor 1242	**ND**	0.060	EPA 8082	5-23-12	5-23-12	
Aroclor 1248	**ND**	0.060	EPA 8082	5-23-12	5-23-12	
Aroclor 1254	**ND**	0.060	EPA 8082	5-23-12	5-23-12	
Aroclor 1260	**ND**	0.060	EPA 8082	5-23-12	5-23-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
DCB	***88***	***42-123***				
Client ID:	**B43-B10-19**					
Laboratory ID:	05-078-06					
Aroclor 1016	**ND**	0.058	EPA 8082	5-23-12	5-23-12	
Aroclor 1221	**ND**	0.058	EPA 8082	5-23-12	5-23-12	
Aroclor 1232	**ND**	0.058	EPA 8082	5-23-12	5-23-12	
Aroclor 1242	**ND**	0.058	EPA 8082	5-23-12	5-23-12	
Aroclor 1248	**ND**	0.058	EPA 8082	5-23-12	5-23-12	
Aroclor 1254	**ND**	0.058	EPA 8082	5-23-12	5-23-12	
Aroclor 1260	**ND**	0.058	EPA 8082	5-23-12	5-23-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
DCB	***104***	***42-123***				
Client ID:	**B43-B11-2.5**					
Laboratory ID:	05-078-08					
Aroclor 1016	**ND**	0.057	EPA 8082	5-23-12	5-23-12	
Aroclor 1221	**ND**	0.057	EPA 8082	5-23-12	5-23-12	
Aroclor 1232	**ND**	0.057	EPA 8082	5-23-12	5-23-12	
Aroclor 1242	**ND**	0.057	EPA 8082	5-23-12	5-23-12	
Aroclor 1248	**ND**	0.057	EPA 8082	5-23-12	5-23-12	
Aroclor 1254	**ND**	0.057	EPA 8082	5-23-12	5-23-12	
Aroclor 1260	**ND**	0.057	EPA 8082	5-23-12	5-23-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
DCB	***103***	***42-123***				

Date of Report: May 25, 2012
Samples Submitted: May 9, 2012
Laboratory Reference: 1205-078
Project: 2012-046-22

PCBs by EPA 8082

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B43-B11-6.5**					
Laboratory ID:	05-078-09					
Aroclor 1016	**ND**	0.057	EPA 8082	5-23-12	5-23-12	
Aroclor 1221	**ND**	0.057	EPA 8082	5-23-12	5-23-12	
Aroclor 1232	**ND**	0.057	EPA 8082	5-23-12	5-23-12	
Aroclor 1242	**ND**	0.057	EPA 8082	5-23-12	5-23-12	
Aroclor 1248	**ND**	0.057	EPA 8082	5-23-12	5-23-12	
Aroclor 1254	**ND**	0.057	EPA 8082	5-23-12	5-23-12	
Aroclor 1260	**ND**	0.057	EPA 8082	5-23-12	5-23-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
DCB	***100***	***42-123***				
Client ID:	**B43-B12-3**					
Laboratory ID:	05-078-10					
Aroclor 1016	**ND**	0.061	EPA 8082	5-23-12	5-23-12	
Aroclor 1221	**ND**	0.061	EPA 8082	5-23-12	5-23-12	
Aroclor 1232	**ND**	0.061	EPA 8082	5-23-12	5-23-12	
Aroclor 1242	**ND**	0.061	EPA 8082	5-23-12	5-23-12	
Aroclor 1248	**ND**	0.061	EPA 8082	5-23-12	5-23-12	
Aroclor 1254	**ND**	0.061	EPA 8082	5-23-12	5-23-12	
Aroclor 1260	**ND**	0.061	EPA 8082	5-23-12	5-23-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
DCB	***58***	***42-123***				
Client ID:	**B43-B12-11**					
Laboratory ID:	05-078-11					
Aroclor 1016	**ND**	0.056	EPA 8082	5-23-12	5-23-12	
Aroclor 1221	**ND**	0.056	EPA 8082	5-23-12	5-23-12	
Aroclor 1232	**ND**	0.056	EPA 8082	5-23-12	5-23-12	
Aroclor 1242	**ND**	0.056	EPA 8082	5-23-12	5-23-12	
Aroclor 1248	**ND**	0.056	EPA 8082	5-23-12	5-23-12	
Aroclor 1254	**ND**	0.056	EPA 8082	5-23-12	5-23-12	
Aroclor 1260	**ND**	0.056	EPA 8082	5-23-12	5-23-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
DCB	***101***	***42-123***				

Date of Report: May 25, 2012
Samples Submitted: May 9, 2012
Laboratory Reference: 1205-078
Project: 2012-046-22

PCBs by EPA 8082
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0523S1					
Aroclor 1016	**ND**	0.050	EPA 8082	5-23-12	5-23-12	
Aroclor 1221	**ND**	0.050	EPA 8082	5-23-12	5-23-12	
Aroclor 1232	**ND**	0.050	EPA 8082	5-23-12	5-23-12	
Aroclor 1242	**ND**	0.050	EPA 8082	5-23-12	5-23-12	
Aroclor 1248	**ND**	0.050	EPA 8082	5-23-12	5-23-12	
Aroclor 1254	**ND**	0.050	EPA 8082	5-23-12	5-23-12	
Aroclor 1260	**ND**	0.050	EPA 8082	5-23-12	5-23-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
DCB	***92***	***42-123***				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
MATRIX SPIKES											
Laboratory ID:	05-215-04										
	MS	MSD	MS	MSD		MS	MSD				
Aroclor 1260	**0.462**	**0.425**	0.500	0.500	ND	**92**	**85**	44-125	8	15	
Surrogate:											
DCB						***85***	***81***	***42-123***			

Date of Report: May 25, 2012
Samples Submitted: May 9, 2012
Laboratory Reference: 1205-078
Project: 2012-046-22

EDB by EPA 8011

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B43-B9-GW**					
Laboratory ID:	05-078-04					
EDB	**ND**	0.0096	EPA 8011	5-21-12	5-21-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
TCMX	***68***	***31-144***				
Client ID:	**B43-B10-GW**					
Laboratory ID:	05-078-07					
EDB	**ND**	0.0095	EPA 8011	5-21-12	5-21-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
TCMX	***40***	***31-144***				

Date of Report: May 25, 2012
Samples Submitted: May 9, 2012
Laboratory Reference: 1205-078
Project: 2012-046-22

EDB by EPA 8011
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0521W1					
EDB	**ND**	0.010	EPA 8011	5-21-12	5-21-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
TCMX	***101***	***31-144***				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS											
Laboratory ID:	SB0521W1										
	SB	SBD	SB	SBD		SB	SBD				
EDB	**0.100**	**0.0966**	0.100	0.100	N/A	**100**	**97**	78-122	3	8	
Surrogate:											
TCMX						***121***	***108***	***31-144***			

Date of Report: May 25, 2012
Samples Submitted: May 9, 2012
Laboratory Reference: 1205-078
Project: 2012-046-22

NAPHTHALENES by EPA 8270D/SIM
(with silica gel clean-up)

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B43-B9-GW**					
Laboratory ID:	05-078-04					
Naphthalene	**12**	1.0	EPA 8270/SIM	5-17-12	5-18-12	
2-Methylnaphthalene	**35**	1.0	EPA 8270/SIM	5-17-12	5-18-12	
1-Methylnaphthalene	**22**	1.0	EPA 8270/SIM	5-17-12	5-18-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
2-Fluorobiphenyl	***71***	***38 - 105***				
Pyrene-d10	***75***	***37 - 121***				
Terphenyl-d14	***83***	***32 - 112***				

Date of Report: May 25, 2012
Samples Submitted: May 9, 2012
Laboratory Reference: 1205-078
Project: 2012-046-22

NAPHTHALENES by EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
(with silica gel clean-up)

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0517W1					
Naphthalene	**ND**	0.10	EPA 8270/SIM	5-17-12	5-17-12	
2-Methylnaphthalene	**ND**	0.10	EPA 8270/SIM	5-17-12	5-17-12	
1-Methylnaphthalene	**ND**	0.10	EPA 8270/SIM	5-17-12	5-17-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
2-Fluorobiphenyl	***89***	***38 - 105***				
Pyrene-d10	***88***	***37 - 121***				
Terphenyl-d14	***95***	***32 - 112***				

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0517W1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	**0.400**	**0.376**	0.500	0.500	80	75	38 - 110	6	35	
Acenaphthylene	**0.370**	**0.336**	0.500	0.500	74	67	47 - 120	10	30	
Acenaphthene	**0.394**	**0.358**	0.500	0.500	79	72	46 - 113	10	26	
Fluorene	**0.423**	**0.385**	0.500	0.500	85	77	58 - 104	9	25	
Phenanthrene	**0.431**	**0.395**	0.500	0.500	86	79	61 - 99	9	19	
Anthracene	**0.398**	**0.362**	0.500	0.500	80	72	55 - 122	9	19	
Fluoranthene	**0.436**	**0.400**	0.500	0.500	87	80	58 - 129	9	18	
Pyrene	**0.440**	**0.405**	0.500	0.500	88	81	57 - 126	8	25	
Benzo[a]anthracene	**0.496**	**0.450**	0.500	0.500	99	90	51 - 124	10	18	
Chrysene	**0.434**	**0.394**	0.500	0.500	87	79	53 - 123	10	20	
Benzo[b]fluoranthene	**0.430**	**0.393**	0.500	0.500	86	79	53 - 126	9	18	
Benzo(j,k)fluoranthene	**0.454**	**0.404**	0.500	0.500	91	81	51 - 126	12	23	
Benzo[a]pyrene	**0.432**	**0.388**	0.500	0.500	86	78	52 - 127	11	21	
Indeno(1,2,3-c,d)pyrene	**0.432**	**0.380**	0.500	0.500	86	76	49 - 123	13	26	
Dibenz[a,h]anthracene	**0.437**	**0.397**	0.500	0.500	87	79	39 - 125	10	31	
Benzo[g,h,i]perylene	**0.432**	**0.386**	0.500	0.500	86	77	40 - 125	11	30	
Surrogate:										
2-Fluorobiphenyl					***85***	***76***	***38 - 105***			
Pyrene-d10					***88***	***79***	***37 - 121***			
Terphenyl-d14					***90***	***80***	***32 - 112***			

Date of Report: May 25, 2012
Samples Submitted: May 9, 2012
Laboratory Reference: 1205-078
Project: 2012-046-22

% MOISTURE

Date Analyzed: 5-11-12

Client ID	Lab ID	% Moisture
B43-B9-3	05-078-02	16
B43-B9-10	05-078-03	12
B43-B10-15	05-078-05	14
B43-B10-19	05-078-06	14
B43-B11-2.5	05-078-08	13
B43-B11-6.5	05-078-09	13
B43-B12-3	05-078-10	18
B43-B12-11	05-078-11	11

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

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

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

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

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

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

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

I - Compound recovery is outside of the control limits.

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

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

L - The RPD is outside of the control limits.

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

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

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

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

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

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

Q - Surrogate recovery is outside of the control limits.

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

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

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

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

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

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

X - Sample extract treated with a mercury cleanup procedure.

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

Z - The sample chromatogram is similar to mineral spirits.

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

Chain of Custody

Page 1 of 2

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

Company: HWA
Project Number: 2012-046-22
Project Name: Vulcan Blk 43
Project Manager: J Thompson
Sampled by: ATKINS

Turnaround Request (in working days)

(Check One)

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

Laboratory Number: 05-078

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	No. of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX only 8260	NWTPH-Gx	NWTPH-Dx	Volatiles 8260B BTEX EDC EDB Silicon MTBE	Halogenated Volatiles 8260B	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level) cPAHs + Naphthalenes	PCBs 8082	Organochlorine Pesticides 8081A	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664	Dissolved RCRA Metals	EDB 8011	Naphthalenes EPA-8270	% Moisture
1	B43-BG-GW	5/8/12	1540	W	14	X												X				X			
2	B43-B7-3	5/9/12	820	S	6	X			X				X	X				X							X
3	B43-B9-10		830	S	6	X												X							X
4	B43-B7-GW		930	W	13	X		X		X												X	X	X	
5	B43-B10-15		945	S	6	X												X							X
6	B43-B10-19		950	S	6	X		X	X	X			X	X				X						No 8270	X
7	B43-B10-GW		1100	W	4	X		X		X												X	X	X	
8	B43-B11-2.5		1030	S	6	X			X				X	X				X							X
9	B43-B11-6.5		1040	S	6	X			X				X	X				X							↓
10	B43-B12-3		1105	S	6	X	X		X				X	X				X							↓

	Signature	Company	Date	Time
Relinquished		HWA	5/9/12	1415
Received		OSE	5/9/12	1415
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Archive remaining volume for Follow-up Analyses

(X) Added 5/17/12 DB (STA)

Chromatograms with final report ☐

Data Package: Level III ☐ Level IV ☐

Electronic Data Deliverables (EDDs) ☐ _____

Chain of Custody

Page 2 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: HWA
Project Number: 2012-044-22
Project Name: Vulcan Block 43
Project Manager: J. Thompson
Sampled by: Atkins

Turnaround Request (in working days)

(Check One)

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

Laboratory Number: 05-077 05-078

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	No. of Cont.	NWTPH-HCID	~~NWTPH-Gx~~/BTEX only 8260	NWTPH-Gx /Beta	NWTPH-Dx	Volatiles 8260B	Halogenated Volatiles 8260B	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level) cPAHs + Naphthalenes	PCBs 8082	Organochlorine Pesticides 8081A	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664	Dissolved RCRA Metals				% Moisture
11	B43-B12-11	5/9/12	1115	S	6	X	(X)		(X)				(X)	(X)				X								X
12	B43-B12-GW		1230	W	12	X																X				
13	TRIP BLANK 050912		—	W	3	~~X~~		X																		

	Signature	Company	Date	Time
Relinquished		HWA	5/9/12	1415
Received		CRE	5/9/12	1415
Relinquished				
Received				
Relinquished				
Received				

Comments/Special Instructions

(X) Added 5/17/12 - DB

Reviewed/Date

Reviewed/Date

Chromatograms with final report ☐

Data Package: Level III ☐ Level IV ☐

Electronic Data Deliverables (EDDs) ☐ _____

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

May 25, 2012

Jeff Thompson
HWA GeoSciences, Inc.
21312 30th Drive SE, Suite 110
Bothell, WA 98021

Re: Analytical Data for Project 2012-046-22
Laboratory Reference No. 1205-099

Dear Jeff:

Enclosed are the analytical results and associated quality control data for samples submitted on May 10, 2012.

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

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

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: May 25, 2012
Samples Submitted: May 10, 2012
Laboratory Reference: 1205-099
Project: 2012-046-22

Case Narrative

Samples were collected on May 10, 2012 and received by the laboratory on May 10, 2012. They were maintained at the laboratory at a temperature of 2°C to 6°C.

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

PAHs EPA 8270D/SIM Analysis

Sample B43-TP6-4 had one surrogate recovery out of control limits. This is within allowance of our standard operating procedure as long as the recovery is above 10%.

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

Date of Report: May 25, 2012
Samples Submitted: May 10, 2012
Laboratory Reference: 1205-099
Project: 2012-046-22

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

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B43-TP1-1.5**					
Laboratory ID:	05-099-01					
Gasoline Range Organics	**ND**	23	NWTPH-HCID	5-15-12	5-15-12	
Diesel Range Organics	**ND**	220	NWTPH-HCID	5-15-12	5-15-12	U1
Lube Oil	**Detected**	120	NWTPH-HCID	5-15-12	5-15-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***115***	***50-150***				
Client ID:	**B43-TP1-9**					
Laboratory ID:	05-099-02					
Gasoline Range Organics	**ND**	23	NWTPH-HCID	5-15-12	5-15-12	
Diesel Range Organics	**ND**	58	NWTPH-HCID	5-15-12	5-15-12	
Lube Oil Range Organics	**ND**	120	NWTPH-HCID	5-15-12	5-15-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***120***	***50-150***				
Client ID:	**B43-TP2-3**					
Laboratory ID:	05-099-03					
Gasoline Range Organics	**ND**	25	NWTPH-HCID	5-15-12	5-15-12	
Diesel Range Organics	**ND**	670	NWTPH-HCID	5-15-12	5-15-12	U1
Lube Oil	**Detected**	120	NWTPH-HCID	5-15-12	5-15-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***124***	***50-150***				
Client ID:	**B43-TP2-8**					
Laboratory ID:	05-099-04					
Gasoline Range Organics	**ND**	22	NWTPH-HCID	5-15-12	5-15-12	
Diesel Range Organics	**ND**	69	NWTPH-HCID	5-15-12	5-15-12	U1
Lube Oil	**Detected**	110	NWTPH-HCID	5-15-12	5-15-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***119***	***50-150***				
Client ID:	**B43-TP3-5**					
Laboratory ID:	05-099-05					
Gasoline Range Organics	**ND**	24	NWTPH-HCID	5-15-12	5-15-12	
Diesel Range Organics	**ND**	87	NWTPH-HCID	5-15-12	5-15-12	U1
Lube Oil	**Detected**	120	NWTPH-HCID	5-15-12	5-15-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***109***	***50-150***				

Date of Report: May 25, 2012
Samples Submitted: May 10, 2012
Laboratory Reference: 1205-099
Project: 2012-046-22

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

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B43-TP3-8**					
Laboratory ID:	05-099-06					
Gasoline Range Organics	**ND**	24	NWTPH-HCID	5-15-12	5-15-12	
Diesel Range Organics	**ND**	150	NWTPH-HCID	5-15-12	5-15-12	U1
Lube Oil	**Detected**	120	NWTPH-HCID	5-15-12	5-15-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***113***	***50-150***				
Client ID:	**B43-TP4-5**					
Laboratory ID:	05-099-07					
Gasoline Range Organics	**ND**	28	NWTPH-HCID	5-15-12	5-15-12	
Diesel Range Organics	**ND**	69	NWTPH-HCID	5-15-12	5-15-12	
Lube Oil	**Detected**	140	NWTPH-HCID	5-15-12	5-15-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***98***	***50-150***				
Client ID:	**B43-TP4-9**					
Laboratory ID:	05-099-08					
Gasoline Range Organics	**ND**	26	NWTPH-HCID	5-15-12	5-15-12	
Diesel Range Organics	**ND**	500	NWTPH-HCID	5-15-12	5-15-12	U1
Lube Oil	**Detected**	130	NWTPH-HCID	5-15-12	5-15-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***103***	***50-150***				
Client ID:	**B43-TP5-6**					
Laboratory ID:	05-099-09					
Gasoline Range Organics	**ND**	24	NWTPH-HCID	5-15-12	5-15-12	
Diesel Range Organics	**ND**	59	NWTPH-HCID	5-15-12	5-15-12	
Lube Oil	**Detected**	120	NWTPH-HCID	5-15-12	5-15-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***111***	***50-150***				
Client ID:	**B43-TP5-10**					
Laboratory ID:	05-099-10					
Gasoline Range Organics	**ND**	24	NWTPH-HCID	5-15-12	5-15-12	
Diesel Range Organics	**ND**	59	NWTPH-HCID	5-15-12	5-15-12	
Lube Oil	**Detected**	120	NWTPH-HCID	5-15-12	5-15-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***114***	***50-150***				

Date of Report: May 25, 2012
Samples Submitted: May 10, 2012
Laboratory Reference: 1205-099
Project: 2012-046-22

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

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B43-TP6-4**					
Laboratory ID:	05-099-11					
Gasoline Range Organics	**ND**	43	NWTPH-HCID	5-15-12	5-15-12	U1
Diesel Range Organics	**ND**	9300	NWTPH-HCID	5-15-12	5-15-12	U1
Lube Oil	**Detected**	120	NWTPH-HCID	5-15-12	5-15-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***121***	***50-150***				
Client ID:	**B43-TP6-6**					
Laboratory ID:	05-099-12					
Gasoline Range Organics	**ND**	46	NWTPH-HCID	5-15-12	5-15-12	
Diesel Range Organics	**ND**	110	NWTPH-HCID	5-15-12	5-15-12	
Lube Oil Range Organics	**ND**	230	NWTPH-HCID	5-15-12	5-15-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***123***	***50-150***				
Client ID:	**B43-TP7-6**					
Laboratory ID:	05-099-13					
Gasoline Range Organics	**ND**	25	NWTPH-HCID	5-15-12	5-15-12	
Diesel Range Organics	**ND**	200	NWTPH-HCID	5-15-12	5-15-12	U1
Lube Oil	**Detected**	120	NWTPH-HCID	5-15-12	5-15-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***127***	***50-150***				

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

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0515S4					
Gasoline Range Organics	**ND**	20	NWTPH-HCID	5-15-12	5-15-12	
Diesel Range Organics	**ND**	50	NWTPH-HCID	5-15-12	5-15-12	
Lube Oil Range Organics	**ND**	100	NWTPH-HCID	5-15-12	5-15-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***124***	***50-150***				

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Project: 2012-046-22

TOTAL METALS
EPA 6010B/7471A

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	05-099-01					
Client ID:	**B43-TP1-1.5**					
Arsenic	**ND**	12	6010B	2-21-12	2-22-12	
Barium	**170**	2.9	6010B	2-21-12	2-22-12	
Cadmium	**0.69**	0.58	6010B	2-21-12	2-22-12	
Chromium	**43**	0.58	6010B	2-21-12	2-22-12	
Lead	**130**	5.8	6010B	2-21-12	2-22-12	
Mercury	**ND**	0.29	7471A	2-16-12	2-16-12	
Selenium	**ND**	12	6010B	2-21-12	2-22-12	
Silver	**ND**	0.58	6010B	2-21-12	2-22-12	
Lab ID:	05-099-02					
Client ID:	**B43-TP1-9**					
Arsenic	**ND**	12	6010B	2-21-12	2-22-12	
Barium	**63**	2.9	6010B	2-21-12	2-22-12	
Cadmium	**ND**	0.58	6010B	2-21-12	2-22-12	
Chromium	**47**	0.58	6010B	2-21-12	2-22-12	
Lead	**ND**	5.8	6010B	2-21-12	2-22-12	
Mercury	**ND**	0.29	7471A	2-16-12	2-16-12	
Selenium	**ND**	12	6010B	2-21-12	2-22-12	
Silver	**ND**	0.58	6010B	2-21-12	2-22-12	

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TOTAL METALS
EPA 6010B/7471A

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	05-099-03					
Client ID:	**B43-TP2-3**					
Arsenic	**ND**	12	6010B	2-21-12	2-22-12	
Barium	**160**	3.1	6010B	2-21-12	2-22-12	
Cadmium	**ND**	0.62	6010B	2-21-12	2-22-12	
Chromium	**69**	0.62	6010B	2-21-12	2-22-12	
Lead	**23**	6.2	6010B	2-21-12	2-22-12	
Mercury	**ND**	0.31	7471A	2-16-12	2-16-12	
Selenium	**ND**	12	6010B	2-21-12	2-22-12	
Silver	**ND**	0.62	6010B	2-21-12	2-22-12	
Lab ID:	05-099-04					
Client ID:	**B43-TP2-8**					
Arsenic	**ND**	11	6010B	2-21-12	2-22-12	
Barium	**45**	2.8	6010B	2-21-12	2-22-12	
Cadmium	**ND**	0.56	6010B	2-21-12	2-22-12	
Chromium	**46**	0.56	6010B	2-21-12	2-22-12	
Lead	**ND**	5.6	6010B	2-21-12	2-22-12	
Mercury	**ND**	0.28	7471A	2-16-12	2-16-12	
Selenium	**ND**	11	6010B	2-21-12	2-22-12	
Silver	**ND**	0.56	6010B	2-21-12	2-22-12	

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TOTAL METALS
EPA 6010B/7471A

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	05-099-05					
Client ID:	**B43-TP3-5**					
Arsenic	**ND**	12	6010B	2-21-12	2-22-12	
Barium	**97**	3.0	6010B	2-21-12	2-22-12	
Cadmium	**ND**	0.61	6010B	2-21-12	2-22-12	
Chromium	**52**	0.61	6010B	2-21-12	2-22-12	
Lead	**44**	6.1	6010B	2-21-12	2-22-12	
Mercury	**ND**	0.30	7471A	2-16-12	2-16-12	
Selenium	**ND**	12	6010B	2-21-12	2-22-12	
Silver	**ND**	0.61	6010B	2-21-12	2-22-12	
Lab ID:	05-099-06					
Client ID:	**B43-TP3-8**					
Arsenic	**ND**	12	6010B	2-21-12	2-22-12	
Barium	**130**	3.0	6010B	2-21-12	2-22-12	
Cadmium	**ND**	0.60	6010B	2-21-12	2-22-12	
Chromium	**51**	0.60	6010B	2-21-12	2-22-12	
Lead	**27**	6.0	6010B	2-21-12	2-22-12	
Mercury	**ND**	0.30	7471A	2-16-12	2-16-12	
Selenium	**ND**	12	6010B	2-21-12	2-22-12	
Silver	**ND**	0.60	6010B	2-21-12	2-22-12	

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TOTAL METALS
EPA 6010B/7471A

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	05-099-07					
Client ID:	**B43-TP4-5**					
Arsenic	**ND**	14	6010B	2-21-12	2-22-12	
Barium	**170**	3.4	6010B	2-21-12	2-22-12	
Cadmium	**ND**	0.69	6010B	2-21-12	2-22-12	
Chromium	**80**	0.69	6010B	2-21-12	2-22-12	
Lead	**15**	6.9	6010B	2-21-12	2-22-12	
Mercury	**ND**	0.34	7471A	2-16-12	2-16-12	
Selenium	**ND**	14	6010B	2-21-12	2-22-12	
Silver	**ND**	0.69	6010B	2-21-12	2-22-12	
Lab ID:	05-099-08					
Client ID:	**B43-TP4-9**					
Arsenic	**ND**	13	6010B	2-21-12	2-22-12	
Barium	**180**	3.3	6010B	2-21-12	2-22-12	
Cadmium	**1.2**	0.65	6010B	2-21-12	2-22-12	
Chromium	**57**	0.65	6010B	2-21-12	2-22-12	
Lead	**170**	6.5	6010B	2-21-12	2-22-12	
Mercury	**ND**	0.33	7471A	2-16-12	2-16-12	
Selenium	**ND**	13	6010B	2-21-12	2-22-12	
Silver	**ND**	0.65	6010B	2-21-12	2-22-12	

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TOTAL METALS
EPA 6010B/7471A

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	05-099-09					
Client ID:	**B43-TP5-6**					
Arsenic	**ND**	12	6010B	2-21-12	2-22-12	
Barium	**180**	3.0	6010B	2-21-12	2-22-12	
Cadmium	**ND**	0.59	6010B	2-21-12	2-22-12	
Chromium	**52**	0.59	6010B	2-21-12	2-22-12	
Lead	**61**	5.9	6010B	2-21-12	2-22-12	
Mercury	**ND**	0.30	7471A	2-16-12	2-16-12	
Selenium	**ND**	12	6010B	2-21-12	2-22-12	
Silver	**ND**	0.59	6010B	2-21-12	2-22-12	
Lab ID:	05-099-10					
Client ID:	**B43-TP5-10**					
Arsenic	**ND**	12	6010B	2-21-12	2-22-12	
Barium	**110**	2.9	6010B	2-21-12	2-22-12	
Cadmium	**ND**	0.59	6010B	2-21-12	2-22-12	
Chromium	**63**	0.59	6010B	2-21-12	2-22-12	
Lead	**7.0**	5.9	6010B	2-21-12	2-22-12	
Mercury	**ND**	0.29	7471A	2-16-12	2-16-12	
Selenium	**ND**	12	6010B	2-21-12	2-22-12	
Silver	**ND**	0.59	6010B	2-21-12	2-22-12	

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TOTAL METALS
EPA 6010B/7471A

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	05-099-11					
Client ID:	**B43-TP6-4**					
Arsenic	**ND**	11	6010B	2-21-12	2-22-12	
Barium	**260**	2.9	6010B	2-21-12	2-22-12	
Cadmium	**0.63**	0.57	6010B	2-21-12	2-22-12	
Chromium	**19**	0.57	6010B	2-21-12	2-22-12	
Lead	**230**	5.7	6010B	2-21-12	2-22-12	
Mercury	**ND**	0.29	7471A	2-16-12	2-16-12	
Selenium	**ND**	11	6010B	2-21-12	2-22-12	
Silver	**ND**	0.57	6010B	2-21-12	2-22-12	
Lab ID:	05-099-12					
Client ID:	**B43-TP6-6**					
Arsenic	**ND**	11	6010B	2-21-12	2-22-12	
Barium	**120**	2.8	6010B	2-21-12	2-22-12	
Cadmium	**ND**	0.57	6010B	2-21-12	2-22-12	
Chromium	**61**	0.57	6010B	2-21-12	2-22-12	
Lead	**ND**	5.7	6010B	2-21-12	2-22-12	
Mercury	**ND**	0.28	7471A	2-16-12	2-16-12	
Selenium	**ND**	11	6010B	2-21-12	2-22-12	
Silver	**ND**	0.57	6010B	2-21-12	2-22-12	

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Samples Submitted: May 10, 2012
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TOTAL METALS
EPA 6010B/7471A

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	05-099-13					
Client ID:	**B43-TP7-6**					
Arsenic	**ND**	12	6010B	2-21-12	2-22-12	
Barium	**200**	3.1	6010B	2-21-12	2-22-12	
Cadmium	**1.2**	0.61	6010B	2-21-12	2-22-12	
Chromium	**46**	0.61	6010B	2-21-12	2-22-12	
Lead	**340**	6.1	6010B	2-21-12	2-22-12	
Mercury	**ND**	0.31	7471A	2-16-12	2-16-12	
Selenium	**ND**	12	6010B	2-21-12	2-22-12	
Silver	**ND**	0.61	6010B	2-21-12	2-22-12	

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Samples Submitted: May 10, 2012
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Project: 2012-046-22

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

Date Extracted: 2-16&21-12
Date Analyzed: 2-16&22-12

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: MB0516S2&MB0521SM2

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

Date of Report: May 25, 2012
Samples Submitted: May 10, 2012
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Project: 2012-046-22

TOTAL METALS
EPA 6010B/7471A
DUPLICATE QUALITY CONTROL

Date Extracted: 2-16&21-12
Date Analyzed: 2-16&22-12

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 05-099-02

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**ND**	**ND**	NA	10	
Barium	**54.2**	**53.3**	2	2.5	
Cadmium	**ND**	**ND**	NA	0.50	
Chromium	**40.3**	**37.4**	8	0.50	
Lead	**ND**	**ND**	NA	5.0	
Mercury	**ND**	**ND**	NA	0.25	
Selenium	**ND**	**ND**	NA	10	
Silver	**ND**	**ND**	NA	0.50	

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Samples Submitted: May 10, 2012
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Project: 2012-046-22

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

Date Extracted: 2-16&21-12
Date Analyzed: 2-16&22-12

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 05-099-02

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	**92.2**	92	**94.5**	94	3	
Barium	100	**151**	97	**153**	99	2	
Cadmium	50.0	**47.7**	95	**47.9**	96	0	
Chromium	100	**130**	90	**130**	89	0	
Lead	250	**232**	93	**232**	93	0	
Mercury	0.500	**0.496**	99	**0.505**	101	2	
Selenium	100	**90.8**	91	**89.3**	89	2	
Silver	25.0	**20.7**	83	**20.7**	83	0	

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Project: 2012-046-22

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

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B43-TP1-1.5**					
Laboratory ID:	05-099-01					
Diesel Range Organics	**ND**	350	NWTPH-Dx	5-20-12	5-21-12	U1
Lube Oil	**1500**	58	NWTPH-Dx	5-20-12	5-21-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***101***	***50-150***				
Client ID:	**B43-TP2-3**					
Laboratory ID:	05-099-03					
Diesel Range Organics	**ND**	740	NWTPH-Dx	5-20-12	5-21-12	U1
Lube Oil	**2100**	62	NWTPH-Dx	5-20-12	5-21-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***77***	***50-150***				
Client ID:	**B43-TP2-8**					
Laboratory ID:	05-099-04					
Diesel Range Organics	**ND**	63	NWTPH-Dx	5-20-12	5-21-12	U1
Lube Oil	**240**	56	NWTPH-Dx	5-20-12	5-21-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***91***	***50-150***				
Client ID:	**B43-TP3-5**					
Laboratory ID:	05-099-05					
Diesel Range Organics	**ND**	220	NWTPH-Dx	5-20-12	5-21-12	U1
Lube Oil	**1100**	61	NWTPH-Dx	5-20-12	5-21-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***77***	***50-150***				
Client ID:	**B43-TP3-8**					
Laboratory ID:	05-099-06					
Diesel Range Organics	**ND**	360	NWTPH-Dx	5-20-12	5-21-12	U1
Lube Oil	**1700**	60	NWTPH-Dx	5-20-12	5-21-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***87***	***50-150***				
Client ID:	**B43-TP4-5**					
Laboratory ID:	05-099-07					
Diesel Range Organics	**ND**	56	NWTPH-Dx	5-20-12	5-21-12	U1
Lube Oil	**280**	69	NWTPH-Dx	5-20-12	5-21-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***71***	***50-150***				

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Project: 2012-046-22

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

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B43-TP4-9**					
Laboratory ID:	05-099-08					
Diesel Range Organics	**ND**	1500	NWTPH-Dx	5-20-12	5-21-12	U1
Lube Oil	**8900**	330	NWTPH-Dx	5-20-12	5-21-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***111***	***50-150***				
Client ID:	**B43-TP5-6**					
Laboratory ID:	05-099-09					
Diesel Range Organics	**ND**	59	NWTPH-Dx	5-20-12	5-21-12	U1
Lube Oil	**270**	59	NWTPH-Dx	5-20-12	5-21-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***84***	***50-150***				
Client ID:	**B43-TP5-10**					
Laboratory ID:	05-099-10					
Diesel Range Organics	**ND**	33	NWTPH-Dx	5-20-12	5-21-12	U1
Lube Oil	**140**	59	NWTPH-Dx	5-20-12	5-21-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***84***	***50-150***				
Client ID:	**B43-TP6-4**					
Laboratory ID:	05-099-11					
Diesel Range Organics	**ND**	11000	NWTPH-Dx	5-20-12	5-22-12	U1
Lube Oil	**41000**	1200	NWTPH-Dx	5-20-12	5-22-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***---***	***50-150***				S
Client ID:	**B43-TP7-6**					
Laboratory ID:	05-099-13					
Diesel Range Organics	**ND**	310	NWTPH-Dx	5-20-12	5-21-12	U1
Lube Oil	**1200**	61	NWTPH-Dx	5-20-12	5-21-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***83***	***50-150***				

Date of Report: May 25, 2012
Samples Submitted: May 10, 2012
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Project: 2012-046-22

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

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0520S1					
Diesel Range Organics	**ND**	25	NWTPH-Dx	5-20-12	5-21-12	
Lube Oil Range Organics	**ND**	50	NWTPH-Dx	5-20-12	5-21-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***99***	***50-150***				

Analyte	Result		Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE							
Laboratory ID:	05-094-02						
	ORIG	DUP					
Diesel Range Organics	**ND**	**ND**			NA	NA	
Lube Oil	**306**	**281**			9	NA	
Surrogate:							
o-Terphenyl			***92*** ***89***	***50-150***			
Laboratory ID:	05-099-04						
	ORIG	DUP					
Diesel Range Organics	**ND**	**ND**			NA	NA	U1
Lube Oil	**218**	**161**			30	NA	
Surrogate:							
o-Terphenyl			***91*** ***87***	***50-150***			

Date of Report: May 25, 2012
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Laboratory Reference: 1205-099
Project: 2012-046-22

cPAHs plus NAPHTHALENES
by EPA 8270D/SIM
(with silica gel clean-up)

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B43-TP1-1.5**					
Laboratory ID:	05-099-01					
Naphthalene	**0.17**	0.0077	EPA 8270/SIM	5-22-12	5-23-12	
2-Methylnaphthalene	**0.12**	0.0077	EPA 8270/SIM	5-22-12	5-23-12	
1-Methylnaphthalene	**0.054**	0.0077	EPA 8270/SIM	5-22-12	5-23-12	
Benzo[a]anthracene	**0.048**	0.0077	EPA 8270/SIM	5-22-12	5-23-12	
Chrysene	**0.073**	0.0077	EPA 8270/SIM	5-22-12	5-23-12	
Benzo[b]fluoranthene	**0.047**	0.0077	EPA 8270/SIM	5-22-12	5-23-12	
Benzo(j,k)fluoranthene	**0.012**	0.0077	EPA 8270/SIM	5-22-12	5-23-12	
Benzo[a]pyrene	**0.027**	0.0077	EPA 8270/SIM	5-22-12	5-23-12	
Indeno(1,2,3-c,d)pyrene	**0.028**	0.0077	EPA 8270/SIM	5-22-12	5-23-12	
Dibenz[a,h]anthracene	**ND**	0.0077	EPA 8270/SIM	5-22-12	5-23-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
2-Fluorobiphenyl	***58***	***43 - 109***				
Pyrene-d10	***49***	***38 - 128***				
Terphenyl-d14	***62***	***33 - 119***				

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Project: 2012-046-22

cPAHs plus NAPHTHALENES
by EPA 8270D/SIM
(with silica gel clean-up)

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B43-TP2-3**					
Laboratory ID:	05-099-03					
Naphthalene	**0.034**	0.0078	EPA 8270/SIM	5-22-12	5-23-12	
2-Methylnaphthalene	**0.032**	0.0078	EPA 8270/SIM	5-22-12	5-23-12	
1-Methylnaphthalene	**0.018**	0.0078	EPA 8270/SIM	5-22-12	5-23-12	
Benzo[a]anthracene	**0.038**	0.0078	EPA 8270/SIM	5-22-12	5-23-12	
Chrysene	**0.045**	0.0078	EPA 8270/SIM	5-22-12	5-23-12	
Benzo[b]fluoranthene	**0.049**	0.0078	EPA 8270/SIM	5-22-12	5-23-12	
Benzo(j,k)fluoranthene	**0.014**	0.0078	EPA 8270/SIM	5-22-12	5-23-12	
Benzo[a]pyrene	**0.030**	0.0078	EPA 8270/SIM	5-22-12	5-23-12	
Indeno(1,2,3-c,d)pyrene	**0.037**	0.0078	EPA 8270/SIM	5-22-12	5-23-12	
Dibenz[a,h]anthracene	**ND**	0.0078	EPA 8270/SIM	5-22-12	5-23-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
2-Fluorobiphenyl	***45***	***43 - 109***				
Pyrene-d10	***41***	***38 - 128***				
Terphenyl-d14	***47***	***33 - 119***				

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Project: 2012-046-22

cPAHs plus NAPHTHALENES
by EPA 8270D/SIM
(with silica gel clean-up)

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B43-TP2-8**					
Laboratory ID:	05-099-04					
Naphthalene	**ND**	0.0074	EPA 8270/SIM	5-22-12	5-23-12	
2-Methylnaphthalene	**ND**	0.0074	EPA 8270/SIM	5-22-12	5-23-12	
1-Methylnaphthalene	**ND**	0.0074	EPA 8270/SIM	5-22-12	5-23-12	
Benzo[a]anthracene	**ND**	0.0074	EPA 8270/SIM	5-22-12	5-23-12	
Chrysene	**ND**	0.0074	EPA 8270/SIM	5-22-12	5-23-12	
Benzo[b]fluoranthene	**ND**	0.0074	EPA 8270/SIM	5-22-12	5-23-12	
Benzo(j,k)fluoranthene	**ND**	0.0074	EPA 8270/SIM	5-22-12	5-23-12	
Benzo[a]pyrene	**ND**	0.0074	EPA 8270/SIM	5-22-12	5-23-12	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0074	EPA 8270/SIM	5-22-12	5-23-12	
Dibenz[a,h]anthracene	**ND**	0.0074	EPA 8270/SIM	5-22-12	5-23-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
2-Fluorobiphenyl	***53***	***43 - 109***				
Pyrene-d10	***48***	***38 - 128***				
Terphenyl-d14	***58***	***33 - 119***				

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cPAHs plus NAPHTHALENES
by EPA 8270D/SIM
(with silica gel clean-up)

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B43-TP3-5**					
Laboratory ID:	05-099-05					
Naphthalene	**0.0093**	0.0081	EPA 8270/SIM	5-24-12	5-24-12	
2-Methylnaphthalene	**0.012**	0.0081	EPA 8270/SIM	5-24-12	5-24-12	
1-Methylnaphthalene	**ND**	0.0081	EPA 8270/SIM	5-24-12	5-24-12	
Benzo[a]anthracene	**0.031**	0.0081	EPA 8270/SIM	5-24-12	5-24-12	
Chrysene	**0.034**	0.0081	EPA 8270/SIM	5-24-12	5-24-12	
Benzo[b]fluoranthene	**0.042**	0.0081	EPA 8270/SIM	5-24-12	5-24-12	
Benzo(j,k)fluoranthene	**0.013**	0.0081	EPA 8270/SIM	5-24-12	5-24-12	
Benzo[a]pyrene	**0.034**	0.0081	EPA 8270/SIM	5-24-12	5-24-12	
Indeno(1,2,3-c,d)pyrene	**0.036**	0.0081	EPA 8270/SIM	5-24-12	5-24-12	
Dibenz[a,h]anthracene	**0.0084**	0.0081	EPA 8270/SIM	5-24-12	5-24-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
2-Fluorobiphenyl	***87***	***43 - 109***				
Pyrene-d10	***76***	***38 - 128***				
Terphenyl-d14	***86***	***33 - 119***				

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cPAHs plus NAPHTHALENES
by EPA 8270D/SIM
(with silica gel clean-up)

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B43-TP3-8**					
Laboratory ID:	05-099-06					
Naphthalene	**0.011**	0.0080	EPA 8270/SIM	5-24-12	5-24-12	
2-Methylnaphthalene	**0.011**	0.0080	EPA 8270/SIM	5-24-12	5-24-12	
1-Methylnaphthalene	**ND**	0.0080	EPA 8270/SIM	5-24-12	5-24-12	
Benzo[a]anthracene	**0.020**	0.0080	EPA 8270/SIM	5-24-12	5-24-12	
Chrysene	**0.026**	0.0080	EPA 8270/SIM	5-24-12	5-24-12	
Benzo[b]fluoranthene	**0.023**	0.0080	EPA 8270/SIM	5-24-12	5-24-12	
Benzo(j,k)fluoranthene	**0.013**	0.0080	EPA 8270/SIM	5-24-12	5-24-12	
Benzo[a]pyrene	**0.018**	0.0080	EPA 8270/SIM	5-24-12	5-24-12	
Indeno(1,2,3-c,d)pyrene	**0.020**	0.0080	EPA 8270/SIM	5-24-12	5-24-12	
Dibenz[a,h]anthracene	**ND**	0.0080	EPA 8270/SIM	5-24-12	5-24-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
2-Fluorobiphenyl	***92***	***43 - 109***				
Pyrene-d10	***89***	***38 - 128***				
Terphenyl-d14	***81***	***33 - 119***				

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Project: 2012-046-22

cPAHs plus NAPHTHALENES
by EPA 8270D/SIM
(with silica gel clean-up)

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B43-TP4-5**					
Laboratory ID:	05-099-07					
Naphthalene	**0.021**	0.0092	EPA 8270/SIM	5-22-12	5-23-12	
2-Methylnaphthalene	**0.014**	0.0092	EPA 8270/SIM	5-22-12	5-23-12	
1-Methylnaphthalene	**ND**	0.0092	EPA 8270/SIM	5-22-12	5-23-12	
Benzo[a]anthracene	**0.010**	0.0092	EPA 8270/SIM	5-22-12	5-23-12	
Chrysene	**ND**	0.0092	EPA 8270/SIM	5-22-12	5-23-12	
Benzo[b]fluoranthene	**0.0097**	0.0092	EPA 8270/SIM	5-22-12	5-23-12	
Benzo(j,k)fluoranthene	**ND**	0.0092	EPA 8270/SIM	5-22-12	5-23-12	
Benzo[a]pyrene	**ND**	0.0092	EPA 8270/SIM	5-22-12	5-23-12	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0092	EPA 8270/SIM	5-22-12	5-23-12	
Dibenz[a,h]anthracene	**ND**	0.0092	EPA 8270/SIM	5-22-12	5-23-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
2-Fluorobiphenyl	***75***	***43 - 109***				
Pyrene-d10	***70***	***38 - 128***				
Terphenyl-d14	***84***	***33 - 119***				

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Project: 2012-046-22

cPAHs plus NAPHTHALENES
by EPA 8270D/SIM
(with silica gel clean-up)

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B43-TP4-9**					
Laboratory ID:	05-099-08					
Naphthalene	**0.13**	0.0087	EPA 8270/SIM	5-22-12	5-23-12	
2-Methylnaphthalene	**0.11**	0.0087	EPA 8270/SIM	5-22-12	5-23-12	
1-Methylnaphthalene	**0.049**	0.0087	EPA 8270/SIM	5-22-12	5-23-12	
Benzo[a]anthracene	**0.049**	0.0087	EPA 8270/SIM	5-22-12	5-23-12	
Chrysene	**0.074**	0.0087	EPA 8270/SIM	5-22-12	5-23-12	
Benzo[b]fluoranthene	**0.043**	0.0087	EPA 8270/SIM	5-22-12	5-23-12	
Benzo(j,k)fluoranthene	**0.016**	0.0087	EPA 8270/SIM	5-22-12	5-23-12	
Benzo[a]pyrene	**0.033**	0.0087	EPA 8270/SIM	5-22-12	5-23-12	
Indeno(1,2,3-c,d)pyrene	**0.058**	0.0087	EPA 8270/SIM	5-22-12	5-23-12	
Dibenz[a,h]anthracene	**0.015**	0.0087	EPA 8270/SIM	5-22-12	5-23-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
2-Fluorobiphenyl	***71***	***43 - 109***				
Pyrene-d10	***97***	***38 - 128***				
Terphenyl-d14	***67***	***33 - 119***				

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cPAHs plus NAPHTHALENES
by EPA 8270D/SIM
(with silica gel clean-up)

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B43-TP5-6**					
Laboratory ID:	05-099-09					
Naphthalene	**0.028**	0.0079	EPA 8270/SIM	5-22-12	5-23-12	
2-Methylnaphthalene	**0.014**	0.0079	EPA 8270/SIM	5-22-12	5-23-12	
1-Methylnaphthalene	**ND**	0.0079	EPA 8270/SIM	5-22-12	5-23-12	
Benzo[a]anthracene	**ND**	0.0079	EPA 8270/SIM	5-22-12	5-23-12	
Chrysene	**0.014**	0.0079	EPA 8270/SIM	5-22-12	5-23-12	
Benzo[b]fluoranthene	**ND**	0.0079	EPA 8270/SIM	5-22-12	5-23-12	
Benzo(j,k)fluoranthene	**ND**	0.0079	EPA 8270/SIM	5-22-12	5-23-12	
Benzo[a]pyrene	**ND**	0.0079	EPA 8270/SIM	5-22-12	5-23-12	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0079	EPA 8270/SIM	5-22-12	5-23-12	
Dibenz[a,h]anthracene	**ND**	0.0079	EPA 8270/SIM	5-22-12	5-23-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
2-Fluorobiphenyl	***64***	***43 - 109***				
Pyrene-d10	***56***	***38 - 128***				
Terphenyl-d14	***70***	***33 - 119***				

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cPAHs plus NAPHTHALENES
by EPA 8270D/SIM
(with silica gel clean-up)

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B43-TP5-10**					
Laboratory ID:	05-099-10					
Naphthalene	**0.020**	0.0079	EPA 8270/SIM	5-22-12	5-23-12	
2-Methylnaphthalene	**ND**	0.0079	EPA 8270/SIM	5-22-12	5-23-12	
1-Methylnaphthalene	**ND**	0.0079	EPA 8270/SIM	5-22-12	5-23-12	
Benzo[a]anthracene	**ND**	0.0079	EPA 8270/SIM	5-22-12	5-23-12	
Chrysene	**0.0094**	0.0079	EPA 8270/SIM	5-22-12	5-23-12	
Benzo[b]fluoranthene	**ND**	0.0079	EPA 8270/SIM	5-22-12	5-23-12	
Benzo(j,k)fluoranthene	**ND**	0.0079	EPA 8270/SIM	5-22-12	5-23-12	
Benzo[a]pyrene	**ND**	0.0079	EPA 8270/SIM	5-22-12	5-23-12	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0079	EPA 8270/SIM	5-22-12	5-23-12	
Dibenz[a,h]anthracene	**ND**	0.0079	EPA 8270/SIM	5-22-12	5-23-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
2-Fluorobiphenyl	***66***	***43 - 109***				
Pyrene-d10	***58***	***38 - 128***				
Terphenyl-d14	***72***	***33 - 119***				

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cPAHs plus NAPHTHALENES
by EPA 8270D/SIM
(with silica gel clean-up)

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B43-TP6-4**					
Laboratory ID:	05-099-11					
Naphthalene	**0.77**	0.038	EPA 8270/SIM	5-22-12	5-25-12	
2-Methylnaphthalene	**0.82**	0.038	EPA 8270/SIM	5-22-12	5-25-12	
1-Methylnaphthalene	**0.33**	0.038	EPA 8270/SIM	5-22-12	5-25-12	
Benzo[a]anthracene	**1.1**	0.038	EPA 8270/SIM	5-22-12	5-25-12	
Chrysene	**0.51**	0.038	EPA 8270/SIM	5-22-12	5-25-12	
Benzo[b]fluoranthene	**0.088**	0.038	EPA 8270/SIM	5-22-12	5-25-12	
Benzo(j,k)fluoranthene	**ND**	0.038	EPA 8270/SIM	5-22-12	5-25-12	
Benzo[a]pyrene	**0.24**	0.038	EPA 8270/SIM	5-22-12	5-25-12	
Indeno(1,2,3-c,d)pyrene	**ND**	0.038	EPA 8270/SIM	5-22-12	5-25-12	
Dibenz[a,h]anthracene	**ND**	0.038	EPA 8270/SIM	5-22-12	5-25-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
2-Fluorobiphenyl	***48***	***43 - 109***				
Pyrene-d10	***30***	***38 - 128***				Q
Terphenyl-d14	***41***	***33 - 119***				

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cPAHs plus NAPHTHALENES
by EPA 8270D/SIM
(with silica gel clean-up)

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B43-TP7-6**					
Laboratory ID:	05-099-13					
Naphthalene	**0.030**	0.0082	EPA 8270/SIM	5-22-12	5-25-12	
2-Methylnaphthalene	**0.031**	0.0082	EPA 8270/SIM	5-22-12	5-25-12	
1-Methylnaphthalene	**0.015**	0.0082	EPA 8270/SIM	5-22-12	5-25-12	
Benzo[a]anthracene	**0.034**	0.0082	EPA 8270/SIM	5-22-12	5-25-12	
Chrysene	**0.046**	0.0082	EPA 8270/SIM	5-22-12	5-25-12	
Benzo[b]fluoranthene	**0.042**	0.0082	EPA 8270/SIM	5-22-12	5-25-12	
Benzo(j,k)fluoranthene	**0.013**	0.0082	EPA 8270/SIM	5-22-12	5-25-12	
Benzo[a]pyrene	**0.030**	0.0082	EPA 8270/SIM	5-22-12	5-25-12	
Indeno(1,2,3-c,d)pyrene	**0.027**	0.0082	EPA 8270/SIM	5-22-12	5-25-12	
Dibenz[a,h]anthracene	**0.0082**	0.0082	EPA 8270/SIM	5-22-12	5-25-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
2-Fluorobiphenyl	***44***	***43 - 109***				
Pyrene-d10	***42***	***38 - 128***				
Terphenyl-d14	***55***	***33 - 119***				

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Project: 2012-046-22

cPAHs plus NAPHTHALENES
by EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
(with silica gel clean-up)

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0522S1					
Naphthalene	**ND**	0.0067	EPA 8270/SIM	5-22-12	5-23-12	
2-Methylnaphthalene	**ND**	0.0067	EPA 8270/SIM	5-22-12	5-23-12	
1-Methylnaphthalene	**ND**	0.0067	EPA 8270/SIM	5-22-12	5-23-12	
Benzo[a]anthracene	**ND**	0.0067	EPA 8270/SIM	5-22-12	5-23-12	
Chrysene	**ND**	0.0067	EPA 8270/SIM	5-22-12	5-23-12	
Benzo[b]fluoranthene	**ND**	0.0067	EPA 8270/SIM	5-22-12	5-23-12	
Benzo(j,k)fluoranthene	**ND**	0.0067	EPA 8270/SIM	5-22-12	5-23-12	
Benzo[a]pyrene	**ND**	0.0067	EPA 8270/SIM	5-22-12	5-23-12	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0067	EPA 8270/SIM	5-22-12	5-23-12	
Dibenz[a,h]anthracene	**ND**	0.0067	EPA 8270/SIM	5-22-12	5-23-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
2-Fluorobiphenyl	***87***	***43 - 109***				
Pyrene-d10	***87***	***38 - 128***				
Terphenyl-d14	***87***	***33 - 119***				
Laboratory ID:	MB0524S1					
Naphthalene	**ND**	0.0067	EPA 8270/SIM	5-24-12	5-24-12	
2-Methylnaphthalene	**ND**	0.0067	EPA 8270/SIM	5-24-12	5-24-12	
1-Methylnaphthalene	**ND**	0.0067	EPA 8270/SIM	5-24-12	5-24-12	
Benzo[a]anthracene	**ND**	0.0067	EPA 8270/SIM	5-24-12	5-24-12	
Chrysene	**ND**	0.0067	EPA 8270/SIM	5-24-12	5-24-12	
Benzo[b]fluoranthene	**ND**	0.0067	EPA 8270/SIM	5-24-12	5-24-12	
Benzo(j,k)fluoranthene	**ND**	0.0067	EPA 8270/SIM	5-24-12	5-24-12	
Benzo[a]pyrene	**ND**	0.0067	EPA 8270/SIM	5-24-12	5-24-12	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0067	EPA 8270/SIM	5-24-12	5-24-12	
Dibenz[a,h]anthracene	**ND**	0.0067	EPA 8270/SIM	5-24-12	5-24-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
2-Fluorobiphenyl	***97***	***43 - 109***				
Pyrene-d10	***81***	***38 - 128***				
Terphenyl-d14	***102***	***33 - 119***				

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cPAHs plus NAPHTHALENES
by EPA 8270D/SIM
SB/SBD QUALITY CONTROL
(with silica gel clean-up)

Matrix: Soil
Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0522S1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	**0.0721**	**0.0696**	0.0833	0.0833	87	84	43 - 108	4	27	
Benzo[a]anthracene	**0.0845**	**0.0834**	0.0833	0.0833	101	100	63 - 116	1	12	
Chrysene	**0.0739**	**0.0726**	0.0833	0.0833	89	87	67 - 118	2	12	
Benzo[b]fluoranthene	**0.0705**	**0.0695**	0.0833	0.0833	85	83	58 - 127	1	20	
Benzo(j,k)fluoranthene	**0.0699**	**0.0688**	0.0833	0.0833	84	83	42 - 134	2	26	
Benzo[a]pyrene	**0.0684**	**0.0673**	0.0833	0.0833	82	81	55 - 111	2	19	
Indeno(1,2,3-c,d)pyrene	**0.0743**	**0.0712**	0.0833	0.0833	89	85	60 - 125	4	20	
Dibenz[a,h]anthracene	**0.0721**	**0.0711**	0.0833	0.0833	87	85	62 - 125	1	19	
Surrogate:										
2-Fluorobiphenyl					***88***	***84***	***43 - 109***			
Pyrene-d10					***88***	***88***	***38 - 128***			
Terphenyl-d14					***85***	***85***	***33 - 119***			

Date of Report: May 25, 2012
Samples Submitted: May 10, 2012
Laboratory Reference: 1205-099
Project: 2012-046-22

cPAHs plus NAPHTHALENES
by EPA 8270D/SIM
MS/MSD QUALITY CONTROL
(with silica gel clean-up)

Matrix: Soil
Units: mg/Kg

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
MATRIX SPIKES											
Laboratory ID:	05-099-05										
	MS	MSD	MS	MSD		MS	MSD				
Naphthalene	**0.0809**	**0.0768**	0.0833	0.0833	0.00762	88	83	39 - 110	5	21	
Benzo[a]anthracene	**0.103**	**0.0990**	0.0833	0.0833	0.0255	93	88	43 - 127	4	21	
Chrysene	**0.0920**	**0.0872**	0.0833	0.0833	0.0282	77	71	41 - 133	5	19	
Benzo[b]fluoranthene	**0.0942**	**0.0815**	0.0833	0.0833	0.0347	71	56	40 - 132	14	25	
Benzo(j,k)fluoranthene	**0.0832**	**0.0729**	0.0833	0.0833	0.0103	88	75	35 - 132	13	25	
Benzo[a]pyrene	**0.0951**	**0.0873**	0.0833	0.0833	0.0276	81	72	37 - 131	9	26	
Indeno(1,2,3-c,d)pyrene	**0.106**	**0.0948**	0.0833	0.0833	0.0297	92	78	39 - 134	11	23	
Dibenz[a,h]anthracene	**0.0886**	**0.0828**	0.0833	0.0833	0.00690	98	91	40 - 137	7	21	
Surrogate:											
2-Fluorobiphenyl						***91***	***90***	***43 - 109***			
Pyrene-d10						***80***	***79***	***38 - 128***			
Terphenyl-d14						***88***	***89***	***33 - 119***			

Date of Report: May 25, 2012
Samples Submitted: May 10, 2012
Laboratory Reference: 1205-099
Project: 2012-046-22

PCBs by EPA 8082

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B43-TP1-1.5**					
Laboratory ID:	05-099-01					
Aroclor 1016	**ND**	0.058	EPA 8082	5-18-12	5-18-12	
Aroclor 1221	**ND**	0.058	EPA 8082	5-18-12	5-18-12	
Aroclor 1232	**ND**	0.058	EPA 8082	5-18-12	5-18-12	
Aroclor 1242	**ND**	0.058	EPA 8082	5-18-12	5-18-12	
Aroclor 1248	**ND**	0.058	EPA 8082	5-18-12	5-18-12	
Aroclor 1254	**ND**	0.058	EPA 8082	5-18-12	5-18-12	
Aroclor 1260	**ND**	0.058	EPA 8082	5-18-12	5-18-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
DCB	***112***	***42-123***				
Client ID:	**B43-TP2-3**					
Laboratory ID:	05-099-03					
Aroclor 1016	**ND**	0.062	EPA 8082	5-18-12	5-18-12	
Aroclor 1221	**ND**	0.062	EPA 8082	5-18-12	5-18-12	
Aroclor 1232	**ND**	0.062	EPA 8082	5-18-12	5-18-12	
Aroclor 1242	**ND**	0.062	EPA 8082	5-18-12	5-18-12	
Aroclor 1248	**ND**	0.062	EPA 8082	5-18-12	5-18-12	
Aroclor 1254	**ND**	0.062	EPA 8082	5-18-12	5-18-12	
Aroclor 1260	**ND**	0.062	EPA 8082	5-18-12	5-18-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
DCB	***83***	***42-123***				
Client ID:	**B43-TP2-8**					
Laboratory ID:	05-099-04					
Aroclor 1016	**ND**	0.056	EPA 8082	5-18-12	5-18-12	
Aroclor 1221	**ND**	0.056	EPA 8082	5-18-12	5-18-12	
Aroclor 1232	**ND**	0.056	EPA 8082	5-18-12	5-18-12	
Aroclor 1242	**ND**	0.056	EPA 8082	5-18-12	5-18-12	
Aroclor 1248	**ND**	0.056	EPA 8082	5-18-12	5-18-12	
Aroclor 1254	**ND**	0.056	EPA 8082	5-18-12	5-18-12	
Aroclor 1260	**ND**	0.056	EPA 8082	5-18-12	5-18-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
DCB	***98***	***42-123***				

Date of Report: May 25, 2012
Samples Submitted: May 10, 2012
Laboratory Reference: 1205-099
Project: 2012-046-22

PCBs by EPA 8082

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B43-TP3-5**					
Laboratory ID:	05-099-05					
Aroclor 1016	**ND**	0.061	EPA 8082	5-18-12	5-18-12	
Aroclor 1221	**ND**	0.061	EPA 8082	5-18-12	5-18-12	
Aroclor 1232	**ND**	0.061	EPA 8082	5-18-12	5-18-12	
Aroclor 1242	**ND**	0.061	EPA 8082	5-18-12	5-18-12	
Aroclor 1248	**ND**	0.061	EPA 8082	5-18-12	5-18-12	
Aroclor 1254	**ND**	0.061	EPA 8082	5-18-12	5-18-12	
Aroclor 1260	**ND**	0.061	EPA 8082	5-18-12	5-18-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
DCB	***98***	***42-123***				
Client ID:	**B43-TP3-8**					
Laboratory ID:	05-099-06					
Aroclor 1016	**ND**	0.060	EPA 8082	5-18-12	5-18-12	
Aroclor 1221	**ND**	0.060	EPA 8082	5-18-12	5-18-12	
Aroclor 1232	**ND**	0.060	EPA 8082	5-18-12	5-18-12	
Aroclor 1242	**ND**	0.060	EPA 8082	5-18-12	5-18-12	
Aroclor 1248	**ND**	0.060	EPA 8082	5-18-12	5-18-12	
Aroclor 1254	**ND**	0.60	EPA 8082	5-18-12	5-18-12	U1
Aroclor 1260	**ND**	0.60	EPA 8082	5-18-12	5-18-12	U1
Surrogate:	***Percent Recovery***	***Control Limits***				
DCB	***105***	***42-123***				
Client ID:	**B43-TP4-5**					
Laboratory ID:	05-099-07					
Aroclor 1016	**ND**	0.069	EPA 8082	5-18-12	5-18-12	
Aroclor 1221	**ND**	0.069	EPA 8082	5-18-12	5-18-12	
Aroclor 1232	**ND**	0.069	EPA 8082	5-18-12	5-18-12	
Aroclor 1242	**ND**	0.069	EPA 8082	5-18-12	5-18-12	
Aroclor 1248	**ND**	0.069	EPA 8082	5-18-12	5-18-12	
Aroclor 1254	**ND**	0.069	EPA 8082	5-18-12	5-18-12	
Aroclor 1260	**ND**	0.069	EPA 8082	5-18-12	5-18-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
DCB	***101***	***42-123***				

Date of Report: May 25, 2012
Samples Submitted: May 10, 2012
Laboratory Reference: 1205-099
Project: 2012-046-22

PCBs by EPA 8082

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B43-TP4-9**					
Laboratory ID:	05-099-08					
Aroclor 1016	**ND**	0.065	EPA 8082	5-18-12	5-18-12	
Aroclor 1221	**ND**	0.065	EPA 8082	5-18-12	5-18-12	
Aroclor 1232	**ND**	0.065	EPA 8082	5-18-12	5-18-12	
Aroclor 1242	**ND**	0.065	EPA 8082	5-18-12	5-18-12	
Aroclor 1248	**ND**	0.065	EPA 8082	5-18-12	5-18-12	
Aroclor 1254	**ND**	0.065	EPA 8082	5-18-12	5-18-12	
Aroclor 1260	**ND**	0.065	EPA 8082	5-18-12	5-18-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
DCB	***104***	***42-123***				
Client ID:	**B43-TP5-6**					
Laboratory ID:	05-099-09					
Aroclor 1016	**ND**	0.059	EPA 8082	5-18-12	5-18-12	
Aroclor 1221	**ND**	0.059	EPA 8082	5-18-12	5-18-12	
Aroclor 1232	**ND**	0.059	EPA 8082	5-18-12	5-18-12	
Aroclor 1242	**ND**	0.059	EPA 8082	5-18-12	5-18-12	
Aroclor 1248	**ND**	0.059	EPA 8082	5-18-12	5-18-12	
Aroclor 1254	**ND**	0.059	EPA 8082	5-18-12	5-18-12	
Aroclor 1260	**ND**	0.059	EPA 8082	5-18-12	5-18-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
DCB	***102***	***42-123***				
Client ID:	**B43-TP5-10**					
Laboratory ID:	05-099-10					
Aroclor 1016	**ND**	0.059	EPA 8082	5-18-12	5-18-12	
Aroclor 1221	**ND**	0.059	EPA 8082	5-18-12	5-18-12	
Aroclor 1232	**ND**	0.059	EPA 8082	5-18-12	5-18-12	
Aroclor 1242	**ND**	0.059	EPA 8082	5-18-12	5-18-12	
Aroclor 1248	**ND**	0.059	EPA 8082	5-18-12	5-18-12	
Aroclor 1254	**ND**	0.059	EPA 8082	5-18-12	5-18-12	
Aroclor 1260	**ND**	0.059	EPA 8082	5-18-12	5-18-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
DCB	***105***	***42-123***				

Date of Report: May 25, 2012
Samples Submitted: May 10, 2012
Laboratory Reference: 1205-099
Project: 2012-046-22

PCBs by EPA 8082

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B43-TP6-4**					
Laboratory ID:	05-099-11					
Aroclor 1016	**ND**	0.057	EPA 8082	5-18-12	5-18-12	
Aroclor 1221	**ND**	0.057	EPA 8082	5-18-12	5-18-12	
Aroclor 1232	**ND**	0.057	EPA 8082	5-18-12	5-18-12	
Aroclor 1242	**ND**	0.057	EPA 8082	5-18-12	5-18-12	
Aroclor 1248	**ND**	0.057	EPA 8082	5-18-12	5-18-12	
Aroclor 1254	**ND**	0.057	EPA 8082	5-18-12	5-18-12	
Aroclor 1260	**ND**	0.057	EPA 8082	5-18-12	5-18-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
DCB	***66***	***42-123***				
Client ID:	**B43-TP7-6**					
Laboratory ID:	05-099-13					
Aroclor 1016	**ND**	0.061	EPA 8082	5-18-12	5-18-12	
Aroclor 1221	**ND**	0.061	EPA 8082	5-18-12	5-18-12	
Aroclor 1232	**ND**	0.061	EPA 8082	5-18-12	5-18-12	
Aroclor 1242	**ND**	0.061	EPA 8082	5-18-12	5-18-12	
Aroclor 1248	**ND**	0.061	EPA 8082	5-18-12	5-18-12	
Aroclor 1254	**0.092**	0.061	EPA 8082	5-18-12	5-18-12	
Aroclor 1260	**ND**	0.061	EPA 8082	5-18-12	5-18-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
DCB	***101***	***42-123***				

Date of Report: May 25, 2012
Samples Submitted: May 10, 2012
Laboratory Reference: 1205-099
Project: 2012-046-22

PCBs by EPA 8082
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0518S1					
Aroclor 1016	**ND**	0.050	EPA 8082	5-18-12	5-18-12	
Aroclor 1221	**ND**	0.050	EPA 8082	5-18-12	5-18-12	
Aroclor 1232	**ND**	0.050	EPA 8082	5-18-12	5-18-12	
Aroclor 1242	**ND**	0.050	EPA 8082	5-18-12	5-18-12	
Aroclor 1248	**ND**	0.050	EPA 8082	5-18-12	5-18-12	
Aroclor 1254	**ND**	0.050	EPA 8082	5-18-12	5-18-12	
Aroclor 1260	**ND**	0.050	EPA 8082	5-18-12	5-18-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
DCB	***115***	***42-123***				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
MATRIX SPIKES											
Laboratory ID:	05-099-04										
	MS	MSD	MS	MSD		MS	MSD				
Aroclor 1260	**0.600**	**0.605**	0.500	0.500	ND	**120**	**121**	44-125	1	15	
Surrogate:											
DCB						***100***	***105***	***42-123***			

Date of Report: May 25, 2012
Samples Submitted: May 10, 2012
Laboratory Reference: 1205-099
Project: 2012-046-22

% MOISTURE

Date Analyzed: 5-15-12

Client ID	Lab ID	% Moisture
B43-TP1-1.5	05-099-01	14
B43-TP1-9	05-099-02	14
B43-TP2-3	05-099-03	19
B43-TP2-8	05-099-04	10
B43-TP3-5	05-099-05	18
B43-TP3-8	05-099-06	17
B43-TP4-5	05-099-07	27
B43-TP4-9	05-099-08	23
B43-TP5-6	05-099-09	15
B43-TP5-10	05-099-10	15
B43-TP6-4	05-099-11	13
B43-TP6-6	05-099-12	12
B43-TP7-6	05-099-13	19

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

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

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

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

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

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

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

I - Compound recovery is outside of the control limits.

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

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

L - The RPD is outside of the control limits.

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

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

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

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

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

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

Q - Surrogate recovery is outside of the control limits.

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

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

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

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

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

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

X - Sample extract treated with a mercury cleanup procedure.

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

Z -

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

Chain of Custody

Page 1 of 2

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

Company: HWA
Project Number: 2012-046-22
Project Name: BLOCK 43
Project Manager: J. THOMPSON
Sampled by: ATKINS

Turnaround Request (in working days)

(Check One)

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

Laboratory Number: 05-099

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	No. of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260B	Halogenated Volatiles 8260B	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level) cPAHs + Naphthalenes	PCBs 8082	Organochlorine Pesticides 8081A	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664	% Moisture
1	B43-TP1-1.5	5/10/12	850	S	6	/			X				X	X				/				
2	B43-TP1-9.		855			/												/				
3	B43-TP2-3		540			/			X				X	X				/				
4	B43-TP2-8		945			/			X				X	X				/				
5	B43-TP3-5		1015			/			X				X	X				/				
6	B43-TP-3-8		1020			/			X				X	X				/				
7	B43-TP4-5		1130			/			X				X	X				/				
8	B43-TP4-9		1140			/			X				X	X				/				
9	B43-TP5-6		1155			/			X				X	X				/				
10	B43-TP5-10		1200			/			X				X	X				/				

	Signature	Company	Date	Time
Relinquished		HWA	5/10/12	1415
Received		SPDY	5/10/12	1415
Relinquished		SPDY	5.10.12	1600
Received		QSE	5/10/12	1600
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

X Added 5/17/12. DB (STA)

Chromatograms with final report ☐

Data Package: Level III ☐ Level IV ☐

Electronic Data Deliverables (EDDs) ☐ _____

Chain of Custody

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

Laboratory Number: 05-099

Company:	HWA
Project Number:	2012-046-22
Project Name:	Block 43
Project Manager:	J. Thompson
Sampled by:	VATKins

Turnaround Request (in working days)

(Check One)

- ☐ Same Day ☐ 1 Day
- ☐ 2 Day ☐ 3 Day
- ☑ Standard (7 working days)
  (TPH analysis 5 working days)
- ☐ _____ (other)

Requested Analysis

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Dx	Volatiles by 8260B	Halogenated Volatiles by 8260B	Semivolatiles by 8270D / SIM	PAHs by 8270D / SIM (cPAHs + Naphthalene)	PCBs by 8082	Pesticides by 8081A	Herbicides by 8151A	Total RCRA Metals (8)	TCLP Metals	HEM by 1664	% Moisture
11	B43-TP6-4	5/10/12	1230	S	6	/		X				X	X			/			X
12	B43-TP6-6	↓	1240	S	4	/	*									/	*		↓
13	B43-TP7-6	↓	1300	S	6	/		X				X	X			/			4

	Signature	Company	Date	Time
Relinquished by		HWA	5/10/12	1415
Received by	Van	SPdy	5/10/12	1415
Relinquished by	Van	SPdy	5.10.12	1600
Received by		OSE	5/10/12	1600
Relinquished by				
Received by				
Reviewed by/Date		Reviewed by/Date		

Comments/Special Instructions:

* Only in VOA vials - limited volume

⊗ Added 5/17/12. DB (STA)

Chromatograms with final report ☐

DISTRIBUTION LEGEND: White - OnSite Copy Yellow - Client Copy

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

May 25, 2012

Jeff Thompson
HWA GeoSciences, Inc.
21312 30th Drive SE, Suite 110
Bothell, WA 98021

Re: Analytical Data for Project 2012-046
Laboratory Reference No. 1205-112

Dear Jeff:

Enclosed are the analytical results and associated quality control data for samples submitted on May 11, 2012.

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

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

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: May 25, 2012
Samples Submitted: May 11, 2012
Laboratory Reference: 1205-112
Project: 2012-046

Case Narrative

Samples were collected on May 10, 2012 and received by the laboratory on May 11, 2012. They were maintained at the laboratory at a temperature of 2°C to 6°C.

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

PAHs EPA 8270D/SIM Analysis

Sample B43-TP11-5 had one surrogate recovery out of control limits. This is within allowance of our standard operating procedure as long as the recovery is above 10%.

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

Date of Report: May 25, 2012
Samples Submitted: May 11, 2012
Laboratory Reference: 1205-112
Project: 2012-046

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

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B43-TP11-5**					
Laboratory ID:	05-112-02					
Gasoline Range Organics	**ND**	28	NWTPH-HCID	5-14-12	5-14-12	
Diesel Range Organics	**Detected**	70	NWTPH-HCID	5-14-12	5-14-12	N
Lube Oil	**Detected**	140	NWTPH-HCID	5-14-12	5-14-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***113***	***50-150***				
Client ID:	**B43-TP11-9**					
Laboratory ID:	05-112-03					
Gasoline Range Organics	**ND**	24	NWTPH-HCID	5-14-12	5-14-12	
Diesel Range Organics	**ND**	60	NWTPH-HCID	5-14-12	5-14-12	
Lube Oil Range Organics	**ND**	120	NWTPH-HCID	5-14-12	5-14-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***112***	***50-150***				

Date of Report: May 25, 2012
Samples Submitted: May 11, 2012
Laboratory Reference: 1205-112
Project: 2012-046

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

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0514S1					
Gasoline Range Organics	**ND**	20	NWTPH-HCID	5-14-12	5-14-12	
Diesel Range Organics	**ND**	50	NWTPH-HCID	5-14-12	5-14-12	
Lube Oil Range Organics	**ND**	100	NWTPH-HCID	5-14-12	5-14-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***110***	***50-150***				

Date of Report: May 25, 2012
Samples Submitted: May 11, 2012
Laboratory Reference: 1205-112
Project: 2012-046

TOTAL METALS
EPA 6010B/7471A

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	05-112-02					
Client ID:	**B43-TP11-5**					
Arsenic	**ND**	14	6010B	2-21-12	2-22-12	
Barium	**83**	3.5	6010B	2-21-12	2-22-12	
Cadmium	**ND**	0.70	6010B	2-21-12	2-22-12	
Chromium	**40**	0.70	6010B	2-21-12	2-22-12	
Lead	**20**	7.0	6010B	2-21-12	2-22-12	
Mercury	**ND**	0.35	7471A	2-16-12	2-16-12	
Selenium	**ND**	14	6010B	2-21-12	2-22-12	
Silver	**ND**	0.70	6010B	2-21-12	2-22-12	
Lab ID:	05-112-03					
Client ID:	**B43-TP11-9**					
Arsenic	**ND**	12	6010B	2-21-12	2-22-12	
Barium	**140**	3.0	6010B	2-21-12	2-22-12	
Cadmium	**ND**	0.60	6010B	2-21-12	2-22-12	
Chromium	**64**	0.60	6010B	2-21-12	2-22-12	
Lead	**ND**	6.0	6010B	2-21-12	2-22-12	
Mercury	**ND**	0.30	7471A	2-16-12	2-16-12	
Selenium	**ND**	12	6010B	2-21-12	2-22-12	
Silver	**ND**	0.60	6010B	2-21-12	2-22-12	

Date of Report: May 25, 2012
Samples Submitted: May 11, 2012
Laboratory Reference: 1205-112
Project: 2012-046

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

Date Extracted: 2-16&21-12
Date Analyzed: 2-16&22-12

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: MB0516S2&MB0521SM2

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

Date of Report: May 25, 2012
Samples Submitted: May 11, 2012
Laboratory Reference: 1205-112
Project: 2012-046

TOTAL METALS
EPA 6010B/7471A
DUPLICATE QUALITY CONTROL

Date Extracted: 2-16&21-12
Date Analyzed: 2-16&22-12

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 05-099-02

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**ND**	**ND**	NA	10	
Barium	**54.2**	**53.3**	2	2.5	
Cadmium	**ND**	**ND**	NA	0.50	
Chromium	**40.3**	**37.4**	8	0.50	
Lead	**ND**	**ND**	NA	5.0	
Mercury	**ND**	**ND**	NA	0.25	
Selenium	**ND**	**ND**	NA	10	
Silver	**ND**	**ND**	NA	0.50	

Date of Report: May 25, 2012
Samples Submitted: May 11, 2012
Laboratory Reference: 1205-112
Project: 2012-046

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

Date Extracted: 2-16&21-12
Date Analyzed: 2-16&22-12

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 05-099-02

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	**92.2**	92	**94.5**	94	3	
Barium	100	**151**	97	**153**	99	2	
Cadmium	50.0	**47.7**	95	**47.9**	96	0	
Chromium	100	**130**	90	**130**	89	0	
Lead	250	**232**	93	**232**	93	0	
Mercury	0.500	**0.496**	99	**0.505**	101	2	
Selenium	100	**90.8**	91	**89.3**	89	2	
Silver	25.0	**20.7**	83	**20.7**	83	0	

Date of Report: May 25, 2012
Samples Submitted: May 11, 2012
Laboratory Reference: 1205-112
Project: 2012-046

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

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B43-TP11-5**					
Laboratory ID:	05-112-02					
Diesel Range Organics	**110**	35	NWTPH-Dx	5-23-12	5-23-12	N
Lube Oil	**580**	70	NWTPH-Dx	5-23-12	5-23-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***104***	***50-150***				

Date of Report: May 25, 2012
Samples Submitted: May 11, 2012
Laboratory Reference: 1205-112
Project: 2012-046

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

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0523S1					
Diesel Range Organics	**ND**	25	NWTPH-Dx	5-23-12	5-23-12	
Lube Oil Range Organics	**ND**	50	NWTPH-Dx	5-23-12	5-23-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***106***	***50-150***				

Analyte	Result		Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE							
Laboratory ID:	05-215-03						
	ORIG	DUP					
Diesel Range Organics	**ND**	**ND**			NA	NA	
Lube Oil Range Organics	**ND**	**ND**			NA	NA	
Surrogate:							
o-Terphenyl			***116*** ***105***	***50-150***			

Date of Report: May 25, 2012
Samples Submitted: May 11, 2012
Laboratory Reference: 1205-112
Project: 2012-046

PAHs by EPA 8270D/SIM
(with silica gel clean-up)

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B43-TP11-5**					
Laboratory ID:	05-112-02					
Naphthalene	**0.37**	0.0093	EPA 8270/SIM	5-22-12	5-24-12	
2-Methylnaphthalene	**0.088**	0.0093	EPA 8270/SIM	5-22-12	5-24-12	
1-Methylnaphthalene	**0.052**	0.0093	EPA 8270/SIM	5-22-12	5-24-12	
Benzo[a]anthracene	**0.019**	0.0093	EPA 8270/SIM	5-22-12	5-24-12	
Chrysene	**0.026**	0.0093	EPA 8270/SIM	5-22-12	5-24-12	
Benzo[b]fluoranthene	**0.020**	0.0093	EPA 8270/SIM	5-22-12	5-24-12	
Benzo(j,k)fluoranthene	**ND**	0.0093	EPA 8270/SIM	5-22-12	5-24-12	
Benzo[a]pyrene	**0.013**	0.0093	EPA 8270/SIM	5-22-12	5-24-12	
Indeno(1,2,3-c,d)pyrene	**0.012**	0.0093	EPA 8270/SIM	5-22-12	5-24-12	
Dibenz[a,h]anthracene	**ND**	0.0093	EPA 8270/SIM	5-22-12	5-24-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
2-Fluorobiphenyl	***45***	***43 - 109***				
Pyrene-d10	***35***	***38 - 128***				Q
Terphenyl-d14	***41***	***33 - 119***				

Date of Report: May 25, 2012
Samples Submitted: May 11, 2012
Laboratory Reference: 1205-112
Project: 2012-046

PAHs by EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
(with silica gel clean-up)

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0522S1					
Naphthalene	**ND**	0.0067	EPA 8270/SIM	5-22-12	5-23-12	
2-Methylnaphthalene	**ND**	0.0067	EPA 8270/SIM	5-22-12	5-23-12	
1-Methylnaphthalene	**ND**	0.0067	EPA 8270/SIM	5-22-12	5-23-12	
Benzo[a]anthracene	**ND**	0.0067	EPA 8270/SIM	5-22-12	5-23-12	
Chrysene	**ND**	0.0067	EPA 8270/SIM	5-22-12	5-23-12	
Benzo[b]fluoranthene	**ND**	0.0067	EPA 8270/SIM	5-22-12	5-23-12	
Benzo(j,k)fluoranthene	**ND**	0.0067	EPA 8270/SIM	5-22-12	5-23-12	
Benzo[a]pyrene	**ND**	0.0067	EPA 8270/SIM	5-22-12	5-23-12	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0067	EPA 8270/SIM	5-22-12	5-23-12	
Dibenz[a,h]anthracene	**ND**	0.0067	EPA 8270/SIM	5-22-12	5-23-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
2-Fluorobiphenyl	***87***	***43 - 109***				
Pyrene-d10	***87***	***38 - 128***				
Terphenyl-d14	***87***	***33 - 119***				

Date of Report: May 25, 2012
Samples Submitted: May 11, 2012
Laboratory Reference: 1205-112
Project: 2012-046

PAHs by EPA 8270D/SIM
SB/SBD QUALITY CONTROL
(with silica gel clean-up)

Matrix: Soil
Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0522S1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	**0.0721**	**0.0696**	0.0833	0.0833	87	84	43 - 108	4	27	
Benzo[a]anthracene	**0.0845**	**0.0834**	0.0833	0.0833	101	100	63 - 116	1	12	
Chrysene	**0.0739**	**0.0726**	0.0833	0.0833	89	87	67 - 118	2	12	
Benzo[b]fluoranthene	**0.0705**	**0.0695**	0.0833	0.0833	85	83	58 - 127	1	20	
Benzo(j,k)fluoranthene	**0.0699**	**0.0688**	0.0833	0.0833	84	83	42 - 134	2	26	
Benzo[a]pyrene	**0.0684**	**0.0673**	0.0833	0.0833	82	81	55 - 111	2	19	
Indeno(1,2,3-c,d)pyrene	**0.0743**	**0.0712**	0.0833	0.0833	89	85	60 - 125	4	20	
Dibenz[a,h]anthracene	**0.0721**	**0.0711**	0.0833	0.0833	87	85	62 - 125	1	19	
Surrogate:										
2-Fluorobiphenyl					***88***	***84***	***43 - 109***			
Pyrene-d10					***88***	***88***	***38 - 128***			
Terphenyl-d14					***85***	***85***	***33 - 119***			

Date of Report: May 25, 2012
Samples Submitted: May 11, 2012
Laboratory Reference: 1205-112
Project: 2012-046

BTEX
EPA 8260B

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B43-TP11-5**					
Laboratory ID:	05-112-02					
Benzene	ND	0.0013	EPA 8260	5-17-12	5-18-12	
Toluene	ND	0.0065	EPA 8260	5-17-12	5-18-12	
Ethylbenzene	ND	0.0013	EPA 8260	5-17-12	5-18-12	
m,p-Xylene	ND	0.0026	EPA 8260	5-17-12	5-18-12	
o-Xylene	ND	0.0013	EPA 8260	5-17-12	5-18-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
Dibromofluoromethane	***102***	***63-127***				
Toluene-d8	***99***	***65-129***				
4-Bromofluorobenzene	***99***	***55-121***				

Date of Report: May 25, 2012
Samples Submitted: May 11, 2012
Laboratory Reference: 1205-112
Project: 2012-046

BTEX
EPA 8260B
QUALITY CONTROL

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0518S1					
Benzene	ND	0.0010	EPA 8260	5-18-12	5-18-12	
Toluene	ND	0.0050	EPA 8260	5-18-12	5-18-12	
Ethylbenzene	ND	0.0010	EPA 8260	5-18-12	5-18-12	
m,p-Xylene	ND	0.0020	EPA 8260	5-18-12	5-18-12	
o-Xylene	ND	0.0010	EPA 8260	5-18-12	5-18-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
Dibromofluoromethane	***98***	***63-127***				
Toluene-d8	***101***	***65-129***				
4-Bromofluorobenzene	***107***	***55-121***				

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0518S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**0.0394**	**0.0397**	0.0500	0.0500	79	79	70-130	1	19	
Benzene	**0.0438**	**0.0434**	0.0500	0.0500	88	87	70-125	1	15	
Trichloroethene	**0.0486**	**0.0486**	0.0500	0.0500	97	97	70-122	0	14	
Toluene	**0.0477**	**0.0507**	0.0500	0.0500	95	101	73-120	6	16	
Chlorobenzene	**0.0517**	**0.0507**	0.0500	0.0500	103	101	74-120	2	12	
Surrogate:										
Dibromofluoromethane					***93***	***94***	***63-127***			
Toluene-d8					***96***	***105***	***65-129***			
4-Bromofluorobenzene					***102***	***104***	***55-121***			

Date of Report: May 25, 2012
Samples Submitted: May 11, 2012
Laboratory Reference: 1205-112
Project: 2012-046

PCBs by EPA 8082

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B43-TP11-5**					
Laboratory ID:	05-112-02					
Aroclor 1016	**ND**	0.070	EPA 8082	5-18-12	5-18-12	
Aroclor 1221	**ND**	0.070	EPA 8082	5-18-12	5-18-12	
Aroclor 1232	**ND**	0.070	EPA 8082	5-18-12	5-18-12	
Aroclor 1242	**ND**	0.070	EPA 8082	5-18-12	5-18-12	
Aroclor 1248	**ND**	0.070	EPA 8082	5-18-12	5-18-12	
Aroclor 1254	**ND**	0.070	EPA 8082	5-18-12	5-18-12	
Aroclor 1260	**ND**	0.070	EPA 8082	5-18-12	5-18-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
DCB	***106***	***42-123***				

Date of Report: May 25, 2012
Samples Submitted: May 11, 2012
Laboratory Reference: 1205-112
Project: 2012-046

PCBs by EPA 8082
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0518S1					
Aroclor 1016	**ND**	0.050	EPA 8082	5-18-12	5-18-12	
Aroclor 1221	**ND**	0.050	EPA 8082	5-18-12	5-18-12	
Aroclor 1232	**ND**	0.050	EPA 8082	5-18-12	5-18-12	
Aroclor 1242	**ND**	0.050	EPA 8082	5-18-12	5-18-12	
Aroclor 1248	**ND**	0.050	EPA 8082	5-18-12	5-18-12	
Aroclor 1254	**ND**	0.050	EPA 8082	5-18-12	5-18-12	
Aroclor 1260	**ND**	0.050	EPA 8082	5-18-12	5-18-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
DCB	***115***	***42-123***				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
MATRIX SPIKES											
Laboratory ID:	05-099-04										
	MS	MSD	MS	MSD		MS	MSD				
Aroclor 1260	**0.600**	**0.605**	0.500	0.500	ND	**120**	**121**	44-125	1	15	
Surrogate:											
DCB						***100***	***105***	***42-123***			

Date of Report: May 25, 2012
Samples Submitted: May 11, 2012
Laboratory Reference: 1205-112
Project: 2012-046

% MOISTURE

Date Analyzed: 5-14-12

Client ID	Lab ID	% Moisture
B43-TP11-5	05-112-02	28
B43-TP11-9	05-112-03	16

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

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

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

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

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

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

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

I - Compound recovery is outside of the control limits.

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

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

L - The RPD is outside of the control limits.

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

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

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

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

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

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

Q - Surrogate recovery is outside of the control limits.

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

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

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

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

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

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

X - Sample extract treated with a mercury cleanup procedure.

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

Z -

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

05-112

HWA GeoSciences Inc.

21312 30th Drive SE, Suite 110, Bothell, Washington 98021-7010
Tel 425.774.0106 Fax 425.774.2714 www.hwageo.com

Chain of Custody and Laboratory Anaylsis Request

DATE: 5/10/12
PAGE: 1 of 1

PROJECT NAME: Block 43 #: 2312-046
SAMPLERS NAME: Atkins PHONE:
SAMPLERS SIGNATURE: DA DATE:
HWA CONTACT: J. Thompson PHONE:

HWA SAMPLE ID	DATE	TIME	MATRIX	LAB ID	# OF BOTTLE
B43-TP11-3	5/10/12	1430	Soil	1	6
B43-TP11-5	"	1440	"	2	6
B43-TP11-9	"	1450	"	3	6

ANALYSIS REQUESTED

Archive - HOLD	Total Resp. Metals		NWTPH-Dx	ePAHs + Naphthalene 8270		BTEX 8260	PCBs					%MOISTURE	HOLD	EDD
													X	/
X	X		⊗	⊗		⊗	⊗					X		/
X	X											↓		/

TURNAROUND TIME
☐ DAYS
☒ STANDARD

REMARKS
Hold Remaining Volume For Added Analyses.

⊗ Added 5/17/12. DB (STA)

PRINT NAME	SIGNATURE	COMPANY	DATE	TIME	REMARKS
Relinquished by: Chrissi Fisk		HWA GeoSciences	5/11/12	10AM	
Received by: Francisco Guzman		speedy messenger	5-11-12	10AM	
Relinquished by: Francisco Guzman		speedy messenger	5-11-12	11:15AM	
Received by: M. VOUN		OSE	5/11/12	1115	

DISTRIBUTION: WHITE - Return to HWA GeoSciences; YELLOW - Retain by Lab; PINK - Retain by Sampler

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

May 25, 2012

Jeff Thompson
HWA GeoSciences, Inc.
21312 30th Drive SE, Suite 110
Bothell, WA 98021

Re: Analytical Data for Project 2012-046-22
Laboratory Reference No. 1205-119

Dear Jeff:

Enclosed are the analytical results and associated quality control data for samples submitted on May 11, 2012.

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

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

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: May 25, 2012
Samples Submitted: May 11, 2012
Laboratory Reference: 1205-119
Project: 2012-046-22

Case Narrative

Samples were collected on May 11, 2012 and received by the laboratory on May 11, 2012. They were maintained at the laboratory at a temperature of 2°C to 6°C.

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

Date of Report: May 25, 2012
Samples Submitted: May 11, 2012
Laboratory Reference: 1205-119
Project: 2012-046-22

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

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B43-1-GW**					
Laboratory ID:	05-119-01					
Gasoline Range Organics	**ND**	0.12	NWTPH-HCID	5-15-12	5-15-12	
Diesel Range Organics	**ND**	0.29	NWTPH-HCID	5-15-12	5-15-12	
Lube Oil Range Organics	**ND**	0.46	NWTPH-HCID	5-15-12	5-15-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***103***	***50-150***				
Client ID:	**B43-2-GW**					
Laboratory ID:	05-119-02					
Gasoline Range Organics	**Detected**	0.11	NWTPH-HCID	5-15-12	5-15-12	
Diesel Range Organics	**ND**	0.28	NWTPH-HCID	5-15-12	5-15-12	
Lube Oil Range Organics	**ND**	0.46	NWTPH-HCID	5-15-12	5-15-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***118***	***50-150***				
Client ID:	**B43-K-MW3-GW**					
Laboratory ID:	05-119-03					
Gasoline Range Organics	**ND**	0.11	NWTPH-HCID	5-15-12	5-15-12	
Diesel Range Organics	**ND**	0.27	NWTPH-HCID	5-15-12	5-15-12	
Lube Oil Range Organics	**ND**	0.44	NWTPH-HCID	5-15-12	5-15-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***106***	***50-150***				
Client ID:	**B43-4-GW**					
Laboratory ID:	05-119-04					
Gasoline Range Organics	**ND**	0.12	NWTPH-HCID	5-15-12	5-15-12	
Diesel Range Organics	**ND**	0.29	NWTPH-HCID	5-15-12	5-15-12	
Lube Oil Range Organics	**ND**	0.47	NWTPH-HCID	5-15-12	5-15-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***118***	***50-150***				
Client ID:	**B43-KMW-6-GW**					
Laboratory ID:	05-119-05					
Gasoline Range Organics	**Detected**	0.12	NWTPH-HCID	5-15-12	5-15-12	
Diesel Range Organics	**ND**	0.49	NWTPH-HCID	5-15-12	5-15-12	U1
Lube Oil Range Organics	**ND**	0.48	NWTPH-HCID	5-15-12	5-15-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***109***	***50-150***				

Date of Report: May 25, 2012
Samples Submitted: May 11, 2012
Laboratory Reference: 1205-119
Project: 2012-046-22

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

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B43-DUP-GW**					
Laboratory ID:	05-119-06					
Gasoline Range Organics	**Detected**	0.11	NWTPH-HCID	5-15-12	5-15-12	
Diesel Range Organics	**ND**	0.49	NWTPH-HCID	5-15-12	5-15-12	U1
Lube Oil Range Organics	**ND**	0.45	NWTPH-HCID	5-15-12	5-15-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***107***	***50-150***				

Date of Report: May 25, 2012
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Laboratory Reference: 1205-119
Project: 2012-046-22

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

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0515W1					
Gasoline Range Organics	**ND**	0.10	NWTPH-HCID	5-15-12	5-15-12	
Diesel Range Organics	**ND**	0.25	NWTPH-HCID	5-15-12	5-15-12	
Lube Oil Range Organics	**ND**	0.40	NWTPH-HCID	5-15-12	5-15-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***109***	***50-150***				

Date of Report: May 25, 2012
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NWTPH-Gx/BTEX

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TRIP BLANK**					
Laboratory ID:	05-119-07					
Benzene	**ND**	1.0	EPA 8021	5-15-12	5-15-12	
Toluene	**ND**	1.0	EPA 8021	5-15-12	5-15-12	
Ethyl Benzene	**ND**	1.0	EPA 8021	5-15-12	5-15-12	
m,p-Xylene	**ND**	1.0	EPA 8021	5-15-12	5-15-12	
o-Xylene	**ND**	1.0	EPA 8021	5-15-12	5-15-12	
Gasoline	**ND**	100	NWTPH-Gx	5-15-12	5-15-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
Fluorobenzene	***83***	***73-121***				

Date of Report: May 25, 2012
Samples Submitted: May 11, 2012
Laboratory Reference: 1205-119
Project: 2012-046-22

NWTPH-Gx/BTEX
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0515W1					
Benzene	**ND**	1.0	EPA 8021	5-15-12	5-15-12	
Toluene	**ND**	1.0	EPA 8021	5-15-12	5-15-12	
Ethyl Benzene	**ND**	1.0	EPA 8021	5-15-12	5-15-12	
m,p-Xylene	**ND**	1.0	EPA 8021	5-15-12	5-15-12	
o-Xylene	**ND**	1.0	EPA 8021	5-15-12	5-15-12	
Gasoline	**ND**	100	NWTPH-Gx	5-15-12	5-15-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
Fluorobenzene	***83***	***73-121***				
Laboratory ID:	MB0517W2					
Benzene	**ND**	1.0	EPA 8021	5-17-12	5-17-12	
Toluene	**ND**	1.0	EPA 8021	5-17-12	5-17-12	
Ethyl Benzene	**ND**	1.0	EPA 8021	5-17-12	5-17-12	
m,p-Xylene	**ND**	1.0	EPA 8021	5-17-12	5-17-12	
o-Xylene	**ND**	1.0	EPA 8021	5-17-12	5-17-12	
Gasoline	**ND**	100	NWTPH-Gx	5-17-12	5-17-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
Fluorobenzene	***92***	***73-121***				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	05-126-01										
	ORIG	DUP									
Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Toluene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Ethyl Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
m,p-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
o-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Gasoline	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Surrogate:											
Fluorobenzene						***81***	***82***	***73-121***			
MATRIX SPIKES											
Laboratory ID:	05-126-01										
	MS	MSD	MS	MSD		MS	MSD				
Benzene	**52.1**	**50.4**	50.0	50.0	ND	**104**	**101**	82-120	3	8	
Toluene	**53.1**	**52.8**	50.0	50.0	ND	**106**	**106**	84-119	1	8	
Ethyl Benzene	**52.9**	**54.6**	50.0	50.0	ND	**106**	**109**	84-122	3	9	
m,p-Xylene	**52.8**	**54.4**	50.0	50.0	ND	**106**	**109**	85-121	3	9	
o-Xylene	**51.8**	**54.1**	50.0	50.0	ND	**104**	**108**	84-121	4	9	
Surrogate:											
Fluorobenzene						***94***	***96***	***73-121***			

Date of Report: May 25, 2012
Samples Submitted: May 11, 2012
Laboratory Reference: 1205-119
Project: 2012-046-22

DISSOLVED METALS
EPA 200.8/7470A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	05-119-01					
Client ID:	**B43-1-GW**					
Arsenic	**3.9**	3.0	200.8		5-18-12	
Barium	**170**	25	200.8		5-16-12	
Cadmium	**ND**	4.0	200.8		5-16-12	
Chromium	**ND**	10	200.8		5-16-12	
Lead	**ND**	1.0	200.8		5-16-12	
Mercury	**ND**	0.50	7470A		5-16-12	
Selenium	**ND**	5.0	200.8		5-16-12	
Silver	**ND**	10	200.8		5-16-12	
Lab ID:	05-119-02					
Client ID:	**B43-2-GW**					
Arsenic	**15**	3.0	200.8		5-18-12	
Barium	**88**	25	200.8		5-16-12	
Cadmium	**ND**	4.0	200.8		5-16-12	
Chromium	**ND**	10	200.8		5-16-12	
Lead	**ND**	1.0	200.8		5-16-12	
Mercury	**ND**	0.50	7470A		5-16-12	
Selenium	**ND**	5.0	200.8		5-16-12	
Silver	**ND**	10	200.8		5-16-12	

Date of Report: May 25, 2012
Samples Submitted: May 11, 2012
Laboratory Reference: 1205-119
Project: 2012-046-22

DISSOLVED METALS
EPA 200.8/7470A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	05-119-03					
Client ID:	**B43-K-MW3-GW**					
Arsenic	**ND**	3.0	200.8		5-16-12	
Barium	**38**	25	200.8		5-16-12	
Cadmium	**ND**	4.0	200.8		5-16-12	
Chromium	**ND**	10	200.8		5-16-12	
Lead	**ND**	1.0	200.8		5-16-12	
Mercury	**ND**	0.50	7470A		5-16-12	
Selenium	**ND**	5.0	200.8		5-16-12	
Silver	**ND**	10	200.8		5-16-12	
Lab ID:	05-119-04					
Client ID:	**B43-4-GW**					
Arsenic	**ND**	3.0	200.8		5-16-12	
Barium	**ND**	25	200.8		5-16-12	
Cadmium	**ND**	4.0	200.8		5-16-12	
Chromium	**ND**	10	200.8		5-16-12	
Lead	**ND**	1.0	200.8		5-16-12	
Mercury	**ND**	0.50	7470A		5-16-12	
Selenium	**ND**	5.0	200.8		5-16-12	
Silver	**ND**	10	200.8		5-16-12	

Date of Report: May 25, 2012
Samples Submitted: May 11, 2012
Laboratory Reference: 1205-119
Project: 2012-046-22

DISSOLVED METALS
EPA 200.8/7470A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	05-119-05					
Client ID:	**B43-KMW-6-GW**					
Arsenic	**8.7**	3.0	200.8		5-18-12	
Barium	**62**	25	200.8		5-16-12	
Cadmium	**ND**	4.0	200.8		5-16-12	
Chromium	**ND**	10	200.8		5-16-12	
Lead	**ND**	1.0	200.8		5-16-12	
Mercury	**ND**	0.50	7470A		5-16-12	
Selenium	**ND**	5.0	200.8		5-16-12	
Silver	**ND**	10	200.8		5-16-12	
Lab ID:	05-119-06					
Client ID:	**B43-DUP-GW**					
Arsenic	**8.7**	3.0	200.8		5-18-12	
Barium	**61**	25	200.8		5-16-12	
Cadmium	**ND**	4.0	200.8		5-16-12	
Chromium	**ND**	10	200.8		5-16-12	
Lead	**ND**	1.0	200.8		5-16-12	
Mercury	**ND**	0.50	7470A		5-16-12	
Selenium	**ND**	5.0	200.8		5-16-12	
Silver	**ND**	10	200.8		5-16-12	

Date of Report: May 25, 2012
Samples Submitted: May 11, 2012
Laboratory Reference: 1205-119
Project: 2012-046-22

DISSOLVED METALS
EPA 200.8
METHOD BLANK QUALITY CONTROL

Date Analyzed: 5-16&18-12

Matrix: Water
Units: ug/L (ppb)

Lab ID: MB0516D2

Analyte	Method	Result	PQL
Arsenic	200.8	**ND**	3.0
Barium	200.8	**ND**	25
Cadmium	200.8	**ND**	4.0
Chromium	200.8	**ND**	10
Lead	200.8	**ND**	1.0
Selenium	200.8	**ND**	5.0
Silver	200.8	**ND**	10

Date of Report: May 25, 2012
Samples Submitted: May 11, 2012
Laboratory Reference: 1205-119
Project: 2012-046-22

DISSOLVED MERCURY
EPA 7470A
METHOD BLANK QUALITY CONTROL

Date Analyzed: 5-16-12

Matrix: Water
Units: ug/L (ppb)

Lab ID: MB0516D1

Analyte	Method	Result	PQL
Mercury	7470A	**ND**	0.50

Date of Report: May 25, 2012
Samples Submitted: May 11, 2012
Laboratory Reference: 1205-119
Project: 2012-046-22

DISSOLVED METALS
EPA 200.8
DUPLICATE QUALITY CONTROL

Date Analyzed: 5-16&18-12

Matrix: Water
Units: ug/L (ppb)

Lab ID: 05-065-03

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**105**	**108**	3	3.0	
Barium	**91.6**	**91.4**	0	25	
Cadmium	**ND**	**ND**	NA	4.0	
Chromium	**ND**	**ND**	NA	10	
Lead	**ND**	**ND**	NA	1.0	
Selenium	**ND**	**ND**	NA	5.0	
Silver	**ND**	**ND**	NA	10	

Date of Report: May 25, 2012
Samples Submitted: May 11, 2012
Laboratory Reference: 1205-119
Project: 2012-046-22

DISSOLVED MERCURY
EPA 7470A
DUPLICATE QUALITY CONTROL

Date Analyzed: 5-16-12

Matrix: Water
Units: ug/L (ppb)

Lab ID: 05-119-01

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Mercury	**ND**	**ND**	NA	0.50	

Date of Report: May 25, 2012
Samples Submitted: May 11, 2012
Laboratory Reference: 1205-119
Project: 2012-046-22

DISSOLVED METALS
EPA 200.8
MS/MSD QUALITY CONTROL

Date Analyzed: 5-16&18-12

Matrix: Water
Units: ug/L (ppb)

Lab ID: 05-065-03

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	200	**315**	105	**318**	107	1	
Barium	200	**290**	99	**296**	102	2	
Cadmium	200	**211**	106	**211**	106	0	
Chromium	200	**191**	95	**219**	109	14	
Lead	200	**192**	96	**195**	97	1	
Selenium	200	**221**	110	**224**	112	2	
Silver	200	**183**	91	**186**	93	2	

Date of Report: May 25, 2012
Samples Submitted: May 11, 2012
Laboratory Reference: 1205-119
Project: 2012-046-22

DISSOLVED MERCURY
EPA 7470A
MS/MSD QUALITY CONTROL

Date Analyzed: 5-16-12

Matrix: Water
Units: ug/L (ppb)

Lab ID: 05-119-01

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Mercury	12.5	**10.5**	84	**10.4**	83	1	

Date of Report: May 25, 2012
Samples Submitted: May 11, 2012
Laboratory Reference: 1205-119
Project: 2012-046-22

NWTPH-Gx

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B43-2-GW**					
Laboratory ID:	05-119-02					
Gasoline	**710**	100	NWTPH-Gx	5-21-12	5-21-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
Fluorobenzene	***86***	***73-121***				
Client ID:	**B43-KMW-6-GW**					
Laboratory ID:	05-119-05					
Gasoline	**1400**	100	NWTPH-Gx	5-21-12	5-21-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
Fluorobenzene	***100***	***73-121***				
Client ID:	**B43-DUP-GW**					
Laboratory ID:	05-119-06					
Gasoline	**1300**	100	NWTPH-Gx	5-21-12	5-21-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
Fluorobenzene	***99***	***73-121***				

Date of Report: May 25, 2012
Samples Submitted: May 11, 2012
Laboratory Reference: 1205-119
Project: 2012-046-22

NWTPH-Gx
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0521W1					
Gasoline	**ND**	100	NWTPH-Gx	5-21-12	5-21-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
Fluorobenzene	***90***	***73-121***				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	05-172-02										
	ORIG	DUP									
Gasoline	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Surrogate:											
Fluorobenzene						***89***	***90***	***73-121***			

Date of Report: May 25, 2012
Samples Submitted: May 11, 2012
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Project: 2012-046-22

VOLATILES by EPA 8260B

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B43-2-GW**					
Laboratory ID:	05-119-02					
Methyl t-Butyl Ether	ND	0.20	EPA 8260	5-18-12	5-18-12	
Benzene	3.9	0.20	EPA 8260	5-18-12	5-18-12	
1,2-Dichloroethane	ND	1.0	EPA 8260	5-18-12	5-18-12	
Toluene	ND	1.0	EPA 8260	5-18-12	5-18-12	
Ethylbenzene	0.33	0.20	EPA 8260	5-18-12	5-18-12	
m,p-Xylene	10	0.40	EPA 8260	5-18-12	5-18-12	
o-Xylene	0.42	0.20	EPA 8260	5-18-12	5-18-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
Dibromofluoromethane	***87***	***68-120***				
Toluene-d8	***84***	***73-120***				
4-Bromofluorobenzene	***84***	***65-120***				

Date of Report: May 25, 2012
Samples Submitted: May 11, 2012
Laboratory Reference: 1205-119
Project: 2012-046-22

VOLATILES by EPA 8260B

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B43-KMW-6-GW**					
Laboratory ID:	05-119-05					
Methyl t-Butyl Ether	ND	0.20	EPA 8260	5-18-12	5-18-12	
Benzene	1.8	0.20	EPA 8260	5-18-12	5-18-12	
1,2-Dichloroethane	ND	1.0	EPA 8260	5-18-12	5-18-12	
Toluene	1.6	1.0	EPA 8260	5-18-12	5-18-12	
Ethylbenzene	3.1	0.20	EPA 8260	5-18-12	5-18-12	
m,p-Xylene	3.8	0.40	EPA 8260	5-18-12	5-18-12	
o-Xylene	0.30	0.20	EPA 8260	5-18-12	5-18-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
Dibromofluoromethane	***85***	***68-120***				
Toluene-d8	***94***	***73-120***				
4-Bromofluorobenzene	***87***	***65-120***				

Date of Report: May 25, 2012
Samples Submitted: May 11, 2012
Laboratory Reference: 1205-119
Project: 2012-046-22

VOLATILES by EPA 8260B

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B43-DUP-GW**					
Laboratory ID:	05-119-06					
Methyl t-Butyl Ether	ND	0.20	EPA 8260	5-18-12	5-18-12	
Benzene	1.8	0.20	EPA 8260	5-18-12	5-18-12	
1,2-Dichloroethane	ND	1.0	EPA 8260	5-18-12	5-18-12	
Toluene	1.6	1.0	EPA 8260	5-18-12	5-18-12	
Ethylbenzene	3.0	0.20	EPA 8260	5-18-12	5-18-12	
m,p-Xylene	3.3	0.40	EPA 8260	5-18-12	5-18-12	
o-Xylene	0.28	0.20	EPA 8260	5-18-12	5-18-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
Dibromofluoromethane	***88***	***68-120***				
Toluene-d8	***93***	***73-120***				
4-Bromofluorobenzene	***86***	***65-120***				

Date of Report: May 25, 2012
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Project: 2012-046-22

VOLATILES by EPA 8260B
METHOD BLANK QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0518W1					
Methyl t-Butyl Ether	ND	0.20	EPA 8260	5-18-12	5-18-12	
Benzene	ND	0.20	EPA 8260	5-18-12	5-18-12	
1,2-Dichloroethane	ND	1.0	EPA 8260	5-18-12	5-18-12	
Toluene	ND	1.0	EPA 8260	5-18-12	5-18-12	
Ethylbenzene	ND	0.20	EPA 8260	5-18-12	5-18-12	
m,p-Xylene	ND	0.40	EPA 8260	5-18-12	5-18-12	
o-Xylene	ND	0.20	EPA 8260	5-18-12	5-18-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
Dibromofluoromethane	***95***	***68-120***				
Toluene-d8	***87***	***73-120***				
4-Bromofluorobenzene	***91***	***65-120***				

Date of Report: May 25, 2012
Samples Submitted: May 11, 2012
Laboratory Reference: 1205-119
Project: 2012-046-22

VOLATILES by EPA 8260B
SB/SBD QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0518W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**8.53**	**8.18**	10.0	10.0	85	82	70-130	4	11	
Benzene	**9.11**	**8.85**	10.0	10.0	91	89	75-123	3	8	
Trichloroethene	**9.41**	**8.99**	10.0	10.0	94	90	80-113	5	9	
Toluene	**9.32**	**9.16**	10.0	10.0	93	92	80-113	2	8	
Chlorobenzene	**10.7**	**10.6**	10.0	10.0	107	106	80-115	1	8	
Surrogate:										
Dibromofluoromethane					***89***	***91***	***68-120***			
Toluene-d8					***84***	***84***	***73-120***			
4-Bromofluorobenzene					***84***	***86***	***65-120***			

Date of Report: May 25, 2012
Samples Submitted: May 11, 2012
Laboratory Reference: 1205-119
Project: 2012-046-22

NAPHTHALENES by EPA 8270D/SIM
(with silica gel clean-up)

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B43-2-GW**					
Laboratory ID:	05-119-02					
Naphthalene	**1.3**	0.10	EPA 8270/SIM	5-17-12	5-18-12	
2-Methylnaphthalene	**ND**	0.10	EPA 8270/SIM	5-17-12	5-18-12	
1-Methylnaphthalene	**0.18**	0.10	EPA 8270/SIM	5-17-12	5-18-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
2-Fluorobiphenyl	***78***	***38 - 105***				
Pyrene-d10	***86***	***37 - 121***				
Terphenyl-d14	***76***	***32 - 112***				

Date of Report: May 25, 2012
Samples Submitted: May 11, 2012
Laboratory Reference: 1205-119
Project: 2012-046-22

NAPHTHALENES by EPA 8270D/SIM
(with silica gel clean-up)

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B43-KMW-6-GW**					
Laboratory ID:	05-119-05					
Naphthalene	**0.44**	0.11	EPA 8270/SIM	5-17-12	5-18-12	
2-Methylnaphthalene	**0.36**	0.11	EPA 8270/SIM	5-17-12	5-18-12	
1-Methylnaphthalene	**1.7**	0.11	EPA 8270/SIM	5-17-12	5-18-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
2-Fluorobiphenyl	***69***	***38 - 105***				
Pyrene-d10	***83***	***37 - 121***				
Terphenyl-d14	***87***	***32 - 112***				

Date of Report: May 25, 2012
Samples Submitted: May 11, 2012
Laboratory Reference: 1205-119
Project: 2012-046-22

NAPHTHALENES by EPA 8270D/SIM
(with silica gel clean-up)

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B43-DUP-GW**					
Laboratory ID:	05-119-06					
Naphthalene	**0.38**	0.11	EPA 8270/SIM	5-17-12	5-18-12	
2-Methylnaphthalene	**0.41**	0.11	EPA 8270/SIM	5-17-12	5-18-12	
1-Methylnaphthalene	**1.9**	0.11	EPA 8270/SIM	5-17-12	5-18-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
2-Fluorobiphenyl	***70***	***38 - 105***				
Pyrene-d10	***77***	***37 - 121***				
Terphenyl-d14	***80***	***32 - 112***				

Date of Report: May 25, 2012
Samples Submitted: May 11, 2012
Laboratory Reference: 1205-119
Project: 2012-046-22

NAPHTHALENES by EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
(with silica gel clean-up)

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0517W1					
Naphthalene	**ND**	0.10	EPA 8270/SIM	5-17-12	5-17-12	
2-Methylnaphthalene	**ND**	0.10	EPA 8270/SIM	5-17-12	5-17-12	
1-Methylnaphthalene	**ND**	0.10	EPA 8270/SIM	5-17-12	5-17-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
2-Fluorobiphenyl	***89***	***38 - 105***				
Pyrene-d10	***88***	***37 - 121***				
Terphenyl-d14	***95***	***32 - 112***				

Date of Report: May 25, 2012
Samples Submitted: May 11, 2012
Laboratory Reference: 1205-119
Project: 2012-046-22

NAPHTHALENES by EPA 8270D/SIM
SB/SBD QUALITY CONTROL
(with silica gel clean-up)

Matrix: Water
Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0517W1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	**0.400**	**0.376**	0.500	0.500	80	75	38 - 110	6	35	
Acenaphthylene	**0.370**	**0.336**	0.500	0.500	74	67	47 - 120	10	30	
Acenaphthene	**0.394**	**0.358**	0.500	0.500	79	72	46 - 113	10	26	
Fluorene	**0.423**	**0.385**	0.500	0.500	85	77	58 - 104	9	25	
Phenanthrene	**0.431**	**0.395**	0.500	0.500	86	79	61 - 99	9	19	
Anthracene	**0.398**	**0.362**	0.500	0.500	80	72	55 - 122	9	19	
Fluoranthene	**0.436**	**0.400**	0.500	0.500	87	80	58 - 129	9	18	
Pyrene	**0.440**	**0.405**	0.500	0.500	88	81	57 - 126	8	25	
Benzo[a]anthracene	**0.496**	**0.450**	0.500	0.500	99	90	51 - 124	10	18	
Chrysene	**0.434**	**0.394**	0.500	0.500	87	79	53 - 123	10	20	
Benzo[b]fluoranthene	**0.430**	**0.393**	0.500	0.500	86	79	53 - 126	9	18	
Benzo(j,k)fluoranthene	**0.454**	**0.404**	0.500	0.500	91	81	51 - 126	12	23	
Benzo[a]pyrene	**0.432**	**0.388**	0.500	0.500	86	78	52 - 127	11	21	
Indeno(1,2,3-c,d)pyrene	**0.432**	**0.380**	0.500	0.500	86	76	49 - 123	13	26	
Dibenz[a,h]anthracene	**0.437**	**0.397**	0.500	0.500	87	79	39 - 125	10	31	
Benzo[g,h,i]perylene	**0.432**	**0.386**	0.500	0.500	86	77	40 - 125	11	30	
Surrogate:										
2-Fluorobiphenyl					***85***	***76***	***38 - 105***			
Pyrene-d10					***88***	***79***	***37 - 121***			
Terphenyl-d14					***90***	***80***	***32 - 112***			

Date of Report: May 25, 2012
Samples Submitted: May 11, 2012
Laboratory Reference: 1205-119
Project: 2012-046-22

EDB by EPA 8011

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B43-2-GW**					
Laboratory ID:	05-119-02					
EDB	**ND**	0.0095	EPA 8011	5-21-12	5-21-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
TCMX	***88***	***31-144***				
Client ID:	**B43-KMW-6-GW**					
Laboratory ID:	05-119-05					
EDB	**ND**	0.0096	EPA 8011	5-21-12	5-21-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
TCMX	***92***	***31-144***				
Client ID:	**B43-DUP-GW**					
Laboratory ID:	05-119-06					
EDB	**ND**	0.0096	EPA 8011	5-21-12	5-21-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
TCMX	***92***	***31-144***				

Date of Report: May 25, 2012
Samples Submitted: May 11, 2012
Laboratory Reference: 1205-119
Project: 2012-046-22

EDB by EPA 8011
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0521W1					
EDB	**ND**	0.010	EPA 8011	5-21-12	5-21-12	
Surrogate:	***Percent Recovery***	***Control Limits***				
TCMX	***101***	***31-144***				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS											
Laboratory ID:	SB0521W1										
	SB	SBD	SB	SBD		SB	SBD				
EDB	**0.100**	**0.0966**	0.100	0.100	N/A	**100**	**97**	78-122	3	8	
Surrogate:											
TCMX						***121***	***108***	***31-144***			

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

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

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

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

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

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

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

I - Compound recovery is outside of the control limits.

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

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

L - The RPD is outside of the control limits.

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

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

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

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

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

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

Q - Surrogate recovery is outside of the control limits.

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

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

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

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

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

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

X - Sample extract treated with a mercury cleanup procedure.

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

Z -

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

Chain of Custody

Page 1 of 1

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

Company: HWA
Project Number: 2012-046-22
Project Name: BLOCK 43
Project Manager: J. THOMPSON
Sampled by: ATKINS

Turnaround Request (in working days)

(Check One)

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

Laboratory Number: 05-119

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	No. of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260B (BTEX, EDC, MTBE)	Halogenated Volatiles 8260B	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level) (NAPHTHALENES ONLY)	PCBs 8082	Organochlorine Pesticides 8081A	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals (D's)	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664	EDB 8011				% Moisture
1	B-43-1-GW	5/11/12	900	W	14	/												/								
2	B43-2-GW		1015		1	/		⊗		⊗			⊗					/				⊗				
3	B43-K-MW3-GW		1145		↓	/												/								
4	B43-4-GW		1330		13	/												/								
5	B43-K MW-6-GW		1400		14	/		⊗		⊗			⊗					/				⊗				
6	B43-DUP-GW		0800		14	/		⊗		⊗			⊗					/				⊗				
7	TRIP BLANK	5/11/12	—		2		/																			

	Signature	Company	Date	Time
Relinquished		HWA	5/11/12	1440
Received	Tracy Hall	Speedy	5-11	1440
Relinquished		Speedy	5-11	343
Received		OSE	5/11/12	1543
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

~~HOLD (CONTINUING) SAMPLES~~
~~FOR FURTHER USE~~

⊗ Added 5/17/12. DB (STA)

Chromatograms with final report ☐

Data Package: Level III ☐ Level IV ☐

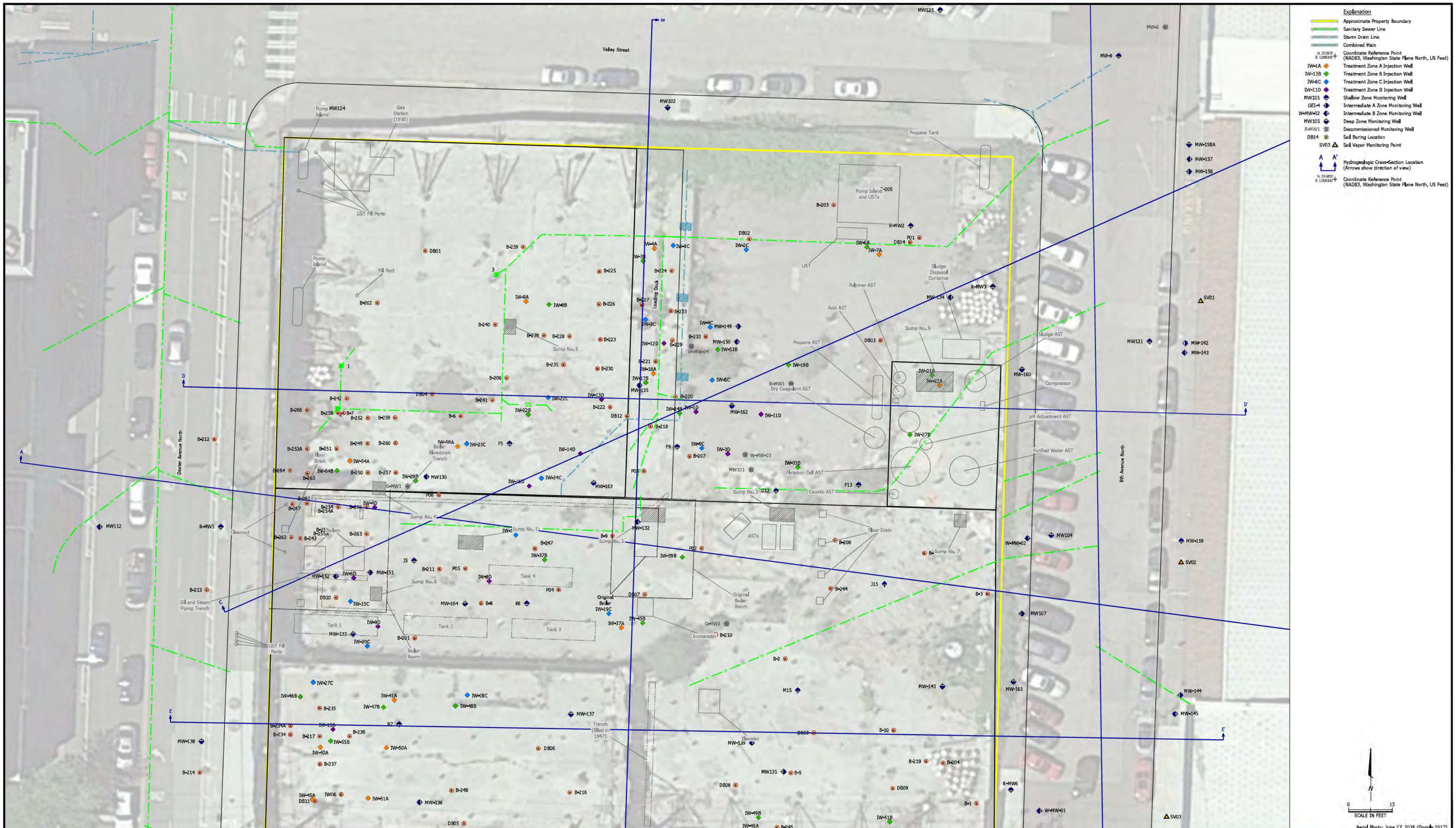
Electronic Data Deliverables (EDDs) ☐ _____

PES Environmental, Inc.
Engineering & Environmental Services

Property Location
Former American Linen Supply
700 Dexter Avenue North
Seattle, Washington

FIGURE
1

1413.001.02.003	141300102003_RIFS_1-2	WRH	12/19
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE

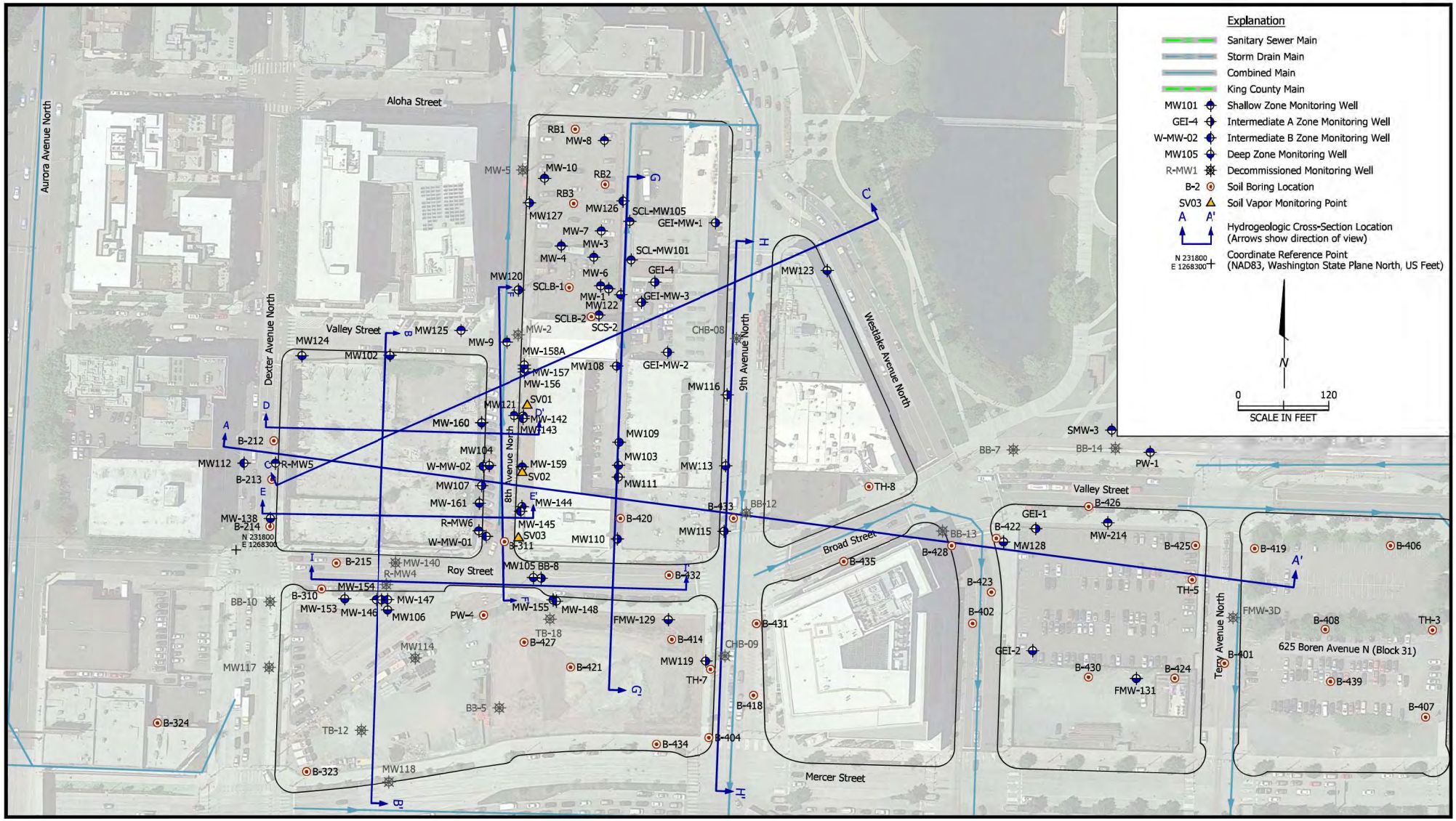

Valley Street
Roy Street
Dexter Avenue North
8th Avenue North
Explanation
Approximate Property Boundary
Sanitary Sewer Line
Storm Drain Line
Combined Main
N 231800 E 1268300 Coordinate Reference Point (NAD83, Washington State Plane North, US Feet)
IW-1A Treatment Zone A Injection Well
IW-13B Treatment Zone B Injection Well
IW-6C Treatment Zone C Injection Well
IW-11D Treatment Zone D Injection Well
MW101 Shallow Zone Monitoring Well
GEI-4 Intermediate A Zone Monitoring Well
W-MW-02 Intermediate B Zone Monitoring Well
MW105 Deep Zone Monitoring Well
R-MW1 Decommissioned Monitoring Well
DB14 Soil Boring Location
SV03 Soil Vapor Monitoring Point
A A' Hydrogeologic Cross-Section Location (Arrows show direction of view)
N 231800 E 1268300 Coordinate Reference Point (NAD83, Washington State Plane North, US Feet)
N
0 15
SCALE IN FEET
Aerial Photo: June 27, 2016 (Google 2017)

PES Environmental, Inc.
Engineering & Environmental Services

Property Exploration Location Map
Former American Linen Supply
700 Dexter Avenue North
Seattle, Washington

FIGURE 6

JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE
1413.001.02.003	141300102003_RIPS_6	WRH	12/19



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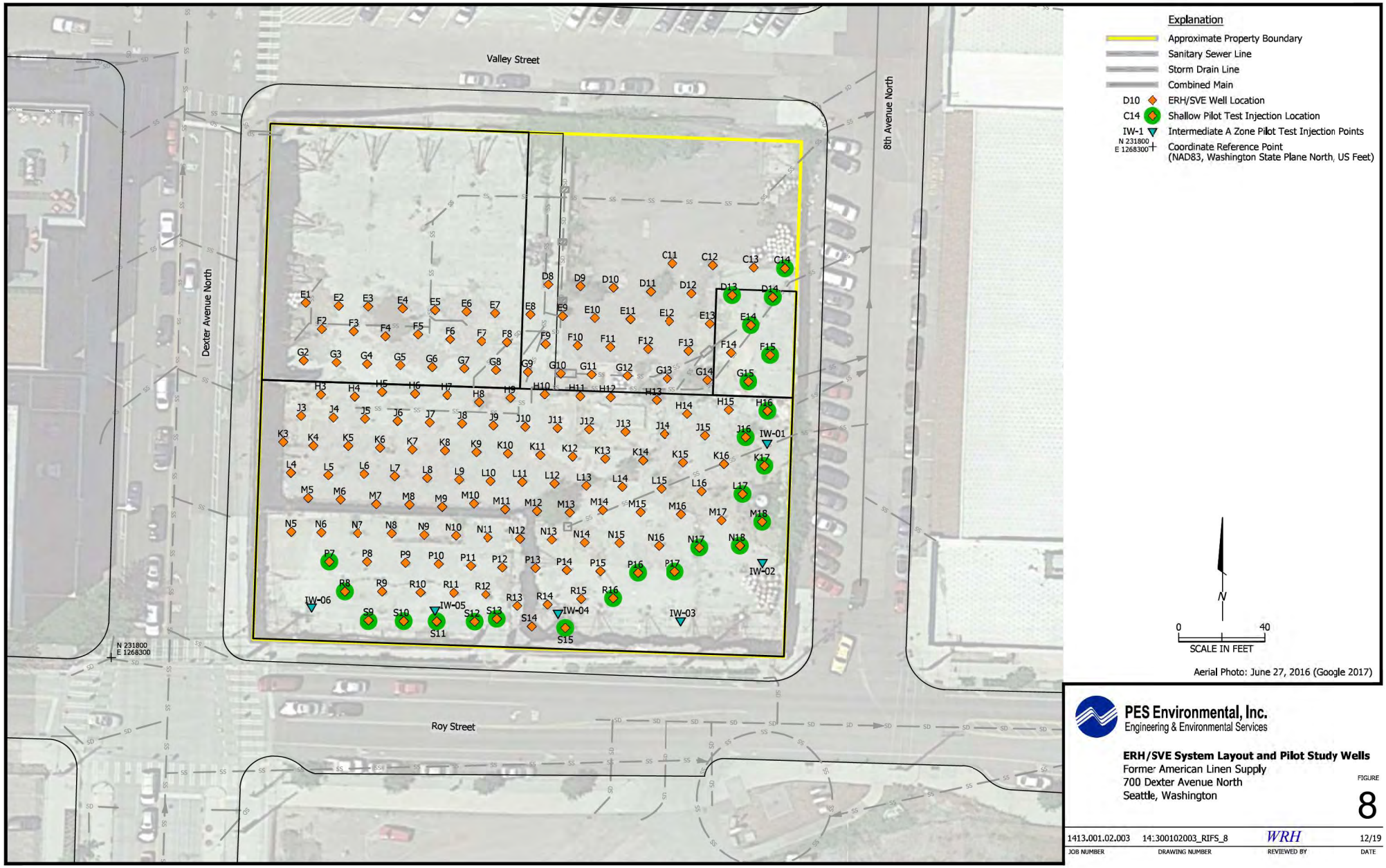
Site-Wide Exploration Location Map
Former American Linen Supply
700 Dexter Avenue North
Seattle, Washington

FIGURE
7

1413.001.02.003	141300102003_RIFS_7	WRH	12/19
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE



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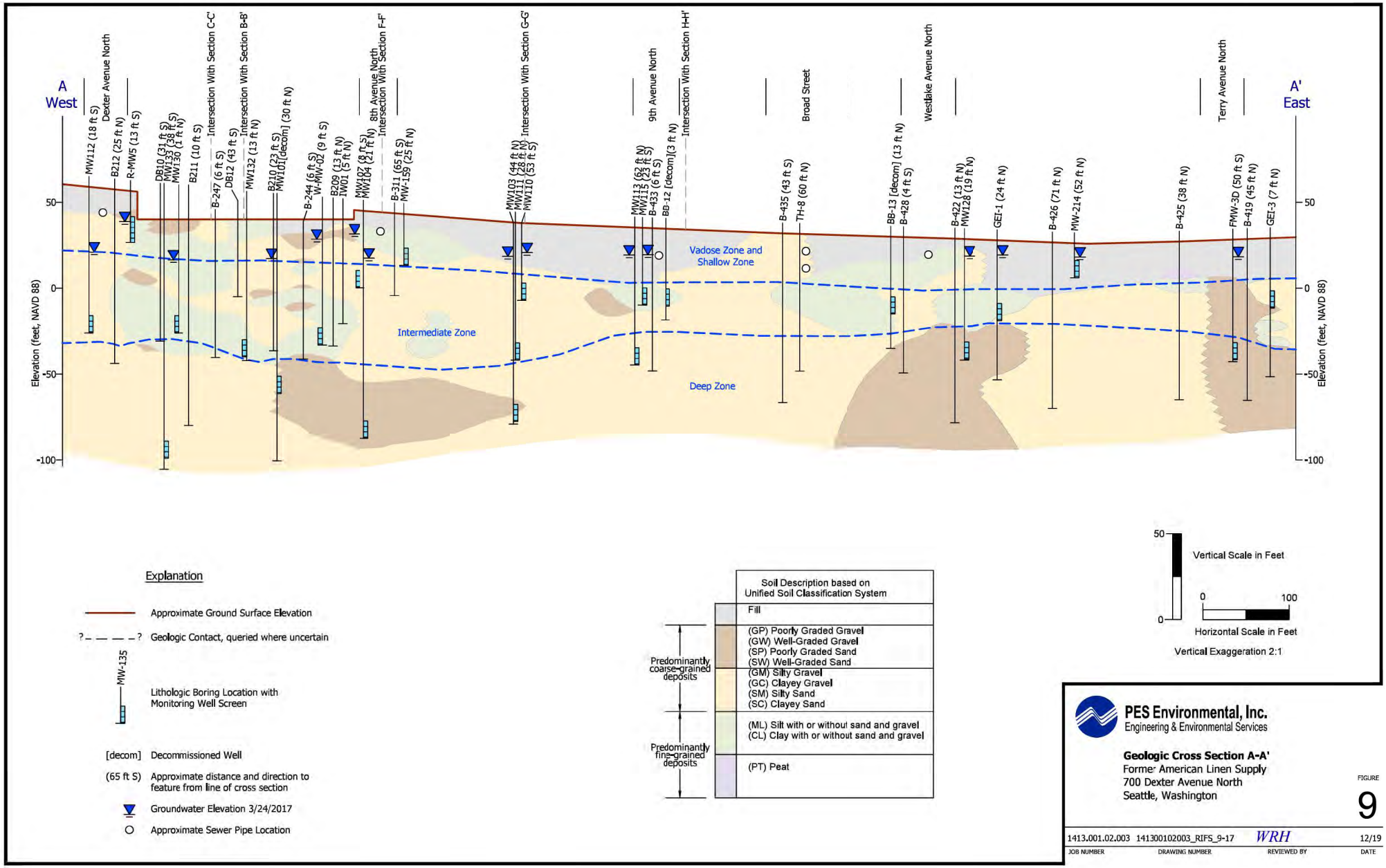
ERH/SVE System Layout and Pilot Study Wells
Former American Linen Supply
700 Dexter Avenue North
Seattle, Washington

FIGURE
8

1413.001.02.003	14:300102003_RIFS_8	WRH	12/19
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE



Explanation

- Approximate Ground Surface Elevation
- Geologic Contact, queried where uncertain
- MW-135 — Lithologic Boring Location with Monitoring Well Screen
- [decom] Decommissioned Well
- (65 ft S) Approximate distance and direction to feature from line of cross section
- Groundwater Elevation 3/24/2017
- Approximate Sewer Pipe Location

	Soil Description based on Unified Soil Classification System
	Fill
Predominantly coarse-grained deposits	(GP) Poorly Graded Gravel (GW) Well-Graded Gravel (SP) Poorly Graded Sand (SW) Well-Graded Sand
	(GM) Silty Gravel (GC) Clayey Gravel (SM) Silty Sand (SC) Clayey Sand
Predominantly fine-grained deposits	(ML) Silt with or without sand and gravel (CL) Clay with or without sand and gravel
	(PT) Peat

50 — Vertical Scale in Feet

0 — 100 — Horizontal Scale in Feet

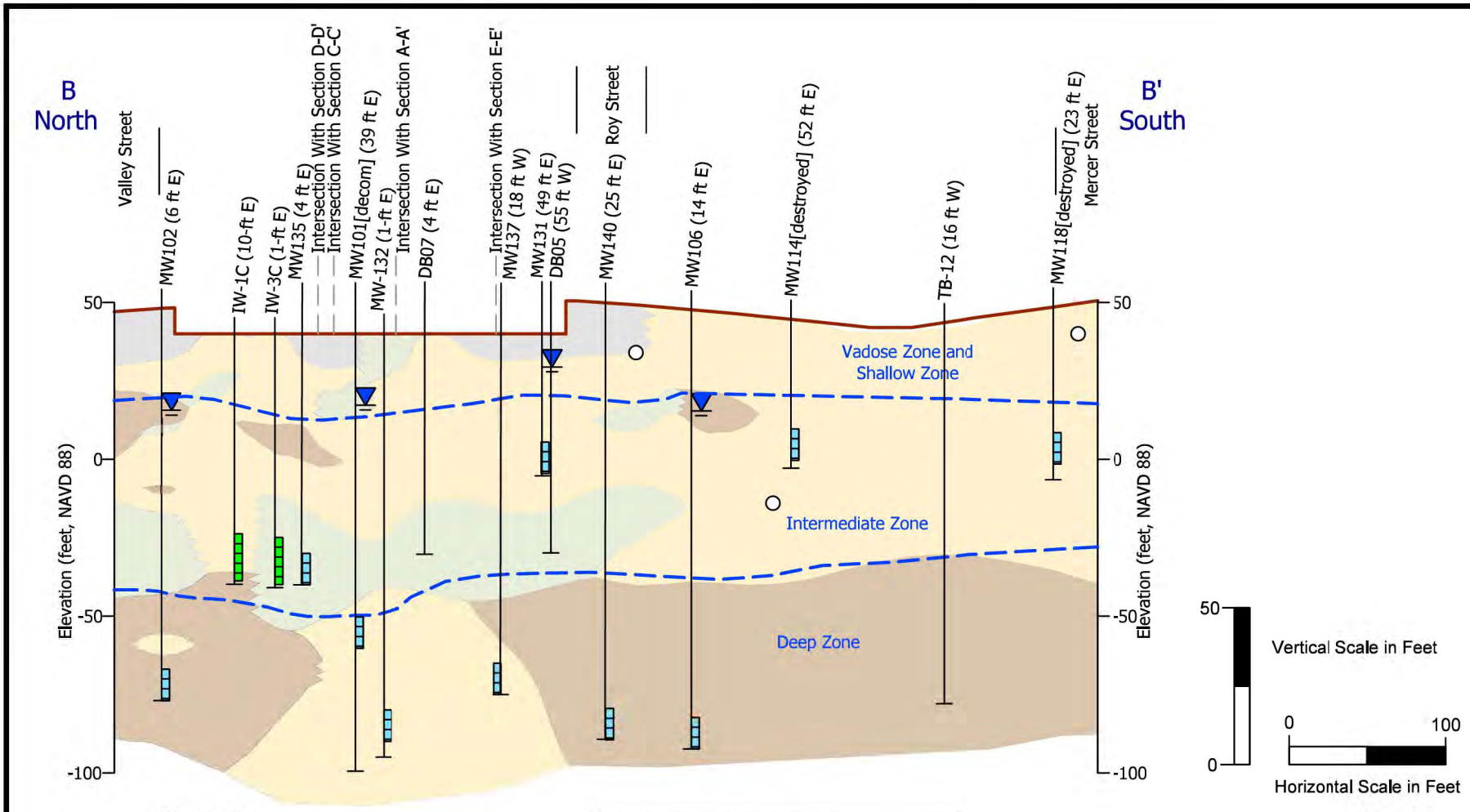
Vertical Exaggeration 2:1

PES Environmental, Inc.
Engineering & Environmental Services

Geologic Cross Section A-A'
Former American Linen Supply
700 Dexter Avenue North
Seattle, Washington

FIGURE 9

1413.001.02.003	141300102003_RIFS_9-17	WRH	12/19
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE



Explanation

- Approximate Ground Surface Elevation
- Geologic Contact, queried where uncertain
- MW-135 / IW-24B — Lithologic Boring Location with Monitoring or Injection Well Screen
- [decom] — Decommissioned Well
- (65 ft S) — Approximate distance and direction to feature from line of cross section
- Groundwater Elevation 3/24/2017
- Approximate Sewer Pipe Location

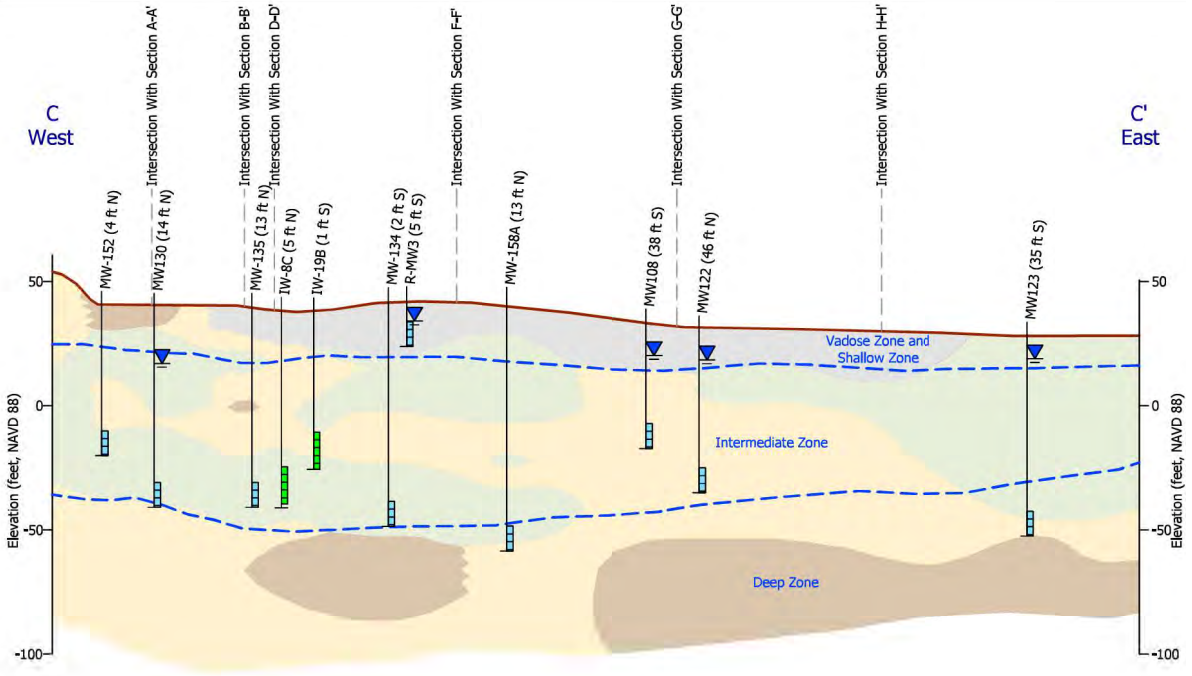
Soil Description based on Unified Soil Classification System	
	Fill
Predominantly coarse-grained deposits	(GP) Poorly Graded Gravel (GW) Well-Graded Gravel (SP) Poorly Graded Sand (SW) Well-Graded Sand
Predominantly coarse-grained deposits	(GM) Silty Gravel (GC) Clayey Gravel (SM) Silty Sand (SC) Clayey Sand
Predominantly fine-grained deposits	(ML) Silt with or without sand and gravel (CL) Clay with or without sand and gravel

PES Environmental, Inc.
Engineering & Environmental Services

Geologic Cross Section B-B'
Former American Linen Supply
700 Dexter Avenue North
Seattle, Washington

FIGURE
10

1413.001.02.003	141300102003_RIFS_9-17	WRH	12/19
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE



Explanation

- Approximate Ground Surface Elevation
- Geologic Contact, queried where uncertain
- MW-135 / IW-24B — Lithologic Boring Location with Monitoring or Injection Well Screen
- [decom] Decommissioned Well
- (65 ft S) Approximate distance and direction to feature from line of cross section
- Groundwater Elevation 3/24/2017
- Approximate Sewer Pipe Location

	Soil Description based on Unified Soil Classification System
	Fill
Predominantly coarse-grained deposits	(GP) Poorly Graded Gravel (GW) Well-Graded Gravel (SP) Poorly Graded Sand (SW) Well-Graded Sand
Predominantly coarse-grained deposits	(GM) Silty Gravel (GC) Clayey Gravel (SM) Silty Sand (SC) Clayey Sand
Predominantly fine-grained deposits	(ML) Silt with or without sand and gravel (CL) Clay with or without sand and gravel
Predominantly fine-grained deposits	(PT) Peat

50 — Vertical Scale in Feet

0 — 100 — Horizontal Scale in Feet

Vertical Exaggeration 2:1

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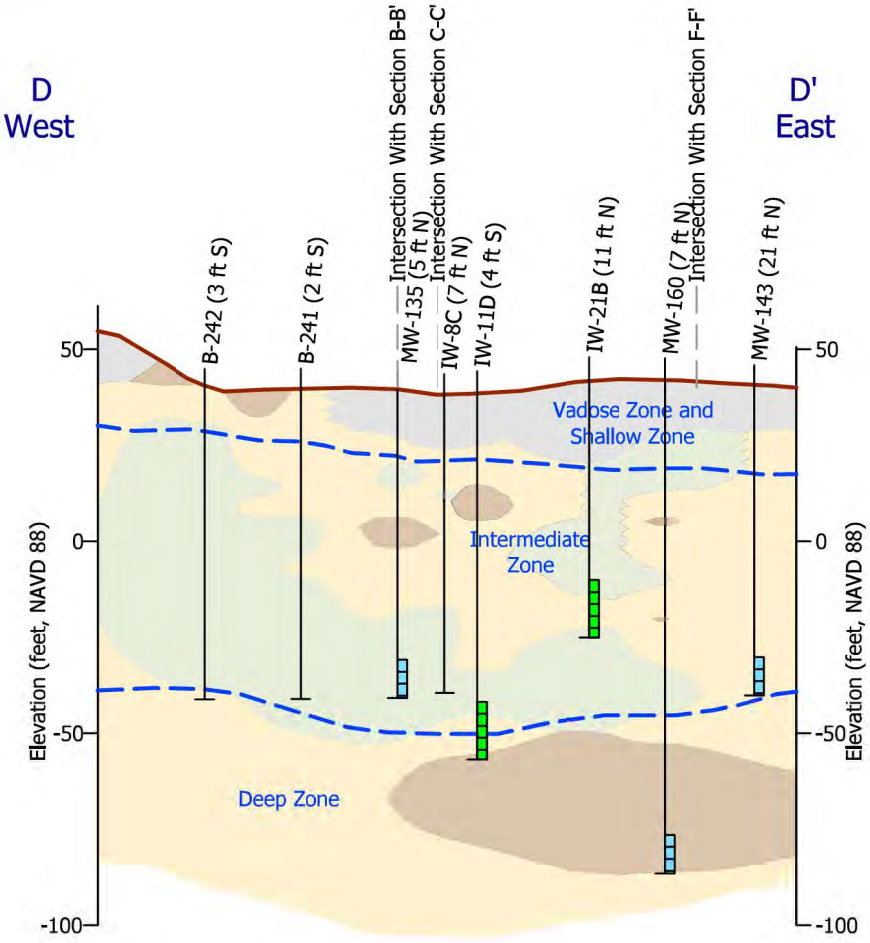
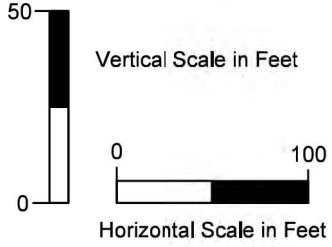
Geologic Cross Section C-C'
Former American Linen Supply
700 Dexter Avenue North
Seattle, Washington

FIGURE
11

1413.001.02.003	141300102003_RIFS_9-17	WRH	12/19
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE





Vertical Exaggeration 2:1

Explanation

- Approximate Ground Surface Elevation
- ? — — — ? Geologic Contact, queried where uncertain
- MW-135 / IW-24B — Lithologic Boring Location with Monitoring or Injection Well Screen
- [decom] Decommissioned Well
- (65 ft S) Approximate distance and direction to feature from line of cross section
- Approximate Sewer Pipe Location

	Soil Description based on Unified Soil Classification System
	Fill
Predominantly coarse-grained deposits	(GP) Poorly Graded Gravel (GW) Well-Graded Gravel (SP) Poorly Graded Sand (SW) Well-Graded Sand
Predominantly coarse-grained deposits	(GM) Silty Gravel (GC) Clayey Gravel (SM) Silty Sand (SC) Clayey Sand
Predominantly fine-grained deposits	(ML) Silt with or without sand and gravel (CL) Clay with or without sand and gravel

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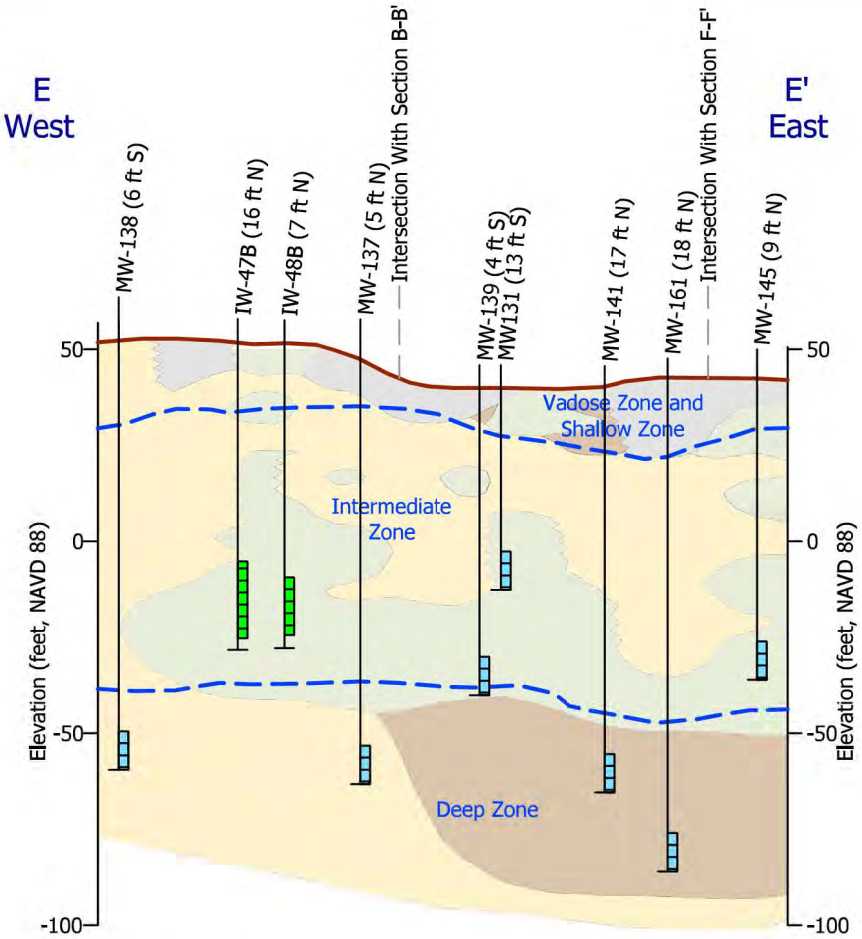
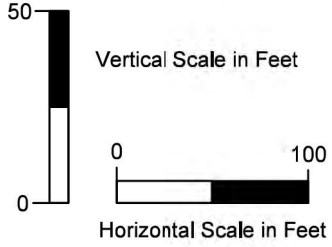
Geologic Cross Section D-D'
Former American Linen Supply
700 Dexter Avenue North
Seattle, Washington

FIGURE
12

1413.001.02.003	141300102003_RIFS_9-17	WRH	12/19
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE





Vertical Exaggeration 2:1

Explanation

- Approximate Ground Surface Elevation
- ? — — — ? Geologic Contact, queried where uncertain
- MW-135 / IW-24B — Lithologic Boring Location with Monitoring or Injection Well Screen
- [decom] Decommissioned Well
- (65 ft S) Approximate distance and direction to feature from line of cross section
- ○ Approximate Sewer Pipe Location

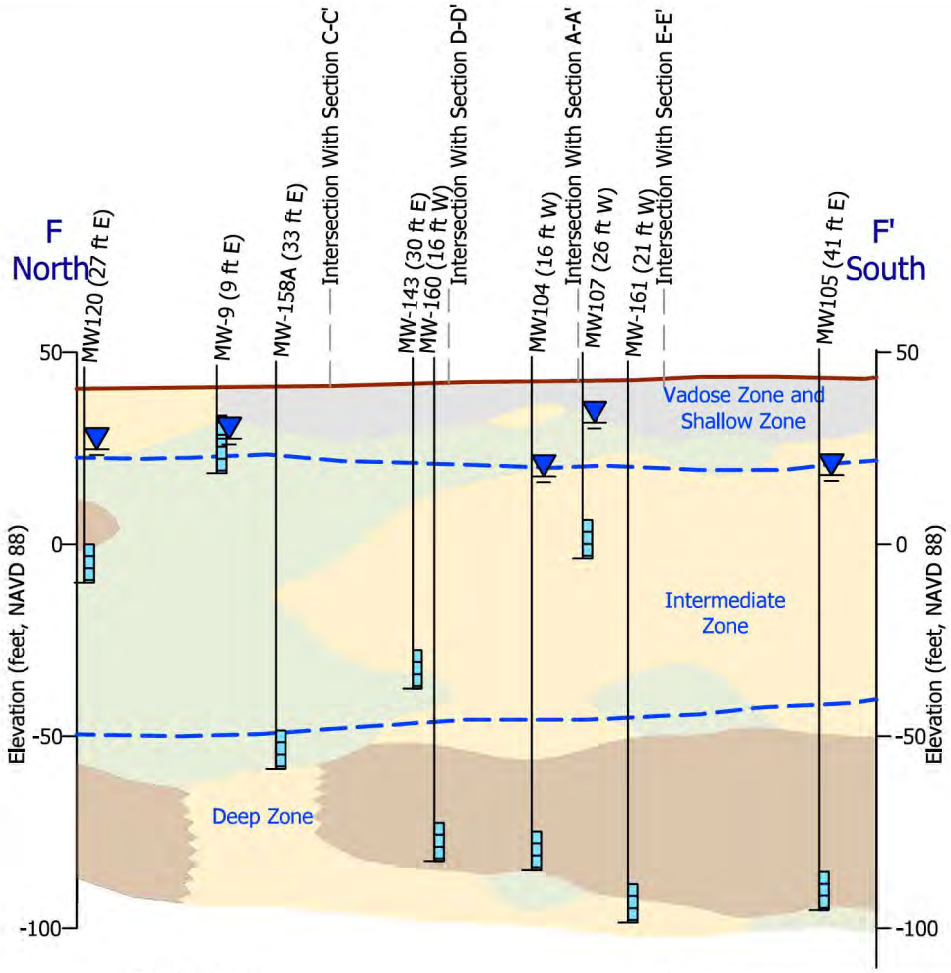
	Soil Description based on Unified Soil Classification System
	Fill
Predominantly coarse-grained deposits	(GP) Poorly Graded Gravel (GW) Well-Graded Gravel (SP) Poorly Graded Sand (SW) Well-Graded Sand
Predominantly coarse-grained deposits	(GM) Silty Gravel (GC) Clayey Gravel (SM) Silty Sand (SC) Clayey Sand
Predominantly fine-grained deposits	(ML) Silt with or without sand and gravel (CL) Clay with or without sand and gravel

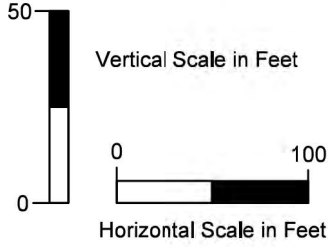
PES Environmental, Inc.
Engineering & Environmental Services

Geologic Cross Section E-E'
Former American Linen Supply
700 Dexter Avenue North
Seattle, Washington

FIGURE
13

1413.001.02.003	141300102003_RIFS_9-17	WRH	12/19
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE





Vertical Exaggeration 2:1

Explanation

- Approximate Ground Surface Elevation
- ?— — — —? Geologic Contact, queried where uncertain
- MW-135 Lithologic Boring Location with Monitoring Well Screen
- [decom] Decommissioned Well
- (65 ft S) Approximate distance and direction to feature from line of cross section
- Groundwater Elevation 3/24/2017
- Approximate Sewer Pipe Location

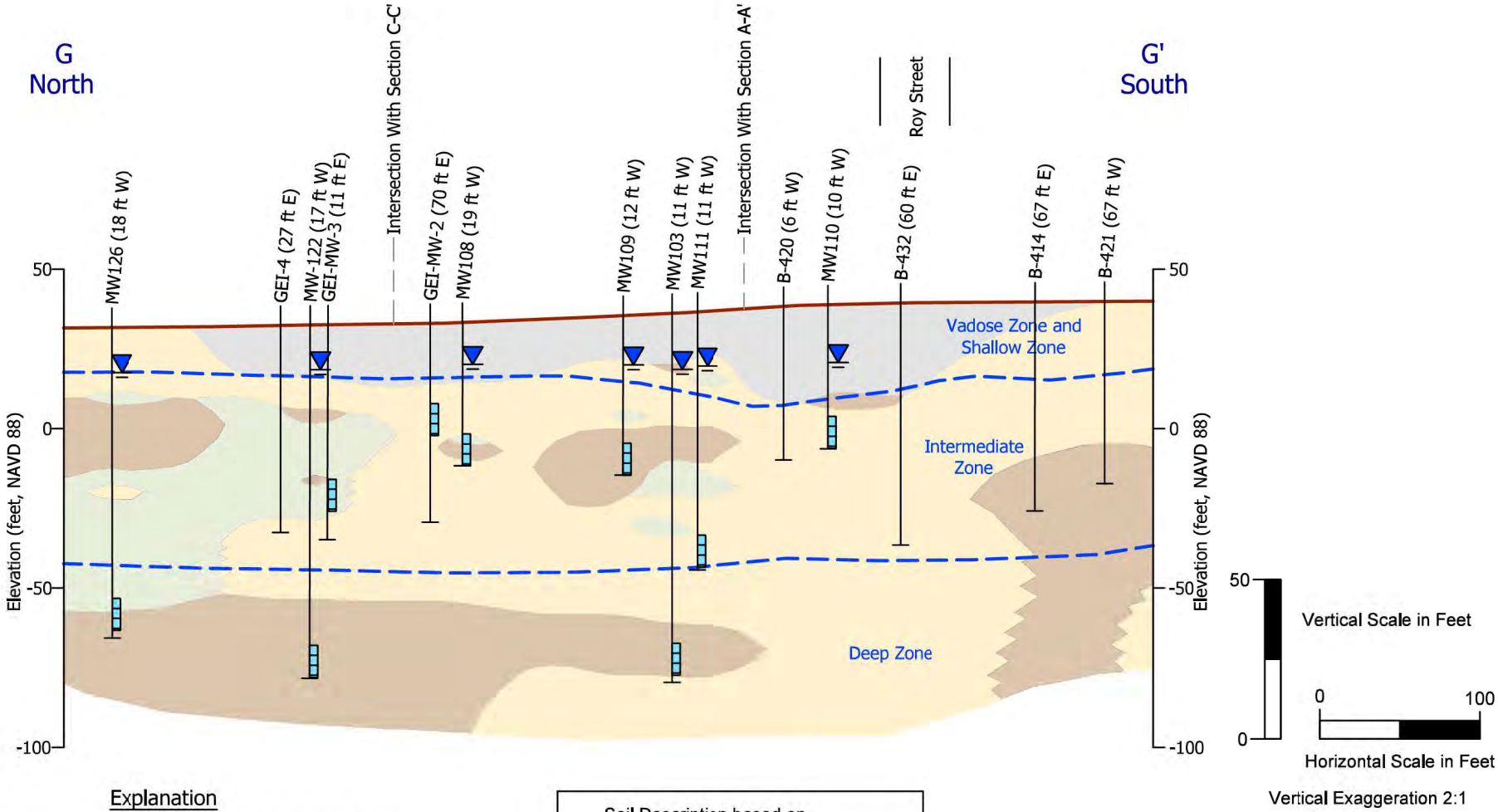
Soil Description based on Unified Soil Classification System	
Fill	
Predominantly coarse-grained deposits	(GP) Poorly Graded Gravel (GW) Well-Graded Gravel (SP) Poorly Graded Sand (SW) Well-Graded Sand
	(GM) Silty Gravel (GC) Clayey Gravel (SM) Silty Sand (SC) Clayey Sand
Predominantly fine-grained deposits	(ML) Silt with or without sand and gravel (CL) Clay with or without sand and gravel

PES Environmental, Inc.
Engineering & Environmental Services

Geologic Cross Section F-F'
Former American Linen Supply
700 Dexter Avenue North
Seattle, Washington

FIGURE
14

1413.001.02.003	141300102003_RIFS_9-17	WRH	12/19
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE



Explanation

- Approximate Ground Surface Elevation
- Geologic Contact, queried with uncertain
- MW-135 — Lithologic Boring Location with Monitoring Well Screen
- [decom] — Decommissioned Well
- (65 ft S) — Approximate distance and direction to feature from line of cross section
- Groundwater Elevation 3/24/2017
- Approximate Sewer Pipe Location

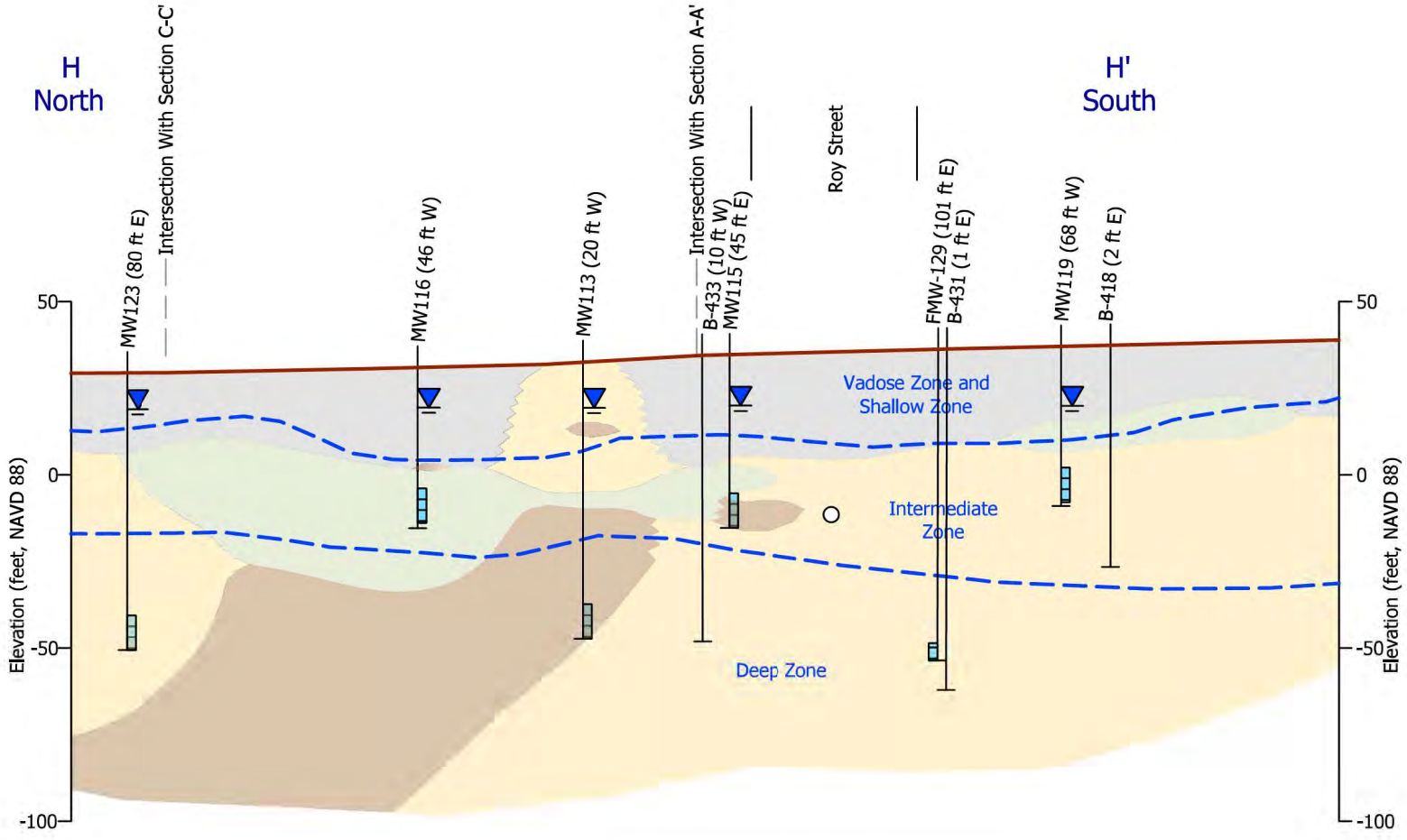
	Soil Description based on Unified Soil Classification System
	Fill
Predominantly coarse-grained deposits	(GP) Poorly Graded Gravel (GW) Well-Graded Gravel (SP) Poorly Graded Sand (SW) Well-Graded Sand
Predominantly coarse-grained deposits	(GM) Silty Gravel (GC) Clayey Gravel (SM) Silty Sand (SC) Clayey Sand
Predominantly fine-grained deposits	(ML) Silt with or without sand and gravel (CL) Clay with or without sand and gravel

PES Environmental, Inc.
Engineering & Environmental Services

Geologic Cross Section G-G'
Former American Linen Supply
700 Dexter Avenue North
Seattle, Washington

FIGURE
15

1413.001.02.003	141300102003_RIFS_9-17	WRH	12/19
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE



Explanation

- Approximate Ground Surface Elevation
- ?– — — –? Geologic Contact, queried where uncertain
- MW-135 Lithologic Boring Location with Monitoring Well Screen
- [decom] Decommissioned Well
- (65 ft S) Approximate distance and direction to feature from line of cross section
- Groundwater Elevation 3/24/2017
- Approximate Sewer Pipe Location

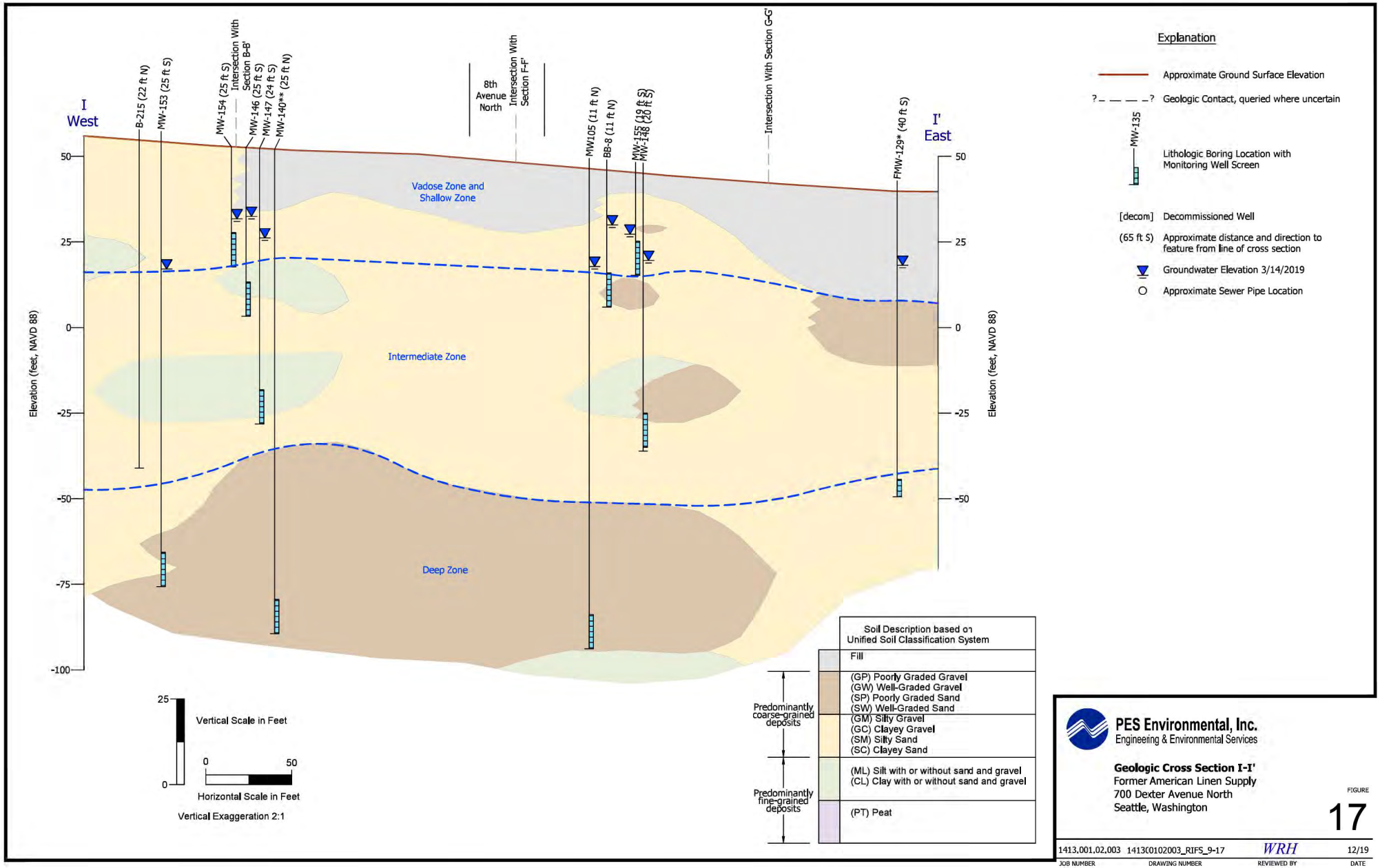
Soil Description based on Unified Soil Classification System	
	Fill
Predominantly coarse-grained deposits	(GP) Poorly Graded Gravel (GW) Well-Graded Gravel (SP) Poorly Graded Sand (SW) Well-Graded Sand
Predominantly coarse-grained deposits	(GM) Silty Gravel (GC) Clayey Gravel (SM) Silty Sand (SC) Clayey Sand
Predominantly fine-grained deposits	(ML) Silt with or without sand and gravel (CL) Clay with or without sand and gravel

PES Environmental, Inc.
Engineering & Environmental Services

Geologic Cross Section H-H'
Former American Linen Supply
700 Dexter Avenue North
Seattle, Washington

FIGURE
16

1413.001.02.003	141300102003_RIFS_9-17	WRH	12/19
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE



PES Environmental, Inc.
Engineering & Environmental Services

Geologic Cross Section I-I'
Former American Linen Supply
700 Dexter Avenue North
Seattle, Washington

FIGURE
17

1413.001.02.003	1413C0102003_RIFS_9-17	WRH	12/19
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE

TABLE 4-2
WATER LEVEL MEASUREMENTS
SEATTLE DOT MERCER PARCELS SITE
SEATTLE, WASHINGTON

Well ID	TOC Elevation[a] (ft)	Date	Time of Measure	Depth to Water (ft)	Groundwater Elevation[a] (ft)
Shallow					
DMW-1S	55.76	3/21/2019	-	21.01	34.75
		3/27/2019	-	20.88	34.88
		12/5/2019	13:55	24.88	30.88
		3/19/2020	13:51	22.35	33.41
		3/26/2020	-	22.37	33.39
		5/11/2020	10:20	23.28	32.48
		7/13/2020	14:27	24.33	31.43
		9/2/2020	9:34	24.99	30.77
		2/1/2021	10:00	21.41	34.35
DMW-2S	55.74	3/19/2020	13:48	22.89	32.85
		5/11/2020	10:26	23.76	31.98
		7/13/2020	14:31	24.72	31.02
		9/2/2020	9:41	24.34	31.40
		2/1/2021	10:05	21.53	34.21
DMW-4S	61.54	3/19/2020	13:58	22.28	39.26
		5/11/2020	10:14	22.51	39.03
		7/13/2020	14:51	23.11	38.43
		9/2/2020	9:30	24.18	37.36
		2/1/2021	10:18	21.48	40.06
DMW-6	66.08	3/19/2020	13:38	28.91	37.17
		5/11/2020	9:50	29.28	36.80
		7/13/2020	14:15	29.91	36.17
		9/2/2020	9:49	30.40	35.68
		2/1/2021	11:02	28.30	37.78
HMW-1S	35.77	3/20/2019	-	16.11	19.66
		3/26/2019	-	16.21	19.56
		7/16/2019	17:21	16.85	18.92
		12/5/2019	8:21	18.89	16.88
		1/13/2020	10:25	22.80	12.97
		3/19/2020	14:41	24.53	11.24
		5/11/2020	9:29	26.44	9.33
		7/13/2020	11:01	dry well	--
		9/2/2020	8:40	dry well	--
		2/1/2021	11:26	20.78	15.99

Well ID	TOC Elevation[a] (ft)	Date	Time of Measure	Depth to Water (ft)	Groundwater Elevation[a] (ft)
HMW-2S	47.32	3/19/2019	-	21.68	25.64
		3/26/2019	-	24.21	23.11
		7/16/2019	15:19	23.98	23.34
		12/5/2019	11:28	25.87	21.45
		1/13/2020	9:32	23.45	23.87
		3/19/2020	15:46	24.98	22.34
		5/11/2020	12:47	25.82	21.50
		7/13/2020	11:38	26.61	20.71
		9/2/2020	10:53	26.11	21.21
		2/1/2021	10:44	21.95	25.37
HMW-9S	58.54	3/19/2020	13:17	33.25	25.29
		5/11/2020	12:08	33.61	24.93
		7/13/2020	13:05	33.94	24.60
		9/2/2020	10:41	34.08	24.46
		2/1/2021	10:30	31.78	26.76
HMW-10S	51.09	3/19/2020	15:00	26.37	24.72
		5/11/2020	13:01	27.11	23.98
		7/13/2020	11:54	27.83	23.26
		9/2/2020	11:05	27.97	23.12
		2/1/2021	10:56	23.91	27.18
HMW-11S	44.77	3/19/2020	14:23	35.50	9.27
		5/11/2020	9:10	37.15	7.62
		7/13/2020	11:07	37.80	6.97
		9/2/2020	8:37	38.07	6.70
		2/1/2021	11:16	32.53	12.24
HMW-17S	57.35	2/1/2021	9:32	24.98	32.37
HMW-18S	57.44	2/1/2021	9:52	25.75	31.69
HMW-19S	61.08	2/1/2021	10:05	30.44	30.64
HMW-20S	56.49	2/1/2021	10:41	29.73	26.76
HMW-21S	37.92	2/1/2021	11:32	25.52	12.40
HMW-22S	38.58	2/1/2021	11:31	26.40	12.18
MW-154	52.57	3/26/2019	-	21.94	30.63
		7/17/2019	12:40	27.02	25.55
		10/21/2019	-	30.16	22.41
		1/13/2020	-	29.30	23.27
		3/19/2020	10:54	29.10	23.47
		5/11/2020	-	29.44	23.13
		7/13/2020	-	30.05	22.52
		9/3/2020	-	29.15	23.42
		2/1/2021	-	22.04	30.53

Well ID	TOC Elevation[a] (ft)	Date	Time of Measure	Depth to Water (ft)	Groundwater Elevation[a] (ft)
MW-155	44.05	3/26/2019	11:37	17.20	26.85
		10/21/2019	-	24.54	19.51
		1/13/2020	-	22.55	21.50
		3/19/2020	8:37	23.10	20.95
		5/11/2020	-	24.31	19.74
		7/13/2020	-	25.17	18.88
		9/3/2020	-	24.55	19.50
		2/1/2021	-	inaccessible	--
MW-305	59.86	10/21/2019	-	28.17	31.69
		1/13/2020	-	27.85	32.01
		3/19/2020	11:28	23.83	36.03
		5/11/2020	-	25.26	34.60
		7/13/2020	-	26.44	33.42
		9/3/2020	-	27.31	32.55
		2/1/2021	-	21.23	38.63
Intermediate A					
BB-8	43.64	10/21/2019	-	26.19	17.45
		1/13/2020	-	24.10	19.54
		5/11/2020	-	26.62	17.02
		7/13/2020	-	27.60	16.04
		2/1/2021	-	15.33	28.31
DMW-3IA	55.84	3/19/2020	13:44	25.39	30.45
		5/11/2020	10:34	25.99	29.85
		7/13/2020	14:41	26.68	29.16
		9/2/2020	9:44	26.36	29.48
		2/1/2021	10:09	22.90	32.94
HC-4	60.00	3/19/2020	13:27	31.50	28.50
		5/11/2020	10:07	32.21	27.79
		7/13/2020	14:56	33.12	26.88
		9/2/2020	9:24	33.42	26.58
		2/1/2021	10:33	30.37	29.63
HMW-2IA	47.56	3/20/2019	-	18.61	28.95
		3/26/2019	13:39	19.11	28.45
		7/16/2019	15:44	24.28	23.28
		12/5/2019	11:40	27.83	19.73
		1/13/2020	9:32	25.48	22.08
		3/19/2020	15:29	27.29	20.27
		4/10/2020	10:14	27.59	19.97
		5/11/2020	12:55	28.27	19.29
		7/13/2020	11:30	28.86	18.70
		9/2/2020	11:03	27.53	20.03
		9/3/2020	11:57	27.52	20.04
		2/1/2021	10:53	19.55	28.01

Well ID	TOC Elevation[a] (ft)	Date	Time of Measure	Depth to Water (ft)	Groundwater Elevation[a] (ft)
HMW-3IA	54.78	3/19/2019	-	23.71	31.07
		3/26/2019	10:51	23.99	30.79
		7/16/2019	16:29	28.11	26.67
		12/5/2019	12:14	30.82	23.96
		1/13/2020	9:24	29.86	24.92
		3/19/2020	15:52	29.54	25.24
		4/10/2020	12:53	29.70	25.08
		5/11/2020	12:21	30.05	24.73
		7/13/2020	13:48	30.58	24.20
		9/2/2020	11:50	30.27	24.51
		2/1/2021	10:00	24.59	30.19
HMW-6IA	61.27	3/19/2020	16:13	33.43	27.84
		5/11/2020	11:58	34.25	27.02
		7/13/2020	13:33	36.05	25.22
		9/2/2020	10:24	35.53	25.74
		2/1/2021	10:13	33.25	28.02
HMW-9IA	58.21	3/19/2020	13:06	34.18	24.03
		5/11/2020	12:14	34.48	23.73
		7/13/2020	13:14	34.95	23.26
		9/2/2020	10:46	34.91	23.30
		2/1/2021	10:35	30.89	27.32
HMW-20IA	56.47	2/1/2021	10:39	27.77	28.70
MW-119	37.42	3/26/2019	16:02	18.62	18.80
		7/17/2019	14:49	18.97	18.45
		7/30/2019	11:25	19.18	18.24
		10/21/2019	-	20.44	16.98
		1/13/2020	-	22.31	15.11
		3/19/2020	9:03	28.14	9.28
		5/11/2020	-	29.32	8.10
		7/13/2020	-	29.96	7.46
		2/1/2021	-	24.79	12.63
MW-146	52.34	3/26/2019	11:20	21.12	31.22
		7/17/2019	12:35	30.16	22.18
		10/21/2019	-	33.98	18.36
		1/13/2020	-	32.90	19.44
		3/19/2020	10:59	33.66	18.68
		5/11/2020	-	33.90	18.44
		7/13/2020	-	34.35	17.99
		9/3/2020	-	31.90	20.44
		2/1/2021	-	22.24	30.10

Well ID	TOC Elevation[a] (ft)	Date	Time of Measure	Depth to Water (ft)	Groundwater Elevation[a] (ft)
MW-306	59.48	10/21/2019	-	30.04	29.44
		1/13/2020	-	29.63	29.85
		3/19/2020	10:43	28.75	30.73
		5/11/2020	-	29.29	30.19
		7/13/2020	-	29.98	29.50
		9/3/2020	-	30.39	29.09
		2/1/2021	-	26.39	33.09
MW-315	49.18	10/21/2019	-	27.08	22.10
		1/13/2020	-	25.80	23.38
		3/19/2020	11:21	27.24	21.94
		5/11/2020	-	28.12	21.06
		7/13/2020	-	28.65	20.53
		2/1/2021	-	22.31	26.87
MW-325	40.90	10/21/2019	-	23.69	17.21
		1/13/2020	-	25.57	15.33
		3/19/2020	9:23	31.64	9.26
		5/11/2020	-	33.31	7.59
		7/13/2020	-	34.03	6.87
		2/1/2021	-	28.79	12.11
Intermediate B					
HMW-1IB	38.42	3/20/2019	-	19.29	19.13
		3/26/2019	15:18	19.47	18.95
		5/16/2019	13:23	19.22	19.20
		7/17/2019	14:00	19.87	18.55
		7/17/2019	14:32	19.89	18.53
		8/15/2019	17:05	20.25	18.17
		12/5/2019	8:11	21.91	16.51
		1/13/2020	10:27	20.79	17.63
		3/19/2020	14:37	28.58	9.84
		4/10/2020	11:19	29.39	9.03
		5/11/2020	9:26	29.90	8.52
		7/13/2020	10:56	30.57	7.85
		9/2/2020	8:53	30.78	7.64
		9/10/2020	11:15	30.78	7.64
		2/1/2021	11:22	25.55	12.87

Well ID	TOC Elevation[a] (ft)	Date	Time of Measure	Depth to Water (ft)	Groundwater Elevation[a] (ft)
HMW-2IB	47.23	3/20/2019	-	27.50	19.73
		3/26/2019	-	27.32	19.91
		7/16/2019	15:09	28.29	18.94
		12/5/2019	11:35	30.51	16.72
		1/13/2020	9:33	31.02	16.21
		3/12/2020	13:37	36.15	11.08
		3/19/2020	15:35	36.33	10.90
		4/10/2020	9:18	37.11	10.12
		5/11/2020	12:50	37.68	9.55
		7/13/2020	11:41	38.41	8.82
		9/2/2020	15:48	38.43	8.80
		2/1/2021	10:49	33.32	13.91
HMW-4IA	58.53	3/19/2019	-	29.50	29.03
		3/26/2019	16:54	30.21	28.32
		7/17/2019	11:53	33.10	25.43
		12/5/2019	11:59	35.08	23.45
		1/13/2020	9:28	34.20	24.33
		3/19/2020	16:07	33.70	24.83
		4/10/2020	12:57	33.79	24.74
		5/11/2020	12:02	34.11	24.42
		7/13/2020	13:22	34.71	23.82
		9/2/2020	12:57	34.56	23.97
		2/1/2021	10:23	30.68	27.85
HMW-5IB	60.99	3/19/2020	16:02	34.60	26.39
		5/11/2020	12:32	35.09	25.90
		7/13/2020	13:40	35.72	25.27
		9/2/2020	10:21	35.75	25.24
		2/1/2021	10:07	31.47	29.52
HMW-6IB	61.61	3/19/2020	16:36	34.87	26.74
		5/11/2020	11:52	35.22	26.39
		7/13/2020	13:31	36.01	25.60
		9/2/2020	10:27	36.48	25.13
		2/1/2021	10:15	33.86	27.75
HMW-7IB	61.38	3/19/2020	16:41	35.61	25.77
		5/11/2020	11:48	36.10	25.28
		7/13/2020	13:26	36.87	24.51
		9/2/2020	10:31	37.11	24.27
		2/1/2021	10:17	34.54	26.84
HMW-8IB	60.78	3/19/2020	16:45	36.69	24.09
		5/11/2020	12:05	37.08	23.70
		7/13/2020	13:19	37.62	23.16
		9/2/2020	10:38	37.49	23.29
		2/1/2021	10:27	33.26	27.52

Well ID	TOC Elevation[a] (ft)	Date	Time of Measure	Depth to Water (ft)	Groundwater Elevation[a] (ft)
HMW-9IB	57.89	3/19/2020	11:51	36.54	21.35
		5/11/2020	12:11	37.15	20.74
		7/13/2020	13:08	37.60	20.29
		9/2/2020	10:44	36.60	21.29
		2/1/2021	10:33	29.99	27.90
HMW-11IB	42.91	3/19/2020	14:26	33.50	9.41
		5/11/2020	9:17	35.06	7.85
		7/13/2020	11:11	35.81	7.10
		9/2/2020	8:35	36.06	6.85
		2/1/2021	11:13	30.61	12.30
HMW-15IB	58.33	9/2/2020	7:55	40.54	17.79
		2/1/2021	10:20	39.61	18.72
HMW-16IB	56.80	9/2/2020	10:17	39.57	17.23
		2/1/2021	9:27	33.08	23.72
MW-147	51.85	3/26/2019	11:16	26.36	25.49
		7/17/2019	12:30	31.53	20.32
		10/21/2019	-	36.23	15.62
		1/13/2020	-	34.45	17.40
		3/19/2020	11:04	37.68	14.17
		5/11/2020	-	38.56	13.29
		7/13/2020	-	38.50	13.35
		9/3/2020	-	34.71	17.14
		2/1/2021	-	27.75	24.10
MW-148	43.91	3/26/2019	11:40	24.21	19.70
		10/21/2019	-	26.92	16.99
		1/13/2020	-	28.07	15.84
		3/19/2020	11:12	32.80	11.11
		5/11/2020	-	33.80	10.11
		7/13/2020	-	34.47	9.44
		9/3/2020	-	34.43	9.48
		2/1/2021	-	inaccessible	-
MW-307	60.21	10/21/2019	-	41.65	18.56
		1/13/2020	-	41.55	18.66
		3/19/2020	10:36	43.34	16.87
		5/11/2020	-	43.90	16.31
		7/13/2020	-	44.69	15.52
		9/3/2020	-	44.47	15.74
		2/1/2021	-	42.38	17.83
MW-316	49.44	10/21/2019	-	31.72	17.72
		1/13/2020	-	32.70	16.74
		3/19/2020	9:35	37.66	11.78
		5/11/2020	-	38.95	10.49
		7/13/2020	-	39.74	9.70
		2/1/2021	-	35.07	14.37

Well ID	TOC Elevation[a] (ft)	Date	Time of Measure	Depth to Water (ft)	Groundwater Elevation[a] (ft)
Deep					
FMW-129	38.31	3/26/2019	15:29	19.99	18.32
		5/16/2019	13:38	19.56	18.75
		7/16/2019	17:38	20.06	18.25
		7/17/2019	13:05	20.13	18.18
		7/30/2019	12:22	20.34	17.97
		10/21/2019	-	21.54	16.77
		1/13/2020	-	24.49	13.82
		3/19/2020	-	-	-
		5/11/2020	-	29.20	9.11
		7/13/2020	-	29.80	8.51
HMW-1D	38.05	3/20/2019	-	20.33	17.72
		3/26/2019	14:22	20.34	17.71
		5/16/2019	13:10	19.90	18.15
		7/16/2019	17:32	20.28	17.77
		7/17/2019	14:09	20.32	17.73
		7/30/2019	12:21	20.50	17.55
		8/15/2019	16:20	20.60	17.45
		12/5/2019	8:41	25.56	12.49
		1/13/2020	10:24	23.40	14.65
		3/9/2020	16:30	28.29	9.76
		3/19/2020	14:30	28.53	9.52
		4/10/2020	11:17	29.29	8.76
		5/11/2020	9:23	29.55	8.50
		7/13/2020	10:51	30.39	7.66
		9/2/2020	8:43	30.40	7.65
		9/16/2020	8:25	30.48	7.57
		9/16/2020	8:51	30.45	7.60
		2/1/2021	11:18	26.78	11.27
HMW-2D	47.23	3/19/2019	-	27.98	19.25
		3/26/2019	13:02	26.48	20.75
		5/16/2019	12:42	27.95	19.28
		7/16/2019	15:56	28.66	18.57
		8/15/2019	15:27	29.17	18.06
		12/5/2019	11:44	30.52	16.71
		1/13/2020	9:34	30.31	16.92
		3/12/2020	10:12	35.94	11.29
		3/19/2020	15:41	36.06	11.17
		3/27/2020	-	36.04	11.19
		4/10/2020	10:15	36.75	10.48
		5/11/2020	12:53	37.18	10.05
		7/13/2020	11:34	37.84	9.39
		9/2/2020	11:02	37.94	9.29
		9/3/2020	11:37	37.95	9.28
		2/1/2021	10:47	33.53	13.70

Well ID	TOC Elevation[a] (ft)	Date	Time of Measure	Depth to Water (ft)	Groundwater Elevation[a] (ft)
HMW-3D	56.40	3/19/2019	-	38.90	17.50
		3/26/2019	10:35	38.77	17.63
		7/16/2019	17:04	39.11	17.29
		12/5/2019	12:07	39.60	16.80
		1/13/2020	9:26	39.62	16.78
		3/12/2020	12:08	41.82	14.58
		3/19/2020	15:56	41.86	14.54
		3/27/2020	-	42.29	14.11
		4/10/2020	12:55	42.43	13.97
		5/11/2020	12:24	42.57	13.83
		7/13/2020	13:45	43.31	13.09
		9/2/2020	10:15	43.26	13.14
		9/2/2020	11:54	43.31	13.09
		9/2/2020	12:17	43.29	13.11
		2/1/2021	9:56	42.15	14.25
HMW-6D	61.49	3/19/2020	16:32	46.89	14.60
		5/11/2020	11:54	47.65	13.84
		7/13/2020	13:36	48.39	13.10
		9/2/2020	10:25	48.48	13.01
		2/1/2021	10:11	47.25	14.24
HMW-9D	58.14	3/19/2020	13:10	43.55	14.59
		5/11/2020	12:16	44.46	13.68
		7/13/2020	13:11	45.17	12.97
		9/2/2020	10:48	45.09	13.05
		2/1/2021	10:37	42.95	15.19
HMW-10D	51.03	3/19/2020	14:55	39.97	11.06
		3/25/2020	-	40.32	10.71
		5/11/2020	13:03	41.37	9.66
		7/13/2020	11:50	42.14	8.89
		9/2/2020	11:07	42.33	8.70
		2/1/2021	10:58	37.53	13.50
HMW-12D	35.86	9/2/2020	8:55	27.49	8.37
		2/1/2021	11:20	23.35	12.51
HMW-13D	45.08	2/1/2021	11:06	33.40	11.68
HMW-14D	46.11	9/2/2020	8:29	36.34	9.77
		2/1/2021	11:10	33.12	12.99
MW-105	44.12	10/21/2019	-	27.47	16.65
		1/13/2020	-	28.75	15.37
		5/11/2020	-	33.01	11.11
		7/13/2020	-	33.82	10.30
		2/1/2021	-	31.11	13.01

Well ID	TOC Elevation[a] (ft)	Date	Time of Measure	Depth to Water (ft)	Groundwater Elevation[a] (ft)
MW-106	51.99	3/26/2019	11:10	34.43	17.56
		7/17/2019	12:23	34.62	17.37
		10/21/2019	-	35.25	16.74
		1/13/2020	-	35.56	16.43
		3/19/2020	8:27	38.23	13.76
		5/11/2020	-	38.87	13.12
		7/13/2020	-	39.58	12.41
		2/1/2021	-	37.82	14.17
MW-153	54.35	3/26/2019	-	36.85	17.50
		7/17/2019	12:45	37.11	17.24
		10/21/2019	-	37.60	16.75
		1/13/2020	-	38.80	15.55
		3/19/2020	10:49	40.14	14.21
		5/11/2020	-	40.67	13.68
		7/13/2020	-	41.55	12.80
		9/3/2020	-	41.37	12.98
		2/1/2021	-	40.15	14.20
MW-326	40.97	10/21/2019	-	24.22	16.75
		1/13/2020	-	26.40	14.57
		3/19/2020	9:17	31.50	9.47
		5/11/2020	-	32.44	8.53
		7/13/2020	-	33.37	7.60
		2/1/2021	-	29.85	11.12

Notes:

a. Elevations referenced to North American Vertical Datum of 1988 (NAVD88).

ft = feet.

TOC = Top of Casing.

TABLE 5-2
SUMMARY OF EXPLORATIONS
SEATTLE DOT MERCER PARCELS SITE
SEATTLE, WASHINGTON

Boring/Well ID	Status[a]	Logs?[f]	Well Tag	Northing	Easting	Date Completed	Elevation[g]		Well Screen				Bottom of Boring		Well Casing Diameter (in)	Grab Groundwater?[f,h]	Report Reference
							Surface (ft)	TOC (ft)	Top of Screen Depth (ft)	Bottom of Screen Depth (ft)	Top of Screen Elevation[g] (ft)	Bottom of Screen Elevation[g] (ft)	Depth (ft)	Elevation[g] (ft)			
SOIL BORINGS																	
B-215	-	Y	-	231782.5	1268432.7	09/13/17	53.95	-	-	-	-	-	95	-41.05	-	N	PES Environmental 2019
B-404	-	Y	-	231557.3	1268925.5	04/02/70	39.50	-	-	-	-	-	68.4	-28.90	-	N	Shannon & Wilson 1971
B-414	-	Y	-	231686.9	1268874.9	04/09/70	43.52	-	-	-	-	-	62.4	-18.88	-	N	Shannon & Wilson 1971
B-432	-	Y	-	231771.9	1268871.5	04/28/70	36.35	-	-	-	-	-	73.5	-37.15	-	N	Shannon & Wilson 1971
B-434	-	Y	-	231547.7	1268855.6	04/30/70	42.73	-	-	-	-	-	63	-20.27	-	N	Shannon & Wilson 1971
GP-7	-	Y	-	231566.4	1268321.0	05/14/12	58.53	-	-	-	-	-	11	47.53	-	-	Shannon & Wilson 2012
GP-8	-	Y	-	231600.2	1268321.4	05/14/12	58.33	-	-	-	-	-	12	46.33	-	-	Shannon & Wilson 2012
GP-9	-	Y	-	231641.5	1268303.4	05/14/12	58.00	-	-	-	-	-	19	39.00	-	-	Shannon & Wilson 2012
21417-MB1	-	Y	-	231725.7	1268417.2	05/12/17	55.43	-	-	-	-	-	10.2	45.23	-	N	Shannon & Wilson 2018b
21417-MB2	-	Y	-	231691.4	1268428.0	05/12/17	54.72	-	-	-	-	-	10	44.72	-	N	Shannon & Wilson 2018b
21417-MB3	-	Y	-	231536.5	1268405.4	05/12/17	58.63	-	-	-	-	-	29	29.63	-	N	Shannon & Wilson 2018b
21417-MB4	-	Y	-	231529.1	1268457.1	05/12/17	57.24	-	15	25	42.24	32.24	25	32.24	1	Y	Shannon & Wilson 2018b
21417-MB5	-	Y	-	231634.5	1268567.3	05/12/17	51.91	-	-	-	-	-	10	41.91	-	N	Shannon & Wilson 2018b
21417-MB6	-	Y	-	231702.7	1268671.1	05/11/17	48.22	-	-	-	-	-	15	33.22	-	N	Shannon & Wilson 2018b
21417-MB7	-	Y	-	231595.5	1268688.0	05/11/17	47.38	-	-	-	-	-	12	35.38	-	N	Shannon & Wilson 2018b
21417-MB8	-	Y	-	231713.1	1268726.6	05/11/17	45.28	-	-	-	-	-	28	17.28	-	N	Shannon & Wilson 2018b
21417-MB9	-	Y	-	231675.5	1268902.0	05/11/17	39.05	-	15	25	24.05	14.05	25	14.05	1	Y	Shannon & Wilson 2018b
21417-MB10	-	Y	-	231628.1	1268906.6	05/11/17	38.08	-	20	30	18.08	8.08	30	8.08	1	Y	Shannon & Wilson 2018b
21417-MB11	-	Y	-	231588.5	1268904.0	05/11/17	39.04	-	15	25	24.04	14.04	25	14.04	1	Y	Shannon & Wilson 2018b
MBB-1	-	Y	-	231703.2	1268422.6	02/27/20	55.02	-	32	37	23.02	18.02	40	15.02	2	Y	Hart Crowser RI
MBB-2	-	Y	-	231687.6	1268418.4	02/27/20	55.45	-	32	37	23.45	18.45	40	15.45	2	Y	Hart Crowser RI
MBB-3	-	Y	-	231679.0	1268431.0	02/27/20	54.84	-	32	37	22.84	17.84	40	14.84	2	Y	Hart Crowser RI
MBB-4	-	Y	-	231685.4	1268438.5	02/27/20	54.61	-	32	37	22.61	17.61	40	14.61	2	Y	Hart Crowser RI
MBB-5	-	Y	-	231669.7	1268575.9	03/02/20	50.53	-	32	37	18.53	13.53	40	10.53	2	Y	Hart Crowser RI
MBB-6	-	Y	-	231665.2	1268588.9	03/03/20	50.33	-	25	30	25.33	20.33	40	10.33	2	Y	Hart Crowser RI
MBB-7	-	Y	-	231704.9	1268625.5	02/25/20	49.41	-	27	32	22.41	17.41	40	9.41	2	Y	Hart Crowser RI
MBB-8	-	Y	-	231658.2	1268630.3	02/26/20	49.66	-	27	32	22.66	17.66	40	9.66	2	Y	Hart Crowser RI
MBB-9	-	Y	-	231652.0	1268676.8	02/26/20	47.55	-	27	32	20.55	15.55	40	7.55	2	Y	Hart Crowser RI
MBB-10	-	Y	-	231698.9	1268686.2	02/26/20	49.66	-	35	40	14.66	9.66	40	9.66	2	Y	Hart Crowser RI
MBB-11	-	Y	-	231668.8	1268866.8	03/04/20	46.42	-	-	-	-	-	35	11.42	-	N	Hart Crowser RI
MBB-12	-	Y	-	231696.9	1268907.2	03/04/20	33.69	-	27	32	6.69	1.69	35	-1.31	2	Y	Hart Crowser RI
MBB-13	-	Y	-	231671.4	1268913.6	03/04/20	35.98	-	30	35	5.98	0.98	35	0.98	2	Y	Hart Crowser RI
MBB-14	-	Y	-	231635.2	1268863.7	03/03/20	47.15	-	-	-	-	-	35	12.15	-	N	Hart Crowser RI
MBB-15	-	Y	-	231638.1	1268912.6	03/04/20	37.73	-	30	35	7.73	2.73	35	2.73	2	Y	Hart Crowser RI
MBB-16	-	Y	-	231702.0	1268460.8	09/02/20	53.70	-	30	40	23.7	13.7	40.4	13.30	-	Y	Hart Crowser RI
MBB-17	-	Y	-	231591.6	1268507.7	09/01/20	54.88	-	-	-	-	-	31.5	23.38	-	N	Hart Crowser RI
MBB-18	-	Y	-	231636.5	1268579.6	09/01/20	51.33	-	-	-	-	-	20.8	30.53	-	N	Hart Crowser RI

Boring/Well ID	Status[a]	Logs?[f]	Well Tag	Northing	Easting	Date Completed	Elevation[g]		Well Screen				Bottom of Boring		Well Casing Diameter (in)	Grab Groundwater?[f,h]	Report Reference
							Surface (ft)	TOC (ft)	Top of Screen Depth (ft)	Bottom of Screen Depth (ft)	Top of Screen Elevation[g] (ft)	Bottom of Screen Elevation[g] (ft)	Depth (ft)	Elevation[g] (ft)			
MBB-19	-	Y	-	231595.4	1268589.9	09/01/20	51.68	-	-	-	-	-	20.8	30.88	-	N	Hart Crowser RI
MBB-20	-	Y	-	231693.1	1268688.0	09/02/20	47.53	-	-	-	-	-	20.5	27.03	-	N	Hart Crowser RI
MBB-21	-	Y	-	231570.0	1268696.9	09/02/20	47.60	-	-	-	-	-	20.9	26.70	-	N	Hart Crowser RI
MBB-22	-	Y	-	231639.0	1268767.4	09/21/20	42.05	-	-	-	-	-	36.5	5.55	-	N	Hart Crowser RI
MBB-23	-	Y	-	231689.5	1268760.4	09/21/20	47.18	-	-	-	-	-	35.8	11.38	-	N	Hart Crowser RI
MBB-24	-	Y	-	231640.9	1268449.0	09/09/20	54.10	-	30	40	24.1	14.1	40.4	13.70	-	Y	Hart Crowser RI
MBB-25	-	Y	-	231525.0	1268366.1	10/30/20	58.63	-	30	40	28.63	18.63	40	18.63	-	Y	Hart Crowser RI
MBB-26	-	Y	-	231500.3	1268385.4	10/29/20	58.79	-	30	40	28.79	18.79	40	18.79	-	Y	Hart Crowser RI
MBGW-1	-	Y	-	231717.9	1268814.4	03/06/19	39.95	-	20	30	19.95	9.95	30	9.95	2	Y	Hart Crowser RI
MBGW-2	-	Y	-	231675.9	1268809.6	03/04/19	46.11	-	20	30	26.11	16.11	81	-34.89	2	Y	Hart Crowser RI
MBGW-3	-	Y	-	231688.0	1268669.1	03/07/19	47.77	-	16	26	31.77	21.77	28	19.77	2	Y	Hart Crowser RI
MBGW-4	-	Y	-	231686.8	1268722.5	03/06/19	47.30	-	-	-	-	-	25	22.30	-	N	Hart Crowser RI
MBGW-5	-	Y	-	231683.8	1268585.2	03/11/19	49.87	-	20	30	29.87	19.87	76.5	-26.63	2	Y	Hart Crowser RI
MBGW-6	-	Y	-	231694.9	1268490.7	03/14/19	52.50	-	20	30	32.5	22.5	30.5	22.00	2	Y	Hart Crowser RI
MBGW-7	-	Y	-	231624.5	1268489.7	03/06/19	53.76	-	30	40	23.76	13.76	75.3	-21.54	2	Y	Hart Crowser RI
MBGW-8	-	Y	-	231577.5	1268709.9	03/15/19	47.08	-	15	25	32.08	22.08	76.5	-29.42	2	Y	Hart Crowser RI
MBGW-9	-	Y	-	231553.8	1268464.9	03/13/19	56.84	-	20	30	36.84	26.84	31.5	25.34	2	Y	Hart Crowser RI
MBGW-10	-	Y	-	231523.6	1268494.8	03/13/19	55.25	-	20	30	35.25	25.25	30.9	24.35	2	Y	Hart Crowser RI
MBGW-11	-	Y	-	231510.4	1268442.2	03/12/19	57.55	-	35	45	22.55	12.55	50	7.55	2	Y	Hart Crowser RI
MBGW-12	-	Y	-	231726.0	1268449.4	03/15/19	54.00	-	17.5	27.5	36.5	26.5	30.9	23.10	2	Y	Hart Crowser RI
MBGW-13	-	Y	-	231693.1	1268435.0	03/14/19	54.72	-	20	30	34.72	24.72	31.5	23.22	2	Y	Hart Crowser RI
MBGW-14	-	Y	-	231615.6	1268872.1	03/06/19	46.09	-	20	30	26.09	16.09	30	16.09	2	Y	Hart Crowser RI
MBGW-15	-	Y	-	231568.7	1268885.7	03/11/19	40.87	-	20	30	20.87	10.87	81	-40.13	2	Y	Hart Crowser RI
MBGW-16	-	Y	-	231546.5	1268567.1	03/14/19	52.14	-	20	30	32.14	22.14	75.5	-23.36	2	Y	Hart Crowser RI
MBPP-1	-	Y	-	231635.9	1268801.4	03/05/19	45.28	-	-	-	-	-	30	15.28	-	N	Hart Crowser RI
MBPP-2	-	Y	-	231575.5	1268828.3	03/05/19	44.46	-	-	-	-	-	30	14.46	-	N	Hart Crowser RI
MBPP-3	-	Y	-	231593.9	1268746.6	03/06/19	45.89	-	-	-	-	-	30	15.89	-	N	Hart Crowser RI
MBPP-4	-	Y	-	231619.1	1268667.7	03/07/19	48.34	-	-	-	-	-	18	30.34	-	N	Hart Crowser RI
MBPP-5	-	Y	-	231721.9	1268693.2	03/07/19	45.92	-	18	28	27.92	17.92	28	17.92	2	Y	Hart Crowser RI
MBPP-6	-	Y	-	231604.6	1268569.5	03/08/19	52.26	-	-	-	-	-	30	22.26	-	N	Hart Crowser RI
MBPP-7	-	Y	-	231725.5	1268551.4	03/08/19	49.77	-	-	-	-	-	23	26.77	-	N	Hart Crowser RI
MBPP-8	-	Y	-	231588.6	1268424.6	03/08/19	57.52	-	-	-	-	-	30	27.52	-	N	Hart Crowser RI

Boring/Well ID	Status[a]	Logs?[f]	Well Tag	Northing	Easting	Date Completed	Elevation[g]		Well Screen				Bottom of Boring		Well Casing Diameter (in)	Grab Groundwater?[f,h]	Report Reference
							Surface (ft)	TOC (ft)	Top of Screen Depth (ft)	Bottom of Screen Depth (ft)	Top of Screen Elevation[g] (ft)	Bottom of Screen Elevation[g] (ft)	Depth (ft)	Elevation[g] (ft)			
MONITORING WELLS																	
Shallow																	
BB-10	D	Y	-	231732.0	1268341.6	08/29/97	57.40	-	29	39	28.4	18.4	60.5	-3.10	2	N	Black & Veatch 1998
HMW-1S	-	Y	BLI532	231663.1	1268917.0	03/06/19	36.01	35.73	20	30	16.01	6.01	31.5	4.51	2	N	Hart Crowser RI
HMW-2S	-	Y	BLR924	231667.7	1268683.1	03/13/19	47.39	47.28	19.8	29.8	27.59	17.59	30	17.39	2	N	Hart Crowser RI
HMW-9S	-	Y	BLZ189	231607.5	1268475.2	03/02/20	55.39	58.54	25	35	30.39	20.39	40	15.39	2	N	Hart Crowser RI
HMW-10S	-	Y	BLZ193	231564.8	1268682.5	03/03/20	48.21	51.09	24.7	34.7	23.51	13.51	40	8.21	2	N	Hart Crowser RI
HMW-11S	-	Y	BLZ195	231575.0	1268889.2	02/24/20	41.47	44.77	25	35	16.47	6.47	40	1.47	2	N	Hart Crowser RI
HMW-17S	-	Y	BMP351	231712.9	1268386.3	09/03/20	57.21	57.35	35	45	22.21	12.21	45.5	11.71	2	N	Hart Crowser RI
HMW-18S	-	Y	BMP352	231676.5	1268386.9	09/03/20	57.61	57.44	35	45	22.61	12.61	45.3	12.31	2	N	Hart Crowser RI
HMW-19S	-	Y	BMP353	231643.0	1268383.9	09/08/20	58.20	61.08	35	45	23.2	13.2	46.4	11.80	2	N	Hart Crowser RI
HMW-20S	-	Y	BMP354	231637.0	1268512.5	09/08/20	53.81	56.49	25	35	28.81	18.81	35.8	18.01	2	N	Hart Crowser RI
HMW-21S	-	Y	BMP373	231626.2	1268924.2	10/20/20	38.17	37.92	30	40	8.17	-1.83	41.5	-3.33	2	N	Hart Crowser RI
HMW-22S	-	Y	BMP374	231592.8	1268923.7	10/22/20	38.75	38.58	27	37	11.75	1.75	38.5	0.25	2	N	Hart Crowser RI
MW-154	-	N	BKF350	231736.0	1268482.2	03/30/18	53.22	52.57	25	35	28.22	18.22	35	18.22	2	N	PES Environmental 2019
MW-155	-	N	BKF354	231735.4	1268717.5	04/10/18	44.47	44.05	20	30	24.47	14.47	30	14.47	2	N	PES Environmental 2019
Intermediate A																	
BB-5	D	Y	-	231594.4	1268646.9	09/03/97	49.48	-	30	40	19.48	9.48	78	-28.52	2	N	Black & Veatch 1998
BB-8	-	Y	-	231762.7	1268707.1	06/06/97	43.72	43.69	30	40	13.72	3.72	78.5	-34.78	2	N	Black & Veatch 1998
BB-8A	D	N	-	231763.5	1268720.0	-	43.36	-	-	40.3	-	3.06	-	-	-	N	DOF 2009[p]
HMW-2IA	-	Y	-	231646.6	1268697.0	03/08/19	45.55	47.51	34.8	44.8	10.75	0.75	46	-0.45	2	N	Hart Crowser RI
HMW-3IA	-	Y	BLR925	231681.8	1268425.8	03/15/19	55.02	54.75	34.8	44.8	20.22	10.22	45.5	9.52	2	N	Hart Crowser RI
HMW-6IA	-	Y	BLZ185	231552.5	1268379.7	03/02/20	58.65	61.27	37.5	47.5	21.15	11.15	50	8.65	2	N	Hart Crowser RI
HMW-9IA	-	Y	BLZ190	231610.7	1268480.4	02/28/20	55.26	58.21	36.7	46.7	18.56	8.56	50	5.26	2	N	Hart Crowser RI
HMW-20IA	-	Y	BMP356	231634.1	1268516.1	09/09/20	53.83	56.47	41	51	12.83	2.83	51.3	2.53	2	N	Hart Crowser RI
MW-114	A	Y	BHS768	231656.1	1268537.7	12/10/12	42.43	45.84	35	45	7.43	-2.57	45	-2.57	2	N	SoundEarth Strategies 2013
MW-117	D	Y	BHS885	231643.7	1268343.7	12/10/12	57.78	56.9	40	55	17.78	2.78	45.5	12.28	2	N	SoundEarth Strategies 2013
MW-118	D	Y	BIC079	231491.4	1268503.4	03/21/13	54.50	52.91	40	50	14.5	4.5	55.5	-1.00	2	N	SoundEarth Strategies 2013
MW-119	-	Y	BIC080	231653.1	1268925.2	03/21/13	37.59	37.42	35	45	2.59	-7.41	45	-7.41	2	N	SoundEarth Strategies 2013
MW-146	-	N	BKF349	231735.7	1268490.1	03/30/18	52.86	52.34	39.8	49.8	13.06	3.06	50	2.86	2	N	PES Environmental 2019
MW-315	-	N	BMF570	231538.6	1268645.5	09/11/19	49.56	49.18	37.5	47.4	12.06	2.16	48	1.56	2	N	PES Environmental 2019
MW-325	-	N	BMF585	231553.5	1268886.3	09/11/19	41.42	40.9	34.5	44.5	6.92	-3.08	44.7	-3.28	2	N	PES Environmental 2019
Intermediate B																	
HMW-1IB	-	Y	BLR917	231653.1	1268903.5	03/13/19	38.29	38.38	54.3	64.3	-16.01	-26.01	65.5	-27.21	2	N	Hart Crowser RI
HMW-2IB	-	Y	BLR923	231653.0	1268687.0	03/12/19	47.41	47.19	52.8	62.8	-5.39	-15.39	66.5	-19.09	2	N	Hart Crowser RI
HMW-4IA[c]	-	Y	BLI162	231558.7	1268409.6	03/07/19	58.70	58.53	50	60	8.7	-1.3	81.5	-22.80	2	N	Hart Crowser RI
HMW-5IB	-	Y	BLZ188	231613.0	1268382.8	02/28/20	58.44	60.99	49.7	59.7	8.74	-1.26	70	-11.56	2	N	Hart Crowser RI
HMW-6IB	-	Y	BLZ186	231548.1	1268380.8	03/03/20	58.67	61.61	50	60	8.67	-1.33	70	-11.33	2	N	Hart Crowser RI
HMW-7IB	-	Y	BLZ159	231522.5	1268383.3	03/02/20	58.69	61.38	49.7	59.7	8.99	-1.01	70	-11.31	2	N	Hart Crowser RI
HMW-8IB	-	Y	BLZ158	231559.1	1268433.8	03/02/20	57.97	60.78	50.5	60.5	7.47	-2.53	70	-12.03	2	N	Hart Crowser RI
HMW-9IB	-	Y	BLZ191	231604.9	1268480.1	02/28/20	55.36	57.89	57	67	-1.64	-11.64	70	-14.64	2	N	Hart Crowser RI
HMW-11IB	-	Y	BLZ196	231565.1	1268891.7	02/24/20	39.70	42.91	44.9	54.9	-5.17	-15.17	70	-30.30	2	N	Hart Crowser RI
HMW15IB	-	Y	BMP316	231512.3	1268389.5	07/16/20	58.86	58.33	64	73	-5.14	-14.14	76.5	-17.64	2	N	Hart Crowser RI
HMW16IB	-	Y	BMP315	231724.0	1268386.5	07/14/20	57.02	56.8	55	65	2.02	-7.98	76.5	-19.48	2	N	Hart Crowser RI
MW-147	-	Y	BKF351	231736.0	1268498.0	04/02/18	52.49	51.85	70	80	-17.51	-27.51	80	-27.51	2	N	PES Environmental 2019
MW-148	-	Y	BKF353	231734.0	1268722.0	04/09/18	44.29	43.91	70	80	-25.71	-35.71	80.5	-36.21	2	N	PES Environmental 2019
MW-316	-	Y	BMF569	231537.9	1268641.6	09/09/19	49.71	49.44	59.8	69.8	-10.09	-20.09	70	-20.29	2	N	PES Environmental 2019

Boring/Well ID	Status[a]	Logs?[f]	Well Tag	Northing	Easting	Date Completed	Elevation[g]		Well Screen				Bottom of Boring		Well Casing Diameter (in)	Grab Groundwater?[f,h]	Report Reference
							Surface (ft)	TOC (ft)	Top of Screen Depth (ft)	Bottom of Screen Depth (ft)	Top of Screen Elevation[g] (ft)	Bottom of Screen Elevation[g] (ft)	Depth (ft)	Elevation[g] (ft)			
Deep																	
FMW-129	-	Y	BIE085	231708.1	1268874.6	05/16/14	38.64	38.31	84.2	89.2	-45.56	-50.56	119	-80.36	2	Y	Farallon[d]
HMW-1D	-	Y	BLI197	231641.8	1268907.5	03/04/19	38.07	37.99	80	90	-41.93	-51.93	90	-51.93	2	N	Hart Crowser RI
HMW-2D	-	Y	BLI198	231659.8	1268696.2	03/06/19	47.34	47.19	80	90	-32.66	-42.66	90	-42.66	2	N	Hart Crowser RI
HMW-3D	-	Y	BLI199	231676.0	1268409.0	03/06/19	56.56	56.37	80	90	-23.44	-33.44	90	-33.44	2	N	Hart Crowser RI
HMW-6D	-	Y	BLZ187	231551.3	1268382.8	03/02/20	58.58	61.49	79.7	89.7	-21.12	-31.12	90	-31.42	2	N	Hart Crowser RI
HMW-9D	-	Y	BLZ192	231609.9	1268484.4	02/28/20	55.32	58.14	79.7	89.7	-24.38	-34.38	90	-34.68	2	N	Hart Crowser RI
HMW-10D	-	Y	BLZ194	231565.5	1268686.2	03/05/20	48.16	51.03	79	89	-30.84	-40.84	90	-41.84	2	N	Hart Crowser RI
HMW12D	-	Y	BMP290	231704.6	1268915.3	07/16/20	33.52	35.86	82	92	-48.48	-58.48	100.3	-66.78	2	N	Hart Crowser RI
HMW13D	-	Y	BMP318	231638.7	1268802.4	07/23/20	45.30	45.08	89.5	99.5	-44.2	-54.2	100.9	-55.60	2	N	Hart Crowser RI
HMW14D	-	Y	BMP317	231576.9	1268800.7	07/20/20	46.35	46.11	70	80	-23.65	-33.65	81.5	-35.15	2	N	Hart Crowser RI
MW-105	-	Y	BCK018	231763.7	1268695.3	08/10/12	45.59	44.69	130	140	-84.41	-94.41	140	-94.41	2	N	SoundEarth Strategies 2013
MW-106	-	Y	BCK019	231721.8	1268488.0	08/15/12	52.90	51.99	130	140	-77.1	-87.1	140	-87.10	2	N	SoundEarth Strategies 2013
MW-140	-	Y	BKA301	231782.8	1268511.9	08/31/17	50.32	50.2	129.5	139.5	-79.18	-89.18	140	-89.68	2	N	PES Environmental 2019
MW-153	-	Y	BKF348	231737.1	1268440.3	03/29/18	54.84	54.35	120	130	-65.16	-75.16	130	-75.16	2	N	PES Environmental 2019
MW-326	-	Y	BLR750	231552.7	1268889.6	09/10/19	41.31	40.97	90	100	-48.69	-58.69	100	-58.69	2	N	PES Environmental 2019
PB-9	-	Y	-	231759.8	1268445.0	07/15/96	53.60	-	62	77	-8.4	-23.4	100.1	-46.50	0.75	N	HWA[e]

Notes:

a."D" represents decommissioned and "A" represents abandoned.

b. No boring log or report discussing the well installation was available. The DOF 2009 report notes that they designated this well as BB-8A because it was an unknown well next to BB-8.
The bottom of screen depth was assumed based on DOF's measurement of the bottom of the well.

c. This well was installed as an Intermediate B well rather than an Intermediate A well as suggested in the name.

d. This well was installed as part of a larger investigation on the AIBS Building Block 43 Site east of the Property.
Although a boring log was found on Ecology's database, no report discussing the well installation was available.

e. This well was installed as part of a larger investigation for the Denny Way combined sewer overflow project.
Although a boring log was found, no report discussing the well installation was available.

f. "Y" represents yes and "N" represents no.

g. Elevations referenced to North American Vertical Datum of 1988 (NAVD88).

h. All grab groundwater samples were collected in the shallow aquifer.

- = Data not available or not applicable.

ft = feet.

in = inches.

TOC = Top of casing.

TABLE 5-3
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SEATTLE, WASHINGTON

Boring ID	Surface Elevation[a] (ft)	Sample Date	Sample Depth (ft)	Sample Elevation[a] (ft)	GRO	DRO/HO	BTEX	cPAHs	PAHs	CVOCs[b]	VOCs	Metals	PCBs
B-215	53.95	9/12/2017	15	38.95			X			X	X		
			25	28.95			X			X			
			35	18.95			X			X	X		
			45	8.95			X			X	X		
			55	-1.05			X			X	X		
			65	-11.05			X			X	X		
			75	-21.05			X			X	X		
		9/13/2017	85	-31.05			X			X	X		
			95	-41.05			X			X	X		
BB-5	49.48	9/3/1997	15 - 17	34.48 to 32.48	X	X	X			X			
			25 - 27	24.48 to 22.48	X	X	X			X			
BB-8	43.72	6/6/1997	20 - 22	23.72 to 21.72	X	X	X			X			
BB-10	57.40	8/29/1997	15 - 17	42.40 to 40.40	X	X							
HMW-1IB	38.29	3/12/2019	7.5 - 9	30.79 to 29.29	X	X	X			X	X		
			15 - 16.5	23.29 to 21.79			X			X	X		
			20.5 - 22	17.79 to 16.29			X			X	X		
			27.5 - 29	10.79 to 9.29	X	X	X			X	X		
			50 - 51.5	-11.71 to -13.21			X			X	X		
			65 - 65.4	-26.71 to -27.11			X			X	X		
HMW-2IB	47.41	3/12/2019	7.5 - 9	39.91 to 38.41	X	X	X			X	X	X	
			15 - 15.5	32.41 to 31.91			X			X	X		
			22.5 - 23.5	24.91 to 23.91	X	X	X			X	X		
			30 - 30.5	17.41 to 16.91			X			X	X		
			45 - 46	2.41 to 1.41			X			X	X		
			65 - 66.5	-17.59 to -19.09			X			X	X		
HMW-3IA	55.02	3/15/2019	15 - 16	40.02 to 39.02			X			X	X		
			20 - 21	35.02 to 34.02	X	X	X			X	X		
			22.5 - 23.5	32.52 to 31.52	X	X	X			X	X	X	
			25 - 26	30.02 to 29.02	X	X	X			X	X		
HMW-4IA	58.70	3/7/2019	5 - 6	53.70 to 52.70			X			X	X		
			7.5 - 8.7	51.20 to 50.00	X	X	X	X	X	X	X		
			10 - 11	48.70 to 47.70			X			X	X		
			25 - 26.8	33.70 to 31.90	X	X	X			X	X		

TABLE 5-3
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SEATTLE DOT MERCER PARCELS SITE
SEATTLE, WASHINGTON

Boring ID	Surface Elevation[a] (ft)	Sample Date	Sample Depth (ft)	Sample Elevation[a] (ft)	GRO	DRO/HO	BTEX	cPAHs	PAHs	CVOCs[b]	VOCs	Metals	PCBs
HMW-5IB	58.44	2/28/2020	5 - 6.5	53.44 to 51.94	X	X	X	X	X	X	X	X	
			10 - 11.5	48.44 to 46.94	X	X	X	X	X	X	X	X	
			15 - 16.5	43.44 to 41.94	X	X	X	X	X	X	X	X	
			20 - 21.5	38.44 to 36.94	X	X	X	X	X	X	X	X	
			25 - 26.5	33.44 to 31.94	X	X	X	X	X	X	X	X	
HMW-6D	58.58	3/2/2020	5 - 6.5	53.58 to 52.08	X	X	X	X	X	X	X	X	
			10 - 11.5	48.58 to 47.08	X	X	X	X	X	X	X	X	
			15 - 16.5	43.58 to 42.08	X	X	X	X	X	X	X	X	
			25 - 26.5	33.58 to 32.08	X	X	X	X	X	X	X	X	
			30 - 31.5	28.58 to 27.08	X	X	X	X	X	X	X	X	
HMW-6IA	58.65	3/2/2020	5 - 6.5	53.65 to 52.15	X	X	X	X	X	X	X	X	
			10 - 11.5	48.65 to 47.15	X	X	X	X	X	X	X	X	
			15 - 16.5	43.65 to 42.15	X	X	X	X	X	X	X	X	
			20 - 21.5	38.65 to 37.15	X	X	X	X	X	X	X	X	
			30 - 31.5	28.65 to 27.15	X	X	X	X	X	X	X	X	
HMW-6IB	58.67	3/3/2020	5 - 6.5	53.67 to 52.17	X	X	X	X	X	X	X	X	
			10 - 11.5	48.67 to 47.17	X	X	X	X	X	X	X	X	
			15 - 16.5	43.67 to 42.17	X	X	X	X	X	X	X	X	
			20 - 21.5	38.67 to 37.17	X	X	X	X	X	X	X	X	
			25 - 26.5	33.67 to 32.17	X	X	X	X	X	X	X	X	
HMW-7IB	58.69	2/28/2020	5 - 6.5	53.69 to 52.19	X	X	X	X	X	X	X	X	
			10 - 11.5	48.69 to 47.19	X	X	X	X	X	X	X	X	
			15 - 16.5	43.69 to 42.19	X	X	X	X	X	X	X	X	
			20 - 21.5	38.69 to 37.19	X	X	X	X	X	X	X	X	
			25 - 26.5	33.69 to 32.19	X	X	X	X	X	X	X	X	
HMW-8IB	57.97	3/2/2020	5 - 6.5	52.97 to 51.47	X	X	X	X	X	X	X	X	
			10 - 11.5	47.97 to 46.47	X	X	X	X	X	X	X	X	
			15 - 16.5	42.97 to 41.47	X	X	X	X	X	X	X	X	
			20 - 21.5	37.97 to 36.47	X	X	X	X	X	X	X	X	
			25 - 26.5	32.97 to 31.47	X	X	X	X	X	X	X	X	
HMW-9D	55.32	2/27/2020	5 - 6.5	50.32 to 48.82	X	X	X			X	X	X	
			10 - 11.5	45.32 to 43.82	X	X	X			X	X	X	
			15 - 16.5	40.32 to 38.82	X	X	X			X	X	X	
			20 - 21.5	35.32 to 33.82	X	X	X			X	X	X	
			25 - 26.5	30.32 to 28.82	X	X	X			X	X	X	

TABLE 5-3
SOIL SAMPLING AND ANALYSIS SUMMARY
SEATTLE DOT MERCER PARCELS SITE
SEATTLE, WASHINGTON

Boring ID	Surface Elevation[a] (ft)	Sample Date	Sample Depth (ft)	Sample Elevation[a] (ft)	GRO	DRO/HO	BTEX	cPAHs	PAHs	CVOCs[b]	VOCs	Metals	PCBs
HMW-9IA	55.26	2/28/2020	5 - 6.5	50.26 to 48.76	X	X	X			X	X	X	
			10 - 11.5	45.26 to 43.76	X	X	X			X	X	X	
			15 - 16.5	40.26 to 38.76	X	X	X			X	X	X	
			20 - 21.5	35.26 to 33.76	X	X	X			X	X	X	
			25 - 26.5	30.26 to 28.76	X	X	X			X	X	X	
HMW-9IB	55.36	2/28/2020	5 - 6.5	50.36 to 48.86	X	X	X			X	X	X	
			13 - 14.5	42.36 to 40.86	X	X	X			X	X	X	
			15 - 16.5	40.36 to 38.86	X	X	X			X	X	X	
			20 - 21.5	35.36 to 33.86	X	X	X			X	X	X	
			25 - 26.5	30.36 to 28.86	X	X	X			X	X	X	
HMW-9S	55.39	3/2/2020	5 - 6.5	50.39 to 48.89	X	X	X			X	X	X	
			14 - 15.5	41.39 to 39.89	X	X	X			X	X	X	
			17 - 18.5	38.39 to 36.89	X	X	X			X	X	X	
			20 - 21.5	35.39 to 33.89	X	X	X			X	X	X	
			25 - 26.5	30.39 to 28.89	X	X	X			X	X	X	
HMW-10D	48.16	3/5/2020	5 - 6.5	43.16 to 41.66	X	X	X			X	X	X	
			10 - 11.5	38.16 to 36.66	X	X	X			X	X	X	
			15 - 16.5	33.16 to 31.66	X	X	X			X	X	X	
			20 - 21.5	28.16 to 26.66	X	X	X			X	X	X	
			25 - 26.5	23.16 to 21.66	X	X	X			X	X	X	
HMW-10S	48.21	3/3/2020	5 - 6.5	43.21 to 41.71	X	X	X			X	X	X	
			10 - 11.5	38.21 to 36.71	X	X	X			X	X	X	
			15 - 16.5	33.21 to 31.71	X	X	X			X	X	X	
			20 - 21.5	28.21 to 26.71	X	X	X			X	X	X	
			25 - 26.5	23.21 to 21.71	X	X	X			X	X	X	
HMW-11IB	39.70	2/24/2020	5 - 6.5	34.7 to 33.2	X	X	X			X	X	X	
			10 - 11.5	29.7 to 28.2	X	X	X			X	X	X	
			15 - 16.5	24.7 to 23.2	X	X	X			X	X	X	
			20 - 21.5	19.7 to 18.2	X	X	X			X	X	X	
			25 - 26.5	14.7 to 13.2	X	X	X			X	X	X	
HMW-11S	41.47	2/25/2020	5 - 6.5	36.47 to 34.97	X	X	X			X	X	X	
			10 - 11.5	31.47 to 29.97	X	X	X			X	X	X	
			15 - 16.5	26.47 to 24.97	X	X	X			X	X	X	
			20 - 21.5	21.47 to 19.97	X	X	X			X	X	X	
			31 - 32.5	10.47 to 8.97	X	X	X			X	X	X	
HMW-17S	57.21	9/3/2020	5 - 6.25	52.21 to 50.96	X	X	X	X		X	X	X	X
			10 - 11.25	47.21 to 45.96	X	X	X	X		X	X	X	X
			15 - 16.33	42.21 to 40.88	X	X	X	X		X	X	X	X
			20 - 20.75	37.21 to 36.46	X	X	X	X		X	X	X	X
			25 - 26	32.21 to 31.21	X	X	X	X		X	X	X	X

TABLE 5-3
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SEATTLE, WASHINGTON

Boring ID	Surface Elevation[a] (ft)	Sample Date	Sample Depth (ft)	Sample Elevation[a] (ft)	GRO	DRO/HO	BTEX	cPAHs	PAHs	CVOCs[b]	VOCs	Metals	PCBs
HMW-18S	57.61	9/3/2020	5 - 5.8	52.61 to 51.81	X	X	X	X		X	X	X	X
			10 - 11.5	47.61 to 46.11	X	X	X	X		X	X	X	X
			15 - 16.5	42.61 to 41.11	X	X	X	X		X	X	X	X
			20 - 20.9	37.61 to 36.71	X	X	X	X		X	X	X	X
			25 - 25.8	32.61 to 31.81	X	X	X	X		X	X	X	X
			30 - 31	27.61 to 26.61	X	X	X	X		X	X	X	X
HMW-19S	58.20	9/8/2020	5 - 5.5	53.20 to 52.70	X	X	X	X		X	X	X	X
			10 - 10.75	48.20 to 47.45	X	X	X	X		X	X	X	X
			15 - 16.5	43.20 to 41.70	X	X	X	X		X	X	X	X
			20 - 21.5	38.20 to 36.70	X	X	X	X		X	X	X	X
			26 - 26.8	32.20 to 31.40	X	X	X	X		X	X	X	X
			30 - 30.5	28.20 to 27.70	X	X	X	X		X	X	X	X
HMW-20S	53.81	9/8/2020	5 - 5.5	48.81 to 48.31	X	X	X	X		X	X	X	X
			10 - 11.5	43.81 to 42.31	X	X	X	X		X	X	X	X
			15 - 16.5	38.81 to 37.31	X	X	X	X		X	X	X	X
			20 - 21.25	33.81 to 32.56	X	X	X	X		X	X	X	X
			25 - 26.4	28.81 to 27.41	X	X	X	X		X	X	X	X
			30 - 31	23.81 to 22.81	X	X	X	X		X	X	X	X
21417-MB1	55.43	5/12/2017	9	46.43	X	X	X			X	X	X	
21417-MB2	54.72	5/12/2017	1	53.72				X	X				
			10	44.72	X	X	X			X	X		
21417-MB3	58.63	5/12/2017	1	57.63				X	X				
21417-MB3	58.63	5/12/2017	20	38.63	X	X	X			X	X		
21417-MB4	57.24	5/12/2017	24	33.24	X	X	X			X	X	X	
21417-MB5	51.91	5/12/2017	9	42.91	X	X	X			X	X		
21417-MB6	48.22	5/11/2017	9	39.22	X	X	X			X	X	X	
21417-MB7	47.38	5/11/2017	11	36.38	X	X	X			X	X		
21417-MB8	45.28	5/11/2017	27	18.28	X	X	X			X	X	X	
21417-MB9	39.05	5/11/2017	13	26.05	X	X	X			X	X	X	
			22	17.05	X	X	X			X	X	X	
21417-MB10	38.08	5/11/2017	28	10.08	X	X	X			X	X	X	
21417-MB11	39.04	5/11/2017	23	16.04	X	X	X			X	X	X	

TABLE 5-3
SOIL SAMPLING AND ANALYSIS SUMMARY
SEATTLE DOT MERCER PARCELS SITE
SEATTLE, WASHINGTON

Boring ID	Surface Elevation[a] (ft)	Sample Date	Sample Depth (ft)	Sample Elevation[a] (ft)	GRO	DRO/HO	BTEX	cPAHs	PAHs	CVOCs[b]	VOCs	Metals	PCBs
MBB-1	55.02	2/27/2020	5 - 6.5	50.02 to 48.52	X	X	X	X	X	X	X	X	
			10 - 11.5	45.02 to 43.52	X	X	X	X	X	X	X	X	
			15 - 16.5	40.02 to 38.52	X	X	X	X	X	X	X	X	
			20 - 21.5	35.02 to 33.52	X	X	X	X	X	X	X	X	
			25 - 26.5	30.02 to 28.52	X	X	X	X	X	X	X	X	
MBB-2	55.45	2/27/2020	5 - 6.5	50.45 to 48.95	X	X	X	X	X	X	X	X	
			10 - 11.5	45.45 to 43.95	X	X	X	X	X	X	X	X	
			15 - 16.5	40.45 to 38.95	X	X	X	X	X	X	X	X	
			20 - 21.5	35.45 to 33.95	X	X	X	X	X	X	X	X	
			25 - 26.5	30.45 to 28.95	X	X	X	X	X	X	X	X	
MBB-3	54.84	2/27/2020	5 - 6.5	49.84 to 48.34	X	X	X	X	X	X	X	X	
			10 - 11.5	44.84 to 43.34	X	X	X	X	X	X	X	X	
			15 - 16.5	39.84 to 38.34	X	X	X	X	X	X	X	X	
			20 - 21.5	34.84 to 33.34	X	X	X	X	X	X	X	X	
			25 - 26.5	29.84 to 28.34	X	X	X	X	X	X	X	X	
MBB-4	54.61	2/27/2020	5 - 6.5	49.61 to 48.11	X	X	X	X	X	X	X	X	
			10 - 12.5	44.61 to 42.11	X	X	X	X	X	X	X	X	
			15 - 16.5	39.61 to 38.11	X	X	X	X	X	X	X	X	
			20 - 23	34.61 to 31.61	X	X	X	X	X	X	X	X	
			25 - 26.5	29.61 to 28.11	X	X	X	X	X	X	X	X	
MBB-5	50.53	3/2/2020	5 - 6.5	45.53 to 44.03	X	X	X			X	X	X	
			10 - 11.5	40.53 to 39.03	X	X	X			X	X	X	
			15 - 16.5	35.53 to 34.03	X	X	X			X	X	X	
			20 - 21.5	30.53 to 29.03	X	X	X			X	X	X	
			25 - 26.5	25.53 to 24.03	X	X	X			X	X	X	
MBB-6	50.33	3/3/2020	5 - 6.5	45.33 to 43.83	X	X	X			X	X	X	
			10 - 11.5	40.33 to 38.83	X	X	X			X	X	X	
			15 - 16.5	35.33 to 33.83	X	X	X			X	X	X	
			20 - 21.5	30.33 to 28.83	X	X	X			X	X	X	
			25 - 26.5	25.33 to 23.83	X	X	X			X	X	X	
MBB-7	49.41	2/25/2020	5 - 6.5	44.41 to 42.91	X	X	X			X	X	X	
			10 - 11.5	39.41 to 37.91	X	X	X			X	X	X	
			15 - 16.5	34.41 to 32.91	X	X	X			X	X	X	
			20 - 21.5	29.41 to 27.91	X	X	X			X	X	X	
			25 - 26.5	24.41 to 22.91	X	X	X			X	X	X	
MBB-8	49.66	2/26/2020	7 - 7.5	42.66 to 42.16	X	X	X			X	X	X	
			10 - 11.5	39.66 to 38.16	X	X	X			X	X	X	
			15 - 16.5	34.66 to 33.16	X	X	X			X	X	X	
			20 - 21.5	29.66 to 28.16	X	X	X			X	X	X	
			25 - 26.5	24.66 to 23.16	X	X	X			X	X	X	

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Boring ID	Surface Elevation[a] (ft)	Sample Date	Sample Depth (ft)	Sample Elevation[a] (ft)	GRO	DRO/HO	BTEX	cPAHs	PAHs	CVOCs[b]	VOCs	Metals	PCBs
MBB-9	47.55	2/26/2020	5.5 - 7	42.05 to 40.55	X	X	X			X	X	X	
			10 - 11.5	37.55 to 36.05	X	X	X			X	X	X	
			15 - 16.5	32.55 to 31.05	X	X	X			X	X	X	
			20 - 21.5	27.55 to 26.05	X	X	X			X	X	X	
			25 - 26.5	22.55 to 21.05	X	X	X			X	X	X	
MBB-10	49.66	2/26/2020	5 - 6.5	44.66 to 43.16	X	X	X			X	X	X	
			10 - 11.5	39.66 to 38.16	X	X	X			X	X	X	
			15 - 16.5	34.66 to 33.16	X	X	X			X	X	X	
			20 - 21.5	29.66 to 28.16	X	X	X			X	X	X	
			25 - 26.5	24.66 to 23.16	X	X	X			X	X	X	
MBB-11	46.42	3/4/2020	15 - 16.5	31.42 to 29.92								X	
			20 - 21.5	26.42 to 24.92								X	
			25 - 26.5	21.42 to 19.92								X	
MBB-12	33.69	3/4/2020	15 - 16.5	18.69 to 17.19								X	
			20 - 21.5	13.69 to 12.19								X	
			25 - 26.5	8.69 to 7.19								X	
MBB-13	35.98	3/4/2020	15 - 16.5	20.98 to 19.48								X	
			20 - 21.5	15.98 to 14.48								X	
			25 - 26.5	10.98 to 9.48								X	
MBB-14	47.15	3/3/2020	5 - 6.5	42.15 to 40.65		X		X	X				
			10 - 11.5	37.15 to 35.65		X		X	X				
			15 - 16.5	32.15 to 30.65		X		X	X				
			20 - 21.5	27.15 to 25.65		X		X	X				
			25 - 26.5	22.15 to 20.65		X		X	X				
MBB-15	37.73	3/4/2020	5 - 6.5	32.73 to 31.23		X		X	X				
			10 - 11.5	27.73 to 26.23		X		X	X				
			15 - 16.5	22.73 to 21.23		X		X	X				
			20 - 21.5	17.73 to 16.23		X		X	X				
			25 - 26.5	12.73 to 11.23		X		X	X				
MBB-16	53.70	9/2/2020	5 - 5.5	48.70 to 48.20	X	X	X	X		X	X	X	X
			10 - 11.5	43.70 to 42.20	X	X	X	X		X	X	X	X
			15 - 15.5	38.70 to 38.20	X	X	X	X		X	X	X	X
			20 - 20.9	33.70 to 32.80	X	X	X	X		X	X	X	X
MBB-17	54.88	9/1/2020	5 - 6	49.88 to 48.88	X	X	X	X		X	X	X	X
			10 - 10.75	44.88 to 44.13	X	X	X	X		X	X	X	X
			15 - 16	39.88 to 38.88	X	X	X	X		X	X	X	X
			25 - 25.9	29.88 to 28.98	X	X	X	X		X	X	X	X

TABLE 5-3
SOIL SAMPLING AND ANALYSIS SUMMARY
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SEATTLE, WASHINGTON

Boring ID	Surface Elevation[a] (ft)	Sample Date	Sample Depth (ft)	Sample Elevation[a] (ft)	GRO	DRO/HO	BTEX	cPAHs	PAHs	CVOCs[b]	VOCs	Metals	PCBs
MBB-18	51.33	9/1/2020	5 - 6.5	46.33 to 44.83	X	X	X	X		X	X	X	X
			10 - 10.9	41.33 to 40.43	X	X	X	X		X	X	X	X
			15 - 16.4	36.33 to 34.93	X	X	X	X		X	X	X	X
			20 - 20.75	31.33 to 30.58	X	X	X	X		X	X	X	X
MBB-19	51.68	9/1/2020	5 - 5.8	46.68 to 45.88	X	X	X	X		X	X	X	X
			10 - 11	41.68 to 40.68	X	X	X	X		X	X	X	X
			15 - 15.4	36.68 to 36.28	X	X	X	X		X	X	X	X
			20 - 20.8	31.68 to 30.88	X	X	X	X		X	X	X	X
MBB-20	47.53	9/2/2020	5 - 6.5	42.53 to 41.03	X	X	X	X		X	X	X	X
			10 - 11.5	37.53 to 36.03	X	X	X	X		X	X	X	X
			15 - 16.33	32.53 to 31.2	X	X	X	X		X	X	X	X
			20 - 20.5	27.53 to 27.03	X	X	X	X		X	X	X	X
MBB-21	47.60	9/2/2020	5 - 5.8	42.60 to 41.80	X	X	X	X		X	X	X	X
			10 - 11.5	37.60 to 36.10	X	X	X	X		X	X	X	X
			15 - 15.9	32.60 to 31.70	X	X	X	X		X	X	X	X
			20 - 20.9	27.60 to 26.70	X	X	X	X		X	X	X	X
MBB-22	42.05	9/21/2020	5 - 6	37.05 to 36.05	X	X	X	X		X	X	X	X
			15 - 16.25	27.05 to 25.8	X	X	X	X		X	X	X	X
			20 - 21.3	22.05 to 20.75	X	X	X	X		X	X	X	X
			25 - 26.3	17.05 to 15.75	X	X	X	X		X	X	X	X
			30 - 30.5	12.05 to 11.55	X	X	X	X		X	X	X	X
MBB-23	47.18	9/21/2020	5 - 6.2	42.18 to 40.98	X	X	X	X		X	X	X	X
			10 - 11.1	37.18 to 36.08	X	X	X	X		X	X	X	X
			15 - 16.25	32.18 to 30.93	X	X	X	X		X	X	X	X
			20 - 21.3	27.18 to 25.88	X	X	X	X		X	X	X	X
			25 - 26	22.18 to 21.18	X	X	X	X		X	X	X	X
			30 - 31	17.18 to 16.18	X	X	X	X		X	X	X	X
MBB-24	54.10	9/9/2020	5 - 6.5	49.10 to 47.60	X	X	X	X		X	X	X	X
			10 - 11.4	44.10 to 42.70	X	X	X	X		X	X	X	X
			15 - 16.5	39.10 to 37.60	X	X	X	X		X	X	X	X
			20 - 21	34.10 to 33.10	X	X	X	X		X	X	X	X
			25 - 25.8	29.10 to 28.30	X	X	X	X		X	X	X	X
			30 - 31	24.10 to 23.10	X	X	X	X		X	X	X	X

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SEATTLE, WASHINGTON

Boring ID	Surface Elevation[a] (ft)	Sample Date	Sample Depth (ft)	Sample Elevation[a] (ft)	GRO	DRO/HO	BTEX	cPAHs	PAHs	CVOCs[b]	VOCs	Metals	PCBs
MBB-25	58.63	10/30/2020	5 - 5.5	53.63 to 53.13				X					
			9.5 - 10.5	49.13 to 48.13				X					
			14.5 - 15.4	44.13 to 43.23				X					
			19.5 - 20.5	39.13 to 38.13				X					
			24.5 - 25.5	34.13 to 33.13				X					
			29.5 - 30.5	29.13 to 28.13				X					
			34.5 - 35.5	24.13 to 23.13				X					
			39.5 - 40	19.13 to 18.63				X					
MBB-26	58.79	10/29/2020	5.25 - 5.5	53.54 to 53.29				X	X				
			9.5 - 10.5	49.29 to 48.29				X	X				
			14.5 - 15.5	44.29 to 43.29				X	X				
			19.5 - 20.5	39.29 to 38.29				X	X				
			24.5 - 25.5	34.29 to 33.29				X	X				
			29.5 - 30.5	29.29 to 28.29				X	X				
			34.5 - 35.5	24.29 to 23.29				X	X				
			39.5 - 40	19.29 to 18.79				X	X				
MBGW-1	39.95	3/6/2019	4 - 5	35.95 to 34.95	X	X	X			X	X	X	
			12.5 - 13.5	27.45 to 26.45			X			X	X		
			17 - 18	22.95 to 21.95	X	X	X			X	X	X	
			23.5 - 25	16.45 to 14.95	X	X	X	X	X	X	X		
			28 - 30	11.95 to 9.95			X			X	X		
MBGW-2	46.11	3/4/2019	5 - 6.5	41.11 to 39.61	X	X							
			10 - 11.5	36.11 to 34.61	X	X	X			X	X		
			12.5 - 14	33.61 to 32.11	X	X	X			X	X	X	
			25 - 26.5	21.11 to 19.61	X	X	X	X	X	X	X	X	
			30 - 31.5	16.11 to 14.61	X	X	X	X	X	X	X	X	
MBGW-3	47.77	3/7/2019	4 - 5	43.77 to 42.77	X	X							
			7 - 8	40.77 to 39.77	X	X	X			X	X	X	
			9 - 10	38.77 to 37.77	X	X	X			X	X		
			12 - 13	35.77 to 34.77	X	X	X	X	X	X	X	X	
			24 - 25	23.77 to 22.77	X	X	X			X	X	X	
			25 - 26	22.77 to 21.77	X	X	X	X	X	X	X		
			26	21.77	X	X	X	X	X	X	X		

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Boring ID	Surface Elevation[a] (ft)	Sample Date	Sample Depth (ft)	Sample Elevation[a] (ft)	GRO	DRO/HO	BTEX	cPAHs	PAHs	CVOCs[b]	VOCs	Metals	PCBs
MBGW-4	47.30	3/6/2019	2 - 3	45.30 to 44.30								X	
			4 - 5	43.30 to 42.30	X	X						X	
			7 - 8	40.30 to 39.30	X	X	X			X	X	X	
			9 - 10	38.30 to 37.30			X			X	X		
			12 - 13	35.30 to 34.30	X	X	X			X	X		
			24 - 25	23.30 to 22.30	X	X	X			X	X	X	
MBGW-5	49.87	3/11/2019	10 - 11	39.87 to 38.87	X	X	X			X	X		
			15 - 16.5	34.87 to 33.37	X	X	X			X	X		
			20 - 21	29.87 to 28.87			X			X	X		
			27.5 - 29	22.37 to 20.87	X	X	X			X	X	X	
			45 - 46.5	4.87 to 3.37	X	X	X			X	X		
MBGW-6	52.50	3/14/2019	10 - 10.7	42.5 to 41.8	X	X	X			X	X	X	
			15 - 15.7	37.5 to 36.8			X			X	X		
			20 - 20.75	32.5 to 31.75			X			X	X		
			30 - 30.5	22.5 to 22	X	X	X			X	X		
MBGW-7	53.76	3/6/2019	10 - 11.5	43.76 to 42.26								X	
			17.5 - 18.75	36.26 to 35.01								X	
			30 - 30.5	23.76 to 23.26			X			X	X		
			40 - 40.5	13.76 to 13.26								X	
MBGW-8	47.08	3/15/2019	10 - 11.5	37.08 to 35.58	X	X	X			X	X		
			15 - 16.5	32.08 to 30.58			X			X	X		
			25 - 26	22.08 to 21.08	X	X	X			X	X	X	
			35 - 35.7	12.08 to 11.38			X			X	X		
MBGW-9	56.84	3/13/2019	10 - 10.5	46.84 to 46.34	X	X	X			X	X	X	
			15 - 15.8	41.84 to 41.04	X	X	X			X	X		
			20 - 21.25	36.84 to 35.59			X			X	X		
			25 - 25.5	31.84 to 31.34	X	X	X			X	X		
			30 - 31.5	26.84 to 25.34	X	X	X			X	X		
MBGW-10	55.25	3/13/2019	10 - 10.9	45.25 to 44.35	X	X	X			X	X	X	
			15 - 16.2	40.25 to 39.05	X	X	X			X	X		
			20 - 21.25	35.25 to 34			X			X	X		
			25 - 25.7	30.25 to 29.55	X	X	X			X	X		
			30 - 30.8	25.25 to 24.45	X	X	X			X	X		
MBGW-11	57.55	3/12/2019	5 - 6.5	52.55 to 51.05	X	X	X			X	X	X	
			10 - 11	47.55 to 46.55	X	X	X			X	X		

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Boring ID	Surface Elevation[a] (ft)	Sample Date	Sample Depth (ft)	Sample Elevation[a] (ft)	GRO	DRO/HO	BTEX	cPAHs	PAHs	CVOCs[b]	VOCs	Metals	PCBs
MBGW-12	54.00	3/15/2019	5 - 5.75	49 to 48.25	X	X	X			X	X	X	
			20 - 21	34 to 33			X			X	X		
			25 - 25.5	29 to 28.5	X	X	X			X	X		
			30 - 30.8	24 to 23.2			X			X	X		
MBGW-13	54.72	3/14/2019	5 - 6.5	49.72 to 48.22	X	X	X			X	X		
			7.5 - 8.75	47.22 to 45.97			X			X	X		
			10 - 11.5	44.72 to 43.22	X	X	X			X	X		
			12.5 - 14	42.22 to 40.72			X			X	X		
			15 - 15.8	39.72 to 38.92	X	X	X			X	X		
			20 - 20.6	34.72 to 34.12	X		X			X	X		
MBGW-14	46.09	3/6/2019	9 - 10	37.09 to 36.09	X	X	X			X	X		
			13.5 - 15	32.59 to 31.09			X			X	X		
			18 - 20	28.09 to 26.09	X	X	X			X	X		
			28 - 30	18.09 to 16.09	X	X	X			X	X		
MBGW-15	40.87	3/8/2019	20 - 21.25	20.87 to 19.62								X	
MBGW-16	52.14	3/8/2019	10 - 10.8	42.14 to 41.34	X	X	X			X	X		
			15 - 16.4	37.14 to 35.74	X	X	X			X	X		
			20 - 20.8	32.14 to 31.34	X								
			30 - 31	22.14 to 21.14	X	X	X			X	X		
MBPP-1	45.28	3/5/2019	8 - 10	37.28 to 35.28								X	
			19 - 20	26.28 to 25.28	X	X	X			X	X		
			24 - 25	21.28 to 20.28	X	X	X			X	X		
MBPP-2	44.46	3/5/2019	9 - 10	35.46 to 34.46	X	X	X			X	X	X	
			19 - 20	25.46 to 24.46	X	X	X			X	X		
			26.5 - 28	17.96 to 16.46	X		X			X	X		
MBPP-3	45.89	3/6/2019	9 - 10	36.89 to 35.89	X	X	X			X	X		
			19 - 20	26.89 to 25.89	X	X	X			X	X		
			24 - 25	21.89 to 20.89	X		X			X	X	X	

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Boring ID	Surface Elevation[a] (ft)	Sample Date	Sample Depth (ft)	Sample Elevation[a] (ft)	GRO	DRO/HO	BTEX	cPAHs	PAHs	CVOCs[b]	VOCs	Metals	PCBs
MBPP-4	48.34	3/7/2019	2 - 3	46.34 to 45.34			X			X	X		
			9 - 10	39.34 to 38.34	X	X	X			X	X	X	
			14 - 15	34.34 to 33.34			X			X	X		
			16 - 17	32.34 to 31.34			X			X	X		
			17 - 18	31.34 to 30.34	X	X	X			X	X		
MBPP-5	45.92	3/7/2019	8 - 10	37.92 to 35.92	X	X	X			X	X		
			14 - 15	31.92 to 30.92	X	X	X			X	X		
			16.5 - 18	29.42 to 27.92			X			X	X		
			19 - 20	26.92 to 25.92	X		X			X	X		
			24 - 25	21.92 to 20.92	X	X	X			X	X	X	
MBPP-6	52.26	3/8/2019	7 - 8	45.26 to 44.26	X	X	X			X	X		
			9 - 10	43.26 to 42.26	X	X	X			X	X		
			12 - 13	40.26 to 39.26	X	X	X			X	X		
			14 - 15	38.26 to 37.26			X			X	X		
			17 - 18	35.26 to 34.26	X	X	X			X	X		
			19 - 20	33.26 to 32.26			X			X	X		
			24 - 25	28.26 to 27.26			X			X	X		
			29 - 30	23.26 to 22.26	X	X	X			X	X		
MBPP-7	49.77	3/8/2019	4 - 5	45.77 to 44.77	X	X	X			X	X	X	
			14 - 15	35.77 to 34.77			X			X	X		
			22 - 23	27.77 to 26.77	X	X	X			X	X		
MBPP-8	57.52	3/8/2019	9 - 10	48.52 to 47.52	X	X	X			X	X		
			14 - 15	43.52 to 42.52	X	X	X			X	X	X	
			21 - 22.5	36.52 to 35.02			X			X	X		
			29 - 30	28.52 to 27.52	X	X	X			X	X		
MW-105	45.59	8/6/2012	10	35.59						X	X		
			20	25.59						X	X		
			30	15.59						X	X		
		8/8/2012	40	5.59						X	X		
			50	-4.41						X	X		
		8/9/2012	60	-14.41						X	X		
			70	-24.41						X	X		
			80	-34.41						X	X		
		8/10/2012	90	-44.41						X	X		
			100	-54.41						X	X		
			110	-64.41						X	X		
			120	-74.41						X	X		
			130	-84.41						X	X		
			138	-92.41						X	X		

TABLE 5-3
SOIL SAMPLING AND ANALYSIS SUMMARY
SEATTLE DOT MERCER PARCELS SITE
SEATTLE, WASHINGTON

Boring ID	Surface Elevation[a] (ft)	Sample Date	Sample Depth (ft)	Sample Elevation[a] (ft)	GRO	DRO/HO	BTEX	cPAHs	PAHs	CVOCs[b]	VOCs	Metals	PCBs
MW-106	52.90	8/14/2012	10	42.90						X	X		
			20	32.90						X	X		
			30	22.90						X	X		
			40	12.90						X	X		
			50	2.90						X	X		
			60	-7.10						X	X		
		8/15/2012	70	-17.10						X	X		
			80	-27.10						X	X		
			90	-37.10						X	X		
			100	-47.10						X	X		
			110	-57.10						X	X		
			120	-67.10						X	X		
			130	-77.10						X	X		
			140	-87.10						X	X		
MW-114	42.43	12/10/2012	15	27.43						X	X		
			25	17.43						X	X		
			35	7.43						X	X		
			40	2.43						X	X		
			45	-2.57						X	X		
MW-117	57.78	2/4/2013	10	47.78						X	X		
			20	37.78						X	X		
			30	27.78						X	X		
			40	17.78						X	X		
			50	7.78						X	X		
MW-118	54.50	3/21/2013	10	44.50						X	X		
			20	34.50						X	X		
			30	24.50						X	X		
			40	14.50						X	X		
			50	4.50						X	X		
MW-119	37.66	3/21/2013	10	27.66						X	X		
			20	17.66						X	X		
			30	7.66						X	X		
			40	-2.34						X	X		

TABLE 5-3
SOIL SAMPLING AND ANALYSIS SUMMARY
SEATTLE DOT MERCER PARCELS SITE
SEATTLE, WASHINGTON

Boring ID	Surface Elevation[a] (ft)	Sample Date	Sample Depth (ft)	Sample Elevation[a] (ft)	GRO	DRO/HO	BTEX	cPAHs	PAHs	CVOCs[b]	VOCs	Metals	PCBs
MW-140	50.32	8/30/2017	15	35.32			X			X	X		
			25	25.32			X			X	X		
			35	15.32			X			X	X		
			45	5.32			X			X	X		
			55	-4.68			X			X	X		
			65	-14.68			X			X	X		
			75	-24.68			X			X	X		
			90	-39.68			X			X	X		
		8/31/2017	110	-59.68			X			X	X		
			130	-79.68			X			X	X		
			140	-89.68			X			X	X		
MW-147	52.49	4/2/2018	10	42.49			X			X	X		
			20	32.49			X			X	X		
			30	22.49			X			X	X		
			40	12.49			X			X	X		
			50	2.49			X			X	X		
			60	-7.51			X			X	X		
			70	-17.51			X			X	X		
			80	-27.51			X			X	X		
MW-148	44.29	4/9/2018	11	33.29			X			X	X		
			20	24.29			X			X	X		
			30	14.29			X			X	X		
			40	4.29			X			X	X		
			50	-5.71			X			X	X		
			60	-15.71			X			X	X		
			70	-25.71			X			X	X		
			80	-35.71			X			X	X		
MW-153	54.84	3/27/2018	10	44.84			X			X	X		
			20	34.84			X			X	X		
			30	24.84			X			X	X		
			40	14.84			X			X	X		
			50	4.84			X			X	X		
			61	-6.16			X			X	X		
			70	-15.16			X			X	X		
		3/28/2018	80	-25.16			X			X	X		
			90	-35.16			X			X	X		
			110	-55.16			X			X	X		
		3/29/2018	130	-75.16			X			X	X		

TABLE 5-3
SOIL SAMPLING AND ANALYSIS SUMMARY
SEATTLE DOT MERCER PARCELS SITE
SEATTLE, WASHINGTON

Boring ID	Surface Elevation[a] (ft)	Sample Date	Sample Depth (ft)	Sample Elevation[a] (ft)	GRO	DRO/HO	BTEX	cPAHs	PAHs	CVOCs[b]	VOCs	Metals	PCBs
MW-316	49.73	9/9/2019	5	44.73			X			X	X		
			10	39.73			X			X	X		
			15	34.73			X			X	X		
			20	29.73			X			X	X		
			25	24.73			X			X	X		
			30	19.73			X			X	X		
			35	14.73			X			X	X		
			40	9.73			X			X	X		
			45	4.73			X			X	X		
			50	-0.27			X			X	X		
			55	-5.27			X			X	X		
			60	-10.27			X			X	X		
		9/10/2019	65	-15.27			X			X	X		
			70	-20.27			X			X	X		
MW-326	41.31	9/9/2019	5	36.31			X			X	X		
			10	31.31			X			X	X		
			15	26.31			X			X	X		
			20	21.31			X			X	X		
			25	16.31			X			X	X		
			30	11.31			X			X	X		
			35	6.31			X			X	X		
			40	1.31			X			X	X		
			45	-3.69			X			X	X		
			50	-8.69			X			X	X		
			55	-13.69			X			X	X		
			60	-18.69			X			X	X		
			65	-23.69			X			X	X		
			70	-28.69			X			X	X		
			75	-33.69			X			X	X		
			80	-38.69			X			X	X		
		9/10/2019	85	-43.69			X			X	X		
			90	-48.69			X			X	X		
			95	-53.69			X			X	X		
			100	-58.69			X			X	X		

TABLE 5-3
SOIL SAMPLING AND ANALYSIS SUMMARY
SEATTLE DOT MERCER PARCELS SITE
SEATTLE, WASHINGTON

Boring ID	Surface Elevation[a] (ft)	Sample Date	Sample Depth (ft)	Sample Elevation[a] (ft)	GRO	DRO/HO	BTEX	cPAHs	PAHs	CVOCs[b]	VOCs	Metals	PCBs
GP-7	58.53	5/12/2012	0 - 7	58.53 to 51.53	X		X					X	
			7 - 11	51.53 to 47.53	X		X					X	
GP-8	58.33	5/14/2012	0 - 7	58.33 to 51.33	X		X					X	
			7 - 12	51.33 to 46.33	X		X					X	
GP-9	58.00	5/14/2012	0 - 7	58.00 to 51.00	X		X					X	
		5/14/2012	7 - 14	51.00 to 44.00	X		X					X	
		5/14/2012	14 - 19	44.00 to 39.00	X		X					X	

Notes:

a. Elevations relative to North American Vertical Datum of 1988 (NAVD88).

b. A note on terminology: for the purposes of this report, we use the term CVOCs to refer to the volatile compound tetrachloroethene and its degradation products, trichloroethene, cis- and trans-1,2-dichloroethene, and vinyl chloride. We use the term BTEX to refer to the volatile aromatic compounds benzene, toluene, ethylbenzene, and xylenes. All other volatile organic compounds, including chlorinated compounds such as 1,1,1-trichloroethane and 1,1-dichloroethane, are referred to as VOCs.

Table shows sampling relevant to Seattle DOT Mercer Parcels Site. Other sampling done at American Linen site is presented in PES Environmental (2019).

BTEX = Benzene, toluene, ethylbenzene, and xylenes.

cPAHs = Carcinogenic polycyclic aromatic hydrocarbons.

CVOCs = Chlorinated volatile organic compounds.

DRO = Diesel-range petroleum hydrocarbons.

ft = feet.

GRO = Gasoline-range petroleum hydrocarbons.

HO = Heavy oil-range petroleum hydrocarbons.

PAHs = Polycyclic aromatic hydrocarbons.

PCBs = Polychlorinated biphenyls.

VOCs = Volatile organic compounds.

TABLE 5-5
SOIL RESULTS FOR SEMI-VOLATILE ORGANIC COMPOUNDS
SEATTLE DOT MERCER PARCELS SITE
SEATTLE, WASHINGTON

Boring/Well ID	Sample Date	Sample Type	Surface Elevation (ft)	Sample Depth (ft)	Sample Elevation (ft)	Carcinogenic Semi-Volatile Organic Compounds							
						Benzo(a) anthracene	Benzo(a) pyrene	Benzo(b) fluoranthene	Benzo(k) fluoranthene	Chrysene	Dibenz(a,h) anthracene	Indeno (1,2,3-cd) pyrene	cPAHs-TEQ
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
					Analytical Method	SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM
21417-MB2	5/12/2017	N	54.72	1	53.72	0.0426 U	0.0426 U	0.0426 U	0.0426 U	0.0426 U	0.0426 U	0.0426 U	0.0322 U
21417-MB3	5/12/2017	N	58.63	1	57.63	**0.0393**	**0.0399**	**0.0505**	0.0382 U	**0.0462**	0.0382 U	0.0382 U	**0.0551**
HMW-4IA	3/7/2019	N	58.70	7.5	51.20	**1.5**	0.1 U	**1.17**	0.1 U	**2.3**	0.1 U	0.1 U	**0.36**
HMW-5IB	2/28/2020	N	58.44	5 - 6.5	53.44 to 51.94	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
				10 - 11.5	48.44 to 46.94	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
				15 - 16.5	43.44 to 41.94	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
				20 - 21.5	38.44 to 36.94	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
				25 - 26.5	33.44 to 31.94	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
HMW-6D	3/2/2020	N	58.58	5 - 6.5	53.58 to 52.08	**0.085**	**0.076**	**0.11**	0.05 U	**0.13**	0.05 U	0.05 U	**0.098**
				10 - 11.5	48.58 to 47.08	**0.083**	**0.064**	**0.088**	0.05 U	**0.11**	0.05 U	0.05 U	**0.083**
				15 - 16.5	43.58 to 42.08	**0.066**	0.05 U	**0.066**	0.05 U	**0.092**	0.05 U	0.05 U	**0.017**
				25 - 26.5	33.58 to 32.08	**0.071**	0.05 U	**0.08**	0.05 U	**0.1**	0.05 U	0.05 U	**0.019**
				30 - 31.5	28.58 to 27.08	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
HMW-6IA	3/2/2020	N	58.65	5 - 6.5	53.65 to 52.15	**0.051**	0.05 U	**0.058**	0.05 U	**0.072**	0.05 U	0.05 U	**0.014**
				10 - 11.5	48.65 to 47.15	**0.082**	**0.06**	**0.086**	0.05 U	**0.1**	0.05 U	0.05 U	**0.079**
				15 - 16.5	43.65 to 42.15	**0.089**	**0.065**	**0.08**	0.05 U	**0.12**	0.05 U	0.05 U	**0.084**
				20 - 21.5	38.65 to 37.15	0.05 U	0.05 U	0.05 U	0.05 U	**0.065**	0.05 U	0.05 U	**0.0036**
				30 - 31.5	28.65 to 27.15	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
HMW-6IB	3/3/2020	N	58.67	5 - 6.5	53.67 to 52.17	**0.068**	0.05 U	**0.06**	0.05 U	**0.087**	0.05 U	0.05 U	**0.016**
				10 - 11.5	48.67 to 47.17	**0.068**	**0.051**	**0.068**	0.05 U	**0.088**	0.05 U	0.05 U	**0.067**
				15 - 16.5	43.67 to 42.17	**0.084**	**0.057**	**0.069**	0.05 U	**0.1**	0.05 U	0.05 U	**0.075**
				20 - 21.5	38.67 to 37.17	0.05 U	0.05 U	**0.057**	0.05 U	**0.071**	0.05 U	0.05 U	**0.0092**
				25 - 26.5	33.67 to 32.17	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
HMW-7IB	2/28/2020	N	58.69	5 - 6.5	53.69 to 52.19	**0.085**	**0.068**	**0.099**	0.05 U	**0.13**	0.05 U	0.05 U	**0.089**
				10 - 11.5	48.69 to 47.19	**0.06**	0.05 U	**0.072**	0.05 U	**0.088**	0.05 U	0.05 U	**0.017**
				15 - 16.5	43.69 to 42.19	**0.76**	**0.29**	**0.59**	**0.17**	**0.75**	0.05 U	**0.051**	**0.44**
				20 - 21.5	38.69 to 37.19	**0.052**	0.05 U	**0.074**	0.05 U	**0.085**	0.05 U	0.05 U	**0.016**
				25 - 26.5	33.69 to 32.19	**0.088**	**0.054**	**0.066**	0.05 U	**0.12**	0.05 U	0.05 U	**0.072**
HMW-8IB	3/2/2020	N	57.97	5 - 6.5	52.97 to 51.47	**0.086**	**0.066**	**0.094**	0.05 U	**0.12**	0.05 U	0.05 U	**0.086**
				10 - 11.5	47.97 to 46.47	**0.11**	**0.085**	**0.11**	0.05 U	**0.14**	0.05 U	0.05 U	**0.11**
				15 - 16.5	42.97 to 41.47	**0.093**	**0.063**	**0.09**	0.05 U	**0.12**	0.05 U	0.05 U	**0.084**
				20 - 21.5	37.97 to 36.47	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.003 U
				25 - 26.5	32.97 to 31.47	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U

Boring/Well ID	Sample Date	Sample Type	Surface Elevation (ft)	Sample Depth (ft)	Sample Elevation (ft)	Carcinogenic Semi-Volatile Organic Compounds							
						Benzo(a) anthracene	Benzo(a) pyrene	Benzo(b) fluoranthene	Benzo(k) fluoranthene	Chrysene	Dibenz(a,h) anthracene	Indeno (1,2,3-cd) pyrene	cPAHs-TEQ
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Analytical Method						SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM
HMW-17S	9/3/2020	N	57.21	5 - 6.25	52.21 to 50.96	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.0097 U
				10 - 11.25	47.21 to 45.96	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.0097 U
				15 - 16.33	42.21 to 40.88	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0019 U
				20 - 20.75	37.21 to 36.46	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0019 U
				25 - 26	32.21 to 31.21	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0019 U
HMW-18S	9/3/2020	N	57.61	5 - 5.8	52.61 to 51.81	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.0097 U
				10 - 11.5	47.61 to 46.11	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0019 U
				15 - 16.5	42.61 to 41.11	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0019 U
				20 - 20.9	37.61 to 36.71	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0019 U
				25 - 25.8	32.61 to 31.81	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0019 U
				30 - 31	27.61 to 26.61	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0019 U
HMW-19S	9/8/2020	N	58.20	5 - 5.5	53.20 to 52.70	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00041 U
				10 - 10.75	48.20 to 47.45	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00041 U
				15 - 16.5	43.20 to 41.70	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00041 U
				20 - 21.5	38.20 to 36.70	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00041 U
				26 - 26.8	32.20 to 31.40	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00041 U
				30 - 30.5	28.20 to 27.70	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00041 U
HMW-20S	9/8/2020	N	53.81	5 - 5.5	48.81 to 48.31	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00041 U
				10 - 11.5	43.81 to 42.31	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00041 U
				15 - 16.5	38.81 to 37.31	**0.011**	0.01 U	0.01 U	0.01 U	**0.011**	0.01 U	0.01 U	**0.0016**
				20 - 21.25	33.81 to 32.56	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00041 U
				25 - 26.4	28.81 to 27.41	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00041 U
				30 - 31	23.81 to 22.81	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00041 U
MBB-1	2/27/2020	N	55.02	5 - 6.5	50.02 to 48.52	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
				10 - 11.5	45.02 to 43.52	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
				15 - 16.5	40.02 to 38.52	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
				20 - 21.5	35.02 to 33.52	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
				25 - 26.5	30.02 to 28.52	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
MBB-2	2/27/2020	N	55.45	5 - 6.5	50.45 to 48.95	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
				10 - 11.5	45.45 to 43.95	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
				15 - 16.5	40.45 to 38.95	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
				20 - 21.5	35.45 to 33.95	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
		FD				0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
		N		25 - 26.5	30.45 to 28.95	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
MBB-3	2/27/2020	N	54.84	5 - 6.5	49.84 to 48.34	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
				10 - 11.5	44.84 to 43.34	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
				15 - 16.5	39.84 to 38.34	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
				20 - 21.5	34.84 to 33.34	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
				25 - 26.5	29.84 to 28.34	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U

Boring/Well ID	Sample Date	Sample Type	Surface Elevation (ft)	Sample Depth (ft)	Sample Elevation (ft)	Carcinogenic Semi-Volatile Organic Compounds							
						Benzo(a) anthracene	Benzo(a) pyrene	Benzo(b) fluoranthene	Benzo(k) fluoranthene	Chrysene	Dibenz(a,h) anthracene	Indeno (1,2,3-cd) pyrene	cPAHs-TEQ
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Analytical Method						SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM
MBB-4	2/27/2020	N	54.61	5 - 6.5	49.61 to 48.11	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
				10 - 12.5	44.61 to 42.11	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
		FD				0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
		N		15 - 16.5	39.61 to 38.11	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
				20 - 23	34.61 to 31.61	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
				25 - 26.5	29.61 to 28.11	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
MBB-14	3/3/2020	N	47.15	5 - 6.5	42.15 to 40.65	0.05 U	0.05 U	0.05 U	0.05 U	**0.058**	0.05 U	0.05 U	0.0036 U
				10 - 11.5	37.15 to 35.65	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
				15 - 16.5	32.15 to 30.65	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
				20 - 21.5	27.15 to 25.65	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
				25 - 26.5	22.15 to 20.65	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
MBB-15	3/4/2020	N	37.73	5 - 6.5	32.73 to 31.23	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
				10 - 11.5	27.73 to 26.23	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
				15 - 16.5	22.73 to 21.23	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
				20 - 21.5	17.73 to 16.23	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
				25 - 26.5	12.73 to 11.23	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
MBB-16	9/2/2020	N	53.70	5 - 5.5	48.70 to 48.20	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.002 U
				10 - 11.5	43.70 to 42.20	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00041 U
				15 - 15.5	38.70 to 38.20	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00041 U
				20 - 20.9	33.70 to 32.80	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00041 U
MBB-17	9/1/2020	N	54.88	5 - 6	49.88 to 48.88	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.002 U
				10 - 10.75	44.88 to 44.13	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00041 U
				15 - 16	39.88 to 38.88	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.002 U
				25 - 25.9	29.88 to 28.98	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00041 U
MBB-18	9/1/2020	N	51.33	5 - 6.5	46.33 to 44.83	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.002 U
				10 - 10.9	41.33 to 40.43	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.002 U
				15 - 16.4	36.33 to 34.93	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00041 U
				20 - 20.75	31.33 to 30.58	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00041 U
MBB-19	9/1/2020	N	51.68	5 - 5.8	46.68 to 45.88	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.002 U
				10 - 11	41.68 to 40.68	0.05 U	0.05 U	**0.064**	0.05 U	**0.05**	0.05 U	0.05 U	**0.0087**
				15 - 15.4	36.68 to 36.28	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00041 U
				20 - 20.8	31.68 to 30.88	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00041 U
MBB-20	9/2/2020	N	47.53	5 - 6.5	42.53 to 41.03	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.002 U
				10 - 11.5	37.53 to 36.03	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.002 U
				15 - 16.33	32.53 to 31.2	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00041 U
				20 - 20.5	27.53 to 27.03	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00041 U
MBB-21	9/2/2020	N	47.60	5 - 5.8	42.60 to 41.80	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00041 U
				10 - 11.5	37.60 to 36.10	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00041 U
				15 - 15.9	32.60 to 31.70	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00041 U
				20 - 20.9	27.60 to 26.70	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00041 U

Boring/Well ID	Sample Date	Sample Type	Surface Elevation (ft)	Sample Depth (ft)	Sample Elevation (ft)	Carcinogenic Semi-Volatile Organic Compounds							
						Benzo(a) anthracene	Benzo(a) pyrene	Benzo(b) fluoranthene	Benzo(k) fluoranthene	Chrysene	Dibenz(a,h) anthracene	Indeno (1,2,3-cd) pyrene	cPAHs-TEQ
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Analytical Method						SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM
MBB-22	9/21/2020	N	42.05	5 - 6	37.05 to 36.05	**0.2**	**0.33**	**0.33**	**0.13**	**0.31**	0.05 U	**0.24**	**0.42**
				15 - 16.25	27.05 to 25.8	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0019 U
				20 - 21.3	22.05 to 20.75	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0019 U
				25 - 26.3	17.05 to 15.75	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0019 U
				30 - 30.5	12.05 to 11.55	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0019 U
MBB-23	9/21/2020	N	47.18	5 - 6.2	42.18 to 40.98	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.0097 U
				10 - 11.1	37.18 to 36.08	**1**	**1.8**	**2.3**	**0.77**	**1.7**	**0.22**	**1.1**	**2.4**
				15 - 16.25	32.18 to 30.93	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0019 U
				20 - 21.3	27.18 to 25.88	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0019 U
				25 - 26	22.18 to 21.18	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0019 U
				30 - 31	17.18 to 16.18	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0019 U
MBB-24	9/9/2020	N	54.10	5 - 6.5	49.10 to 47.60	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00041 U
				10 - 11.4	44.10 to 42.70	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00041 U
				15 - 16.5	39.10 to 37.60	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00041 U
				20 - 21	34.10 to 33.10	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00041 U
				25 - 25.8	29.10 to 28.30	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00041 U
				30 - 31	24.10 to 23.10	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00041 U
MBB-25	10/30/2020	N	58.63	5 - 5.5	53.63 to 53.13	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.002 U
				9.5 - 10.5	49.13 to 48.13	**0.091**	**0.07**	**0.091**	0.05 U	**0.095**	0.05 U	0.05 U	**0.09**
				14.5 - 15.4	44.13 to 43.23	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.002 U
				19.5 - 20.5	39.13 to 38.13	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00041 U
		FD				0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00041 U
		N		24.5 - 25.5	34.13 to 33.13	**0.25**	**0.24**	**0.28**	**0.12**	**0.28**	0.05 U	**0.13**	**0.32**
				29.5 - 30.5	29.13 to 28.13	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00041 U
				34.5 - 35.5	24.13 to 23.13	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00041 U
				39.5 - 40	19.13 to 18.63	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00041 U
MBB-26	10/29/2020	N	58.79	5.25 - 5.5	53.54 to 53.29	0.01 U	**0.011**	**0.014**	0.01 U	0.01 U	0.01 U	0.01 U	**0.013**
				9.5 - 10.5	49.29 to 48.29	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0019 U
				14.5 - 15.5	44.29 to 43.29	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0019 U
				19.5 - 20.5	39.29 to 38.29	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0019 U
				24.5 - 25.5	34.29 to 33.29	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0019 U
				29.5 - 30.5	29.29 to 28.29	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0019 U
		FD				0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0019 U
		N		34.5 - 35.5	24.29 to 23.29	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0019 U
				39.5 - 40	19.29 to 18.79	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0019 U
MBGW-1	3/6/2019	N	39.95	23.5 - 25	16.45 to 14.95	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.0076 U
MBGW-2	3/4/2019	N	46.11	25 - 26.5	21.11 to 19.61	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.0076 U
				30 - 31.5	16.11 to 14.61	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.0076 U
MBGW-3	3/7/2019	N	47.77	12 - 13	35.77 to 34.77	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.0076 U
				25 - 26	22.77 to 21.77	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.0076 U

TABLE 5-5
SOIL RESULTS FOR SEMI-VOLATILE ORGANIC COMPOUNDS
SEATTLE DOT MERCER PARCELS SITE
SEATTLE, WASHINGTON

Boring/Well ID	Sample Date	Sample Type	Surface Elevation (ft)	Sample Depth (ft)	Sample Elevation (ft)	Non-Carcinogenic Semi-Volatile Organic Compounds										
						1-Methyl naphthalene	2-Methyl naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(g,h,i) perylene	Fluoranthene	Fluorene	Naphthalene	Phenanthrene	Pyrene
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Analytical Method						SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM
21417-MB2	5/12/2017	N	54.72	1	53.72	0.0426 U	0.0426 U	0.0426 U	0.0426 U	0.0426 U	0.0426 U	0.0426 U	0.0426 U	0.0426 U	0.0426 U	0.0426 U
21417-MB3	5/12/2017	N	58.63	1	57.63	0.0382 U	0.0382 U	0.0382 U	0.0382 U	0.0382 U	0.0382 U	**0.0981**	0.0382 U	0.0382 U	**0.0455**	**0.0939**
HMW-4IA	3/7/2019	N	58.70	7.5	51.20	0.1 U	0.1 U	**1.06**	**0.37**	0.1 U	0.1 U	**4.68**	0.1 U	0.1 U	**1.97**	**4.41**
HMW-5IB	2/28/2020	N	58.44	5 - 6.5	53.44 to 51.94	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
				10 - 11.5	48.44 to 46.94	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
				15 - 16.5	43.44 to 41.94	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
				20 - 21.5	38.44 to 36.94	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
				25 - 26.5	33.44 to 31.94	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
HMW-6D	3/2/2020	N	58.58	5 - 6.5	53.58 to 52.08	-	-	0.05 U	0.05 U	0.05 U	0.05 U	**0.21**	0.05 U	0.05 U	**0.099**	**0.24**
				10 - 11.5	48.58 to 47.08	-	-	0.05 U	0.05 U	0.05 U	0.05 U	**0.24**	0.05 U	0.05 U	**0.3**	**0.27**
				15 - 16.5	43.58 to 42.08	-	-	0.05 U	0.05 U	0.05 U	0.05 U	**0.18**	0.05 U	0.05 U	**0.14**	**0.21**
				25 - 26.5	33.58 to 32.08	-	-	0.05 U	0.05 U	**0.077**	0.05 U	**0.29**	0.05 U	0.05 U	**0.23**	**0.29**
				30 - 31.5	28.58 to 27.08	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
HMW-6IA	3/2/2020	N	58.65	5 - 6.5	53.65 to 52.15	-	-	0.05 U	0.05 U	0.05 U	0.05 U	**0.14**	0.05 U	0.05 U	**0.11**	**0.15**
				10 - 11.5	48.65 to 47.15	-	-	0.05 U	0.05 U	0.05 U	0.05 U	**0.2**	0.05 U	0.05 U	**0.23**	**0.22**
				15 - 16.5	43.65 to 42.15	-	-	0.05 U	0.05 U	0.05 U	0.05 U	**0.27**	0.05 U	0.05 U	**0.11**	**0.28**
				20 - 21.5	38.65 to 37.15	-	-	0.05 U	0.05 U	0.05 U	0.05 U	**0.14**	0.05 U	0.05 U	**0.11**	**0.14**
				30 - 31.5	28.65 to 27.15	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
HMW-6IB	3/3/2020	N	58.67	5 - 6.5	53.67 to 52.17	-	-	0.05 U	0.05 U	0.05 U	0.05 U	**0.17**	0.05 U	0.05 U	**0.14**	**0.22 J**
				10 - 11.5	48.67 to 47.17	-	-	0.05 U	0.05 U	0.05 U	0.05 U	**0.2**	0.05 U	0.05 U	**0.21**	**0.22 J**
				15 - 16.5	43.67 to 42.17	-	-	0.05 U	0.05 U	0.05 U	0.05 U	**0.22**	0.05 U	0.05 U	**0.11**	**0.28 J**
				20 - 21.5	38.67 to 37.17	-	-	0.05 U	0.05 U	0.05 U	0.05 U	**0.12**	0.05 U	0.05 U	**0.095**	**0.15 J**
				25 - 26.5	33.67 to 32.17	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
HMW-7IB	2/28/2020	N	58.69	5 - 6.5	53.69 to 52.19	-	-	**0.055**	0.05 U	**0.05**	0.05 U	**0.26**	0.05 U	0.05 U	**0.31**	**0.3**
				10 - 11.5	48.69 to 47.19	-	-	0.05 U	0.05 U	0.05 U	0.05 U	**0.18**	0.05 U	0.05 U	**0.079**	**0.21**
				15 - 16.5	43.69 to 42.19	-	-	0.05 U	0.05 U	**0.057**	0.05 U	**1.3**	0.05 U	0.05 U	**0.12**	**1.4**
				20 - 21.5	38.69 to 37.19	-	-	0.05 U	0.05 U	0.05 U	0.05 U	**0.16**	0.05 U	0.05 U	**0.065**	**0.16**
				25 - 26.5	33.69 to 32.19	-	-	0.05 U	0.05 U	**0.13**	0.05 U	**0.26**	0.05 U	0.05 U	**0.18**	**0.24**
HMW-8IB	3/2/2020	N	57.97	5 - 6.5	52.97 to 51.47	-	-	0.05 U	0.05 U	0.05 U	0.05 U	**0.25**	0.05 U	0.05 U	**0.32**	**0.27**
				10 - 11.5	47.97 to 46.47	-	-	**0.05**	0.05 U	**0.061**	0.05 U	**0.29**	0.05 U	0.05 U	**0.4**	**0.37**
				15 - 16.5	42.97 to 41.47	-	-	**0.058**	0.05 U	**0.09**	0.05 U	**0.34**	0.05 U	0.05 U	**0.7**	**0.36**
				20 - 21.5	37.97 to 36.47	-	-	0.05 U	0.05 U	0.05 U	0.05 U	**0.056**	0.05 U	0.05 U	**0.055**	**0.074**
				25 - 26.5	32.97 to 31.47	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U

Boring/Well ID	Sample Date	Sample Type	Surface Elevation (ft)	Sample Depth (ft)	Sample Elevation (ft)	Non-Carcinogenic Semi-Volatile Organic Compounds										
						1-Methyl naphthalene	2-Methyl naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(g,h,i) perylene	Fluoranthene	Fluorene	Naphthalene	Phenanthrene	Pyrene
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Analytical Method						SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM
HMW-17S	9/3/2020	N	57.21	5 - 6.25	52.21 to 50.96	-	-	-	-	-	-	-	-	-	-	-
				10 - 11.25	47.21 to 45.96	-	-	-	-	-	-	-	-	-	-	-
				15 - 16.33	42.21 to 40.88	-	-	-	-	-	-	-	-	-	-	-
				20 - 20.75	37.21 to 36.46	-	-	-	-	-	-	-	-	-	-	-
				25 - 26	32.21 to 31.21	-	-	-	-	-	-	-	-	-	-	-
HMW-18S	9/3/2020	N	57.61	5 - 5.8	52.61 to 51.81	-	-	-	-	-	-	-	-	-	-	-
				10 - 11.5	47.61 to 46.11	-	-	-	-	-	-	-	-	-	-	-
				15 - 16.5	42.61 to 41.11	-	-	-	-	-	-	-	-	-	-	-
				20 - 20.9	37.61 to 36.71	-	-	-	-	-	-	-	-	-	-	-
				25 - 25.8	32.61 to 31.81	-	-	-	-	-	-	-	-	-	-	-
				30 - 31	27.61 to 26.61	-	-	-	-	-	-	-	-	-	-	-
HMW-19S	9/8/2020	N	58.20	5 - 5.5	53.20 to 52.70	-	-	-	-	-	-	-	-	-	-	-
				10 - 10.75	48.20 to 47.45	-	-	-	-	-	-	-	-	-	-	-
				15 - 16.5	43.20 to 41.70	-	-	-	-	-	-	-	-	-	-	-
				20 - 21.5	38.20 to 36.70	-	-	-	-	-	-	-	-	-	-	-
				26 - 26.8	32.20 to 31.40	-	-	-	-	-	-	-	-	-	-	-
				30 - 30.5	28.20 to 27.70	-	-	-	-	-	-	-	-	-	-	-
HMW-20S	9/8/2020	N	53.81	5 - 5.5	48.81 to 48.31	-	-	-	-	-	-	-	-	-	-	-
				10 - 11.5	43.81 to 42.31	-	-	-	-	-	-	-	-	-	-	-
				15 - 16.5	38.81 to 37.31	-	-	-	-	-	-	-	-	-	-	-
				20 - 21.25	33.81 to 32.56	-	-	-	-	-	-	-	-	-	-	-
				25 - 26.4	28.81 to 27.41	-	-	-	-	-	-	-	-	-	-	-
				30 - 31	23.81 to 22.81	-	-	-	-	-	-	-	-	-	-	-
MBB-1	2/27/2020	N	55.02	5 - 6.5	50.02 to 48.52	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
				10 - 11.5	45.02 to 43.52	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
				15 - 16.5	40.02 to 38.52	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
				20 - 21.5	35.02 to 33.52	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	**0.024**	0.01 U	0.01 U
				25 - 26.5	30.02 to 28.52	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
MBB-2	2/27/2020	N	55.45	5 - 6.5	50.45 to 48.95	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
				10 - 11.5	45.45 to 43.95	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
				15 - 16.5	40.45 to 38.95	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
				20 - 21.5	35.45 to 33.95	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
		FD				-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
		N		25 - 26.5	30.45 to 28.95	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
MBB-3	2/27/2020	N	54.84	5 - 6.5	49.84 to 48.34	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
				10 - 11.5	44.84 to 43.34	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
				15 - 16.5	39.84 to 38.34	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
				20 - 21.5	34.84 to 33.34	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
				25 - 26.5	29.84 to 28.34	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	**0.092**	0.01 U	0.01 U

Boring/Well ID	Sample Date	Sample Type	Surface Elevation (ft)	Sample Depth (ft)	Sample Elevation (ft)	Non-Carcinogenic Semi-Volatile Organic Compounds										
						1-Methyl naphthalene	2-Methyl naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(g,h,i) perylene	Fluoranthene	Fluorene	Naphthalene	Phenanthrene	Pyrene
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Analytical Method						SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM
MBB-4	2/27/2020	N	54.61	5 - 6.5	49.61 to 48.11	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
				10 - 12.5	44.61 to 42.11	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	**0.011**	0.01 U	0.01 U
		FD				-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
				15 - 16.5	39.61 to 38.11	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
		N		20 - 23	34.61 to 31.61	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	**0.74**	0.01 U	0.01 U
				25 - 26.5	29.61 to 28.11	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
MBB-14	3/3/2020	N	47.15	5 - 6.5	42.15 to 40.65	-	-	0.05 U	0.05 U	0.05 U	0.05 U	**0.11**	0.05 U	0.05 U	**0.09**	**0.12 J**
				10 - 11.5	37.15 to 35.65	-	-	0.01 U	0.01 U	0.01 U	0.01 U	**0.016**	0.01 U	**0.028**	**0.015**	**0.018**
				15 - 16.5	32.15 to 30.65	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
				20 - 21.5	27.15 to 25.65	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
				25 - 26.5	22.15 to 20.65	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	**0.01**
MBB-15	3/4/2020	N	37.73	5 - 6.5	32.73 to 31.23	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
				10 - 11.5	27.73 to 26.23	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
				15 - 16.5	22.73 to 21.23	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
				20 - 21.5	17.73 to 16.23	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
				25 - 26.5	12.73 to 11.23	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
MBB-16	9/2/2020	N	53.70	5 - 5.5	48.70 to 48.20	-	-	-	-	-	-	-	-	-	-	-
				10 - 11.5	43.70 to 42.20	-	-	-	-	-	-	-	-	-	-	-
				15 - 15.5	38.70 to 38.20	-	-	-	-	-	-	-	-	-	-	-
				20 - 20.9	33.70 to 32.80	-	-	-	-	-	-	-	-	-	-	-
MBB-17	9/1/2020	N	54.88	5 - 6	49.88 to 48.88	-	-	-	-	-	-	-	-	-	-	-
				10 - 10.75	44.88 to 44.13	-	-	-	-	-	-	-	-	-	-	-
				15 - 16	39.88 to 38.88	-	-	-	-	-	-	-	-	-	-	-
				25 - 25.9	29.88 to 28.98	-	-	-	-	-	-	-	-	-	-	-
MBB-18	9/1/2020	N	51.33	5 - 6.5	46.33 to 44.83	-	-	-	-	-	-	-	-	-	-	-
				10 - 10.9	41.33 to 40.43	-	-	-	-	-	-	-	-	-	-	-
				15 - 16.4	36.33 to 34.93	-	-	-	-	-	-	-	-	-	-	-
				20 - 20.75	31.33 to 30.58	-	-	-	-	-	-	-	-	-	-	-
MBB-19	9/1/2020	N	51.68	5 - 5.8	46.68 to 45.88	-	-	-	-	-	-	-	-	-	-	-
				10 - 11	41.68 to 40.68	-	-	-	-	-	-	-	-	-	-	-
				15 - 15.4	36.68 to 36.28	-	-	-	-	-	-	-	-	-	-	-
				20 - 20.8	31.68 to 30.88	-	-	-	-	-	-	-	-	-	-	-
MBB-20	9/2/2020	N	47.53	5 - 6.5	42.53 to 41.03	-	-	-	-	-	-	-	-	-	-	-
				10 - 11.5	37.53 to 36.03	-	-	-	-	-	-	-	-	-	-	-
				15 - 16.33	32.53 to 31.2	-	-	-	-	-	-	-	-	-	-	-
				20 - 20.5	27.53 to 27.03	-	-	-	-	-	-	-	-	-	-	-
MBB-21	9/2/2020	N	47.60	5 - 5.8	42.60 to 41.80	-	-	-	-	-	-	-	-	-	-	-
				10 - 11.5	37.60 to 36.10	-	-	-	-	-	-	-	-	-	-	-
				15 - 15.9	32.60 to 31.70	-	-	-	-	-	-	-	-	-	-	-
				20 - 20.9	27.60 to 26.70	-	-	-	-	-	-	-	-	-	-	-

Boring/Well ID	Sample Date	Sample Type	Surface Elevation (ft)	Sample Depth (ft)	Sample Elevation (ft)	Non-Carcinogenic Semi-Volatile Organic Compounds										
						1-Methyl naphthalene	2-Methyl naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(g,h,i) perylene	Fluoranthene	Fluorene	Naphthalene	Phenanthrene	Pyrene
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Analytical Method						SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM
MBB-22	9/21/2020	N	42.05	5 - 6	37.05 to 36.05	-	-	-	-	-	-	-	-	-	-	-
				15 - 16.25	27.05 to 25.8	-	-	-	-	-	-	-	-	-	-	-
				20 - 21.3	22.05 to 20.75	-	-	-	-	-	-	-	-	-	-	-
				25 - 26.3	17.05 to 15.75	-	-	-	-	-	-	-	-	-	-	-
				30 - 30.5	12.05 to 11.55	-	-	-	-	-	-	-	-	-	-	-
MBB-23	9/21/2020	N	47.18	5 - 6.2	42.18 to 40.98	-	-	-	-	-	-	-	-	-	-	-
				10 - 11.1	37.18 to 36.08	-	-	-	-	-	-	-	-	-	-	-
				15 - 16.25	32.18 to 30.93	-	-	-	-	-	-	-	-	-	-	-
				20 - 21.3	27.18 to 25.88	-	-	-	-	-	-	-	-	-	-	-
				25 - 26	22.18 to 21.18	-	-	-	-	-	-	-	-	-	-	-
				30 - 31	17.18 to 16.18	-	-	-	-	-	-	-	-	-	-	-
MBB-24	9/9/2020	N	54.10	5 - 6.5	49.10 to 47.60	-	-	-	-	-	-	-	-	-	-	-
				10 - 11.4	44.10 to 42.70	-	-	-	-	-	-	-	-	-	-	-
				15 - 16.5	39.10 to 37.60	-	-	-	-	-	-	-	-	-	-	-
				20 - 21	34.10 to 33.10	-	-	-	-	-	-	-	-	-	-	-
				25 - 25.8	29.10 to 28.30	-	-	-	-	-	-	-	-	-	-	-
				30 - 31	24.10 to 23.10	-	-	-	-	-	-	-	-	-	-	-
MBB-25	10/30/2020	N	58.63	5 - 5.5	53.63 to 53.13	-	-	-	-	-	-	-	-	-	-	-
				9.5 - 10.5	49.13 to 48.13	-	-	-	-	-	-	-	-	-	-	-
				14.5 - 15.4	44.13 to 43.23	-	-	-	-	-	-	-	-	-	-	-
				19.5 - 20.5	39.13 to 38.13	-	-	-	-	-	-	-	-	-	-	-
		FD				-	-	-	-	-	-	-	-	-	-	-
		N		24.5 - 25.5	34.13 to 33.13	-	-	-	-	-	-	-	-	-	-	-
				29.5 - 30.5	29.13 to 28.13	-	-	-	-	-	-	-	-	-	-	-
				34.5 - 35.5	24.13 to 23.13	-	-	-	-	-	-	-	-	-	-	-
				39.5 - 40	19.13 to 18.63	-	-	-	-	-	-	-	-	-	-	-
MBB-26	10/29/2020	N	58.79	5.25 - 5.5	53.54 to 53.29	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
				9.5 - 10.5	49.29 to 48.29	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
				14.5 - 15.5	44.29 to 43.29	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
				19.5 - 20.5	39.29 to 38.29	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
				24.5 - 25.5	34.29 to 33.29	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
				29.5 - 30.5	29.29 to 28.29	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
		FD				0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
		N		34.5 - 35.5	24.29 to 23.29	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
				39.5 - 40	19.29 to 18.79	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
MBGW-1	3/6/2019	N	39.95	23.5 - 25	16.45 to 14.95	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MBGW-2	3/4/2019	N	46.11	25 - 26.5	21.11 to 19.61	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
				30 - 31.5	16.11 to 14.61	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MBGW-3	3/7/2019	N	47.77	12 - 13	35.77 to 34.77	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
				25 - 26	22.77 to 21.77	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U

Boring/Well ID	Sample Date	Sample Type	Surface Elevation (ft)	Sample Depth (ft)	Sample Elevation (ft)	Non-Carcinogenic Semi-Volatile Organic Compounds										
						1-Methyl naphthalene	2-Methyl naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(g,h,i) perylene	Fluoranthene	Fluorene	Naphthalene	Phenanthrene	Pyrene
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Analytical Method						SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM	SW8270E SW8270SIM SW8270ESIM

Notes:

Bold indicates a detected concentration at or above the laboratory reporting limit.

Elevations relative to North American Vertical Datum of 1988 (NAVD88).

- = Data not available or not applicable.

Cpahs-TEQ = Carcinogenic polycyclic aromatic hydrocarbons toxic equivalency.

FD = Field duplicate.

ft = feet.

J = Estimated value.

mg/kg = milligram per kilogram.

N = Primary environmental sample.

U = Not detected at detection limit indicated.

TABLE 5-8
SOIL RESULTS FOR INORGANIC COMPOUNDS
SEATTLE DOT MERCER PARCELS SITE
SEATTLE, WASHINGTON

Boring/Well ID	Sample Date	Sample Type	Surface Elevation (ft)	Sample Depth (ft)	Sample Elevation (ft)	Inorganic Compounds										
						Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Zinc
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
					Analytical Method	SW6010D SW6020	SW6010D	SW6010D SW6020	SW6010D SW6020	-	SW6010D SW6020	SW6020 SW7471B	-	SW6010D	SW6010D SW6020	-
21417-MB1	5/12/2017	N	55.43	9	46.43	**4.78**	-	0.192 U	**41.2**	-	**2.43**	0.293 U	-	-	-	-
21417-MB4	5/12/2017	N	57.24	24	33.24	**6.94**	**68.9**	**0.192**	**35.8**	-	**40.2**	0.298 U	-	**1.26**	0.093 U	-
21417-MB6	5/11/2017	N	48.22	9	39.22	**3.1**	**43.3**	0.168 U	**29.1**	-	**9.18**	0.265 U	-	**1.3**	0.0839 U	-
21417-MB8	5/11/2017	N	45.28	27	18.28	**2.69**	**31.8**	0.168 U	**29.3**	-	**2.38**	0.276 U	-	**0.988**	0.0842 U	-
21417-MB9	5/11/2017	N	39.05	13	26.05	**4.24**	**45.5**	**0.428**	**31.4**	-	**19.3**	0.291 U	-	**1.39**	0.0979 U	-
				22	17.05	**5.01**	**105**	0.199 U	**39.1**	**26.3**	**279**	**0.453**	**37.3**	**1.26**	0.0996 U	**62.2**
21417-MB10	5/11/2017	N	38.08	28	10.08	**7.75**	**42**	0.174 U	**43.2**	-	**6.75**	0.268 U	-	**0.99**	0.0872 U	-
21417-MB11	5/11/2017	N	39.04	23	16.04	**4.18**	**101**	0.204 U	**39.5**	-	**7.73**	0.325 U	-	**1.76**	0.102 U	-
GP-7	5/12/2012	N	58.53	0 to 7	58.53 to 51.53	-	-	-	-	-	**4.19**	-	-	-	-	-
				7 to 11	51.53 to 47.53	-	-	-	-	-	**1.56**	-	-	-	-	-
GP-8	5/14/2012	N	58.33	0 to 7	58.33 to 51.33	-	-	-	-	-	**2.85**	-	-	-	-	-
				7 to 12	51.33 to 46.33	-	-	-	-	-	**2.31**	-	-	-	-	-
GP-9	5/14/2012	N	58.00	0 - 7	58.00 to 51.00	-	-	-	-	-	**2.85**	-	-	-	-	-
				7 - 14	51.00 to 44.00	-	-	-	-	-	**2.64**	-	-	-	-	-
				14 - 19	44.00 to 39.00	-	-	-	-	-	**1.8**	-	-	-	-	-
HMW-2IB	3/12/2019	N	47.41	7.5 - 9	39.91 to 38.41	11 U	**72**	0.56 U	**33**	-	**10**	0.28 U	-	11 U	0.56 U	-
HMW-3IA	3/15/2019	N	55.02	22.5 - 23.5	32.52 to 31.52	12 U	**50**	0.59 U	**39**	-	5.9 U	0.29 U	-	12 U	1.2 U	-
HMW-5IB	2/28/2020	N	58.44	5 - 6.5	53.44 to 51.94	**1.55**	-	1 U	**12.2**	-	**1.11**	1 U	-	-	-	-
				10 - 11.5	48.44 to 46.94	**1.31**	-	1 U	**16**	-	**1.18**	1 U	-	-	-	-
				15 - 16.5	43.44 to 41.94	**1.26**	-	1 U	**16.9**	-	**1.06**	1 U	-	-	-	-
				20 - 21.5	38.44 to 36.94	**1.03**	-	1 U	**12.5**	-	**1.11**	1 U	-	-	-	-
				25 - 26.5	33.44 to 31.94	1 U	-	1 U	**11.3**	-	1 U	1 U	-	-	-	-
HMW-6D	3/2/2020	N	58.58	5 - 6.5	53.58 to 52.08	**16.4**	-	1 U	**17.8**	-	**21.8**	1 U	-	-	-	-
				10 - 11.5	48.58 to 47.08	**21.8**	-	1 U	**20.2**	-	**23.6**	1 U	-	-	-	-
				15 - 16.5	43.58 to 42.08	**24.4**	-	1 U	**21.3**	-	**21.3**	1 U	-	-	-	-
				25 - 26.5	33.58 to 32.08	**18**	-	1 U	**26.4**	-	**16**	1 U	-	-	-	-
				30 - 31.5	28.58 to 27.08	**1.61**	-	1 U	**14.4 J**	-	**1.69**	1 U	-	-	-	-
		FD				**1.42**	-	1 U	**10.8 J**	-	**1.44**	1 U	-	-	-	-
HMW-6IA	3/2/2020	N	58.65	5 - 6.5	53.65 to 52.15	**15.6**	-	1 U	**18.1**	-	**20.1**	1 U	-	-	-	-
				10 - 11.5	48.65 to 47.15	**13.6**	-	1 U	**19.2**	-	**16.5**	1 U	-	-	-	-
				15 - 16.5	43.65 to 42.15	**18.6**	-	1 U	**16**	-	**20.5**	1 U	-	-	-	-
				20 - 21.5	38.65 to 37.15	**18.3**	-	1 U	**30.2**	-	**13.4**	1 U	-	-	-	-
				30 - 31.5	28.65 to 27.15	**3.1**	-	1 U	**19.9**	-	**4.88**	1 U	-	-	-	-

TABLE 5-8
SOIL RESULTS FOR INORGANIC COMPOUNDS
SEATTLE DOT MERCER PARCELS SITE
SEATTLE, WASHINGTON

Boring/Well ID	Sample Date	Sample Type	Surface Elevation (ft)	Sample Depth (ft)	Sample Elevation (ft)	Inorganic Compounds										
						Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Zinc
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
HMW-6IB	3/3/2020	N	58.67	5 - 6.5	53.67 to 52.17	**13.4**	-	1 U	**17.8**	-	**18.2**	1 U	-	-	-	-
				10 - 11.5	48.67 to 47.17	**15.9**	-	1 U	**20.6 J**	-	**26.3 J**	1 U	-	-	-	-
		FD				**14.9**	-	1 U	**29.3 J**	-	**16.1 J**	1 U	-	-	-	-
		N		15 - 16.5	43.67 to 42.17	**22.2**	-	1 U	**19.6**	-	**19**	1 U	-	-	-	-
				20 - 21.5	38.67 to 37.17	**25.6**	-	1 U	**20.5**	-	**18**	1 U	-	-	-	-
				25 - 26.5	33.67 to 32.17	**2.23**	-	1 U	**20.3**	-	**2.08**	1 U	-	-	-	-
HMW-7IB	2/28/2020	N	58.69	5 - 6.5	53.69 to 52.19	**15.3**	-	1 U	**22.4**	-	**17.4**	1 U	-	-	-	-
				10 - 11.5	48.69 to 47.19	**13.8**	-	1 U	**18.4**	-	**25.2**	1 U	-	-	-	-
				15 - 16.5	43.69 to 42.19	**19.9**	-	1 U	**18.3**	-	**18.2**	1 U	-	-	-	-
				20 - 21.5	38.69 to 37.19	**25.6**	-	1 U	**19.1**	-	**18.4**	1 U	-	-	-	-
				25 - 26.5	33.69 to 32.19	**8.13**	-	1 U	**18.9 J**	-	**6.75**	1 U	-	-	-	-
		FD				**8.49**	-	1 U	**25.9 J**	-	**7.93**	1 U	-	-	-	-
HMW-8IB	3/2/2020	N	57.97	5 - 6.5	52.97 to 51.47	**21.4**	-	1 U	**20.8**	-	**24.8**	1 U	-	-	-	-
				10 - 11.5	47.97 to 46.47	**19.5**	-	1 U	**18.3**	-	**19.1**	1 U	-	-	-	-
				15 - 16.5	42.97 to 41.47	**17.1**	-	1 U	**19.3**	-	**19.4**	1 U	-	-	-	-
				20 - 21.5	37.97 to 36.47	**4.86**	-	1 U	**14.9**	-	**5**	1 U	-	-	-	-
				25 - 26.5	32.97 to 31.47	**1.12**	-	1 U	**15.1**	-	**1.38**	1 U	-	-	-	-
		FD				**1.06**	-	1 U	**17.9**	-	**1.49**	1 U	-	-	-	-
HMW-9D	2/27/2020	N	55.32	5 - 6.5	50.32 to 48.82	**1.78**	-	1 U	**13.6**	-	**2.8**	1 U	-	-	-	-
				10 - 11.5	45.32 to 43.82	**1.38**	-	1 U	**12.4**	-	**2.17**	1 U	-	-	-	-
				15 - 16.5	40.32 to 38.82	**15.3**	-	1 U	**18.2**	-	**10.9**	1 U	-	-	-	-
				20 - 21.5	35.32 to 33.82	**2.55**	-	1 U	**16**	-	**2.59**	1 U	-	-	-	-
				25 - 26.5	30.32 to 28.82	**1.46**	-	1 U	**12.3**	-	**1.25**	1 U	-	-	-	-
HMW-9IA	2/28/2020	N	55.26	5 - 6.5	50.26 to 48.76	**1.07**	-	1 U	**15**	-	**1.27**	1 U	-	-	-	-
				10 - 11.5	45.26 to 43.76	**1.41**	-	1 U	**11.3**	-	**2.52**	1 U	-	-	-	-
				15 - 16.5	40.26 to 38.76	**6.62**	-	1 U	**16.9**	-	**14.1**	1 U	-	-	-	-
				20 - 21.5	35.26 to 33.76	**1.74**	-	1 U	**13.2**	-	**1.32**	1 U	-	-	-	-
				25 - 26.5	30.26 to 28.76	**1.23**	-	1 U	**13.1**	-	**1.2**	1 U	-	-	-	-
HMW-9IB	2/28/2020	N	55.36	5 - 6.5	50.36 to 48.86	**7.75**	-	1 U	**17.3**	-	**7.89**	1 U	-	-	-	-
				13 - 14.5	42.36 to 40.86	**1.64**	-	1 U	**10.9**	-	**1.9**	1 U	-	-	-	-
				15 - 16.5	40.36 to 38.86	**17.8**	-	1 U	**18.5**	-	**11.3**	1 U	-	-	-	-
				20 - 21.5	35.36 to 33.86	**1.6**	-	1 U	**13.6**	-	**1.29**	1 U	-	-	-	-
				25 - 26.5	30.36 to 28.86	**1.26**	-	1 U	**14.5**	-	**1.39**	1 U	-	-	-	-
HMW-9S	3/2/2020	N	55.39	5 - 6.5	50.39 to 48.89	**2.64**	-	1 U	**15.8**	-	**5.91**	1 U	-	-	-	-
				14 - 15.5	41.39 to 39.89	**14.5**	-	1 U	**19.2**	-	**14.5**	1 U	-	-	-	-
				17 - 18.5	38.39 to 36.89	**17.7**	-	1 U	**14.3**	-	**17.3**	1 U	-	-	-	-
				20 - 21.5	35.39 to 33.89	**1.3**	-	1 U	**11.3**	-	**1.17**	1 U	-	-	-	-
				25 - 26.5	30.39 to 28.89	**1.36**	-	1 U	**13.9**	-	**1.52**	1 U	-	-	-	-

TABLE 5-8
SOIL RESULTS FOR INORGANIC COMPOUNDS
SEATTLE DOT MERCER PARCELS SITE
SEATTLE, WASHINGTON

Boring/Well ID	Sample Date	Sample Type	Surface Elevation (ft)	Sample Depth (ft)	Sample Elevation (ft)	Inorganic Compounds										
						Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Zinc
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
HMW-10D	3/5/2020	N	48.16	5 - 6.5	43.16 to 41.66	**1.76**	-	1 U	**15.2**	-	**1.4**	1 U	-	-	-	-
				10 - 11.5	38.16 to 36.66	**1.78**	-	1 U	**14.1**	-	**1.38**	1 U	-	-	-	-
				15 - 16.5	33.16 to 31.66	**1.87**	-	1 U	**15.4**	-	**1.62**	1 U	-	-	-	-
		FD				**1.81**	-	1 U	**17.4**	-	**1.64**	1 U	-	-	-	-
		N		20 - 21.5	28.16 to 26.66	**1.31**	-	1 U	**15**	-	**1.48**	1 U	-	-	-	-
				25 - 26.5	23.16 to 21.66	**1.8**	-	1 U	**20.7**	-	**1.95**	1 U	-	-	-	-
HMW-10S	3/3/2020	N	48.21	5 - 6.5	43.21 to 41.71	**1.83**	-	1 U	**17.8**	-	**1.27**	1 U	-	-	-	-
				10 - 11.5	38.21 to 36.71	**1.51**	-	1 U	**13.6**	-	**1.45**	1 U	-	-	-	-
		FD				**1.42**	-	1 U	**15**	-	**1.41**	1 U	-	-	-	-
		N		15 - 16.5	33.21 to 31.71	**1.51**	-	1 U	**16**	-	**1.38**	1 U	-	-	-	-
				20 - 21.5	28.21 to 26.71	**1.32**	-	1 U	**17.3**	-	**1.55**	1 U	-	-	-	-
				25 - 26.5	23.21 to 21.71	**1.57**	-	1 U	**18**	-	**1.16**	1 U	-	-	-	-
HMW-11IB	2/24/2020	N	39.70	5 - 6.5	34.70 to 33.20	**2.14**	-	1 U	**23.1**	-	**28.7**	1 U	-	-	-	-
				10 - 11.5	29.70 to 28.20	**1.43**	-	1 U	**22.8**	-	**2.73**	1 U	-	-	-	-
				15 - 16.5	24.70 to 23.20	**3.44**	-	1 U	**14.5**	-	**65**	1 U	-	-	-	-
				20 - 21.5	19.70 to 18.20	**2.69**	-	1 U	**31.8**	-	**2.11**	1 U	-	-	-	-
				25 - 26.5	14.70 to 13.20	1 U	-	1 U	**18.8**	-	**1.23**	1 U	-	-	-	-
HMW-11S	2/25/2020	N	41.47	5 - 6.5	36.47 to 34.97	**2**	-	1 U	**23**	-	**14.4**	1 U	-	-	-	-
				10 - 11.5	31.47 to 29.97	**1.86**	-	1 U	**18.5**	-	**11**	1 U	-	-	-	-
				15 - 16.5	26.47 to 24.97	**1.27**	-	1 U	**17.8**	-	**1.39**	1 U	-	-	-	-
				20 - 21.5	21.47 to 19.97	**1.72**	-	1 U	**19.2**	-	**6.65**	1 U	-	-	-	-
				31 - 32.5	10.47 to 8.97	1 U	-	1 U	**16**	-	**1.33**	1 U	-	-	-	-
HMW-17S	9/3/2020	N	57.21	5 - 6.25	52.21 to 50.96	**2.93**	-	1 U	**24.1**	-	**4.65**	1 U	-	-	-	-
				10 - 11.25	47.21 to 45.96	**1.5**	-	1 U	**13.2**	-	**2.18**	1 U	-	-	-	-
				15 - 16.33	42.21 to 40.88	**1.45**	-	1 U	**15.4**	-	**1.6**	1 U	-	-	-	-
				20 - 20.75	37.21 to 36.46	**1.48**	-	1 U	**16.6**	-	**1.53**	1 U	-	-	-	-
				25 - 26	32.21 to 31.21	1 U	-	1 U	**15.8**	-	**1.23**	1 U	-	-	-	-
HMW-18S	9/3/2020	N	57.61	5 - 5.8	52.61 to 51.81	**1.19**	-	1 U	**11.1**	-	**1.36**	1 U	-	-	-	-
				10 - 11.5	47.61 to 46.11	**2.9**	-	1 U	**25.8**	-	**3.15**	1 U	-	-	-	-
				15 - 16.5	42.61 to 41.11	**3.01**	-	1 U	**19.2**	-	**2.43**	1 U	-	-	-	-
				20 - 20.9	37.61 to 36.71	**1.39**	-	1 U	**12**	-	**1.22**	1 U	-	-	-	-
				25 - 25.8	32.61 to 31.81	**1.09**	-	1 U	**13.9**	-	**1.23**	1 U	-	-	-	-
				30 - 31	27.61 to 26.61	**1.03**	-	1 U	**15.5**	-	**1.54**	1 U	-	-	-	-
HMW-19S	9/8/2020	N	58.20	5 - 5.5	53.20 to 52.70	**2.16**	-	1 U	**26.2**	-	**2.33**	1 U	-	-	-	-
				10 - 10.75	48.20 to 47.45	**1.24**	-	1 U	**14**	-	**1.27**	1 U	-	-	-	-
				15 - 16.5	43.20 to 41.70	**3.02**	-	1 U	**30.7**	-	**3.29**	1 U	-	-	-	-
				20 - 21.5	38.20 to 36.70	**2.17**	-	1 U	**31.5**	-	**2.22**	1 U	-	-	-	-
				26 - 26.8	32.20 to 31.40	**1.44**	-	1 U	**20.5**	-	**1.31**	1 U	-	-	-	-
				30 - 30.5	28.20 to 27.70	**1.31**	-	1 U	**38.2**	-	**1.49**	1 U	-	-	-	-

TABLE 5-8
SOIL RESULTS FOR INORGANIC COMPOUNDS
SEATTLE DOT MERCER PARCELS SITE
SEATTLE, WASHINGTON

Boring/Well ID	Sample Date	Sample Type	Surface Elevation (ft)	Sample Depth (ft)	Sample Elevation (ft)	Inorganic Compounds										
						Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Zinc
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
HMW-20S	9/8/2020	N	53.81	5 - 5.5	48.81 to 48.31	**1.57**	-	1 U	**12.6**	-	**1.88**	1 U	-	-	-	-
				10 - 11.5	43.81 to 42.31	**1.36**	-	1 U	**9.22**	-	**4.47**	1 U	-	-	-	-
				15 - 16.5	38.81 to 37.31	**1.55**	-	1 U	**13.5**	-	**1.62**	1 U	-	-	-	-
				20 - 21.25	33.81 to 32.56	**1.77**	-	1 U	**15.6**	-	**1.66**	1 U	-	-	-	-
				25 - 26.4	28.81 to 27.41	**1.9**	-	1 U	**29.1**	-	**2.68**	1 U	-	-	-	-
				30 - 31	23.81 to 22.81	**1.32**	-	1 U	**29.5**	-	**1.77**	1 U	-	-	-	-
MBB-1	2/27/2020	N	55.02	5 - 6.5	50.02 to 48.52	**2.38**	-	1 U	**36.7**	-	**4.94**	1 U	-	-	-	-
				10 - 11.5	45.02 to 43.52	**2.69**	-	1 U	**15.8**	-	**1.27**	1 U	-	-	-	-
				15 - 16.5	40.02 to 38.52	**1.29**	-	1 U	**14.1**	-	**1.31**	1 U	-	-	-	-
				20 - 21.5	35.02 to 33.52	**1.23**	-	1 U	**11.7**	-	**1.29**	1 U	-	-	-	-
				25 - 26.5	30.02 to 28.52	**1.56**	-	1 U	**15.6**	-	**1.38**	1 U	-	-	-	-
MBB-2	2/27/2020	N	55.45	5 - 6.5	50.45 to 48.95	**4.5**	-	1 U	**45.9**	-	**4.09**	1 U	-	-	-	-
				10 - 11.5	45.45 to 43.95	**1.53**	-	1 U	**11.2**	-	**1.11**	1 U	-	-	-	-
				15 - 16.5	40.45 to 38.95	**1.27**	-	1 U	**12.2**	-	**1.54**	1 U	-	-	-	-
				20 - 21.5	35.45 to 33.95	**1.21**	-	1 U	**11.7**	-	**1.12**	1 U	-	-	-	-
		FD				**1.29**	-	1 U	**10.7**	-	**1.15**	1 U	-	-	-	-
		N		25 - 26.5	30.45 to 28.95	1 U	-	1 U	**12**	-	**1.12**	1 U	-	-	-	-
MBB-3	2/27/2020	N	54.84	5 - 6.5	49.84 to 48.34	**3.27**	-	1 U	**34.8**	-	**2.88**	1 U	-	-	-	-
				10 - 11.5	44.84 to 43.34	**1.65**	-	1 U	**13.6**	-	**2.3**	1 U	-	-	-	-
				15 - 16.5	39.84 to 38.34	1 U	-	1 U	**12.1**	-	**1.07**	1 U	-	-	-	-
				20 - 21.5	34.84 to 33.34	**2.74**	-	1 U	**9.91**	-	**1.04**	1 U	-	-	-	-
				25 - 26.5	29.84 to 28.34	**1.52**	-	1 U	**15.1**	-	**1.69**	1 U	-	-	-	-
MBB-4	2/27/2020	N	54.61	5 - 6.5	49.61 to 48.11	**2.44**	-	1 U	**28.2**	-	**5.37**	1 U	-	-	-	-
				10 - 12.5	44.61 to 42.11	**1.39**	-	1 U	**12.3**	-	**1.15**	1 U	-	-	-	-
		FD				**1.28**	-	1 U	**14.4**	-	**1.18**	1 U	-	-	-	-
		N		15 - 16.5	39.61 to 38.11	**1.16**	-	1 U	**12.9**	-	**1.15**	1 U	-	-	-	-
				20 - 23	34.61 to 31.61	**1.44**	-	1 U	**13.2**	-	**3.42**	1 U	-	-	-	-
				25 - 26.5	29.61 to 28.11	**1.47**	-	1 U	**14.5**	-	**1.51**	1 U	-	-	-	-
MBB-5	3/2/2020	N	50.53	5 - 6.5	45.53 to 44.03	**23.2**	-	1 U	**20.1**	-	**17.6**	1 U	-	-	-	-
				10 - 11.5	40.53 to 39.03	**6.56**	-	1 U	**17.7**	-	**591**	1 U	-	-	-	-
				15 - 16.5	35.53 to 34.03	**1.81**	-	1 U	**14.8**	-	**1.57**	1 U	-	-	-	-
				20 - 21.5	30.53 to 29.03	**1.34**	-	1 U	**12.6**	-	**1.24**	1 U	-	-	-	-
				25 - 26.5	25.53 to 24.03	**1.51**	-	1 U	**15.2**	-	**1.29**	1 U	-	-	-	-
MBB-6	3/3/2020	N	50.33	5 - 6.5	45.33 to 43.83	**21.2**	-	1 U	**22.7**	-	**20**	1 U	-	-	-	-
				10 - 11.5	40.33 to 38.83	**9.18**	-	1 U	**44.8**	-	**14.8**	1 U	-	-	-	-
				15 - 16.5	35.33 to 33.83	**1.84**	-	1 U	**17.8**	-	**1.4**	1 U	-	-	-	-
				20 - 21.5	30.33 to 28.83	**2.08**	-	1 U	**16.9**	-	**1.61**	1 U	-	-	-	-
				25 - 26.5	25.33 to 23.83	**1.6**	-	1 U	**15.8**	-	**1.44**	1 U	-	-	-	-

TABLE 5-8
SOIL RESULTS FOR INORGANIC COMPOUNDS
SEATTLE DOT MERCER PARCELS SITE
SEATTLE, WASHINGTON

Boring/Well ID	Sample Date	Sample Type	Surface Elevation (ft)	Sample Depth (ft)	Sample Elevation (ft)	Inorganic Compounds										
						Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Zinc
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
MBB-7	2/25/2020	N	49.41	5 - 6.5	44.41 to 42.91	**2.74**	-	1 U	**21.1**	-	**9.26**	1 U	-	-	-	-
				10 - 11.5	39.41 to 37.91	**1.37**	-	1 U	**15.4**	-	**2.14**	1 U	-	-	-	-
				15 - 16.5	34.41 to 32.91	**1.43**	-	1 U	**15.9**	-	**1.46**	1 U	-	-	-	-
				20 - 21.5	29.41 to 27.91	1 U	-	1 U	**16.4**	-	**1.24**	1 U	-	-	-	-
				25 - 26.5	24.41 to 22.91	**1.12**	-	1 U	**17.4**	-	**1.43**	1 U	-	-	-	-
MBB-8	2/26/2020	N	49.66	7 - 7.5	42.66 to 42.16	**21.9**	-	1 U	**18.2**	-	**12.5**	1 U	-	-	-	-
				10 - 11.5	39.66 to 38.16	**1.75**	-	1 U	**13.2**	-	**1.22**	1 U	-	-	-	-
				15 - 16.5	34.66 to 33.16	**1.7**	-	1 U	**19.2 J**	-	**1.26**	1 U	-	-	-	-
		FD				**1.6**	-	1 U	**15.3 J**	-	**1.23**	1 U	-	-	-	-
		N		20 - 21.5	29.66 to 28.16	**1.6**	-	1 U	**14.3**	-	**1.3**	1 U	-	-	-	-
				25 - 26.5	24.66 to 23.16	**1.13**	-	1 U	**16.3**	-	**1.31**	1 U	-	-	-	-
MBB-9	2/26/2020	N	47.55	5.5 - 7	42.05 to 40.55	**9.58**	-	1 U	**16.7**	-	**13.4**	1 U	-	-	-	-
				10 - 11.5	37.55 to 36.05	**1.94**	-	1 U	**18.8**	-	**2.11**	1 U	-	-	-	-
				15 - 16.5	32.55 to 31.05	**1.72**	-	1 U	**14.7**	-	**1.22**	1 U	-	-	-	-
				20 - 21.5	27.55 to 26.05	**1.7**	-	1 U	**18.1**	-	**1.24**	1 U	-	-	-	-
				25 - 26.5	22.55 to 21.05	**1.27**	-	1 U	**17.3**	-	**1.31**	1 U	-	-	-	-
MBB-10	2/26/2020	N	49.66	5 - 6.5	44.66 to 43.16	**1.76**	-	1 U	**17.3**	-	**1.72**	1 U	-	-	-	-
				10 - 11.5	39.66 to 38.16	**2.32**	-	1 U	**25.5**	-	**1.89**	1 U	-	-	-	-
				15 - 16.5	34.66 to 33.16	**1.65**	-	1 U	**17.1**	-	**1.46**	1 U	-	-	-	-
				20 - 21.5	29.66 to 28.16	**1.4**	-	1 U	**15**	-	**1.19**	1 U	-	-	-	-
				25 - 26.5	24.66 to 23.16	**1.51**	-	1 U	**20.8**	-	**1.57**	1 U	-	-	-	-
MBB-11	3/4/2020	N	46.42	15 - 16.5	31.42 to 29.92	-	-	-	-	-	**5.52**	-	-	-	-	-
				20 - 21.5	26.42 to 24.92	-	-	-	-	-	**5.51**	-	-	-	-	-
				25 - 26.5	21.42 to 19.92	-	-	-	-	-	**15.4**	-	-	-	-	-
MBB-12	3/4/2020	N	33.69	15 - 16.5	18.69 to 17.19	-	-	-	-	-	**3.23**	-	-	-	-	-
				20 - 21.5	13.69 to 12.19	-	-	-	-	-	**9**	-	-	-	-	-
				25 - 26.5	8.69 to 7.19	-	-	-	-	-	**1.56**	-	-	-	-	-
MBB-13	3/4/2020	N	35.98	15 - 16.5	20.98 to 19.48	-	-	-	-	-	**7.71**	-	-	-	-	-
				20 - 21.5	15.98 to 14.48	-	-	-	-	-	**9.54**	-	-	-	-	-
				25 - 26.5	10.98 to 9.48	-	-	-	-	-	**1.55**	-	-	-	-	-
		FD				-	-	-	-	-	**1.51**	-	-	-	-	-
MBB-16	9/2/2020	N	53.70	5 - 5.5	48.70 to 48.20	**2.62**	-	1 U	**28.4**	-	**7.58**	1 U	-	-	-	-
				10 - 11.5	43.70 to 42.20	**1.56**	-	1 U	**18.3**	-	**1.89**	1 U	-	-	-	-
				15 - 15.5	38.70 to 38.20	**1.74**	-	1 U	**24.8**	-	**1.3**	1 U	-	-	-	-
				20 - 20.9	33.70 to 32.80	**1.42**	-	1 U	**13.7**	-	**1.17**	1 U	-	-	-	-
MBB-17	9/1/2020	N	54.88	5 - 6	49.88 to 48.88	**1.71**	-	1 U	**23.6**	-	**2.67**	1 U	-	-	-	-
				10 - 10.75	44.88 to 44.13	**1.75**	-	1 U	**15**	-	**4.42**	1 U	-	-	-	-
				15 - 16	39.88 to 38.88	**3.91**	-	1 U	**17.5**	-	**7.13**	1 U	-	-	-	-
				25 - 25.9	29.88 to 28.98	**1.97**	-	1 U	**17.7**	-	**1.75**	1 U	-	-	-	-

TABLE 5-8
SOIL RESULTS FOR INORGANIC COMPOUNDS
SEATTLE DOT MERCER PARCELS SITE
SEATTLE, WASHINGTON

Boring/Well ID	Sample Date	Sample Type	Surface Elevation (ft)	Sample Depth (ft)	Sample Elevation (ft)	Inorganic Compounds										
						Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Zinc
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
MBB-18	9/1/2020	N	51.33	5 - 6.5	46.33 to 44.83	**14.2**	-	1 U	**25.5**	-	**13.5**	1 U	-	-	-	-
				10 - 10.9	41.33 to 40.43	**6.2**	-	1 U	**14.4**	-	**6.61**	1 U	-	-	-	-
				15 - 16.4	36.33 to 34.93	**1.13**	-	1 U	**12.3**	-	**1.02**	1 U	-	-	-	-
				20 - 20.75	31.33 to 30.58	**1.61**	-	1 U	**16.2**	-	**1.69**	1 U	-	-	-	-
MBB-19	9/1/2020	N	51.68	5 - 5.8	46.68 to 45.88	**3.16**	-	1 U	**19.2**	-	**4.27**	1 U	-	-	-	-
				10 - 11	41.68 to 40.68	**4.47**	-	1 U	**15.4**	-	**55.6**	1 U	-	-	-	-
				15 - 15.4	36.68 to 36.28	**2.01**	-	1 U	**20.8**	-	**1.75**	1 U	-	-	-	-
				20 - 20.8	31.68 to 30.88	**1.7**	-	1 U	**13.5**	-	**1.13**	1 U	-	-	-	-
MBB-20	9/2/2020	N	47.53	5 - 6.5	42.53 to 41.03	**2.67**	-	1 U	**16.6**	-	**2.02**	1 U	-	-	-	-
				10 - 11.5	37.53 to 36.03	**3.48**	-	1 U	**19.2**	-	**5.15**	1 U	-	-	-	-
				15 - 16.33	32.53 to 31.2	**1.6**	-	1 U	**20.6**	-	**1.54**	1 U	-	-	-	-
				20 - 20.5	27.53 to 27.03	**1.53**	-	1 U	**17.2**	-	**1.5**	1 U	-	-	-	-
MBB-21	9/2/2020	N	47.60	5 - 5.8	42.60 to 41.80	**2.02**	-	1 U	**20**	-	**1.69**	1 U	-	-	-	-
				10 - 11.5	37.60 to 36.10	**2.21**	-	1 U	**19.3**	-	**1.85**	1 U	-	-	-	-
				15 - 15.9	32.60 to 31.70	**1.52**	-	1 U	**18.3**	-	**1.4**	1 U	-	-	-	-
				20 - 20.9	27.60 to 26.70	**1.53**	-	1 U	**14.3**	-	**1.46**	1 U	-	-	-	-
MBB-22	9/21/2020	N	42.05	5 - 6	37.05 to 36.05	**2.71**	-	1 U	**30.2**	-	**26.7**	1 U	-	-	-	-
				15 - 16.25	27.05 to 25.8	**3.08**	-	1 U	**26.1**	-	**2.58**	1 U	-	-	-	-
				20 - 21.3	22.05 to 20.75	**1.63**	-	1 U	**15.3**	-	**1.39**	1 U	-	-	-	-
				25 - 26.3	17.05 to 15.75	**2.03**	-	1 U	**24.4**	-	**1.14**	1 U	-	-	-	-
				30 - 30.5	12.05 to 11.55	**1.96**	-	1 U	**40**	-	**1.97**	1 U	-	-	-	-
MBB-23	9/21/2020	N	47.18	5 - 6.2	42.18 to 40.98	**2.57**	-	1 U	**18.7**	-	**3.58**	1 U	-	-	-	-
				10 - 11.1	37.18 to 36.08	**3.98**	-	1 U	**17.1**	-	**29.5**	1 U	-	-	-	-
				15 - 16.25	32.18 to 30.93	**2.73**	-	1 U	**22.4**	-	**3.6**	1 U	-	-	-	-
				20 - 21.3	27.18 to 25.88	**2.21**	-	1 U	**17.7**	-	**1.99**	1 U	-	-	-	-
				25 - 26	22.18 to 21.18	**1.88**	-	1 U	**16.3**	-	**1.35**	1 U	-	-	-	-
				30 - 31	17.18 to 16.18	**1.68**	-	1 U	**16.2**	-	**1.36**	1 U	-	-	-	-
MBB-24	9/9/2020	N	54.10	5 - 6.5	49.10 to 47.60	**2.92**	-	1 U	**25.9**	-	**3.32**	1 U	-	-	-	-
				10 - 11.4	44.10 to 42.70	**1.38**	-	1 U	**15**	-	**1.57**	1 U	-	-	-	-
				15 - 16.5	39.10 to 37.60	**3**	-	1 U	**25.6**	-	**3.04**	1 U	-	-	-	-
				20 - 21	34.10 to 33.10	**1.05**	-	1 U	**10.5**	-	**1.02**	1 U	-	-	-	-
				25 - 25.8	29.10 to 28.30	**1.38**	-	1 U	**14.9**	-	**1.52**	1 U	-	-	-	-
				30 - 31	24.10 to 23.10	1 U	-	1 U	**14.1**	-	**1.34**	1 U	-	-	-	-
MBGW-1	3/6/2019	N	39.95	4 - 5	35.95 to 34.95	11 U	**49**	0.57 U	**25**	-	**43**	0.28 U	-	11 U	0.57 U	-
				17 - 18	22.95 to 21.95	11 U	**45**	0.57 U	**43**	-	5.7 U	0.29 U	-	11 U	0.57 U	-
MBGW-2	3/4/2019	N	46.11	12.5 - 14	33.61 to 32.11	10 U	**47**	0.52 U	**24**	-	**8.5**	0.26 U	-	10 U	0.52 U	-
				25 - 26.5	21.11 to 19.61	14 U	**130**	0.7 U	**34**	-	**23**	0.35 U	-	14 U	0.7 U	-
				30 - 31.5	16.11 to 14.61	12 U	**46**	0.61 U	**42**	-	6.1 U	0.31 U	-	12 U	0.61 U	-

TABLE 5-8
SOIL RESULTS FOR INORGANIC COMPOUNDS
SEATTLE DOT MERCER PARCELS SITE
SEATTLE, WASHINGTON

Boring/Well ID	Sample Date	Sample Type	Surface Elevation (ft)	Sample Depth (ft)	Sample Elevation (ft)	Inorganic Compounds										
						Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Zinc
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
MBGW-3	3/7/2019	N	47.77	7 - 8	40.77 to 39.77	11 U	**43**	0.54 U	**32**	-	5.4 U	0.27 U	-	11 U	0.54 U	-
				12 - 13	35.77 to 34.77	11 U	**61**	0.55 U	**40**	-	5.5 U	0.27 U	-	11 U	0.55 U	-
				24 - 25	23.77 to 22.77	12 U	**42**	0.62 U	**33**	-	6.2 U	0.31 U	-	12 U	0.62 U	-
MBGW-4	3/6/2019	N	47.30	2 - 3	45.30 to 44.30	11 U	**50**	0.56 U	**32**	-	5.6 U	0.28 U	-	11 U	1.1 U	-
				4 - 5	43.30 to 42.30	12 U	**65**	0.58 U	**22**	-	**12**	0.29 U	-	12 U	1.2 U	-
				7 - 8	40.30 to 39.30	11 U	**46**	0.54 U	**26**	-	5.4 U	0.27 U	-	11 U	1.1 U	-
				24 - 25	23.30 to 22.30	12 U	**54**	0.6 U	**36**	-	6 U	0.3 U	-	12 U	1.2 U	-
MBGW-5	3/11/2019	N	49.87	27.5 - 29	22.37 to 20.87	11 U	**39**	0.56 U	**25**	-	5.6 U	0.28 U	-	11 U	0.56 U	-
MBGW-6	3/14/2019	N	52.50	10 - 10.7	42.5 to 41.8	11 U	**32**	0.54 U	**21**	-	5.4 U	0.27 U	-	11 U	0.54 U	-
MBGW-7	3/6/2019	N	53.76	10 - 11.5	43.76 to 42.26	11 U	**33**	0.54 U	**21**	-	5.4 U	0.27 U	-	11 U	0.54 U	-
				17.5 - 18.75	36.26 to 35.01	11 U	**37**	0.53 U	**34**	-	5.3 U	0.27 U	-	11 U	0.53 U	-
				40 - 40.5	13.76 to 13.26	11 U	**42**	0.56 U	**36**	-	5.6 U	0.28 U	-	11 U	0.56 U	-
MBGW-8	3/15/2019	N	47.08	25 - 26	22.08 to 21.08	11 U	**40**	0.55 U	**36**	-	5.5 U	0.27 U	-	11 U	1.1 U	-
MBGW-9	3/13/2019	N	56.84	10 - 10.5	46.84 to 46.34	11 U	**43**	0.53 U	**42**	-	5.3 U	0.26 U	-	11 U	0.53 U	-
MBGW-10	3/13/2019	N	55.25	10 - 10.9	45.25 to 44.35	11 U	**48**	0.54 U	**44**	-	5.4 U	0.27 U	-	11 U	0.54 U	-
MBGW-11	3/12/2019	N	57.55	5 - 6.5	52.55 to 51.05	11 U	**68**	0.55 U	**38**	-	**10**	0.28 U	-	11 U	0.55 U	-
MBGW-12	3/15/2019	N	54.00	5 - 5.75	49 to 48.25	11 U	**56**	0.57 U	**42**	-	5.7 U	0.29 U	-	11 U	1.1 U	-
MBGW-15	3/8/2019	N	40.87	20 - 21.25	20.87 to 19.62	13 U	**170**	0.66 U	**18**	-	6.6 U	0.33 U	-	13 U	0.66 U	-
MBPP-1	3/5/2019	N	45.28	8 - 10	37.28 to 35.28	11 U	**81**	0.55 U	**46**	-	**93**	0.28 U	-	11 U	0.55 U	-
MBPP-2	3/5/2019	N	44.46	9 - 10	35.46 to 34.46	12 U	**100**	0.62 U	**45**	-	**21**	0.31 U	-	12 U	0.62 U	-
MBPP-3	3/6/2019	N	45.89	24 - 25	21.89 to 20.89	11 U	**35**	0.55 U	**26**	-	5.5 U	0.27 U	-	11 U	0.55 U	-
MBPP-4	3/7/2019	N	48.34	9 - 10	39.34 to 38.34	11 U	**48**	0.55 U	**29**	-	**5.6**	0.27 U	-	11 U	0.55 U	-
MBPP-5	3/7/2019	N	45.92	24 - 25	21.92 to 20.92	11 U	**49**	0.56 U	**34**	-	5.6 U	0.28 U	-	11 U	0.56 U	-
MBPP-7	3/8/2019	N	49.77	4 - 5	45.77 to 44.77	12 U	**200**	0.6 U	**38**	-	**6.6**	0.3 U	-	12 U	0.6 U	-
MBPP-8	3/8/2019	N	57.52	14 - 15	43.52 to 42.52	**16**	**80**	0.63 U	**30**	-	**16**	0.32 U	-	13 U	0.63 U	-

Notes:
Bold indicates a detected concentration at or above the laboratory reporting limit.
Elevations relative to North American Vertical Datum of 1988 (NAVD88).
- = Data not available or applicable.
FD = Field duplicate.
ft = feet.
J = Estimated value.
mg/kg = milligram per kilogram.
N = Primary environmental sample.
U = Not detected at the detection limit indicated.

TABLE 5-9
GROUNDWATER SAMPLING AND ANALYSIS SUMMARY
SEATTLE DOT MERCER PARCELS SITE
SEATTLE, WASHINGTON

Boring/Well ID	Grab or Monitoring Well?[a]	Groundwater Depth Zone[b]	Surface Elevation[c] (ft)	Sample Depth (ft)[d]	Sample Elevation[c] (ft)	Sample Date	GRO	DRO/HO	BTEX	cPAHs	PAHs	CVOCs[e]	VOCs	Total Metals	Dissolved Metals
BB-5	MW	IA	49.48	30 to 40	19.48 to 9.48	11/17/1997	X	X	X			X			
BB-8	MW	IA	43.72	30 to 40	12.48 to 2.48	6/10/1997	X	X				X			
						6/24/1997			X			X			
						1/29/2009	X		X			X			
						5/3/2010						X	X		
						6/2/2011	X	X	X			X	X		
						9/5/2012			X			X	X		
						12/29/2013			X			X	X		
						6/17/2015						X			
						3/22/2017			X			X	X		
						6/14/2017			X			X	X		
						4/11/2018	X		X			X	X		
						1/23/2019	X		X			X	X		
						4/23/2019	X		X			X	X		
						7/17/2019	X		X			X	X		
						10/22/2019	X		X			X	X		
						1/20/2020	X		X			X	X		
						5/12/2020	X		X			X	X		
BB-8A	MW	IA	43.36	-	-	1/29/2009	X		X			X			
						5/3/2010						X	X		
						6/2/2011	X	X	X			X	X		
BB-10	MW	S	57.4	29 to 39	28.40 to 18.40	11/13/1997	X	X	X			X			
FMW-129	MW	D	38.64	84.2 to 89.2	-45.56 to -50.56	5/23/2014						X			
						10/20/2015						X			
						2/2/2016						X			
						4/10/2017			X			X	X		
						6/23/2017			X			X	X		
						5/1/2019			X			X	X		
						7/16/2019			X			X	X		
						10/21/2019	X		X			X	X		
						11/12/2019						X			
						1/14/2020			X			X	X		
						2/18/2020						X			
						3/25/2020						X			
						4/27/2020						X			
						5/6/2020			X			X	X		
						5/19/2020						X			
HMW-1D	MW	D	38.07	80 to 90	-41.93 to -51.93	3/25/2019	X	X	X			X	X		
						3/9/2020	X	X	X			X	X	X	

Boring/Well ID	Grab or Monitoring Well?[a]	Groundwater Depth Zone[b]	Surface Elevation[c] (ft)	Sample Depth (ft)[d]	Sample Elevation[c] (ft)	Sample Date	GRO	DRO/HO	BTEX	cPAHs	PAHs	CVOCs[e]	VOCs	Total Metals	Dissolved Metals
HMW-1IB	MW	IB	38.29	54.3 to 64.3	-16.01 to -26.01	3/25/2019	X	X	X			X	X		
						3/10/2020	X	X	X			X	X	X	
HMW-1S	MW	S	36.01	20 to 30	16.01 to 6.01	3/25/2019	X	X	X			X	X	X	
						3/11/2020	X	X	X			X	X	X	X
HMW-2D	MW	D	47.34	80 to 90	-32.66 to -42.66	3/25/2019	X	X	X			X	X		
						3/12/2020	X	X	X			X	X	X	
HMW-2IA	MW	IA	45.55	34.8 to 44.8	10.75 to 0.75	3/25/2019	X	X	X			X	X		
						3/12/2020	X	X	X			X	X	X	
HMW-2IB	MW	IB	47.41	52.8 to 62.8	-5.39 to -15.39	3/25/2019	X	X	X			X	X		
						3/12/2020	X	X	X			X	X	X	
HMW-2S	MW	S	47.39	19.8 to 29.8	27.59 to 17.59	3/25/2019	X	X	X			X	X		
						3/12/2020	X	X	X			X	X	X	
HMW-3D	MW	D	56.56	80 to 90	-23.44 to -33.44	3/25/2019	X	X	X			X	X		
						3/13/2020	X	X	X			X	X	X	
HMW-3IA	MW	IA	55.02	34.8 to 44.8	20.22 to 10.22	3/25/2019	X	X	X			X	X		
						3/13/2020	X	X	X			X	X	X	
HMW-4IA	MW	IB	58.7	50 to 60	8.7 to -1.3	3/25/2019	X	X	X	X	X	X	X		
						3/10/2020	X	X	X	X	X	X	X	X	
HMW-5IB	MW	IB	58.44	49.7 to 59.7	8.74 to -1.26	3/17/2020	X	X	X	X	X	X	X	X	
HMW-6D	MW	D	58.58	79.7 to 89.7	-21.12 to -31.12	3/16/2020	X	X	X	X	X	X	X	X	
HMW-6IA	MW	IA	58.65	37.5 to 47.5	21.15 to 11.15	3/13/2020	X	X	X	X	X	X	X	X	
HMW-6IB	MW	IB	58.67	50 to 60	8.67 to -1.33	3/13/2020	X	X	X	X	X	X	X	X	
HMW-7IB	MW	IB	58.69	49.7 to 59.7	8.98 to -1.01	3/12/2020	X	X	X	X	X	X	X	X	
HMW-8IB	MW	IB	57.97	50.5 to 60.5	7.47 to -2.53	3/11/2020	X	X	X	X	X	X	X	X	X
HMW-9D	MW	D	55.32	79.7 to 89.7	-34.38 to -24.38	3/17/2020	X	X	X			X	X	X	
HMW-9IA	MW	IA	55.26	36.7 to 46.7	18.56 to 8.56	3/19/2020	X	X	X			X	X	X	
HMW-9IB	MW	IB	55.36	57 to 67	-1.64 to -11.64	3/19/2020	X	X	X			X	X	X	
HMW-9S	MW	S	55.39	25 to 35	30.39 to 20.39	3/17/2020	X	X	X			X	X	X	
HMW-10D	MW	D	48.16	79 to 89	-30.84 to -40.84	3/16/2020	X	X	X			X	X	X	
HMW-10S	MW	S	48.21	24.7 to 34.7	23.51 to 13.51	3/16/2020	X	X	X			X	X	X	
HMW-11IB	MW	IB	39.7	44.87 to 54.87	-5.17 to -15.17	3/16/2020	X	X	X			X	X	X	
HMW-11S	MW	S	41.47	25 to 35	16.47 to 6.47	3/11/2020	X	X	X			X	X	X	X
HMW-12D	MW	D	33.52	82 to 92	-48.48 to -58.48	9/10/2020	X	X	X	X	X	X	X	X	X
HMW-13D	MW	D	45.3	90 to 100	-44.70 to -54.70	9/10/2020	X	X	X	X	X	X	X	X	X
HMW-14D	MW	D	46.35	70 to 80	-23.65 to -33.65	9/16/2020	X	X	X	X	X	X	X	X	X
HMW-15IB	MW	IB	58.86	64 to 73	-5.14 to -14.14	9/16/2020	X	X	X	X	X	X	X	X	X
HMW-16IB	MW	IB	57.02	55 to 65	2.02 to -7.98	9/17/2020		X		X	X				
						9/18/2020	X		X	X	X	X	X	X	X
HMW-17S	MW	S	57.7	35 to 45	22.70 to 12.70	9/17/2020	X	X	X	X	X	X	X	X	X
HMW-18S	MW	S	57.46	35 to 45	22.46 to 12.46	9/17/2020	X	X	X	X	X	X	X	X	X
HMW-19S	MW	S	58.41	35 to 45	23.41 to 13.41	9/17/2020	X	X	X	X	X	X	X	X	X
HMW-20IA	MW	IA	53.46	41 to 51	12.46 to 2.46	9/18/2020	X	X	X	X	X	X	X	X	X
HMW-20S	MW	S	53.57	25 to 35	23.57 to 13.57	9/18/2020	X	X	X	X	X	X	X	X	X
HMW-21S	MW	S	38.17	30 to 40	8.17 to -1.83	11/3/2020		X							

Boring/Well ID	Grab or Monitoring Well?[a]	Groundwater Depth Zone[b]	Surface Elevation[c] (ft)	Sample Depth (ft)[d]	Sample Elevation[c] (ft)	Sample Date	GRO	DRO/HO	BTEX	cPAHs	PAHs	CVOCs[e]	VOCs	Total Metals	Dissolved Metals
HMW-22S	MW	S	38.75	27 to 37	11.75 to 1.75	11/3/2020		X							
21417-MB4	G	S	57.24	15 to 25	42.24 to 32.24	5/12/2017	X	X	X			X	X		
21417-MB9	G	S	39.05	15 to 25	24.05 to 14.05	5/11/2017	X	X	X			X	X	X	X
21417-MB10	G	S	38.08	20 to 30	18.08 to 8.08	5/11/2017	X	X	X			X	X	X	X
21417-MB11	G	S	39.04	15 to 25	24.04 to 14.04	5/11/2017	X	X	X			X	X	X	X
MBB-1	G	S	55.02	32 to 37	23.02 to 18.02	3/3/2020	X	X	X	X	X	X	X	X	
MBB-2	G	S	55.45	32 to 37	23.45 to 18.45	3/3/2020	X	X	X	X	X	X	X	X	
MBB-3	G	S	54.84	32 to 37	22.84 to 17.84	3/4/2020	X	X	X	X	X	X	X	X	
MBB-4	G	S	54.61	32 to 37	22.61 to 17.61	3/5/2020	X	X	X	X	X	X	X	X	
MBB-5	G	S	50.53	32 to 37	18.53 to 13.53	3/5/2020	X	X	X			X	X	X	X
MBB-6	G	S	50.33	25 to 30	25.33 to 20.33	3/5/2020	X	X	X			X	X	X	
MBB-7	G	S	49.41	27 to 32	22.41 to 17.41	3/4/2020	X	X	X			X	X	X	X
MBB-8	G	S	49.66	27 to 32	22.66 to 17.66	2/27/2020	X	X	X			X	X	X	X
MBB-9	G	S	47.55	27 to 32	20.55 to 15.55	2/28/2020	X	X	X			X	X	X	X
MBB-10	G	S	49.66	35 to 40	14.66 to 9.66	2/27/2020	X	X	X			X	X	X	X
MBB-12	G	S	33.69	27 to 32	6.69 to 1.69	3/6/2020								X	X
MBB-13	G	S	35.98	30 to 35	5.98 to 0.98	3/9/2020								X	X
MBB-15	G	S	37.73	30 to 35	7.73 to 2.73	3/6/2020		X		X	X				
MBB-16	G	S	53.7	30 to 40	23.70 to 17.70	9/3/2020	X	X	X	X	X	X	X	X	X
MBB-24	G	S	54.1	30 to 40	24.10 to 14.10	9/10/2020	X	X	X	X	X	X	X	X	X
MBB-25	G	S	58.63	30 to 40	28.63 to 18.63	10/31/2020				X	X				
MBB-26	G	S	58.79	30 to 40	28.79 to 18.79	10/30/2020				X					
MBGW-1	G	S	39.95	20 to 30	19.95 to 9.95	3/6/2019	X	X	X			X	X	X	X
MBGW-2	G	S	46.11	20 to 30	26.11 to 16.11	3/4/2019	X	X	X			X	X		X
MBGW-3	G	S	47.77	16 to 26	31.77 to 21.77	3/7/2019	X	X	X			X	X	X	X
MBGW-5	G	S	49.87	20 to 30	29.87 to 19.87	3/15/2019	X	X	X			X	X	X	X
MBGW-6	G	S	52.5	20 to 30	32.5 to 22.5	3/15/2019	X	X	X			X	X	X	X
MBGW-7	G	S	53.76	30 to 40	23.76 to 13.76	3/6/2019	X	X	X			X	X	X	X
MBGW-8	G	S	47.08	15 to 25	32.08 to 22.08	3/19/2019	X	X	X			X	X	X	X
MBGW-9	G	S	56.84	20 to 30	36.84 to 26.84	3/15/2019	X	X	X			X	X	X	X
MBGW-10	G	S	55.25	20 to 30	35.25 to 25.25	3/15/2019	X	X	X			X	X	X	X
MBGW-11	G	S	57.55	35 to 45	22.55 to 12.55	3/15/2019	X	X	X			X	X	X	X
MBGW-12	G	S	54	17.5 to 27.5	36.5 to 26.5	3/19/2019	X	X	X			X	X		
MBGW-13	G	S	54.72	20 to 30	34.72 to 24.72	3/15/2019	X	X	X			X	X	X	X
MBGW-14	G	S	46.09	20 to 30	26.09 to 16.09	3/6/2019	X	X						X	X
MBGW-15	G	S	40.87	20 to 30	20.87 to 10.87	3/15/2019	X	X	X			X	X	X	X
MBGW-16	G	S	52.14	20 to 30	32.14 to 22.14	3/8/2019	X	X	X			X	X	X	X
MBPP-5	G	S	45.92	18 to 28	27.92 to 17.92	3/7/2019	X	X	X			X	X	X	X

Boring/Well ID	Grab or Monitoring Well?[a]	Groundwater Depth Zone[b]	Surface Elevation[c] (ft)	Sample Depth (ft)[d]	Sample Elevation[c] (ft)	Sample Date	GRO	DRO/HO	BTEX	cPAHs	PAHs	CVOCs[e]	VOCs	Total Metals	Dissolved Metals
MW-105	G	D	45.59	80	-34.41	8/9/2012						X	X		
				100	-54.41	8/10/2012						X	X		
	MW	D	45.59	130 to 140	-84.48 to -94.48	8/16/2012						X	X		
						9/5/2012			X			X	X		
						12/29/2013			X			X	X		
						4/21/2015						X			
						6/17/2015						X			
						10/27/2015						X			
						2/3/2016						X			
						4/11/2018	X		X			X	X		
						1/23/2019	X		X			X	X		
						4/23/2019	X		X			X	X		
						7/17/2019	X		X			X	X		
						10/22/2019	X		X			X	X		
						1/20/2020	X		X			X	X		
						5/12/2020	X		X			X	X		
MW-106	G	D	52.9	35	17.9	8/14/2012						X	X		
				50	2.9	8/14/2012						X	X		
				90	-37.1	8/15/2012						X	X		
	MW	D	52.9	130 to 140	-77.1 to -87.1	8/22/2012						X	X		
						9/5/2012			X			X	X		
						12/17/2013			X			X	X		
						10/27/2015						X			
	MW	D	52.9	130 to 140	-77.1 to -87.1	2/2/2016						X			
						4/14/2017									
						6/30/2017									
						5/4/2018									
						4/26/2019	X		X			X	X		
						7/19/2019	X		X			X	X		
						10/18/2019	X		X			X	X		
						1/14/2020	X		X			X	X		
						5/6/2020	X		X			X	X		
MW-114	MW	IA	42.43	35 to 45	7.43 to -2.57	12/21/2012						X	X		
						12/18/2013			X			X	X		
MW-117	MW	IA	57.78	40 to 55	17.78 to 2.78	2/8/2013						X	X		
						12/18/2013	X	X	X			X	X		
MW-118	MW	IA	54.5	40 to 50	14.5 to 4.5	3/25/2013						X	X		
						12/18/2013	X	X	X			X	X		

Boring/Well ID	Grab or Monitoring Well?[a]	Groundwater Depth Zone[b]	Surface Elevation[c] (ft)	Sample Depth (ft)[d]	Sample Elevation[c] (ft)	Sample Date	GRO	DRO/HO	BTEX	cPAHs	PAHs	CVOCs[e]	VOCs	Total Metals	Dissolved Metals
MW-119	MW	IA	37.66	35 to 45	2.59 to -7.41	3/25/2013						X	X		
						12/19/2013			X			X	X		
						4/21/2015						X			
						6/17/2015						X			
						10/20/2015						X			
						2/2/2016						X			
						3/29/2017			X			X	X		
						6/28/2017			X			X	X		
						4/5/2018			X			X	X		
						1/21/2019			X			X	X		
						4/29/2019			X			X	X		
						7/19/2019			X			X	X		
						10/10/2019			X			X	X		
						11/11/2019						X			
						1/14/2020			X			X	X		
						2/18/2020						X			
						3/24/2020						X			
						4/27/2020			X			X	X		
						5/19/2020						X			
MW-140	MW	D	50.32	129.5 to 139.5	-79.18 to -89.18	9/22/2017			X			X	X		
						4/12/2018	X		X			X	X		
MW-146	MW	IA	52.86	39.8 to 49.8	13.06 to 3.06	4/30/2018	X		X			X	X		
						1/22/2019	X		X			X	X		
						4/24/2019	X		X			X	X		
						7/19/2019	X		X			X	X		
						10/14/2019	X		X			X	X		
						1/24/2020	X		X			X	X		
						4/30/2020	X		X			X	X		
						11/10/2020	X	X	X			X	X		
MW-147	MW	IB	52.49	70 to 80	-17.51 to -27.51	5/1/2018	X		X			X	X		
						1/22/2019	X		X			X	X		
						4/23/2019	X		X			X	X		
						7/18/2019	X		X			X	X		
						10/14/2019	X		X			X	X		
						1/24/2020	X		X			X	X		
						4/29/2020	X		X			X	X		
						11/10/2020	X	X	X			X	X		
MW-148	MW	IB	44.29	70 to 80	-25.71 to -35.71	5/1/2018	X		X			X	X		
						1/23/2019	X		X			X	X		
						4/26/2019	X		X			X	X		
						7/22/2019	X		X			X	X		
						10/16/2019	X		X			X	X		
						1/20/2020	X		X			X	X		
						4/30/2020	X		X			X	X		

Boring/Well ID	Grab or Monitoring Well?[a]	Groundwater Depth Zone[b]	Surface Elevation[c] (ft)	Sample Depth (ft)[d]	Sample Elevation[c] (ft)	Sample Date	GRO	DRO/HO	BTEX	cPAHs	PAHs	CVOCs[e]	VOCs	Total Metals	Dissolved Metals
MW-153	MW	D	54.84	120 to 130	-65.16 to -75.16	5/1/2018	X		X			X	X		
						1/22/2019	X		X			X	X		
						4/24/2019	X		X			X	X		
						7/22/2019	X		X			X	X		
						10/15/2019	X		X			X	X		
						1/21/2020	X		X			X	X		
						4/30/2020	X		X			X	X		
MW-154	MW	S	53.22	25 to 35	28.22 to 18.22	4/30/2018	X		X			X	X		
						1/21/2019	X		X			X	X		
						4/24/2019	X		X			X	X		
						7/15/2019	X		X			X	X		
						10/14/2019	X		X			X	X		
						1/21/2020	X		X			X	X		
						4/30/2020	X		X			X	X		
MW-155	MW	S	44.47	20 to 30	24.47 to 14.47	4/27/2018	X		X			X	X		
						1/21/2019	X		X			X	X		
						4/23/2019	X		X			X	X		
						7/23/2019	X		X			X	X		
						10/16/2019	X		X			X	X		
						1/20/2020	X		X			X	X		
						5/5/2020	X		X			X	X		
MW-315	MW	IA	49.56	37.5 to 47.4	12.06 to 2.16	10/3/2019			X			X	X		
						1/16/2020			X			X	X		
						4/24/2020			X			X	X		
MW-316	MW	IB	49.71	59.8 to 69.8	-10.07 to -20.07	10/2/2019			X			X	X		
						10/3/2019									
						1/16/2020			X			X	X		
						4/21/2020			X			X	X		
MW-325	MW	IA	41.42	34.5 to 44.5	6.92 to -3.08	10/3/2019			X			X	X		
						1/17/2020			X			X	X		
						4/21/2020			X			X	X		
MW-326	MW	D	41.31	90 to 100	-48.69 to -58.69	10/3/2019			X			X	X		
						1/17/2020			X			X	X		
						4/21/2020			X			X	X		

Notes:

a. "G" represents grab groundwater from temporary wells and "MW" represents groundwater from permanent monitoring wells.

b. "S" represents Shallow,"IA" represents Intermediate A, "IB" represents Intermediate B, and "D" represents Deep.

c. Elevations relative to North American Vertical Datum of 1988 (NAVD88).

d. Sample depths for grab groundwater samples are approximate.

e. A note on terminology: for the purposes of this report, we use the term CVOCs to refer to the volatile compound tetrachloroethene and its degradation products, trichloroethene, cis- and trans-1,2-dichloroethene, and vinyl chloride. We use the term BTEX to refer to the volatile aromatic compounds benzene, toluene, ethylbenzene, and xylenes. All other volatile organic compounds, including chlorinated compounds such as 1,1,1-trichloroethane and 1,1-dichloroethane, are referred to as VOCs.

Table shows sampling relevant to Seattle DOT Mercer Parcels Site. Other sampling done at American Linen site is presented in PES Environmental (2019).

BTEX = Benzene, toluene, ethylbenzene, and xylenes.

cPAHs = Carcinogenic polycylic aromatic hydrocarbons.

CVOCs = Chlorinated volatile organic compounds.

DRO = Diesel-range petroleum hydrocarbons.

ft = feet.

GRO = Gasoline-range petroleum hydrocarbons.

HO = Heavy oil-range petroleum hydrocarbons.

PAHs = Polycyclic aromatic hydrocarbons.

VOCs = Volatile organic compounds.

TABLE 5-11
GROUNDWATER RESULTS FOR SEMI-VOLATILE ORGANIC COMPOUNDS
SEATTLE DOT MERCER PARCELS SITE
SEATTLE, WASHINGTON

Boring/Well ID	Surface Elevation (ft)	Sample Type	Sample Depth (ft)	Sample Elevation (ft)	Grab or Monitoring Well?	Sample Date	Carcinogenic Semi-Volatile Organic Compounds							
							Benzo(a) anthracene	Benzo(a) pyrene	Benzo(b) fluoranthene	Benzo(k) fluoranthene	Chrysene	Dibenz(a,h) anthracene	Indeno(1,2,3-cd)pyrene	cPAHs-TEQ
							ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
						Analytical Method	SW8270E SW8270ESIM	SW8270E SW8270ESIM	SW8270E SW8270ESIM	SW8270E SW8270ESIM	SW8270E SW8270ESIM	SW8270E SW8270ESIM	SW8270E SW8270ESIM	SW8270E SW8270ESIM
SHALLOW ZONE														
HMW-17S	57.21	N	35 to 45	22.21 to 12.21	MW	9/17/2020	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.0068 U
HMW-18S	57.61	N	35 to 45	22.61 to 12.61	MW	9/17/2020	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.0068 U
HMW-19S	58.2	N	35 to 45	23.2 to 13.2	MW	9/17/2020	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.0068 U
HMW-20S	53.81	N	25 to 35	28.81 to 18.81	MW	9/18/2020	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.0068 U
MBB-1	55.02	N	32 to 37	23.02 to 18.02	G	3/3/2020	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.0051 U
MBB-2	55.45	N	32 to 37	23.45 to 18.45	G	3/3/2020	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.0051 U
MBB-3	54.84	N	32 to 37	22.84 to 17.84	G	3/4/2020	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.0051 U
MBB-4	54.61	N	32 to 37	22.61 to 17.61	G	3/5/2020	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.0051 U
MBB-15	37.73	N	30 to 35	7.73 to 2.73	G	3/6/2020	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.0051 U
MBB-16	53.7	N	30 to 40	23.7 to 13.7	G	9/3/2020	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.0068 U
MBB-24	54.1	N	30 to 40	24.1 to 14.1	G	9/10/2020	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.0068 U
MBB-25	58.63	N	30 to 40	28.63 to 18.63	G	10/31/2020	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.0086 U
MBB-26	58.79	N	30 to 40	28.79 to 18.79	G	10/30/2020	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.0086 U
INTERMEDIATE A ZONE														
HMW-6IA	58.65	N	37.5 to 47.5	21.15 to 11.15	MW	3/13/2020	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.0051 U
HMW-20IA	53.83	N	41 to 51	12.83 to 2.83	MW	9/18/2020	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.0068 U
INTERMEDIATE B ZONE														
HMW-4IA	58.7	N	50 to 60	8.70 to -1.30	MW	3/10/2020	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.0051 U
HMW-5IB	58.44	N	49.7 to 59.7	8.74 to -1.26	MW	3/17/2020	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.0051 U
HMW-6IB	58.67	N	50 to 60	8.67 to -1.33	MW	3/13/2020	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.0051 U
HMW-7IB	58.69	N	49.7 to 59.7	8.99 to -1.01	MW	3/12/2020	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.0051 U
HMW-8IB	57.97	N	50.5 to 60.5	7.47 to -2.53	MW	3/11/2020	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.0051 U
HMW-15IB	58.86	N	64 to 73	-5.14 to -14.14	MW	9/16/2020	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.0068 U
HMW-16IB	57.02	N	55 to 65	2.02 to -7.98	MW	9/18/2020	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.0068 U
DEEP ZONE														
HMW-6D	58.58	N	79.9 to 89.7	-21.12 to -31.12	MW	3/16/2020	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.0051 U
HMW-12D	33.52	N	82 to 92	-48.48 to -58.48	MW	9/10/2020	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.0068 U
HMW-13D	45.3	N	89.5 to 99.5	-44.20 to -54.20	MW	9/10/2020	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.0068 U
HMW-14D	46.35	N	70 to 80	-23.65 to -33.65	MW	9/16/2020	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.0068 U

TABLE 5-11
GROUNDWATER RESULTS FOR SEMI-VOLATILE ORGANIC COMPOUNDS
SEATTLE DOT MERCER PARCELS SITE
SEATTLE, WASHINGTON

Boring/Well ID	Surface Elevation (ft)	Sample Type	Sample Depth (ft)	Sample Elevation (ft)	Grab or Monitoring Well?	Sample Date	Non-Carcinogenic Semi-Volatile Organic Compounds										
							1-Methyl naphthalene	2-Methyl naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(g,h,i) perylene	Fluoranthene	Fluorene	Naphthalene	Phenanthrene	Pyrene
							ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
						Analytical Method	SW8270E	SW8270E	SW8270E SW8270ESIM	SW8270E SW8270ESIM	SW8270E SW8270ESIM	SW8270E SW8270ESIM	SW8270E SW8270ESIM	SW8270E SW8270ESIM	SW8270E SW8270ESIM	SW8270E SW8270ESIM	SW8270E SW8270ESIM
SHALLOW ZONE																	
HMW-17S	57.21	N	35 to 45	22.21 to 12.21	MW	9/17/2020	0.4 U	0.4 U	0.04 U	0.04 U	0.04 U	0.08 U	0.04 U	0.04 U	0.4 U	0.04 U	0.04 U
HMW-18S	57.61	N	35 to 45	22.61 to 12.61	MW	9/17/2020	0.4 U	0.4 U	0.04 U	0.04 U	0.04 U	0.08 U	0.04 U	0.04 U	0.4 U	0.04 U	0.04 U
HMW-19S	58.2	N	35 to 45	23.2 to 13.2	MW	9/17/2020	0.4 U	0.4 U	0.04 U	0.04 U	0.04 U	0.08 U	0.04 U	0.04 U	0.4 U	0.04 U	0.04 U
HMW-20S	53.81	N	25 to 35	28.81 to 18.81	MW	9/18/2020	0.4 U	0.4 U	0.04 U	0.04 U	0.04 U	0.08 U	0.04 U	0.04 U	0.4 U	0.04 U	0.04 U
MBB-1	55.02	N	32 to 37	23.02 to 18.02	G	3/3/2020	-	-	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.4 U	0.04 U	0.04 U
MBB-2	55.45	N	32 to 37	23.45 to 18.45	G	3/3/2020	-	-	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.4 U	0.04 U	0.04 U
MBB-3	54.84	N	32 to 37	22.84 to 17.84	G	3/4/2020	-	-	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	**2.2**	0.04 U	0.04 U
MBB-4	54.61	N	32 to 37	22.61 to 17.61	G	3/5/2020	-	-	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.4 U	0.04 U	0.04 U
MBB-15	37.73	N	30 to 35	7.73 to 2.73	G	3/6/2020	-	-	**0.25**	0.04 U	0.04 U	0.04 U	0.04 U	**0.098**	0.4 U	**0.18**	0.04 U
MBB-16	53.7	N	30 to 40	23.7 to 13.7	G	9/3/2020	0.4 U	0.4 U	0.04 U	0.04 U	0.04 U	0.08 U	0.04 U	0.04 U	0.4 U	0.04 U	0.04 U
MBB-24	54.1	N	30 to 40	24.1 to 14.1	G	9/10/2020	**1.6**	**1.6**	0.04 U	0.04 U	0.04 U	0.08 U	0.04 U	0.04 U	**6**	0.04 U	0.04 U
MBB-25	58.63	N	30 to 40	28.63 to 18.63	G	10/31/2020	0.4 U	0.4 U	0.04 U	0.04 U	0.04 U	0.08 U	0.04 U	0.04 U	0.4 U	0.04 U	0.04 U
MBB-26	58.79	N	30 to 40	28.79 to 18.79	G	10/30/2020	-	-	-	-	-	-	-	-	-	-	-
INTERMEDIATE A ZONE																	
HMW-6IA	58.65	N	37.5 to 47.5	21.15 to 11.15	MW	3/13/2020	-	-	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.4 U	0.04 U	0.04 U
HMW-20IA	53.83	N	41 to 51	12.83 to 2.83	MW	9/18/2020	0.4 U	0.4 U	0.04 U	0.04 U	0.04 U	0.08 U	0.04 U	0.04 U	0.4 U	0.04 U	0.04 U
INTERMEDIATE B ZONE																	
HMW-4IA	58.7	N	50 to 60	8.70 to -1.30	MW	3/10/2020	-	-	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.4 U	0.04 U	0.04 U
HMW-5IB	58.44	N	49.7 to 59.7	8.74 to -1.26	MW	3/17/2020	-	-	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.4 U	0.04 U	0.04 U
HMW-6IB	58.67	N	50 to 60	8.67 to -1.33	MW	3/13/2020	-	-	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.4 U	0.04 U	0.04 U
HMW-7IB	58.69	N	49.7 to 59.7	8.99 to -1.01	MW	3/12/2020	-	-	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.4 U	0.04 U	0.04 U
HMW-8IB	57.97	N	50.5 to 60.5	7.47 to -2.53	MW	3/11/2020	-	-	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.4 U	0.04 U	0.04 U
HMW-15IB	58.86	N	64 to 73	-5.14 to -14.14	MW	9/16/2020	0.4 U	0.4 U	0.04 U	0.04 U	0.04 U	0.08 U	0.04 U	0.04 U	0.4 U	0.04 U	0.04 U
HMW-16IB	57.02	N	55 to 65	2.02 to -7.98	MW	9/18/2020	0.4 U	0.4 U	0.04 U	0.04 U	0.04 U	0.08 U	0.04 U	0.04 U	0.4 U	0.04 U	0.04 U
DEEP ZONE																	
HMW-6D	58.58	N	79.9 to 89.7	-21.12 to -31.12	MW	3/16/2020	-	-	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.4 U	0.04 U	0.04 U
HMW-12D	33.52	N	82 to 92	-48.48 to -58.48	MW	9/10/2020	0.4 U	0.4 U	0.04 U	0.04 U	0.04 U	0.08 U	0.04 U	0.04 U	0.4 U	0.04 U	0.04 U
HMW-13D	45.3	N	89.5 to 99.5	-44.20 to -54.20	MW	9/10/2020	0.4 U	0.4 U	0.04 U	0.04 U	0.04 U	0.08 U	0.04 U	0.04 U	0.4 U	0.04 U	0.04 U
HMW-14D	46.35	N	70 to 80	-23.65 to -33.65	MW	9/16/2020	0.4 U	0.4 U	0.04 U	0.04 U	0.04 U	0.08 U	0.04 U	0.04 U	0.4 U	0.04 U	0.04 U

Notes:

Bold indicates a detected concentration at or above the laboratory reporting limit.
Elevations relative to North American Vertical Datum of 1988 (NAVD88).
'- = Data not available or applicable.
cPAHs-TEQ = Carcinogenic polycyclic aromatic hydrocarbons toxic equivalency.
FD = Field duplicate.
ft = feet.
G = Grab groundwater sample.
MW = Monitoring well sample.
N = Primary environmental sample.
U = Not detected at detection limit indicated.
ug/L = microgram per liter.

TABLE 5-13
GROUNDWATER RESULTS FOR INORGANIC COMPOUNDS
SEATTLE DOT MERCER PARCELS SITE
SEATTLE, WASHINGTON

Boring/Well ID	Surface Elevation (ft)	Sample Type	Sample Depth (ft)	Sample Elevation (ft)	Grab or Monitoring Well?	Sample Date	Inorganic Compounds, Dissolved													
							Antimony, Dissolved	Arsenic, Dissolved	Barium, Dissolved	Beryllium, Dissolved	Cadmium, Dissolved	Chromium, Dissolved	Copper, Dissolved	Lead, Dissolved	Mercury, Dissolved	Nickel, Dissolved	Selenium, Dissolved	Silver, Dissolved	Thallium, Dissolved	Zinc, Dissolved
							ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
						Analytical Method	-	E200.8 SW6020	E200.8	-	E200.8 SW6020	E200.8 SW6020	-	E200.8 SW6020	SW6020 SW7470A	-	E200.8	E200.8	-	-
SHALLOW ZONE																				
21417-MB9	39.05	N	15 to 25	24.05 to 14.05	G	5/11/2017	**0.646**	1 U	-	0.2 U	0.2 U	0.5 U	**0.733**	0.5 U	0.1 U	**3.11**	1 U	0.2 U	0.2 U	**4.48**
21417-MB10	38.08	N	20 to 30	18.08 to 8.08	G	5/11/2017	**0.206**	**1.87**	-	0.2 U	0.2 U	0.5 U	**1.01**	0.5 U	0.1 U	**3.72**	1 U	0.2 U	0.2 U	**1.56**
21417-MB11	39.04	N	15 to 25	24.04 to 14.04	G	5/11/2017	**0.214**	1 U	-	0.2 U	0.2 U	**0.852**	0.5 U	0.5 U	0.1 U	**5.12**	1 U	0.2 U	0.2 U	**1.91**
HMW-1S	36.01	N	20 to 30	16.01 to 6.01	MW	3/25/2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-
						3/11/2020	-	**12.3**	-	-	1 U	50 U	-	1 U	1 U	-	-	-	-	-
HMW-2S	47.39	N	19.8 to 29.8	27.59 to 17.59	MW	3/12/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HMW-9S	55.39	N	25 to 35	30.39 to 20.39	MW	3/17/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HMW-10S	48.21	N	24.7 to 34.7	23.51 to 13.51	MW	3/16/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HMW-11S	41.47	N	25 to 35	16.47 to 6.47	MW	3/11/2020	-	**2.57**	-	-	1 U	5 U	-	1 U	1 U	-	-	-	-	-
HMW-17S	57.21	N	35 to 45	22.21 to 12.21	MW	9/17/2020	-	**1.32**	-	-	1 U	**2.12**	-	1 U	1 U	-	-	-	-	-
HMW-18S	57.61	N	35 to 45	22.61 to 12.61	MW	9/17/2020	-	**2.5**	-	-	1 U	1 U	-	1 U	1 U	-	-	-	-	-
HMW-19S	58.2	N	35 to 45	23.20 to 13.20	MW	9/17/2020	-	**1.97**	-	-	1 U	1 U	-	1 U	1 U	-	-	-	-	-
HMW-20S	53.81	N	25 to 35	28.81 to 18.81	MW	9/18/2020	-	**2.03**	-	-	1 U	**4.26**	-	1 U	1 U	-	-	-	-	-
MBB-1	55.02	N	32 to 37	23.02 to 18.02	G	3/3/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MBB-2	55.45	N	32 to 37	23.45 to 18.45	G	3/3/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MBB-3	54.84	N	32 to 37	22.84 to 17.84	G	3/4/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MBB-4	54.61	N	32 to 37	22.61 to 17.61	G	3/5/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MBB-5	50.53	N	32 to 37	18.53 to 13.53	G	3/5/2020	-	**4.01**	-	-	1 U	1 U	-	1 U	1 U	-	-	-	-	-
MBB-6	50.33	N	25 to 30	25.33 to 20.33	G	3/5/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MBB-7	49.41	N	27 to 32	22.41 to 17.41	G	3/4/2020	-	1 U	-	-	1 U	1 U	-	1 U	1 U	-	-	-	-	-
MBB-8	49.66	N	27 to 32	22.66 to 17.66	G	2/27/2020	-	1 U	-	-	1 U	1 U	-	1 U	1 U	-	-	-	-	-
MBB-9	47.55	N	27 to 32	20.55 to 15.55	G	2/28/2020	-	**2.37**	-	-	1 U	1 U	-	1 U	1 U	-	-	-	-	-
MBB-10	49.66	N	35 to 40	14.66 to 9.66	G	2/27/2020	-	**3.22**	-	-	1 U	1 U	-	1 U	1 U	-	-	-	-	-
MBB-12	33.69	N	27 to 32	6.69 to 1.69	G	3/6/2020	-	**14.4**	-	-	1 U	1 U	-	1 U	1 U	-	-	-	-	-
MBB-13	35.98	N	30 to 35	5.98 to 0.98	G	3/9/2020	-	**41.2**	-	-	1 U	1 U	-	1 U	1 U	-	-	-	-	-
MBB-16	53.7	N	30 to 40	23.70 to 13.70	G	9/3/2020	-	**2.6**	-	-	1 U	**1.21**	-	1 U	1 U	-	-	-	-	-
MBB-24	54.1	N	30 to 40	24.10 to 14.10	G	9/10/2020	-	**7.49**	-	-	1 U	1 U	-	1 U	1 UJ	-	-	-	-	-
MBGW-1	39.95	N	20 to 30	19.95 to 9.95	G	3/6/2019	-	3 U	25 U	-	4 U	10 U	-	1 U	0.5 UJ	-	5 U	10 U	-	-
MBGW-2	46.11	N	20 to 30	26.11 to 16.11	G	3/4/2019	-	3 U	**44**	-	4 U	10 U	-	1 U	0.5 U	-	5 U	10 U	-	-
MBGW-3	47.77	N	16 to 26	31.77 to 21.77	G	3/7/2019	-	3 U	25 U	-	4 U	10 U	-	1 U	0.5 UJ	-	5 U	10 U	-	-
MBGW-5	49.87	N	20 to 30	29.87 to 19.87	G	3/15/2019	-	3 U	25 U	-	4 U	10 U	-	1 U	0.5 U	-	5 U	10 U	-	-
MBGW-6	52.5	N	20 to 30	32.50 to 22.50	G	3/15/2019	-	3 U	25 U	-	4 U	10 U	-	1 U	0.5 U	-	5 U	10 U	-	-
MBGW-7	53.76	N	30 to 40	23.76 to 13.76	G	3/6/2019	-	3 U	**28**	-	4 U	10 U	-	1 U	0.5 UJ	-	5 U	10 U	-	-
MBGW-8	47.08	N	15 to 25	32.08 to 22.08	G	3/19/2019	-	3 U	**45**	-	4 U	10 U	-	1 U	0.5 U	-	5 U	10 U	-	-
MBGW-9	56.84	N	20 to 30	36.84 to 26.84	G	3/15/2019	-	3 U	25 U	-	4 U	10 U	-	1 U	0.5 U	-	5 U	10 U	-	-
MBGW-10	55.25	N	20 to 30	35.25 to 25.25	G	3/15/2019	-	3 U	**26**	-	4 U	10 U	-	1 U	0.5 U	-	5 U	10 U	-	-
MBGW-11	57.55	N	35 to 45	22.55 to 12.55	G	3/15/2019	-	**6.9**	**32**	-	4 U	10 U	-	1 U	0.5 U	-	5 U	10 U	-	-
MBGW-13	54.72	N	20 to 30	34.72 to 24.72	G	3/15/2019	-	**3.3**	25 U	-	4 U	10 U	-	1 U	0.5 U	-	5 U	10 U	-	-
MBGW-14	46.09	N	20 to 30	26.09 to 16.09	G	3/6/2019	-	3 U	**40**	-	4 U	10 U	-	1 U	0.5 UJ	-	5 U	10 U	-	-
MBGW-15	40.87	N	20 to 30	20.87 to 10.87	G	3/15/2019	-	3 U	**95**	-	4 U	10 U	-	1 U	0.5 UJ	-	5 U	10 U	-	-
MBGW-16	52.14	N	20 to 30	32.14 to 22.14	G	3/8/2019	-	3 U	**25**	-	4 U	10 U	-	1 U	0.5 UJ	-	5 U	10 U	-	-
MBPP-5	45.92	N	18 to 28	27.92 to 17.92	G	3/7/2019	-	3 U	**26**	-	4 U	10 U	-	1 U	0.5 UJ	-	5 U	10 U	-	-

TABLE 5-13
GROUNDWATER RESULTS FOR INORGANIC COMPOUNDS
SEATTLE DOT MERCER PARCELS SITE
SEATTLE, WASHINGTON

Boring/Well ID	Surface Elevation (ft)	Sample Type	Sample Depth (ft)	Sample Elevation (ft)	Grab or Monitoring Well?	Sample Date	Inorganic Compounds, Dissolved													
							Antimony, Dissolved	Arsenic, Dissolved	Barium, Dissolved	Beryllium, Dissolved	Cadmium, Dissolved	Chromium, Dissolved	Copper, Dissolved	Lead, Dissolved	Mercury, Dissolved	Nickel, Dissolved	Selenium, Dissolved	Silver, Dissolved	Thallium, Dissolved	Zinc, Dissolved
							ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
						Analytical Method	-	E200.8 SW6020	E200.8	-	E200.8 SW6020	E200.8 SW6020	-	E200.8 SW6020	SW6020 SW7470A	-	E200.8	E200.8	-	-
INTERMEDIATE A ZONE																				
HMW-2IA	45.55	N	34.8 to 44.8	10.75 to 0.75	MW	3/12/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HMW-3IA	55.02	N	34.8 to 44.8	20.22 to 10.22	MW	3/13/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HMW-6IA	58.65	N	37.5 to 47.5	21.15 to 11.15	MW	3/13/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HMW-9IA	55.26	N	36.7 to 46.7	18.56 to 8.56	MW	3/19/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HMW-20IA	53.83	N	41 to 51	12.83 to 2.83	MW	9/18/2020	-	**4.39**	-	-	1 U	1 U	-	1 U	1 U	-	-	-	-	-
INTERMEDIATE B ZONE																				
HMW-1IB	38.29	N	54 to 64.3	-15.71 to -26.01	MW	3/10/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HMW-2IB	47.41	N	52.8 to 62.8	-5.39 to -15.39	MW	3/12/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HMW-4IA	58.7	N	50 to 60	8.70 to -1.30	MW	3/10/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HMW-5IB	58.44	N	49.7 to 59.7	8.74 to -1.26	MW	3/17/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HMW-6IB	58.67	N	50 to 60	8.67 to -1.33	MW	3/13/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HMW-7IB	58.69	N	49.7 to 59.7	8.99 to -1.01	MW	3/12/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HMW-8IB	57.97	N	50.5 to 60.5	7.47 to -2.53	MW	3/11/2020	-	**9.67**	-	-	1 U	5 U	-	1 U	1 U	-	-	-	-	-
HMW-9IB	55.36	N	57 to 67	-1.64 to -11.64	MW	3/19/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HMW-11IB	39.7	N	44.87 to 54.87	-5.17 to -15.17	MW	3/16/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		FD					-	-	-	-	-	-	-	-	-	-	-	-	-	-
HMW-15IB	58.86	N	64 to 73	-5.14 to -14.14	MW	9/16/2020	-	**7.66**	-	-	1 U	**1.52**	-	1 U	1 U	-	-	-	-	-
HMW-16IB	57.02	N	55 to 65	2.02 to -7.98	MW	9/18/2020	-	**8.23**	-	-	1 U	1 U	-	1 U	1 U	-	-	-	-	-
DEEP ZONE																				
HMW-1D	38.07	N	80 to 90	-41.93 to -51.93	MW	3/9/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HMW-2D	47.34	N	80 to 90	-32.66 to -42.66	MW	3/12/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HMW-3D	56.56	N	80 to 90	-23.44 to -33.44	MW	3/13/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HMW-6D	58.58	N	79.9 to 89.7	-21.32 to -21.12	MW	3/16/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HMW-9D	55.32	N	79.7 to 89.7	-24.38 to -34.38	MW	3/17/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		FD					-	-	-	-	-	-	-	-	-	-	-	-	-	-
HMW-10D	48.16	N	79 to 89	-30.84 to -40.84	MW	3/16/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HMW-12D	33.52	N	82 to 92	-48.48 to -58.48	MW	9/10/2020	-	**1.54**	-	-	1 U	1 U	-	1 U	1 U	-	-	-	-	-
HMW-13D	45.3	N	89.5 to 99.5	-44.2 to -54.2	MW	9/10/2020	-	**5.25**	-	-	1 U	1 U	-	1 U	1 U	-	-	-	-	-
HMW-14D	46.35	N	70 to 80	-23.65 to -33.65	MW	9/16/2020	-	**6.05**	-	-	1 U	1 U	-	1 U	1 U	-	-	-	-	-

TABLE 5-13
GROUNDWATER RESULTS FOR INORGANIC COMPOUNDS
SEATTLE DOT MERCER PARCELS SITE
SEATTLE, WASHINGTON

Boring/Well ID	Surface Elevation (ft)	Sample Type	Sample Depth (ft)	Sample Elevation (ft)	Grab or Monitoring Well?	Sample Date	Inorganic Compounds, Total													
							Antimony, Total	Arsenic, Total	Barium, Total	Beryllium, Total	Cadmium, Total	Chromium, Total	Copper, Total	Lead, Total	Mercury, Total	Nickel, Total	Selenium, Total	Silver, Total	Thallium, Total	Zinc, Total
							ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
						Analytical Method	-	E200.8 SW6020	E200.8	-	E200.8 SW6020	E200.8 SW6020	-	E200.8 SW6020	SW6020 SW7470A	-	E200.8	E200.8	-	-
SHALLOW ZONE																				
21417-MB9	39.05	N	15 to 25	24.05 to 14.05	G	5/11/2017	**0.694**	**2.88**	-	0.2 U	0.2 U	**6.59**	**23.7**	**123**	0.1 U	**7.56**	**1.06**	0.2 U	1 U	**49.2**
21417-MB10	38.08	N	20 to 30	18.08 to 8.08	G	5/11/2017	0.2 U	**13.5**	-	**0.264**	0.2 U	**27.7**	**17.2**	**24.1**	0.1 U	**11.2**	**1.92**	0.2 U	1 U	**20.8**
21417-MB11	39.04	N	15 to 25	24.04 to 14.04	G	5/11/2017	0.2 U	**6.34**	-	**0.248**	**0.353**	**9.77**	**13.2**	**19**	0.1 U	**14.3**	**1.02**	0.2 U	0.2 U	**44.2**
HMW-1S	36.01	N	20 to 30	16.01 to 6.01	MW	3/25/2019	-	**14**	**83**	-	4.4 U	11 U	-	**2.7**	0.5 U	-	5.6 U	11 U	-	-
						3/11/2020	-	**13.5**	-	-	1 U	50 U	-	1 U	1 U	-	-	-	-	-
HMW-2S	47.39	N	19.8 to 29.8	27.59 to 17.59	MW	3/12/2020	-	5 U	-	-	1 U	**7.48**	-	1 U	1 U	-	-	-	-	-
HMW-9S	55.39	N	25 to 35	30.39 to 20.39	MW	3/17/2020	-	5 U	-	-	1 U	1 U	-	1 U	1 U	-	-	-	-	-
HMW-10S	48.21	N	24.7 to 34.7	23.51 to 13.51	MW	3/16/2020	-	5 U	-	-	1 U	1 U	-	1 U	1 U	-	-	-	-	-
HMW-11S	41.47	N	25 to 35	16.47 to 6.47	MW	3/11/2020	-	**4.14**	-	-	1 U	**5.81**	-	**1.65**	1 U	-	-	-	-	-
HMW-17S	57.21	N	35 to 45	22.21 to 12.21	MW	9/17/2020	-	**1.57**	-	-	1 U	**5.45**	-	1 U	1 U	-	-	-	-	-
HMW-18S	57.61	N	35 to 45	22.61 to 12.61	MW	9/17/2020	-	**2.58**	-	-	1 U	1 U	-	1 U	1 U	-	-	-	-	-
HMW-19S	58.2	N	35 to 45	23.20 to 13.20	MW	9/17/2020	-	**1.87**	-	-	1 U	**1.73**	-	1 U	1 U	-	-	-	-	-
HMW-20S	53.81	N	25 to 35	28.81 to 18.81	MW	9/18/2020	-	**2.04**	-	-	1 U	**4.99**	-	1 U	1 U	-	-	-	-	-
MBB-1	55.02	N	32 to 37	23.02 to 18.02	G	3/3/2020	-	**1.02**	-	-	1 U	**4.06**	-	1 U	1 U	-	-	-	-	-
MBB-2	55.45	N	32 to 37	23.45 to 18.45	G	3/3/2020	-	1 U	-	-	1 U	**1.65**	-	1 U	1 U	-	-	-	-	-
MBB-3	54.84	N	32 to 37	22.84 to 17.84	G	3/4/2020	-	1 U	-	-	1 U	1 U	-	1 U	1 U	-	-	-	-	-
MBB-4	54.61	N	32 to 37	22.61 to 17.61	G	3/5/2020	-	**2.23**	-	-	1 U	1 U	-	1 U	1 U	-	-	-	-	-
MBB-5	50.53	N	32 to 37	18.53 to 13.53	G	3/5/2020	-	**4.15**	-	-	1 U	**4.55**	-	1 U	1 U	-	-	-	-	-
MBB-6	50.33	N	25 to 30	25.33 to 20.33	G	3/5/2020	-	**3.11**	-	-	1 U	**3.35**	-	1 U	1 U	-	-	-	-	-
MBB-7	49.41	N	27 to 32	22.41 to 17.41	G	3/4/2020	-	**1.09**	-	-	1 U	**12.4**	-	1 U	1 U	-	-	-	-	-
MBB-8	49.66	N	27 to 32	22.66 to 17.66	G	2/27/2020	-	**10.5**	-	-	1 U	**192**	-	**7.82**	1 U	-	-	-	-	-
MBB-9	47.55	N	27 to 32	20.55 to 15.55	G	2/28/2020	-	**3.59**	-	-	1 U	**12**	-	**1.27**	1 U	-	-	-	-	-
MBB-10	49.66	N	35 to 40	14.66 to 9.66	G	2/27/2020	-	**3.32**	-	-	1 U	1 U	-	1 U	1 U	-	-	-	-	-
MBB-12	33.69	N	27 to 32	6.69 to 1.69	G	3/6/2020	-	**15.8**	-	-	1 U	**2.14**	-	1 U	1 U	-	-	-	-	-
MBB-13	35.98	N	30 to 35	5.98 to 0.98	G	3/9/2020	-	**38.1**	-	-	1 U	**1.33**	-	1 U	1 U	-	-	-	-	-
MBB-16	53.7	N	30 to 40	23.70 to 13.70	G	9/3/2020	-	**2.61**	-	-	1 U	**1.58**	-	1 U	1 U	-	-	-	-	-
MBB-24	54.1	N	30 to 40	24.10 to 14.10	G	9/10/2020	-	**7.53**	-	-	1 U	**3.22**	-	1 U	1 U	-	-	-	-	-
MBGW-1	39.95	N	20 to 30	19.95 to 9.95	G	3/6/2019	-	3.3 U	**65**	-	4.4 U	**12**	-	**1.7**	0.5 U	-	5.6 U	11 U	-	-
MBGW-2	46.11	N	20 to 30	26.11 to 16.11	G	3/4/2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MBGW-3	47.77	N	16 to 26	31.77 to 21.77	G	3/7/2019	-	**5.9**	**140**	-	4.4 U	**61**	-	**5.1**	0.5 U	-	5.6 U	11 U	-	-
MBGW-5	49.87	N	20 to 30	29.87 to 19.87	G	3/15/2019	-	**130**	**3200**	-	**5.8**	**1500**	-	**140**	**2.2**	-	**25**	11 U	-	-
MBGW-6	52.5	N	20 to 30	32.50 to 22.50	G	3/15/2019	-	**15**	**200**	-	4.4 U	**74**	-	**10**	0.5 U	-	5.6 U	11 U	-	-
MBGW-7	53.76	N	30 to 40	23.76 to 13.76	G	3/6/2019	-	**130**	**3500**	-	**7.5**	**1700**	-	**190**	**2.2**	-	**18**	11 U	-	-
MBGW-8	47.08	N	15 to 25	32.08 to 22.08	G	3/19/2019	-	**37**	**800**	-	4.4 U	**360**	-	**30**	0.5 U	-	5.6 U	11 U	-	-
MBGW-9	56.84	N	20 to 30	36.84 to 26.84	G	3/15/2019	-	**71**	**1900**	-	4.4 U	**930**	-	**89**	**0.88**	-	**7.9**	11 U	-	-
MBGW-10	55.25	N	20 to 30	35.25 to 25.25	G	3/15/2019	-	**180**	**4200**	-	**6.1**	**2300**	-	**200**	**2.3**	-	**20**	22 U	-	-
MBGW-11	57.55	N	35 to 45	22.55 to 12.55	G	3/15/2019	-	**14**	**240**	-	4.4 U	**86**	-	**8.9**	0.5 U	-	5.6 U	11 U	-	-
MBGW-13	54.72	N	20 to 30	34.72 to 24.72	G	3/15/2019	-	**110**	**1600**	-	4.4 U	**910**	-	**110**	**1.8**	-	**9.5**	11 U	-	-
MBGW-14	46.09	N	20 to 30	26.09 to 16.09	G	3/6/2019	-	**6.1**	**130**	-	4.4 U	**38**	-	**16**	0.5 U	-	5.6 U	11 U	-	-
MBGW-15	40.87	N	20 to 30	20.87 to 10.87	G	3/15/2019	-	**35**	**390**	-	4.4 U	**170**	-	**20**	0.5 U	-	5.6 U	11 U	-	-
MBGW-16	52.14	N	20 to 30	32.14 to 22.14	G	3/8/2019	-	**210**	**4600**	-	**5.3**	**2400**	-	**190**	**1.8**	-	**31**	11 U	-	-
MBPP-5	45.92	N	18 to 28	27.92 to 17.92	G	3/7/2019	-	**15**	**230**	-	4.4 U	**93**	-	**9.3**	0.5 U	-	5.6 U	11 U	-	-

TABLE 5-13
GROUNDWATER RESULTS FOR INORGANIC COMPOUNDS
SEATTLE DOT MERCER PARCELS SITE
SEATTLE, WASHINGTON

Boring/Well ID	Surface Elevation (ft)	Sample Type	Sample Depth (ft)	Sample Elevation (ft)	Grab or Monitoring Well?	Sample Date	Inorganic Compounds, Total													
							Antimony, Total	Arsenic, Total	Barium, Total	Beryllium, Total	Cadmium, Total	Chromium, Total	Copper, Total	Lead, Total	Mercury, Total	Nickel, Total	Selenium, Total	Silver, Total	Thallium, Total	Zinc, Total
							ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
						Analytical Method	-	E200.8 SW6020	E200.8	-	E200.8 SW6020	E200.8 SW6020	-	E200.8 SW6020	SW6020 SW7470A	-	E200.8	E200.8	-	-
INTERMEDIATE A ZONE																				
HMW-2IA	45.55	N	34.8 to 44.8	10.75 to 0.75	MW	3/12/2020	-	**5.1**	-	-	1 U	1 U	-	1 U	1 U	-	-	-	-	-
HMW-3IA	55.02	N	34.8 to 44.8	20.22 to 10.22	MW	3/13/2020	-	**4.57**	-	-	1 U	1 U	-	1 U	1 U	-	-	-	-	-
HMW-6IA	58.65	N	37.5 to 47.5	21.15 to 11.15	MW	3/13/2020	-	**7.84**	-	-	1 U	**9.31**	-	1 U	1 U	-	-	-	-	-
HMW-9IA	55.26	N	36.7 to 46.7	18.56 to 8.56	MW	3/19/2020	-	**3**	-	-	1 U	**3.63**	-	1 U	1 U	-	-	-	-	-
HMW-20IA	53.83	N	41 to 51	12.83 to 2.83	MW	9/18/2020	-	**4.4**	-	-	1 U	1 U	-	1 U	1 U	-	-	-	-	-
INTERMEDIATE B ZONE																				
HMW-1IB	38.29	N	54 to 64.3	-15.71 to -26.01	MW	3/10/2020	-	1 U	-	-	1 U	5 U	-	1 U	1 U	-	-	-	-	-
HMW-2IB	47.41	N	52.8 to 62.8	-5.39 to -15.39	MW	3/12/2020	-	**7.49**	-	-	1 U	**1.09**	-	1 U	1 U	-	-	-	-	-
HMW-4IA	58.7	N	50 to 60	8.70 to -1.30	MW	3/10/2020	-	**6.03**	-	-	1 U	5 U	-	1 U	1 U	-	-	-	-	-
HMW-5IB	58.44	N	49.7 to 59.7	8.74 to -1.26	MW	3/17/2020	-	5 U	-	-	1 U	1 U	-	1 U	1 U	-	-	-	-	-
HMW-6IB	58.67	N	50 to 60	8.67 to -1.33	MW	3/13/2020	-	**8.55**	-	-	1 U	1 U	-	1 U	1 U	-	-	-	-	-
HMW-7IB	58.69	N	49.7 to 59.7	8.99 to -1.01	MW	3/12/2020	-	**6.36**	-	-	1 U	1 U	-	1 U	1 U	-	-	-	-	-
HMW-8IB	57.97	N	50.5 to 60.5	7.47 to -2.53	MW	3/11/2020	-	**10.7**	-	-	1 U	**25.3**	-	1 U	1 U	-	-	-	-	-
HMW-9IB	55.36	N	57 to 67	-1.64 to -11.64	MW	3/19/2020	-	**2.07**	-	-	1 U	1 U	-	1 U	1 U	-	-	-	-	-
HMW-11IB	39.7	N	44.87 to 54.87	-5.17 to -15.17	MW	3/16/2020	-	5 U	-	-	1 U	1 U	-	1 U	1 U	-	-	-	-	-
		FD					-	5 U	-	-	1 U	1 U	-	1 U	1 U	-	-	-	-	-
HMW-15IB	58.86	N	64 to 73	-5.14 to -14.14	MW	9/16/2020	-	**7.78**	-	-	1 U	**40.9**	-	1 U	1 U	-	-	-	-	-
HMW-16IB	57.02	N	55 to 65	2.02 to -7.98	MW	9/18/2020	-	**8.21**	-	-	1 U	**8.12**	-	1 U	1 U	-	-	-	-	-
DEEP ZONE																				
HMW-1D	38.07	N	80 to 90	-41.93 to -51.93	MW	3/9/2020	-	**2.59**	-	-	1 U	1 U	-	1 U	1 U	-	-	-	-	-
HMW-2D	47.34	N	80 to 90	-32.66 to -42.66	MW	3/12/2020	-	**6.36**	-	-	1 U	1 U	-	1 U	1 U	-	-	-	-	-
HMW-3D	56.56	N	80 to 90	-23.44 to -33.44	MW	3/13/2020	-	**4.69**	-	-	1 U	**2.29**	-	1 U	1 U	-	-	-	-	-
HMW-6D	58.58	N	79.9 to 89.7	-21.32 to -21.12	MW	3/16/2020	-	**5.53**	-	-	1 U	**1.4**	-	1 U	1 U	-	-	-	-	-
HMW-9D	55.32	N	79.7 to 89.7	-24.38 to -34.38	MW	3/17/2020	-	**7.95**	-	-	1 U	1 U	-	1 U	1 U	-	-	-	-	-
		FD					-	**7.82**	-	-	1 U	1 U	-	1 U	1 U	-	-	-	-	-
HMW-10D	48.16	N	79 to 89	-30.84 to -40.84	MW	3/16/2020	-	**5.22**	-	-	1 U	1 U	-	1 U	1 U	-	-	-	-	-
HMW-12D	33.52	N	82 to 92	-48.48 to -58.48	MW	9/10/2020	-	**1.75**	-	-	1 U	1 U	-	1 U	1 U	-	-	-	-	-
HMW-13D	45.3	N	89.5 to 99.5	-44.2 to -54.2	MW	9/10/2020	-	**5.47**	-	-	1 U	**9.39**	-	1 U	1 U	-	-	-	-	-
HMW-14D	46.35	N	70 to 80	-23.65 to -33.65	MW	9/16/2020	-	**5.91**	-	-	1 U	**1.34**	-	1 U	1 U	-	-	-	-	-

TABLE 5-13
GROUNDWATER RESULTS FOR INORGANIC COMPOUNDS
SEATTLE DOT MERCER PARCELS SITE
SEATTLE, WASHINGTON

Boring/Well ID	Surface Elevation (ft)	Sample Type	Sample Depth (ft)	Sample Elevation (ft)	Grab or Monitoring Well?	Sample Date	Inorganic Compounds, Total													
							Antimony, Total	Arsenic, Total	Barium, Total	Beryllium, Total	Cadmium, Total	Chromium, Total	Copper, Total	Lead, Total	Mercury, Total	Nickel, Total	Selenium, Total	Silver, Total	Thallium, Total	Zinc, Total
							ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
						Analytical Method	-	E200.8 SW6020	E200.8	-	E200.8 SW6020	E200.8 SW6020	-	E200.8 SW6020	SW6020 SW7470A	-	E200.8	E200.8	-	-

Notes:

Bold indicates a detected concentration at or above the laboratory reporting limit.

Elevations relative to North American Vertical Datum of 1988 (NAVD88).

- = Data not available or applicable.

B = Compound was detected in the sample and the associated blank.

FD = Field duplicate.

ft = feet.

G = Grab groundwater sample.

J = Estimated value.

MW = Monitoring well sample.

N = Primary environmental sample.

U = Not detected at detection limit indicated.

ug/L = microgram per liter.

TABLE 7-1
BASIS OF SELECTED SCREENING LEVELS
SEATTLE DOT MERCER PARCELS SITE
SEATTLE, WASHINGTON

Exposure Pathway & Receptor from Conceptual Site Model	Screening Level Basis	Notes
Soil		
Contact with impacted soil by site user or resident.	With the exceptions noted, the Direct Contact values represent the lower of the non-cancer or cancer levels calculated using MTCA Equations 740-1 and 740-2, respectively, using MTCA default assumptions for residential exposure.	For PCBs, Direct Contact value is based on the federal Toxic Substances Control Act (TSCA) cleanup action level for PCBs in soil.
		The Direct Contact value used for gasoline-range organics (GRO) (1,500 mg/kg) is based on Ecology's 2017 model remedy guidance for sites with petroleum contaminated soil.
		In cases where the natural background for soil is higher than the Direct Contact level, the background level is used as the screening level. For this site, this situation applies to arsenic where the background level of 7.3 mg/kg is used as the screening level for this pathway.
		For total chromium, the Direct Contact value is based on protection from trivalent chromium since there are no historical operations on the Property that would suggest the previous use or release of hexavalent chromium.
Leaching from vadose zone soil to underlying groundwater where the groundwater is assumed to be a potential domestic drinking water source.	With the exceptions noted, the Protect Drinking Water via Vadose Zone values are developed using the fixed parameter three-phase partitioning model in accordance with WAC 173-340-747(4). Groundwater screening levels used in the model for protection of drinking water were derived using the procedure described below for ingestion of groundwater.	In cases where the natural background for soil is higher than the Protect Drinking Water via Vadose Zone level, the background level is used as the screening level. For this site, this situation applies to arsenic and cadmium where the respective background levels of 7.3 and 0.77 mg/kg are used as the screening levels for this pathway.
		For total chromium, the Protect Drinking Water via Vadose Zone level is based on protection from trivalent chromium since there are no historical operations on the Property that would suggest the previous use or release of hexavalent chromium.
		In cases where the PQL is higher than the Protect Drinking Water via Vadose Zone level, the PQL is used as the screening level. For this site, this situation applies to 1,1,2,2-tetrachloroethane, 1,2-dibromoethane, and trans-1,3-dichloropropene where the PQLs are used as the screening levels for this pathway.
		For total petroleum hydrocarbons, the Protect Drinking Water via Vadose Zone values are based on the MTCA Method A listed values.
Leaching from saturated zone soil to underlying groundwater where the groundwater is assumed to be a potential domestic drinking water source.	With the exceptions noted, the Protect Drinking Water via Saturated Zone values are developed using the fixed parameter three-phase partitioning model in accordance with WAC 173-340-747(4).	In cases where the natural background for soil is higher than the Protect Drinking Water via Saturated Zone level, the background level is used as the screening level. For this site, this situation applies to arsenic and cadmium where the respective background levels of 7.3 and 0.77 mg/kg are used as the screening levels for this pathway.
		For total chromium, the Protect Drinking Water via Saturated Zone level is based on protection from trivalent chromium since there are no historical operations on the Property that would suggest the previous use or release of hexavalent chromium.
		In cases where the PQL is higher than the Protect Drinking Water via Saturated Zone level, the PQL is used as the screening level. For this site, this situation applies to 1,1,2,2-tetrachloroethane, 1,1,2-trichloroethane, 1,1-dichloroethene, 1,2-dibromoethane, cis-1,3-dichloropropene, methylene chloride, trans-1,3-dichloropropene, vinyl chloride, and selenium where the PQLs are used as the screening levels for this pathway.
		For total petroleum hydrocarbons, the Protect Drinking Water via Saturated Zone values are based on the MTCA Method A listed values.

Exposure Pathway & Receptor from Conceptual Site Model	Screening Level Basis	Notes
Groundwater		
Ingestion of groundwater should site groundwater be developed as a future drinking water source.	With the exceptions noted, the derivation of the ground water screening levels for protection of potable water involved identifying MCLs and calculating levels per MTCA Equations 720-1 and 720-2 (WAC 173-340-720[4][b][iii][A] and -720[4][b][iii][B]) using the toxicity values in the CLARC database (Ecology 2019).	If the ratio of the minimum MCL to the Equation 720-1 value does not exceed 1, then the hazard quotient associated with the MCL does not exceed 1 and the MCL requires no adjustment. If the ratio exceeds 1, the MCL is adjusted to the Equation 720-1 value to achieve a hazard quotient of 1. If the ratio of the minimum MCL to the Equation 720-2 value does not exceed 10, then the cancer risk associated with the MCL does not exceed 1E-5 and the MCL requires no adjustment. If the ratio exceeds 10, the MCL is adjusted to 10 times the Equation 720-2 value to achieve a cancer risk of 1E-5. If an MCL is available but no oral toxicity values are available to evaluate it (e.g., lead), the MCL is used without adjustment. If no MCL is available but an oral toxicity value is available, the minimum of the values from Equations 720-1 and 720-2 is used. If a chemical has no toxicity values and no MCL, there is no screening level for potable water.
		In cases where the natural background for groundwater is higher than the Protect Drinking Water level, the background level is used as the screening level. For this Site, this situation applies to arsenic where the background level of 8 µg/L is used as the screening level for this pathway (see Appendix F for more information on how 8 µg/L was selected as the natural background level for arsenic).
		In cases where the PQL is higher than the Protect Drinking Water level, the PQL is used as the screening level. For this Site, this situation applies to cPAHs-TEQ, 1,1,2,2-tetrachloroethane, 1,2,3-trichloropropane, 1,2-dibromo-3-chloropropane, 1,2-dibromoethane, acrylonitrile, cis-1,3-dichloropropene, and trans-1,3-dichloropropene where the PQLs are used as the screening levels for this pathway.
		For total petroleum hydrocarbons, the Protect Drinking Water levels are based on the MTCA Method A listed values.
Volatilization of volatile constituents in groundwater to indoor air where they may be inhaled by building users or residents.	These screening levels are based on the groundwater values for protection of indoor air and were calculated per Ecology's (2018b and 2018c) guidance.	In cases where the natural background for groundwater is higher than the Protect Indoor Air level, the background level is used as the screening level.

Notes:

Screening levels provided by Ecology (November 17, 2020).

µg/L = micrograms per liter.

CLARC = Cleanup Levels and Risk Calculation.

GRO = Gasoline Range Organics.

MCL = Maximum Contaminant Level.

mg/kg = milligrams per kilogram.

MTCA = Model Toxics Control Act.

PCB = Polychlorinated Biphenyl.

PQL = Practical quantitation limit.

TSCA = Toxic Substances Control Act.

WAC = Washington Administrative Code.

TABLE 7-2a
IDENTIFICATION OF CONSTITUENTS OF POTENTIAL CONCERN IN VADOSE ZONE SOIL
SEATTLE DOT MERCER PARCELS SITE
SEATTLE, WASHINGTON

Constituent[a]	Frequency of Detection	Percent Detected	Range of Detected Concentrations	Average of All Samples	Direct Contact[b]	Protective of GW Vadose Zone[b]	Natural Background[b]	Median PQL[b]	Retained as a COPC[b]?	Frequency of Exceedance	Percent Exceeded	Exceedance Factor
Volatile Organic Compounds (mg/kg)												
1,1-Dichloroethane	1 / 307	0.3%	0.00317 - 0.00317	0.010	180	**0.041**	NA	0.001	no	0 / 307	0%	
1,1-Dichloroethene	1 / 307	0.3%	0.000568 - 0.000568	0.011	4000	**0.044**	NA	0.003	no	0 / 307	0%	
1,2,3-Trimethylbenzene	1 / 16	6%	0.00216 - 0.00216	0.0020	**800**	NA	NA	0.0015	no	0 / 16	0%	
1,2,4-Trimethylbenzene	18 / 301	6%	0.00325 - 15	0.11	**800**	NA	NA	0.001	no	0 / 301	0%	
1,3,5-Trimethylbenzene	8 / 176	5%	0.00151 - 5.7	0.060	**800**	NA	NA	0.001	no	0 / 176	0%	
2-Butanone (Methyl Ethyl Ketone)	3 / 73	4%	0.00585 - 0.0223	0.022	**48000**	NA	NA	0.005	no	0 / 73	0%	
2-Phenylbutane (sec-Butylbenzene)	2 / 176	1%	0.011 - 0.42	0.017	**8000**	NA	NA	0.001	no	0 / 176	0%	
Acetone	7 / 73	10%	0.0266 - 0.042	0.045	72000	**29**	NA	0.005	no	0 / 73	0%	
Benzene	5 / 301	2%	0.000566 - 0.011	0.0050	18	**0.027**	NA	0.0015	no	0 / 301	0%	
Carbon disulfide	4 / 16	25%	0.000247 - 0.0014	0.0048	8000	**5**	NA	0.001	no	0 / 16	0%	
cis-1,2-Dichloroethene	1 / 307	0.3%	0.00142 - 0.00142	0.010	160	**0.078**	NA	0.0015	no	0 / 307	0%	
Cymene (p-Isopropyltoluene)	4 / 83	5%	0.0059 - 0.59	0.012	NA	NA	NA	0.001	NSL	0 / 83	0%	
Dibromochloromethane	1 / 301	0.3%	0.0081 - 0.0081	0.0053418	12	**0.028**	NA	0.0015	no	0 / 301	0%	
Ethylbenzene	17 / 301	6%	0.00213 - 3.9	0.035	8000	**5.9**	NA	0.0015	no	0 / 301	0%	
Hexane	10 / 73	14%	0.00338 - 0.00978	0.014	4800	**69**	NA	NA	no	0 / 73	0%	
Isopropylbenzene (Cumene)	6 / 176	3%	0.0062 - 0.97	0.025	**8000**	NA	NA	0.001	no	0 / 176	0%	
Isopropyltoluene	2 / 93	2%	0.103 - 0.97	0.036	NA	NA	NA	NA	NSL	0 / 93	0%	
m,p-Xylenes	8 / 192	4%	0.011 - 2.5	0.024	NA	NA	NA	NA	NSL	0 / 192	0%	
Methylene chloride	4 / 307	1%	0.00875 - 0.0129	0.0179567	94	**0.021**	NA	0.0035	no	0 / 307	0%	
Naphthalene	7 / 176	4%	0.00452 - 1.9	0.028	1600	**4.5**	NA	0.005	no	0 / 176	0%	
n-Butylbenzene	3 / 119	3%	0.055 - 2.2	0.041	**4000**	NA	NA	0.001	no	0 / 119	0%	
n-Propylbenzene	7 / 176	4%	0.0077 - 3	0.041	**8000**	NA	NA	0.001	no	0 / 176	0%	
o-Xylene	7 / 192	4%	0.0072 - 0.5	0.0077872	NA	NA	NA	NA	NSL	0 / 192	0%	
tert-Butylbenzene	1 / 176	0.6%	0.018 - 0.018	0.015	**8000**	NA	NA	0.001	no	0 / 176	0%	
Tetrachloroethene	5 / 307	2%	0.000561 - 0.00305	0.016	480	**0.05**	NA	0.0015	no	0 / 307	0%	
Toluene	15 / 301	5%	0.00457 - 0.14	0.011	6400	**4.5**	NA	0.0015	no	0 / 301	0%	
Trichlorofluoromethane (CFC-11)	8 / 301	3%	0.00179 - 0.00358	0.026	**24000**	NA	NA	0.002	no	0 / 301	0%	
Xylene (total)	12 / 301	4%	0.00846 - 7	0.052	16000	**14**	NA	0.005	no	0 / 301	0%	
Semi-Volatile Organic Compounds (mg/kg)												
Acenaphthene	4 / 71	6%	0.05 - 1.06	0.030	4800	**99**	NA	0.005	no	0 / 71	0%	
Acenaphthylene	1 / 71	2%	0.37 - 0.37	0.019	NA	NA	NA	0.005	NSL	0 / 71	0%	
Anthracene	6 / 71	9%	0.05 - 0.13	0.019	24000	**2300**	NA	0.005	no	0 / 71	0%	
Benzo(a)anthracene	25 / 134	30%	0.011 - 1.5	0.047	NA	NA	NA	0.0034	NSL	0 / 134	0%	
Benzo(a)pyrene	18 / 134	20%	0.011 - 1.8	0.036	**0.19**	3.9	NA	0.005	YES	4 / 134	3%	9
Benzo(b)fluoranthene	27 / 134	32%	0.014 - 2.3	0.055	NA	NA	NA	0.0035	NSL	0 / 134	0%	
Benzo(k)fluoranthene	4 / 134	2%	0.12 - 0.77	0.021	NA	NA	NA	0.0035	NSL	0 / 134	0%	
Chrysene	29 / 134	35%	0.011 - 2.3	0.064	NA	NA	NA	0.005	NSL	0 / 134	0%	
Dibenz(a,h)anthracene	1 / 134	1%	0.22 - 0.22	0.014	NA	NA	NA	0.005	NSL	0 / 134	0%	
Fluoranthene	25 / 71	38%	0.016 - 4.68	0.15	3200	**630**	NA	0.005	no	0 / 71	0%	

Constituent[a]	Frequency of Detection	Percent Detected	Range of Detected Concentrations	Average of All Samples	Direct Contact[b]	Protective of GW Vadose Zone[b]	Natural Background[b]	Median PQL[b]	Retained as a COPC[b]?	Frequency of Exceedance	Percent Exceeded	Exceedance Factor
Indeno(1,2,3-cd)pyrene	4 / 134	2%	0.051 - 1.1	0.023	NA	NA	NA	0.0034	NSL	0 / 134	0%	
Naphthalene	5 / 71	8%	0.011 - 0.74	0.026	1600	**4.5**	NA	0.005	no	0 / 71	0%	
Phenanthrene	25 / 71	38%	0.015 - 1.97	0.093	NA	NA	NA	0.005	NSL	0 / 71	0%	
Pyrene	26 / 71	39%	0.01 - 4.41	0.16	2400	**650**	NA	0.005	no	0 / 71	0%	
cPAHs-TEQ	29 / 134	33%	0.0016 - 2.4	0.039	**0.19**	0.45	NA	0.0069	YES	5 / 134	4%	13
Total Petroleum Hydrocarbons (mg/kg)												
Diesel Range Organics	12 / 269	4%	29 - 350	24.4	NA	**2000**[d]	NA	15	no	0 / 269	0%	
Gasoline Range Organics	12 / 254	5%	7.3 - 1200	15.9	1500[c]	**30**[d]	NA	5	YES	8 / 254	3%	40
Total Petroleum Hydrocarbons - Heavy Oils	24 / 269	9%	74.3 - 1100	133	NA	**2000**[d]	NA	NA	no	0 / 269	0%	
Diesel Range + Oil Range Organics	28 / 269	10%	29 - 1100	136	NA	**2000**[d]	NA	NA	no	0 / 269	0%	
Inorganic Compounds (mg/kg)												
Arsenic	183 / 217	84%	1.03 - 25.6	4.84	0.67	0.34	**7.3**	0.1	YES	34 / 217	16%	4
Barium	34 / 34	100%	32 - 200	65.8	16000	**1600**	NA	0.1	no	0 / 34	0%	
Cadmium	2 / 217	1%	0.192 - 0.428	0.462	80	0.69	**0.77**	0.1	no	0 / 217	0%	
Chromium	217 / 217	100%	9.22 - 46	20.6	**120000**[e]	480000[e]	48	0.1	no	0 / 217	0%	
Copper	1 / 1	100%	26.3 - 26.3	26.3	3200	**280**	36	0.1	no	0 / 1	0%	
Lead	208 / 227	92%	1.02 - 591	10.6	**250**	3000	17	0.1	YES	2 / 227	0.90%	2
Mercury	1 / 217	0%	0.453 - 0.453	0.444	24	**2.1**	0.07	0.02	no	0 / 217	0%	
Nickel	1 / 1	100%	37.3 - 37.3	37.3	1600	**130**	38	0.1	no	0 / 1	0%	
Selenium	5 / 34	15%	1.26 - 1.76	5.07	400	**5.2**	NA	0.5	no	0 / 34	0%	
Zinc	1 / 1	100%	62.2 - 62.2	62.2	24000	**6000**	85	5	no	0 / 1	0%	
Polychlorinated Biphenyls (mg/kg)												
Aroclor-1242	1 / 57	2%	0.022 - 0.022	0.010	NA	NA	NA	NA	NSL	0 / 57	0%	
Aroclor-1254	2 / 57	4%	0.022 - 0.026	0.010	NA	NA	NA	NA	NSL	0 / 57	0%	
Total PCB Aroclors	3 / 57	5%	0.022 - 0.026	0.011	**1**	2.7	NA	NA	no	0 / 57	0%	

Notes:

a. Only constituents detected at or above the laboratory reporting limit are provided herein.

b. **Bold value** identified the selected screening level to determine if a constituent is retained as a COPC. This value is the lowest protective value unless adjusted for an elevated Natural Background or Median PQL.

c. The Direct Contact value for gasoline range organics is based on Ecology's 2017 model remedy guidance for sites with petroleum contaminated soil.

d. The Method A values for total petroleum hydrocarbons were used for for the soil-leaching-to-groundwater pathway as extractable petroleum hydrocarbon (EPH) and volatile petroleum hydrocarbon (VPH) data are unavailable.

e. Trivalent chromium values for direct contact and leaching are used to represent total chromium as there are no historical operations on the Property that would suggest the previous use or release of hexavalent chromium.

COPC = Constituent of Potential Concern.

cPAHs-TEQ = Carcinogenic polycyclic aromatic hydrocarbons toxic equivalency.

GW = Groundwater.

mg/kg = milligram per kilogram.

NA = Not applicable.

NSL = No screening level.

PCB = Polychlorinated biphenyl.

PQL = Practical Quantitation Limit.

TABLE 7-2b
IDENTIFICATION OF CONSTITUENTS OF POTENTIAL CONCERN IN SATURATED ZONE SOIL
SEATTLE DOT MERCER PARCELS SITE
SEATTLE, WASHINGTON

Constituent[a]	Frequency of Detection	Percent Detected	Range of Detected Concentrations	Average of All Samples	Direct Contact[b]	Protective of GW Saturated Zone[b]	Natural Background[b]	Median PQL[b]	Retained as a COPC[b]?	Frequency of Exceedance	Percent Exceeded	Exceedance Factor
Volatile Organic Compounds (mg/kg)												
1,2,4-Trimethylbenzene	1 / 80	1%	0.11 - 0.11	0.00989	**800**	NA	NA	0.001	no	0 / 80	0%	
1,3,5-Trimethylbenzene	1 / 76	1%	0.03 - 0.03	0.00922	**800**	NA	NA	0.001	no	0 / 76	0%	
2-Butanone (Methyl Ethyl Ketone)	4 / 52	8%	0.00707 - 0.0237	0.0134	**48000**	NA	NA	0.005	no	0 / 52	0%	
Acetone	13 / 52	25%	0.0118 - 0.105	0.0299	72000	**2.1**	NA	0.005	no	0 / 52	0%	
Benzene	1 / 80	1%	0.000517 - 0.000517	0.00350	18	**0.0017**	NA	0.0015	no	0 / 80	0%	
Carbon disulfide	8 / 45	18%	0.000256 - 0.000436	0.00455	8000	**0.27**	NA	0.001	no	0 / 45	0%	
Chloroform (Trichloromethane)	1 / 80	1%	0.000914 - 0.000914	0.00865	32	**0.0048**	NA	0.0015	no	0 / 80	0%	
cis-1,2-Dichloroethene	22 / 97	23%	0.000314 - 0.26	0.0164	160	**0.0052**	NA	0.0015	YES	4 / 97	4%	50
Cymene (p-Isopropyltoluene)	1 / 54	2%	0.006 - 0.006	0.00235	NA	NA	NA	0.001	NSL	0 / 54	0%	
Ethylbenzene	1 / 80	1%	0.013 - 0.013	0.00829	8000	**0.34**	NA	0.0015	no	0 / 80	0%	
Hexane	21 / 52	40%	0.000376 - 0.00718	0.00570	4800	**1.8**	NA	NA	no	0 / 52	0%	
m,p-Xylenes	1 / 13	8%	0.027 - 0.027	0.00717	NA	NA	NA	NA	NSL	0 / 13	0%	
Methylene chloride	7 / 97	7%	0.00885 - 0.035	0.0516	94	0.0015	NA	**0.0035**	YES	7 / 97	7%	10
Naphthalene	1 / 76	1%	0.036 - 0.036	0.0116	1600	**0.24**	NA	0.005	no	0 / 76	0%	
n-Propylbenzene	1 / 76	1%	0.0099 - 0.0099	0.00896	**8000**	NA	NA	0.001	no	0 / 76	0%	
o-Xylene	1 / 13	8%	0.017 - 0.017	0.00448	NA	NA	NA	NA	NSL	0 / 13	0%	
Tetrachloroethene	22 / 97	23%	0.000585 - 8.8	0.187	480	**0.0028**	NA	0.0015	YES	13 / 97	13%	3143
Toluene	24 / 80	30%	0.00342 - 0.0174	0.0105	6400	**0.27**	NA	0.0015	no	0 / 80	0%	
Trichloroethene	14 / 97	14%	0.000486 - 0.47	0.0202	12	**0.0015**	NA	0.0015	YES	7 / 97	7%	313
Trichlorofluoromethane (CFC-11)	12 / 80	15%	0.00156 - 0.00346	0.0122	**24000**	NA	NA	0.002	no	0 / 80	0%	
Vinyl chloride	10 / 97	10%	0.000344 - 0.0615	0.0119	0.67	0.000089	NA	**0.0015**	YES	6 / 97	6%	41
Xylene (total)	1 / 80	1%	0.044 - 0.044	0.0100	16000	**0.83**	NA	0.005	no	0 / 80	0%	
Total Petroleum Hydrocarbons (mg/kg)												
Gasoline Range Organics	1 / 26	4%	26 - 26	3.4	1500[c]	**30**[d]	NA	5	no	0 / 26	0%	
Inorganic Compounds (mg/kg)												
Arsenic	11 / 16	69%	1.03 - 7.75	2.71	0.67	0.017	**7.3**	0.1	YES	1 / 16	6%	1
Barium	5 / 5	100%	31.8 - 46	40.2	16000	**83**	NA	0.1	no	0 / 5	0%	
Chromium	16 / 16	100%	10.8 - 43.2	25.7	120000[e]	**24000**[e]	48	0.1	no	0 / 16	0%	
Lead	13 / 16	81%	1.31 - 6.75	2.37	250	**150**	17	0.1	no	0 / 16	0%	
Selenium	2 / 5	40%	0.988 - 0.99	3.80	400	0.26	NA	**0.5**	YES	2 / 5	40%	2

Notes:

a. Only constituents detected at or above the laboratory reporting limit are provided herein.

b. **Bold value** identified the selected screening level to determine if a constituent is retained as a COPC. This value is the lowest protective value unless adjusted for an elevated Natural Background or Median PQL.

c. The Direct Contact value for gasoline range organics is based on Ecology's 2017 model remedy guidance for sites with petroleum contaminated soil.

d. The Method A values for total petroleum hydrocarbons were used for the soil-leaching-to-groundwater pathway as extractable petroleum hydrocarbon (EPH) and volatile petroleum hydrocarbon (VPH) data are unavailable.

e. Trivalent chromium values for direct contact and leaching are used to represent total chromium as there are no historical operations on the Property that would suggest the previous use or release of hexavalent chromium.

COPC = Constituent of Potential Concern.

GW = Groundwater.

mg/kg = milligram per kilogram.

NA = Not applicable.

NSL = No screening level.

PQL = Practical Quantitation Limit.

TABLE 7-2c
IDENTIFICATION OF CONSTITUENTS OF POTENTIAL CONCERN IN GROUNDWATER
SEATTLE DOT MERCER PARCELS SITE
SEATTLE, WASHINGTON

Constituent[a]	Frequency of Detection	Percent Detected	Range of Detected Concentrations	Average of All Samples	Protective of Drinking Water[b]	Protective of Indoor Air[b]	Natural Background[b]	Median PQL[b]	Retained as a COPC[b]?	Frequency of Exceedance	Percent Exceeded	Exceedance Factor
Volatile Organic Compounds (ug/L)												
1,1,1-Trichloroethane	1 / 164	1%	0.2 - 0.2	0.809	**200**	5500	NA	0.5	no	0 / 164	0%	
1,1-Dichloroethene	28 / 165	17%	0.249 - 13	1.23	**7**	130	NA	0.5	YES	1 / 165	1%	1.9
1,2,3-Trichlorobenzene	1 / 158	1%	0.165 - 0.165	0.857	NA	NA	NA	1.5	NSL	0 / 158	0%	
1,2,3-Trimethylbenzene	1 / 75	1%	0.139 - 0.139	1.18	**80**	NA	NA	1	no	0 / 75	0%	
1,2,4-Trimethylbenzene	9 / 158	6%	0.225 - 37	1.23	**80**	240	NA	1	no	0 / 158	0%	
1,2-Dichloroethane	1 / 129	1%	7.1 - 7.1	1.10	4.8	**4.2**	NA	0.5	YES	1 / 129	1%	1.7
1,3,5-Trimethylbenzene	2 / 122	2%	0.141 - 14	1.19	**80**	NA	NA	1	no	0 / 122	0%	
2,2-Dichloropropane	3 / 158	2%	0.161 - 0.161	0.831	NA	NA	NA	0.5	NSL	0 / 158	0%	
2-Butanone (Methyl Ethyl Ketone)	1 / 93	1%	25 - 25	13.4	**4800**	1700000	NA	5	no	0 / 93	0%	
2-Phenylbutane (sec-Butylbenzene)	2 / 123	2%	0.159 - 2	1.08	**800**	NA	NA	1	no	0 / 123	0%	
Acetone	37 / 94	39%	1.06 - 1130	46.5	**7200**	NA	NA	5	no	0 / 94	0%	
Benzene	13 / 160	8%	0.108 - 34	1.11	5	**2.4**	NA	0.5	YES	3 / 160	2%	14.2
Carbon disulfide	14 / 76	18%	0.142 - 6.02	1.33	800	**400**	NA	0.5	no	0 / 76	0%	
Chloroethane	5 / 165	3%	0.369 - 2.01	2.80	NA	**19000**	NA	0.5	no	0 / 165	0%	
Chloroform (Trichloromethane)	9 / 159	6%	0.23 - 0.87	0.829	14	**1.2**	NA	0.5	no	0 / 159	0%	
Chloromethane (Methyl Chloride)	1 / 159	1%	0.161 - 0.161	3.37	NA	**150**	NA	0.5	no	0 / 159	0%	
cis-1,2-Dichloroethene	109 / 186	59%	0.2 - 9100	215	**16**	NA	NA	0.5	YES	54 / 186	29%	569
Cymene (p-Isopropyltoluene)	2 / 96	2%	1.46 - 3.8	1.28	NA	NA	NA	1	NSL	0 / 96	0%	
Diisopropyl ether (DIPE)	3 / 76	4%	0.105 - 0.105	1.10	NA	NA	NA	NA	NSL	0 / 76	0%	
Ethylbenzene	7 / 160	4%	0.2 - 24	1.14	**700**	2800	NA	0.5	no	0 / 160	0%	
Hexane	1 / 90	1%	0.371 - 0.371	9.54	480	**4.4**	NA	NA	no	0 / 90	0%	
Isopropylbenzene (Cumene)	2 / 122	2%	0.134 - 6	1.12	800	**720**	NA	1	no	0 / 122	0%	
m,p-Xylenes	5 / 58	9%	0.4 - 27	2.00	NA	NA	NA	NA	NSL	0 / 58	0%	
Methylene chloride	1 / 164	1%	76 - 76	4.74	**5**	1200	NA	1	YES	1 / 164	1%	15.2
Naphthalene	6 / 122	5%	1.01 - 6.9	3.91	160	**8.9**	NA	0.05	no	0 / 122	0%	
n-Butylbenzene	1 / 105	1%	0.162 - 0.162	0.935	**400**	NA	NA	1	no	0 / 105	0%	
n-Propylbenzene	1 / 122	1%	6.9 - 6.9	1.17	**800**	NA	NA	1	no	0 / 122	0%	
o-Xylene	4 / 58	7%	0.2 - 19	1.17	NA	NA	NA	NA	NSL	0 / 58	0%	
tert-Butylbenzene	1 / 123	1%	0.3 - 0.3	1.03	**800**	NA	NA	1	no	0 / 123	0%	
Tetrachloroethene	93 / 186	50%	0.21 - 8400	78.4	**5**	24	NA	0.5	YES	53 / 186	28%	1680
Toluene	20 / 160	13%	0.22 - 49	1.53	**640**	15000	NA	0.5	no	0 / 160	0%	
trans-1,2-Dichloroethene	33 / 186	18%	0.158 - 13	1.19	**100**	NA	NA	0.5	no	0 / 186	0%	
Trichloroethene	89 / 186	48%	0.163 - 1200	28.0	4	**1.4**	NA	0.5	YES	67 / 186	36%	857
Vinyl chloride	69 / 186	37%	0.211 - 7400	223	**0.29**	0.35	NA	0.2	YES	63 / 186	34%	25517
Xylene (total)	7 / 160	4%	0.562 - 41	2.68	1600	**330**	NA	0.5	no	0 / 160	0%	

Constituent[a]	Frequency of Detection	Percent Detected	Range of Detected Concentrations	Average of All Samples	Protective of Drinking Water[b]	Protective of Indoor Air[b]	Natural Background[b]	Median PQL[b]	Retained as a COPC[b]?	Frequency of Exceedance	Percent Exceeded	Exceedance Factor
Semi-Volatile Organic Compounds (ug/L)												
1-Methylnaphthalene	1 / 13	8%	1.6 - 1.6	0.31	**1.5**	NA	NA	0.05	YES	1 / 13	8%	1.1
2-Methylnaphthalene	1 / 13	8%	1.6 - 1.6	0.31	**32**	NA	NA	0.05	no	0 / 13	0%	
Acenaphthene	1 / 25	4%	0.25 - 0.25	0.029	**960**	NA	NA	0.05	no	0 / 25	0%	
Fluorene	1 / 25	4%	0.098 - 0.098	0.023	**640**	NA	NA	0.05	no	0 / 25	0%	
Naphthalene	2 / 25	8%	2.2 - 6	0.51	160	**8.9**	NA	0.05	no	0 / 25	0%	
Phenanthrene	1 / 25	4%	0.18 - 0.18	0.026	NA	NA	NA	0.05	NSL	0 / 25	0%	
Total Petroleum Hydrocarbons (ug/L)												
Diesel Range Organics	27 / 84	32%	56 - 650	102	**500**[c]	NA	NA	110	YES	2 / 84	2%	1.3
Gasoline Range Organics	20 / 115	17%	31.6 - 1600	82.6	**800**[c]	NA	NA	250	YES	1 / 115	1%	2
Total Petroleum Hydrocarbons - Heavy Oils	5 / 84	6%	146 - 970	182	**500**[c]	NA	NA	NA	YES	1 / 84	1%	1.9
Diesel Range + Oil Range Organics	30 / 84	36%	56 - 970	202	**500**[c]	NA	NA	NA	YES	5 / 84	6%	1.9
Inorganic Compounds (ug/L)												
Antimony, Total	1 / 3	33%	0.694 - 0.694	0.298	**6**	NA	NA	0.2	no	0 / 3	0%	
Arsenic, Total[d]	30 / 37	81%	1.57 - 14	5.2	0.58	NA	**8**	0.5	YES	5 / 37	14%	1.8
Barium, Total	15 / 15	100%	65 - 4600	1419	**2000**	NA	NA	0.05	YES	4 / 15	27%	2.3
Beryllium, Total	2 / 3	67%	0.248 - 0.264	0.204	**4**	NA	NA	0.06	no	0 / 3	0%	
Cadmium, Total	5 / 68	7%	0.353 - 7.5	1.09	**5**	NA	NA	0.06	YES	4 / 68	6%	1.5
Chromium, Total	43 / 68	63%	1.09 - 2400	163	**100**	NA	NA	0.2	YES	9 / 68	13%	24
Copper, Total	3 / 3	100%	13.2 - 23.7	18.0	**640**	NA	NA	0.1	no	0 / 3	0%	
Lead, Total	21 / 68	31%	1.27 - 200	18.0	**15**	NA	NA	0.06	YES	12 / 68	18%	13.3
Mercury, Total	6 / 68	9%	0.88 - 2.3	0.567	2	**0.83**	NA	0.15	YES	6 / 68	9%	2.8
Nickel, Total	3 / 3	100%	7.56 - 14.3	11.0	**100**	NA	NA	0.15	no	0 / 3	0%	
Selenium, Total	9 / 18	50%	1.02 - 31	7.81	**50**	NA	NA	1	no	0 / 18	0%	
Zinc, Total	3 / 3	100%	20.8 - 49.2	38.1	**4800**	NA	NA	5	no	0 / 3	0%	
Antimony, Dissolved	3 / 3	100%	0.206 - 0.646	0.355	**6**	NA	NA	0.2	no	0 / 3	0%	
Arsenic, Dissolved[e]	23 / 40	58%	1.32 - 41.2	4.36	0.58	NA	**8**	0.5	YES	5 / 40	13%	5.2
Barium, Dissolved	9 / 15	60%	25 - 95	29.1	**2000**	NA	NA	0.05	no	0 / 15	0%	
Chromium, Dissolved	5 / 40	13%	0.852 - 4.26	3.07	**100**	NA	NA	0.2	no	0 / 40	0%	
Copper, Dissolved	2 / 3	67%	0.733 - 1.01	0.664	**640**	NA	NA	0.1	no	0 / 3	0%	
Nickel, Dissolved	3 / 3	100%	3.11 - 5.12	3.98	**100**	NA	NA	0.15	no	0 / 3	0%	
Zinc, Dissolved	3 / 3	100%	1.56 - 4.48	2.65	**4800**	NA	NA	5	no	0 / 3	0%	

Notes:

a. Only constituents detected at or above the laboratory reporting limit are provided herein.

b. **Bold value** identified the selected screening level to determine if a constituent is retained as a COPC. This value is the lowest protective value unless adjusted for an elevated Natural Background or Median PQL.

c. The Method A values for total petroleum hydrocarbons were used for the protect drinking water pathway as extractable petroleum hydrocarbon (EPH) and volatile petroleum hydrocarbon (VPH) data are unavailable.

d. Total Arsenic statistics are based on monitoring well results. Grab samples are omitted from the evaluation of Total Arsenic.

e. See Appendix F for further statistical evaluation.

COPC = Constituent of Potential Concern.

NA = Not applicable.

NSL = No screening level.

PQL = Practical Quantitation Limit.

ug/L = microgram per liter.

TABLE 7-3b
VADOSE ZONE SOIL RESULTS COMPARED TO SCREENING LEVELS
FOR SEMI-VOLATILE ORGANIC COMPOUNDS
SEATTLE DOT MERCER PARCELS SITE
SEATTLE, WASHINGTON

Boring/ Well ID	Sample Date	Sample Type	Surface Elevation (ft)	Sample Depth (ft)	Sample Elevation (ft)	Carcinogenic Semi-Volatile Organic Compounds							
						Benzo(a) anthracene	Benzo(a) pyrene	Benzo(b) fluoranthene	Benzo(k) fluoranthene	Chrysene	Dibenz(a,h) anthracene	Indeno(1,2,3-cd)pyrene	cPAHs-TEQ
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Direct Contact[a]						NA	**0.19**	NA	NA	NA	NA	NA	**0.19**
Protective of Groundwater Vadose Zone[a]						NA	3.9	NA	NA	NA	NA	NA	0.45
Natural Background[a]						NA	NA	NA	NA	NA	NA	NA	NA
Median PQL[a]						0.0034	0.005	0.0035	0.0035	0.005	0.005	0.0034	0.0069
21417-MB2	5/12/2017	N	54.72	1	53.72	0.0426 U	0.0426 U	0.0426 U	0.0426 U	0.0426 U	0.0426 U	0.0426 U	0.0322 U
21417-MB3	5/12/2017	N	58.63	1	57.63	**0.0393**	**0.0399**	**0.0505**	0.0382 U	**0.0462**	0.0382 U	0.0382 U	**0.0551**
HMW-4IA	3/7/2019	N	58.70	7.5 - 8.7	51.20 to 50.00	**1.5**	0.1 U	**1.17**	0.1 U	**2.3**	0.1 U	0.1 U	**0.36**
HMW-5IB	2/28/2020	N	58.44	5 - 6.5	53.44 to 51.94	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
				10 - 11.5	48.44 to 46.94	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
				15 - 16.5	43.44 to 41.94	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
				20 - 21.5	38.44 to 36.94	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
				25 - 26.5	33.44 to 31.94	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
HMW-6D	3/2/2020	N	58.58	5 - 6.5	53.58 to 52.08	**0.085**	**0.076**	**0.11**	0.05 U	**0.13**	0.05 U	0.05 U	**0.098**
				10 - 11.5	48.58 to 47.08	**0.083**	**0.064**	**0.088**	0.05 U	**0.11**	0.05 U	0.05 U	**0.083**
				15 - 16.5	43.58 to 42.08	**0.066**	0.05 U	**0.066**	0.05 U	**0.092**	0.05 U	0.05 U	**0.017**
				25 - 26.5	33.58 to 32.08	**0.071**	0.05 U	**0.08**	0.05 U	**0.1**	0.05 U	0.05 U	**0.019**
HMW-6IA	3/2/2020	N	58.65	5 - 6.5	53.65 to 52.15	**0.051**	0.05 U	**0.058**	0.05 U	**0.072**	0.05 U	0.05 U	**0.014**
				10 - 11.5	48.65 to 47.15	**0.082**	**0.06**	**0.086**	0.05 U	**0.1**	0.05 U	0.05 U	**0.079**
				15 - 16.5	43.65 to 42.15	**0.089**	**0.065**	**0.08**	0.05 U	**0.12**	0.05 U	0.05 U	**0.084**
				20 - 21.5	38.65 to 37.15	0.05 U	0.05 U	0.05 U	0.05 U	**0.065**	0.05 U	0.05 U	**0.0036**
HMW-6IB	3/3/2020	N	58.67	5 - 6.5	53.67 to 52.17	**0.068**	0.05 U	**0.06**	0.05 U	**0.087**	0.05 U	0.05 U	**0.016**
				10 - 11.5	48.67 to 47.17	**0.068**	**0.051**	**0.068**	0.05 U	**0.088**	0.05 U	0.05 U	**0.067**
				15 - 16.5	43.67 to 42.17	**0.084**	**0.057**	**0.069**	0.05 U	**0.1**	0.05 U	0.05 U	**0.075**
				20 - 21.5	38.67 to 37.17	0.05 U	0.05 U	**0.057**	0.05 U	**0.071**	0.05 U	0.05 U	**0.0092**
				25 - 26.5	33.67 to 32.17	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
HMW-7IB	2/28/2020	N	58.69	5 - 6.5	53.69 to 52.19	**0.085**	**0.068**	**0.099**	0.05 U	**0.13**	0.05 U	0.05 U	**0.089**
				10 - 11.5	48.69 to 47.19	**0.06**	0.05 U	**0.072**	0.05 U	**0.088**	0.05 U	0.05 U	**0.017**
				15 - 16.5	43.69 to 42.19	**0.76**	**0.29**	**0.59**	**0.17**	**0.75**	0.05 U	**0.051**	**0.44**
				20 - 21.5	38.69 to 37.19	**0.052**	0.05 U	**0.074**	0.05 U	**0.085**	0.05 U	0.05 U	**0.016**
				25 - 26.5	33.69 to 32.19	**0.088**	**0.054**	**0.066**	0.05 U	**0.12**	0.05 U	0.05 U	**0.072**
HMW-8IB	3/2/2020	N	57.97	5 - 6.5	52.97 to 51.47	**0.086**	**0.066**	**0.094**	0.05 U	**0.12**	0.05 U	0.05 U	**0.086**
				10 - 11.5	47.97 to 46.47	**0.11**	**0.085**	**0.11**	0.05 U	**0.14**	0.05 U	0.05 U	**0.11**
				15 - 16.5	42.97 to 41.47	**0.093**	**0.063**	**0.09**	0.05 U	**0.12**	0.05 U	0.05 U	**0.084**
				20 - 21.5	37.97 to 36.47	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.003 U
				25 - 26.5	32.97 to 31.47	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U

TABLE 7-3b
VADOSE ZONE SOIL RESULTS COMPARED TO SCREENING LEVELS
FOR SEMI-VOLATILE ORGANIC COMPOUNDS
SEATTLE DOT MERCER PARCELS SITE
SEATTLE, WASHINGTON

Boring/ Well ID	Sample Date	Sample Type	Surface Elevation (ft)	Sample Depth (ft)	Sample Elevation (ft)	Carcinogenic Semi-Volatile Organic Compounds							
						Benzo(a) anthracene	Benzo(a) pyrene	Benzo(b) fluoranthene	Benzo(k) fluoranthene	Chrysene	Dibenz(a,h) anthracene	Indeno(1,2,3-cd)pyrene	cPAHs-TEQ
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Direct Contact[a]						NA	**0.19**	NA	NA	NA	NA	NA	**0.19**
Protective of Groundwater Vadose Zone[a]						NA	3.9	NA	NA	NA	NA	NA	0.45
Natural Background[a]						NA	NA	NA	NA	NA	NA	NA	NA
Median PQL[a]						0.0034	0.005	0.0035	0.0035	0.005	0.005	0.0034	0.0069
HMW-17S	9/3/2020	N	57.21	5 - 6.25	52.21 to 50.96	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.0097 U
				10 - 11.25	47.21 to 45.96	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.0097 U
				15 - 16.33	42.21 to 40.88	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0019 U
				20 - 20.75	37.21 to 36.46	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0019 U
				25 - 26	32.21 to 31.21	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0019 U
HMW-18S	9/3/2020	N	57.61	5 - 5.8	52.61 to 51.81	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.0097 U
				10 - 11.5	47.61 to 46.11	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0019 U
				15 - 16.5	42.61 to 41.11	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0019 U
				20 - 20.9	37.61 to 36.71	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0019 U
				25 - 25.8	32.61 to 31.81	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0019 U
HMW-19S	9/8/2020	N	58.20	5 - 5.5	53.20 to 52.70	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00041 U
				10 - 10.75	48.20 to 47.45	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00041 U
				15 - 16.5	43.20 to 41.70	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00041 U
				20 - 21.5	38.20 to 36.70	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00041 U
HMW-20S	9/8/2020	N	53.81	5 - 5.5	48.81 to 48.31	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00041 U
				10 - 11.5	43.81 to 42.31	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00041 U
				15 - 16.5	38.81 to 37.31	**0.011**	0.01 U	0.01 U	0.01 U	**0.011**	0.01 U	0.01 U	**0.0016**
				20 - 21.25	33.81 to 32.56	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00041 U
				25 - 26.4	28.81 to 27.41	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00041 U
MBB-1	2/27/2020	N	55.02	5 - 6.5	50.02 to 48.52	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
				10 - 11.5	45.02 to 43.52	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
				15 - 16.5	40.02 to 38.52	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
				20 - 21.5	35.02 to 33.52	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
				25 - 26.5	30.02 to 28.52	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
MBB-2	2/27/2020	N	55.45	5 - 6.5	50.45 to 48.95	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
				10 - 11.5	45.45 to 43.95	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
				15 - 16.5	40.45 to 38.95	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
				20 - 21.5	35.45 to 33.95	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
		FD				0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
		N		25 - 26.5	30.45 to 28.95	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
MBB-3	2/27/2020	N	54.84	5 - 6.5	49.84 to 48.34	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
				10 - 11.5	44.84 to 43.34	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
				15 - 16.5	39.84 to 38.34	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
				20 - 21.5	34.84 to 33.34	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
				25 - 26.5	29.84 to 28.34	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U

TABLE 7-3b
VADOSE ZONE SOIL RESULTS COMPARED TO SCREENING LEVELS
FOR SEMI-VOLATILE ORGANIC COMPOUNDS
SEATTLE DOT MERCER PARCELS SITE
SEATTLE, WASHINGTON

Boring/ Well ID	Sample Date	Sample Type	Surface Elevation (ft)	Sample Depth (ft)	Sample Elevation (ft)	Carcinogenic Semi-Volatile Organic Compounds							
						Benzo(a) anthracene	Benzo(a) pyrene	Benzo(b) fluoranthene	Benzo(k) fluoranthene	Chrysene	Dibenz(a,h) anthracene	Indeno(1,2,3-cd)pyrene	cPAHs-TEQ
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Direct Contact[a]						NA	**0.19**	NA	NA	NA	NA	NA	**0.19**
Protective of Groundwater Vadose Zone[a]						NA	3.9	NA	NA	NA	NA	NA	0.45
Natural Background[a]						NA	NA	NA	NA	NA	NA	NA	NA
Median PQL[a]						0.0034	0.005	0.0035	0.0035	0.005	0.005	0.0034	0.0069
MBB-4	2/27/2020	N	54.61	5 - 6.5	49.61 to 48.11	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
				10 - 12.5	44.61 to 42.11	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
		FD				0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
		N		15 - 16.5	39.61 to 38.11	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
				20 - 23	34.61 to 31.61	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
				25 - 26.5	29.61 to 28.11	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
MBB-14	3/3/2020	N	47.15	5 - 6.5	42.15 to 40.65	0.05 U	0.05 U	0.05 U	0.05 U	**0.058**	0.05 U	0.05 U	0.0036 U
				10 - 11.5	37.15 to 35.65	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
				15 - 16.5	32.15 to 30.65	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
				20 - 21.5	27.15 to 25.65	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
				25 - 26.5	22.15 to 20.65	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
MBB-15	3/4/2020	N	37.73	5 - 6.5	32.73 to 31.23	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
				10 - 11.5	27.73 to 26.23	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
				15 - 16.5	22.73 to 21.23	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
				20 - 21.5	17.73 to 16.23	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
				25 - 26.5	12.73 to 11.23	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
MBB-16	9/2/2020	N	53.70	5 - 5.5	48.70 to 48.20	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.002 U
				10 - 11.5	43.70 to 42.20	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00041 U
				15 - 15.5	38.70 to 38.20	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00041 U
				20 - 20.9	33.70 to 32.80	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00041 U
MBB-17	9/1/2020	N	54.88	5 - 6	49.88 to 48.88	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.002 U
				10 - 10.75	44.88 to 44.13	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00041 U
				15 - 16	39.88 to 38.88	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.002 U
				25 - 25.9	29.88 to 28.98	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00041 U
MBB-18	9/1/2020	N	51.33	5 - 6.5	46.33 to 44.83	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.002 U
				10 - 10.9	41.33 to 40.43	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.002 U
				15 - 16.4	36.33 to 34.93	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00041 U
				20 - 20.75	31.33 to 30.58	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00041 U
MBB-19	9/1/2020	N	51.68	5 - 5.8	46.68 to 45.88	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.002 U
				10 - 11	41.68 to 40.68	0.05 U	0.05 U	**0.064**	0.05 U	**0.05**	0.05 U	0.05 U	**0.0087**
				15 - 15.4	36.68 to 36.28	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00041 U
				20 - 20.8	31.68 to 30.88	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00041 U

TABLE 7-3b
VADOSE ZONE SOIL RESULTS COMPARED TO SCREENING LEVELS
FOR SEMI-VOLATILE ORGANIC COMPOUNDS
SEATTLE DOT MERCER PARCELS SITE
SEATTLE, WASHINGTON

Boring/ Well ID	Sample Date	Sample Type	Surface Elevation (ft)	Sample Depth (ft)	Sample Elevation (ft)	Carcinogenic Semi-Volatile Organic Compounds							
						Benzo(a) anthracene	Benzo(a) pyrene	Benzo(b) fluoranthene	Benzo(k) fluoranthene	Chrysene	Dibenz(a,h) anthracene	Indeno(1,2,3-cd)pyrene	cPAHs-TEQ
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Direct Contact[a]						NA	**0.19**	NA	NA	NA	NA	NA	**0.19**
Protective of Groundwater Vadose Zone[a]						NA	3.9	NA	NA	NA	NA	NA	0.45
Natural Background[a]						NA	NA	NA	NA	NA	NA	NA	NA
Median PQL[a]						0.0034	0.005	0.0035	0.0035	0.005	0.005	0.0034	0.0069
MBB-20	9/2/2020	N	47.53	5 - 6.5	42.53 to 41.03	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.002 U
				10 - 11.5	37.53 to 36.03	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.002 U
				15 - 16.33	32.53 to 31.2	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00041 U
				20 - 20.5	27.53 to 27.03	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00041 U
MBB-21	9/2/2020	N	47.60	5 - 5.8	42.60 to 41.80	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00041 U
				10 - 11.5	37.60 to 36.10	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00041 U
				15 - 15.9	32.60 to 31.70	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00041 U
				20 - 20.9	27.60 to 26.70	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00041 U
MBB-22	9/21/2020	N	42.05	5 - 6	37.05 to 36.05	**0.2**	**0.33**	**0.33**	**0.13**	**0.31**	0.05 U	**0.24**	**0.42**
				15 - 16.25	27.05 to 25.8	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0019 U
				20 - 21.3	22.05 to 20.75	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0019 U
				25 - 26.3	17.05 to 15.75	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0019 U
MBB-23	9/21/2020	N	47.18	5 - 6.2	42.18 to 40.98	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.0097 U
				10 - 11.1	37.18 to 36.08	**1**	**1.8**	**2.3**	**0.77**	**1.7**	**0.22**	**1.1**	**2.4**
				15 - 16.25	32.18 to 30.93	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0019 U
				20 - 21.3	27.18 to 25.88	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0019 U
				25 - 26	22.18 to 21.18	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0019 U
MBB-24	9/9/2020	N	54.10	5 - 6.5	49.10 to 47.60	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00041 U
				10 - 11.4	44.10 to 42.70	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00041 U
				15 - 16.5	39.10 to 37.60	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00041 U
				20 - 21	34.10 to 33.10	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00041 U
				25 - 25.8	29.10 to 28.30	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00041 U
MBB-25	10/30/2020	N	58.63	5 - 5.5	53.63 to 53.13	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.002 U
				9.5 - 10.5	49.13 to 48.13	**0.091**	**0.07**	**0.091**	0.05 U	**0.095**	0.05 U	0.05 U	**0.09**
				14.5 - 15.4	44.13 to 43.23	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.002 U
				19.5 - 20.5	39.13 to 38.13	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00041 U
		FD				0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00041 U
		N		24.5 - 25.5	34.13 to 33.13	**0.25**	**0.24**	**0.28**	**0.12**	**0.28**	0.05 U	**0.13**	**0.32**
MBB-26	10/29/2020	N	58.79	5.25 - 5.5	53.54 to 53.29	0.01 U	**0.011**	**0.014**	0.01 U	0.01 U	0.01 U	0.01 U	**0.013**
				9.5 - 10.5	49.29 to 48.29	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0019 U
				14.5 - 15.5	44.29 to 43.29	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0019 U
				19.5 - 20.5	39.29 to 38.29	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0019 U
				24.5 - 25.5	34.29 to 33.29	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0019 U

TABLE 7-3b
VADOSE ZONE SOIL RESULTS COMPARED TO SCREENING LEVELS
FOR SEMI-VOLATILE ORGANIC COMPOUNDS
SEATTLE DOT MERCER PARCELS SITE
SEATTLE, WASHINGTON

Boring/ Well ID	Sample Date	Sample Type	Surface Elevation (ft)	Sample Depth (ft)	Sample Elevation (ft)	Carcinogenic Semi-Volatile Organic Compounds							
						Benzo(a) anthracene	Benzo(a) pyrene	Benzo(b) fluoranthene	Benzo(k) fluoranthene	Chrysene	Dibenz(a,h) anthracene	Indeno(1,2,3-cd)pyrene	cPAHs-TEQ
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
					Direct Contact[a]	NA	**0.19**	NA	NA	NA	NA	NA	**0.19**
					Protective of Groundwater Vadose Zone[a]	NA	3.9	NA	NA	NA	NA	NA	0.45
					Natural Background[a]	NA	NA	NA	NA	NA	NA	NA	NA
					Median PQL[a]	0.0034	0.005	0.0035	0.0035	0.005	0.005	0.0034	0.0069
MBGW-1	3/6/2019	N	39.95	23.5 - 25	16.45 to 14.95	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.0076 U
MBGW-2	3/4/2019	N	46.11	25 - 26.5	21.11 to 19.61	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.0076 U
MBGW-3	3/7/2019	N	47.77	12 - 13	35.77 to 34.77	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.0076 U

TABLE 7-3b
VADOSE ZONE SOIL RESULTS COMPARED TO SCREENING LEVELS
FOR SEMI-VOLATILE ORGANIC COMPOUNDS
SEATTLE DOT MERCER PARCELS SITE
SEATTLE, WASHINGTON

Boring/ Well ID	Sample Date	Sample Type	Surface Elevation (ft)	Sample Depth (ft)	Sample Elevation (ft)	Non-Carcinogenic Semi-Volatile Organic Compounds										
						1-Methyl naphthalene	2-Methyl naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(g,h,i) perylene	Fluoranthene	Fluorene	Naphthalene	Phenanthrene	Pyrene
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
					Direct Contact[a]	**34**	**320**	4800	NA	24000	NA	3200	3200	1600	NA	2400
					Protective of Groundwater Vadose Zone[a]	NA	NA	**99**	NA	**2300**	NA	**630**	**100**	**4.5**	NA	**650**
					Natural Background[a]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
					Median PQL[a]	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
21417-MB2	5/12/2017	N	54.72	1	53.72	0.0426 U	0.0426 U	0.0426 U	0.0426 U	0.0426 U	0.0426 U	0.0426 U	0.0426 U	0.0426 U	0.0426 U	0.0426 U
21417-MB3	5/12/2017	N	58.63	1	57.63	0.0382 U	0.0382 U	0.0382 U	0.0382 U	0.0382 U	0.0382 U	**0.0981**	0.0382 U	0.0382 U	**0.0455**	**0.0939**
HMW-4IA	3/7/2019	N	58.70	7.5 - 8.7	51.20 to 50.00	0.1 U	0.1 U	**1.06**	**0.37**	0.1 U	0.1 U	**4.68**	0.1 U	0.1 U	**1.97**	**4.41**
HMW-5IB	2/28/2020	N	58.44	5 - 6.5	53.44 to 51.94	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
				10 - 11.5	48.44 to 46.94	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
				15 - 16.5	43.44 to 41.94	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
				20 - 21.5	38.44 to 36.94	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
				25 - 26.5	33.44 to 31.94	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
HMW-6D	3/2/2020	N	58.58	5 - 6.5	53.58 to 52.08	-	-	0.05 U	0.05 U	0.05 U	0.05 U	**0.21**	0.05 U	0.05 U	**0.099**	**0.24**
				10 - 11.5	48.58 to 47.08	-	-	0.05 U	0.05 U	0.05 U	0.05 U	**0.24**	0.05 U	0.05 U	**0.3**	**0.27**
				15 - 16.5	43.58 to 42.08	-	-	0.05 U	0.05 U	0.05 U	0.05 U	**0.18**	0.05 U	0.05 U	**0.14**	**0.21**
				25 - 26.5	33.58 to 32.08	-	-	0.05 U	0.05 U	**0.077**	0.05 U	**0.29**	0.05 U	0.05 U	**0.23**	**0.29**
HMW-6IA	3/2/2020	N	58.65	5 - 6.5	53.65 to 52.15	-	-	0.05 U	0.05 U	0.05 U	0.05 U	**0.14**	0.05 U	0.05 U	**0.11**	**0.15**
				10 - 11.5	48.65 to 47.15	-	-	0.05 U	0.05 U	0.05 U	0.05 U	**0.2**	0.05 U	0.05 U	**0.23**	**0.22**
				15 - 16.5	43.65 to 42.15	-	-	0.05 U	0.05 U	0.05 U	0.05 U	**0.27**	0.05 U	0.05 U	**0.11**	**0.28**
				20 - 21.5	38.65 to 37.15	-	-	0.05 U	0.05 U	0.05 U	0.05 U	**0.14**	0.05 U	0.05 U	**0.11**	**0.14**
HMW-6IB	3/3/2020	N	58.67	5 - 6.5	53.67 to 52.17	-	-	0.05 U	0.05 U	0.05 U	0.05 U	**0.17**	0.05 U	0.05 U	**0.14**	**0.22 J**
				10 - 11.5	48.67 to 47.17	-	-	0.05 U	0.05 U	0.05 U	0.05 U	**0.2**	0.05 U	0.05 U	**0.21**	**0.22 J**
				15 - 16.5	43.67 to 42.17	-	-	0.05 U	0.05 U	0.05 U	0.05 U	**0.22**	0.05 U	0.05 U	**0.11**	**0.28 J**
				20 - 21.5	38.67 to 37.17	-	-	0.05 U	0.05 U	0.05 U	0.05 U	**0.12**	0.05 U	0.05 U	**0.095**	**0.15 J**
				25 - 26.5	33.67 to 32.17	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
HMW-7IB	2/28/2020	N	58.69	5 - 6.5	53.69 to 52.19	-	-	**0.055**	0.05 U	**0.05**	0.05 U	**0.26**	0.05 U	0.05 U	**0.31**	**0.3**
				10 - 11.5	48.69 to 47.19	-	-	0.05 U	0.05 U	0.05 U	0.05 U	**0.18**	0.05 U	0.05 U	**0.079**	**0.21**
				15 - 16.5	43.69 to 42.19	-	-	0.05 U	0.05 U	**0.057**	0.05 U	**1.3**	0.05 U	0.05 U	**0.12**	**1.4**
				20 - 21.5	38.69 to 37.19	-	-	0.05 U	0.05 U	0.05 U	0.05 U	**0.16**	0.05 U	0.05 U	**0.065**	**0.16**
				25 - 26.5	33.69 to 32.19	-	-	0.05 U	0.05 U	**0.13**	0.05 U	**0.26**	0.05 U	0.05 U	**0.18**	**0.24**
HMW-8IB	3/2/2020	N	57.97	5 - 6.5	52.97 to 51.47	-	-	0.05 U	0.05 U	0.05 U	0.05 U	**0.25**	0.05 U	0.05 U	**0.32**	**0.27**
				10 - 11.5	47.97 to 46.47	-	-	**0.05**	0.05 U	**0.061**	0.05 U	**0.29**	0.05 U	0.05 U	**0.4**	**0.37**
				15 - 16.5	42.97 to 41.47	-	-	**0.058**	0.05 U	**0.09**	0.05 U	**0.34**	0.05 U	0.05 U	**0.7**	**0.36**
				20 - 21.5	37.97 to 36.47	-	-	0.05 U	0.05 U	0.05 U	0.05 U	**0.056**	0.05 U	0.05 U	**0.055**	**0.074**
				25 - 26.5	32.97 to 31.47	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U

TABLE 7-3b
VADOSE ZONE SOIL RESULTS COMPARED TO SCREENING LEVELS
FOR SEMI-VOLATILE ORGANIC COMPOUNDS
SEATTLE DOT MERCER PARCELS SITE
SEATTLE, WASHINGTON

Boring/ Well ID	Sample Date	Sample Type	Surface Elevation (ft)	Sample Depth (ft)	Sample Elevation (ft)	Non-Carcinogenic Semi-Volatile Organic Compounds										
						1-Methyl naphthalene	2-Methyl naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(g,h,i) perylene	Fluoranthene	Fluorene	Naphthalene	Phenanthrene	Pyrene
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Direct Contact[a]						**34**	**320**	4800	NA	24000	NA	3200	3200	1600	NA	2400
Protective of Groundwater Vadose Zone[a]						NA	NA	**99**	NA	**2300**	NA	**630**	**100**	**4.5**	NA	**650**
Natural Background[a]						NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Median PQL[a]						0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
HMW-17S	9/3/2020	N	57.21	5 - 6.25	52.21 to 50.96	-	-	-	-	-	-	-	-	-	-	-
				10 - 11.25	47.21 to 45.96	-	-	-	-	-	-	-	-	-	-	-
				15 - 16.33	42.21 to 40.88	-	-	-	-	-	-	-	-	-	-	-
				20 - 20.75	37.21 to 36.46	-	-	-	-	-	-	-	-	-	-	-
				25 - 26	32.21 to 31.21	-	-	-	-	-	-	-	-	-	-	-
HMW-18S	9/3/2020	N	57.61	5 - 5.8	52.61 to 51.81	-	-	-	-	-	-	-	-	-	-	-
				10 - 11.5	47.61 to 46.11	-	-	-	-	-	-	-	-	-	-	-
				15 - 16.5	42.61 to 41.11	-	-	-	-	-	-	-	-	-	-	-
				20 - 20.9	37.61 to 36.71	-	-	-	-	-	-	-	-	-	-	-
				25 - 25.8	32.61 to 31.81	-	-	-	-	-	-	-	-	-	-	-
HMW-19S	9/8/2020	N	58.20	5 - 5.5	53.20 to 52.70	-	-	-	-	-	-	-	-	-	-	-
				10 - 10.75	48.20 to 47.45	-	-	-	-	-	-	-	-	-	-	-
				15 - 16.5	43.20 to 41.70	-	-	-	-	-	-	-	-	-	-	-
				20 - 21.5	38.20 to 36.70	-	-	-	-	-	-	-	-	-	-	-
HMW-20S	9/8/2020	N	53.81	5 - 5.5	48.81 to 48.31	-	-	-	-	-	-	-	-	-	-	-
				10 - 11.5	43.81 to 42.31	-	-	-	-	-	-	-	-	-	-	-
				15 - 16.5	38.81 to 37.31	-	-	-	-	-	-	-	-	-	-	-
				20 - 21.25	33.81 to 32.56	-	-	-	-	-	-	-	-	-	-	-
				25 - 26.4	28.81 to 27.41	-	-	-	-	-	-	-	-	-	-	-
MBB-1	2/27/2020	N	55.02	5 - 6.5	50.02 to 48.52	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
				10 - 11.5	45.02 to 43.52	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
				15 - 16.5	40.02 to 38.52	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
				20 - 21.5	35.02 to 33.52	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	**0.024**	0.01 U	0.01 U
				25 - 26.5	30.02 to 28.52	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
MBB-2	2/27/2020	N	55.45	5 - 6.5	50.45 to 48.95	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
				10 - 11.5	45.45 to 43.95	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
				15 - 16.5	40.45 to 38.95	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
				20 - 21.5	35.45 to 33.95	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
		FD				-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
		N		25 - 26.5	30.45 to 28.95	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
MBB-3	2/27/2020	N	54.84	5 - 6.5	49.84 to 48.34	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
				10 - 11.5	44.84 to 43.34	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
				15 - 16.5	39.84 to 38.34	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
				20 - 21.5	34.84 to 33.34	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
				25 - 26.5	29.84 to 28.34	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	**0.092**	0.01 U	0.01 U

TABLE 7-3b
VADOSE ZONE SOIL RESULTS COMPARED TO SCREENING LEVELS
FOR SEMI-VOLATILE ORGANIC COMPOUNDS
SEATTLE DOT MERCER PARCELS SITE
SEATTLE, WASHINGTON

Boring/ Well ID	Sample Date	Sample Type	Surface Elevation (ft)	Sample Depth (ft)	Sample Elevation (ft)	Non-Carcinogenic Semi-Volatile Organic Compounds										
						1-Methyl naphthalene	2-Methyl naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(g,h,i) perylene	Fluoranthene	Fluorene	Naphthalene	Phenanthrene	Pyrene
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Direct Contact[a]						**34**	**320**	4800	NA	24000	NA	3200	3200	1600	NA	2400
Protective of Groundwater Vadose Zone[a]						NA	NA	**99**	NA	**2300**	NA	**630**	**100**	**4.5**	NA	**650**
Natural Background[a]						NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Median PQL[a]						0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
MBB-4	2/27/2020	N	54.61	5 - 6.5	49.61 to 48.11	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
		FD		10 - 12.5	44.61 to 42.11	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	**0.011**	0.01 U	0.01 U
		N				-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
				15 - 16.5	39.61 to 38.11	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
				20 - 23	34.61 to 31.61	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	**0.74**	0.01 U	0.01 U
				25 - 26.5	29.61 to 28.11	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
MBB-14	3/3/2020	N	47.15	5 - 6.5	42.15 to 40.65	-	-	0.05 U	0.05 U	0.05 U	0.05 U	**0.11**	0.05 U	0.05 U	**0.09**	**0.12 J**
				10 - 11.5	37.15 to 35.65	-	-	0.01 U	0.01 U	0.01 U	0.01 U	**0.016**	0.01 U	**0.028**	**0.015**	**0.018**
				15 - 16.5	32.15 to 30.65	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
				20 - 21.5	27.15 to 25.65	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
				25 - 26.5	22.15 to 20.65	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	**0.01**
MBB-15	3/4/2020	N	37.73	5 - 6.5	32.73 to 31.23	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
				10 - 11.5	27.73 to 26.23	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
				15 - 16.5	22.73 to 21.23	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
				20 - 21.5	17.73 to 16.23	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
				25 - 26.5	12.73 to 11.23	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
MBB-16	9/2/2020	N	53.70	5 - 5.5	48.70 to 48.20	-	-	-	-	-	-	-	-	-	-	-
				10 - 11.5	43.70 to 42.20	-	-	-	-	-	-	-	-	-	-	-
				15 - 15.5	38.70 to 38.20	-	-	-	-	-	-	-	-	-	-	-
				20 - 20.9	33.70 to 32.80	-	-	-	-	-	-	-	-	-	-	-
MBB-17	9/1/2020	N	54.88	5 - 6	49.88 to 48.88	-	-	-	-	-	-	-	-	-	-	-
				10 - 10.75	44.88 to 44.13	-	-	-	-	-	-	-	-	-	-	-
				15 - 16	39.88 to 38.88	-	-	-	-	-	-	-	-	-	-	-
				25 - 25.9	29.88 to 28.98	-	-	-	-	-	-	-	-	-	-	-
MBB-18	9/1/2020	N	51.33	5 - 6.5	46.33 to 44.83	-	-	-	-	-	-	-	-	-	-	-
				10 - 10.9	41.33 to 40.43	-	-	-	-	-	-	-	-	-	-	-
				15 - 16.4	36.33 to 34.93	-	-	-	-	-	-	-	-	-	-	-
				20 - 20.75	31.33 to 30.58	-	-	-	-	-	-	-	-	-	-	-
MBB-19	9/1/2020	N	51.68	5 - 5.8	46.68 to 45.88	-	-	-	-	-	-	-	-	-	-	-
				10 - 11	41.68 to 40.68	-	-	-	-	-	-	-	-	-	-	-
				15 - 15.4	36.68 to 36.28	-	-	-	-	-	-	-	-	-	-	-
				20 - 20.8	31.68 to 30.88	-	-	-	-	-	-	-	-	-	-	-

TABLE 7-3b
VADOSE ZONE SOIL RESULTS COMPARED TO SCREENING LEVELS
FOR SEMI-VOLATILE ORGANIC COMPOUNDS
SEATTLE DOT MERCER PARCELS SITE
SEATTLE, WASHINGTON

Boring/ Well ID	Sample Date	Sample Type	Surface Elevation (ft)	Sample Depth (ft)	Sample Elevation (ft)	Non-Carcinogenic Semi-Volatile Organic Compounds										
						1-Methyl naphthalene	2-Methyl naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(g,h,i) perylene	Fluoranthene	Fluorene	Naphthalene	Phenanthrene	Pyrene
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
					Direct Contact[a]	**34**	**320**	4800	NA	24000	NA	3200	3200	1600	NA	2400
					Protective of Groundwater Vadose Zone[a]	NA	NA	**99**	NA	**2300**	NA	**630**	**100**	**4.5**	NA	**650**
					Natural Background[a]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
					Median PQL[a]	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
MBB-20	9/2/2020	N	47.53	5 - 6.5	42.53 to 41.03	-	-	-	-	-	-	-	-	-	-	-
				10 - 11.5	37.53 to 36.03	-	-	-	-	-	-	-	-	-	-	-
				15 - 16.33	32.53 to 31.2	-	-	-	-	-	-	-	-	-	-	-
				20 - 20.5	27.53 to 27.03	-	-	-	-	-	-	-	-	-	-	-
MBB-21	9/2/2020	N	47.60	5 - 5.8	42.60 to 41.80	-	-	-	-	-	-	-	-	-	-	-
				10 - 11.5	37.60 to 36.10	-	-	-	-	-	-	-	-	-	-	-
				15 - 15.9	32.60 to 31.70	-	-	-	-	-	-	-	-	-	-	-
				20 - 20.9	27.60 to 26.70	-	-	-	-	-	-	-	-	-	-	-
MBB-22	9/21/2020	N	42.05	5 - 6	37.05 to 36.05	-	-	-	-	-	-	-	-	-	-	-
				15 - 16.25	27.05 to 25.8	-	-	-	-	-	-	-	-	-	-	-
				20 - 21.3	22.05 to 20.75	-	-	-	-	-	-	-	-	-	-	-
				25 - 26.3	17.05 to 15.75	-	-	-	-	-	-	-	-	-	-	-
MBB-23	9/21/2020	N	47.18	5 - 6.2	42.18 to 40.98	-	-	-	-	-	-	-	-	-	-	-
				10 - 11.1	37.18 to 36.08	-	-	-	-	-	-	-	-	-	-	-
				15 - 16.25	32.18 to 30.93	-	-	-	-	-	-	-	-	-	-	-
				20 - 21.3	27.18 to 25.88	-	-	-	-	-	-	-	-	-	-	-
				25 - 26	22.18 to 21.18	-	-	-	-	-	-	-	-	-	-	-
MBB-24	9/9/2020	N	54.10	5 - 6.5	49.10 to 47.60	-	-	-	-	-	-	-	-	-	-	-
				10 - 11.4	44.10 to 42.70	-	-	-	-	-	-	-	-	-	-	-
				15 - 16.5	39.10 to 37.60	-	-	-	-	-	-	-	-	-	-	-
				20 - 21	34.10 to 33.10	-	-	-	-	-	-	-	-	-	-	-
				25 - 25.8	29.10 to 28.30	-	-	-	-	-	-	-	-	-	-	-
MBB-25	10/30/2020	N	58.63	5 - 5.5	53.63 to 53.13	-	-	-	-	-	-	-	-	-	-	-
				9.5 - 10.5	49.13 to 48.13	-	-	-	-	-	-	-	-	-	-	-
				14.5 - 15.4	44.13 to 43.23	-	-	-	-	-	-	-	-	-	-	-
				19.5 - 20.5	39.13 to 38.13	-	-	-	-	-	-	-	-	-	-	-
		FD				-	-	-	-	-	-	-	-	-	-	-
		N		24.5 - 25.5	34.13 to 33.13	-	-	-	-	-	-	-	-	-	-	-
MBB-26	10/29/2020	N	58.79	5.25 - 5.5	53.54 to 53.29	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
				9.5 - 10.5	49.29 to 48.29	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
				14.5 - 15.5	44.29 to 43.29	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
				19.5 - 20.5	39.29 to 38.29	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
				24.5 - 25.5	34.29 to 33.29	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U

TABLE 7-3b
VADOSE ZONE SOIL RESULTS COMPARED TO SCREENING LEVELS
FOR SEMI-VOLATILE ORGANIC COMPOUNDS
SEATTLE DOT MERCER PARCELS SITE
SEATTLE, WASHINGTON

Boring/ Well ID	Sample Date	Sample Type	Surface Elevation (ft)	Sample Depth (ft)	Sample Elevation (ft)	Non-Carcinogenic Semi-Volatile Organic Compounds										
						1-Methyl naphthalene	2-Methyl naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(g,h,i) perylene	Fluoranthene	Fluorene	Naphthalene	Phenanthrene	Pyrene
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Direct Contact[a]						**34**	**320**	4800	NA	24000	NA	3200	3200	1600	NA	2400
Protective of Groundwater Vadose Zone[a]						NA	NA	**99**	NA	**2300**	NA	**630**	**100**	**4.5**	NA	**650**
Natural Background[a]						NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Median PQL[a]						0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
MBGW-1	3/6/2019	N	39.95	23.5 - 25	16.45 to 14.95	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MBGW-2	3/4/2019	N	46.11	25 - 26.5	21.11 to 19.61	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MBGW-3	3/7/2019	N	47.77	12 - 13	35.77 to 34.77	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U

Notes:

a. **Bold value** identified the selected screening level to determine if a constituent is retained as a COPC. This value is the lowest protective value unless adjusted for an elevated Natural Background or Median PQL.

Bold indicates a detected concentration at or above the laboratory reporting limit.

Highlighted indicates a detected concentration above the screening level.

Elevations relative to North American Vertical Datum of 1988 (NAVD88).

- = Data not available or not applicable.

COPC = Constituent of Potential Concern.

cPAHs-TEQ = Carcinogenic polycyclic aromatic hydrocarbons toxic equivalency.

FD = Field duplicate.

ft = feet.

J = Estimated value.

mg/kg = milligram per kilogram.

N = Primary environmental sample.

NA = Not applicable.

PQL = Practical Quantitation Limit.

U = Not detected at detection limit indicated.

TABLE 7-3e
VADOSE ZONE SOIL RESULTS COMPARED TO SCREENING LEVELS
FOR INORGANIC COMPOUNDS
SEATTLE DOT MERCER PARCELS SITE
SEATTLE, WASHINGTON

Boring/ Well ID	Sample Date	Sample Type	Surface Elevation (ft)	Sample Depth (ft)	Sample Elevation (ft)	Inorganic Compounds										
						Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Zinc
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
					Direct Contact[a]	0.67	16000	80	**120000**	3200	**250**	24	1600	400	400	24000
					Protective of Groundwater Vadose Zone[a]	0.34	**1600**	0.69	480000	**280**	3000	**2.1**	**130**	**5.2**	**14**	**6000**
					Natural Background[a]	**7.3**	NA	**0.77**	48	36	17	0.07	38	NA	NA	85
					Median PQL[a]	0.1	0.1	0.1	0.1	0.1	0.1	0.02	0.1	0.5	0.1	5
21417-MB1	5/12/2017	N	55.43	9	46.43	**4.78**	-	0.192 U	**41.2**	-	**2.43**	0.293 U	-	-	-	-
21417-MB4	5/12/2017	N	57.24	24	33.24	**6.94**	**68.9**	**0.192**	**35.8**	-	**40.2**	0.298 U	-	**1.26**	0.093 U	-
21417-MB6	5/11/2017	N	48.22	9	39.22	**3.1**	**43.3**	0.168 U	**29.1**	-	**9.18**	0.265 U	-	**1.3**	0.0839 U	-
21417-MB9	5/11/2017	N	39.05	13	26.05	**4.24**	**45.5**	**0.428**	**31.4**	-	**19.3**	0.291 U	-	**1.39**	0.0979 U	-
				22	17.05	**5.01**	**105**	0.199 U	**39.1**	**26.3**	**279**	**0.453**	**37.3**	**1.26**	0.0996 U	**62.2**
21417-MB11	5/11/2017	N	39.04	23	16.04	**4.18**	**101**	0.204 U	**39.5**	-	**7.73**	0.325 U	-	**1.76**	0.102 U	-
GP-7	5/12/2012	N	58.53	0 - 7	58.53 to 51.53	-	-	-	-	-	**4.19**	-	-	-	-	-
				7 - 11	51.53 to 47.53	-	-	-	-	-	**1.56**	-	-	-	-	-
GP-8	5/14/2012	N	58.33	0 - 7	58.33 to 51.33	-	-	-	-	-	**2.85**	-	-	-	-	-
				7 - 12	51.33 to 46.33	-	-	-	-	-	**2.31**	-	-	-	-	-
GP-9	5/14/2012	N	58.00	0 - 7	58.00 to 51.00	-	-	-	-	-	**2.85**	-	-	-	-	-
				7 - 14	51.00 to 44.00	-	-	-	-	-	**2.64**	-	-	-	-	-
				14 - 19	44.00 to 39.00	-	-	-	-	-	**1.8**	-	-	-	-	-
HMW-2IB	3/12/2019	N	47.41	7.5 - 9	39.91 to 38.41	11 U	**72**	0.56 U	**33**	-	**10**	0.28 U	-	11 U	0.56 U	-
HMW-3IA	3/15/2019	N	55.02	22.5 - 23.5	32.52 to 31.52	12 U	**50**	0.59 U	**39**	-	5.9 U	0.29 U	-	12 U	1.2 U	-
HMW-5IB	2/28/2020	N	58.44	5 - 6.5	53.44 to 51.94	**1.55**	-	1 U	**12.2**	-	**1.11**	1 U	-	-	-	-
				10 - 11.5	48.44 to 46.94	**1.31**	-	1 U	**16**	-	**1.18**	1 U	-	-	-	-
				15 - 16.5	43.44 to 41.94	**1.26**	-	1 U	**16.9**	-	**1.06**	1 U	-	-	-	-
				20 - 21.5	38.44 to 36.94	**1.03**	-	1 U	**12.5**	-	**1.11**	1 U	-	-	-	-
				25 - 26.5	33.44 to 31.94	1 U	-	1 U	**11.3**	-	1 U	1 U	-	-	-	-
HMW-6D	3/2/2020	N	58.58	5 - 6.5	53.58 to 52.08	**16.4**	-	1 U	**17.8**	-	**21.8**	1 U	-	-	-	-
				10 - 11.5	48.58 to 47.08	**21.8**	-	1 U	**20.2**	-	**23.6**	1 U	-	-	-	-
				15 - 16.5	43.58 to 42.08	**24.4**	-	1 U	**21.3**	-	**21.3**	1 U	-	-	-	-
				25 - 26.5	33.58 to 32.08	**18**	-	1 U	**26.4**	-	**16**	1 U	-	-	-	-
HMW-6IA	3/2/2020	N	58.65	5 - 6.5	53.65 to 52.15	**15.6**	-	1 U	**18.1**	-	**20.1**	1 U	-	-	-	-
				10 - 11.5	48.65 to 47.15	**13.6**	-	1 U	**19.2**	-	**16.5**	1 U	-	-	-	-
				15 - 16.5	43.65 to 42.15	**18.6**	-	1 U	**16**	-	**20.5**	1 U	-	-	-	-
				20 - 21.5	38.65 to 37.15	**18.3**	-	1 U	**30.2**	-	**13.4**	1 U	-	-	-	-
HMW-6IB	3/3/2020	N	58.67	5 - 6.5	53.67 to 52.17	**13.4**	-	1 U	**17.8**	-	**18.2**	1 U	-	-	-	-
				10 - 11.5	48.67 to 47.17	**15.9**	-	1 U	**20.6 J**	-	**26.3 J**	1 U	-	-	-	-
		FD				**14.9**	-	1 U	**29.3 J**	-	**16.1 J**	1 U	-	-	-	-
		N		15 - 16.5	43.67 to 42.17	**22.2**	-	1 U	**19.6**	-	**19**	1 U	-	-	-	-
				20 - 21.5	38.67 to 37.17	**25.6**	-	1 U	**20.5**	-	**18**	1 U	-	-	-	-
				25 - 26.5	33.67 to 32.17	**2.23**	-	1 U	**20.3**	-	**2.08**	1 U	-	-	-	-

Boring/ Well ID	Sample Date	Sample Type	Surface Elevation (ft)	Sample Depth (ft)	Sample Elevation (ft)	Inorganic Compounds										
						Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Zinc
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
					Direct Contact[a]	0.67	16000	80	**120000**	3200	**250**	24	1600	400	400	24000
					Protective of Groundwater Vadose Zone[a]	0.34	**1600**	0.69	480000	**280**	3000	**2.1**	**130**	**5.2**	**14**	**6000**
					Natural Background[a]	**7.3**	NA	**0.77**	48	36	17	0.07	38	NA	NA	85
					Median PQL[a]	0.1	0.1	0.1	0.1	0.1	0.1	0.02	0.1	0.5	0.1	5
HMW-7IB	2/28/2020	N	58.69	5 - 6.5	53.69 to 52.19	**15.3**	-	1 U	**22.4**	-	**17.4**	1 U	-	-	-	-
				10 - 11.5	48.69 to 47.19	**13.8**	-	1 U	**18.4**	-	**25.2**	1 U	-	-	-	-
				15 - 16.5	43.69 to 42.19	**19.9**	-	1 U	**18.3**	-	**18.2**	1 U	-	-	-	-
				20 - 21.5	38.69 to 37.19	**25.6**	-	1 U	**19.1**	-	**18.4**	1 U	-	-	-	-
				25 - 26.5	33.69 to 32.19	**8.13**	-	1 U	**18.9 J**	-	**6.75**	1 U	-	-	-	-
		FD				**8.49**	-	1 U	**25.9 J**	-	**7.93**	1 U	-	-	-	-
HMW-8IB	3/2/2020	N	57.97	5 - 6.5	52.97 to 51.47	**21.4**	-	1 U	**20.8**	-	**24.8**	1 U	-	-	-	-
				10 - 11.5	47.97 to 46.47	**19.5**	-	1 U	**18.3**	-	**19.1**	1 U	-	-	-	-
				15 - 16.5	42.97 to 41.47	**17.1**	-	1 U	**19.3**	-	**19.4**	1 U	-	-	-	-
				20 - 21.5	37.97 to 36.47	**4.86**	-	1 U	**14.9**	-	**5**	1 U	-	-	-	-
				25 - 26.5	32.97 to 31.47	**1.12**	-	1 U	**15.1**	-	**1.38**	1 U	-	-	-	-
		FD				**1.06**	-	1 U	**17.9**	-	**1.49**	1 U	-	-	-	-
HMW-9D	2/27/2020	N	55.32	5 - 6.5	50.32 to 48.82	**1.78**	-	1 U	**13.6**	-	**2.8**	1 U	-	-	-	-
				10 - 11.5	45.32 to 43.82	**1.38**	-	1 U	**12.4**	-	**2.17**	1 U	-	-	-	-
				15 - 16.5	40.32 to 38.82	**15.3**	-	1 U	**18.2**	-	**10.9**	1 U	-	-	-	-
				20 - 21.5	35.32 to 33.82	**2.55**	-	1 U	**16**	-	**2.59**	1 U	-	-	-	-
				25 - 26.5	30.32 to 28.82	**1.46**	-	1 U	**12.3**	-	**1.25**	1 U	-	-	-	-
HMW-9IA	2/28/2020	N	55.26	5 - 6.5	50.26 to 48.76	**1.07**	-	1 U	**15**	-	**1.27**	1 U	-	-	-	-
				10 - 11.5	45.26 to 43.76	**1.41**	-	1 U	**11.3**	-	**2.52**	1 U	-	-	-	-
				15 - 16.5	40.26 to 38.76	**6.62**	-	1 U	**16.9**	-	**14.1**	1 U	-	-	-	-
				20 - 21.5	35.26 to 33.76	**1.74**	-	1 U	**13.2**	-	**1.32**	1 U	-	-	-	-
				25 - 26.5	30.26 to 28.76	**1.23**	-	1 U	**13.1**	-	**1.2**	1 U	-	-	-	-
HMW-9IB	2/28/2020	N	55.36	5 - 6.5	50.36 to 48.86	**7.75**	-	1 U	**17.3**	-	**7.89**	1 U	-	-	-	-
				13 - 14.5	42.36 to 40.86	**1.64**	-	1 U	**10.9**	-	**1.9**	1 U	-	-	-	-
				15 - 16.5	40.36 to 38.86	**17.8**	-	1 U	**18.5**	-	**11.3**	1 U	-	-	-	-
				20 - 21.5	35.36 to 33.86	**1.6**	-	1 U	**13.6**	-	**1.29**	1 U	-	-	-	-
				25 - 26.5	30.36 to 28.86	**1.26**	-	1 U	**14.5**	-	**1.39**	1 U	-	-	-	-
HMW-9S	3/2/2020	N	55.39	5 - 6.5	50.39 to 48.89	**2.64**	-	1 U	**15.8**	-	**5.91**	1 U	-	-	-	-
				14 - 15.5	41.39 to 39.89	**14.5**	-	1 U	**19.2**	-	**14.5**	1 U	-	-	-	-
				17 - 18.5	38.39 to 36.89	**17.7**	-	1 U	**14.3**	-	**17.3**	1 U	-	-	-	-
				20 - 21.5	35.39 to 33.89	**1.3**	-	1 U	**11.3**	-	**1.17**	1 U	-	-	-	-
				25 - 26.5	30.39 to 28.89	**1.36**	-	1 U	**13.9**	-	**1.52**	1 U	-	-	-	-
HMW-10D	3/5/2020	N	48.16	5 - 6.5	43.16 to 41.66	**1.76**	-	1 U	**15.2**	-	**1.4**	1 U	-	-	-	-
				10 - 11.5	38.16 to 36.66	**1.78**	-	1 U	**14.1**	-	**1.38**	1 U	-	-	-	-
				15 - 16.5	33.16 to 31.66	**1.87**	-	1 U	**15.4**	-	**1.62**	1 U	-	-	-	-
		FD				**1.81**	-	1 U	**17.4**	-	**1.64**	1 U	-	-	-	-
		N		20 - 21.5	28.16 to 26.66	**1.31**	-	1 U	**15**	-	**1.48**	1 U	-	-	-	-
				25 - 26.5	23.16 to 21.66	**1.8**	-	1 U	**20.7**	-	**1.95**	1 U	-	-	-	-

Boring/ Well ID	Sample Date	Sample Type	Surface Elevation (ft)	Sample Depth (ft)	Sample Elevation (ft)	Inorganic Compounds										
						Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Zinc
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
					Direct Contact[a]	0.67	16000	80	**120000**	3200	**250**	24	1600	400	400	24000
					Protective of Groundwater Vadose Zone[a]	0.34	**1600**	0.69	480000	**280**	3000	**2.1**	**130**	**5.2**	**14**	**6000**
					Natural Background[a]	**7.3**	NA	**0.77**	48	36	17	0.07	38	NA	NA	85
					Median PQL[a]	0.1	0.1	0.1	0.1	0.1	0.1	0.02	0.1	0.5	0.1	5
HMW-10S	3/3/2020	N	48.21	5 - 6.5	43.21 to 41.71	**1.83**	-	1 U	**17.8**	-	**1.27**	1 U	-	-	-	-
				10 - 11.5	38.21 to 36.71	**1.51**	-	1 U	**13.6**	-	**1.45**	1 U	-	-	-	-
		FD					-	1 U	**15**	-	**1.41**	1 U	-	-	-	-
		N		15 - 16.5	33.21 to 31.71	**1.51**	-	1 U	**16**	-	**1.38**	1 U	-	-	-	-
				20 - 21.5	28.21 to 26.71	**1.32**	-	1 U	**17.3**	-	**1.55**	1 U	-	-	-	-
				25 - 26.5	23.21 to 21.71	**1.57**	-	1 U	**18**	-	**1.16**	1 U	-	-	-	-
HMW-11IB	2/24/2020	N	39.70	5 - 6.5	34.7 to 33.2	**2.14**	-	1 U	**23.1**	-	**28.7**	1 U	-	-	-	-
				10 - 11.5	29.7 to 28.2	**1.43**	-	1 U	**22.8**	-	**2.73**	1 U	-	-	-	-
				15 - 16.5	24.7 to 23.2	**3.44**	-	1 U	**14.5**	-	**65**	1 U	-	-	-	-
				20 - 21.5	19.7 to 18.2	**2.69**	-	1 U	**31.8**	-	**2.11**	1 U	-	-	-	-
				25 - 26.5	14.7 to 13.2	1 U	-	1 U	**18.8**	-	**1.23**	1 U	-	-	-	-
HMW-11S	2/25/2020	N	41.47	5 - 6.5	36.47 to 34.97	**2**	-	1 U	**23**	-	**14.4**	1 U	-	-	-	-
				10 - 11.5	31.47 to 29.97	**1.86**	-	1 U	**18.5**	-	**11**	1 U	-	-	-	-
				15 - 16.5	26.47 to 24.97	**1.27**	-	1 U	**17.8**	-	**1.39**	1 U	-	-	-	-
				20 - 21.5	21.47 to 19.97	**1.72**	-	1 U	**19.2**	-	**6.65**	1 U	-	-	-	-
HMW-17S	9/3/2020	N	57.21	5 - 6.25	52.21 to 50.96	**2.93**	-	1 U	**24.1**	-	**4.65**	1 U	-	-	-	-
				10 - 11.25	47.21 to 45.96	**1.5**	-	1 U	**13.2**	-	**2.18**	1 U	-	-	-	-
				15 - 16.33	42.21 to 40.88	**1.45**	-	1 U	**15.4**	-	**1.6**	1 U	-	-	-	-
				20 - 20.75	37.21 to 36.46	**1.48**	-	1 U	**16.6**	-	**1.53**	1 U	-	-	-	-
				25 - 26	32.21 to 31.21	1 U	-	1 U	**15.8**	-	**1.23**	1 U	-	-	-	-
HMW-18S	9/3/2020	N	57.61	5 - 5.8	52.61 to 51.81	**1.19**	-	1 U	**11.1**	-	**1.36**	1 U	-	-	-	-
				10 - 11.5	47.61 to 46.11	**2.9**	-	1 U	**25.8**	-	**3.15**	1 U	-	-	-	-
				15 - 16.5	42.61 to 41.11	**3.01**	-	1 U	**19.2**	-	**2.43**	1 U	-	-	-	-
				20 - 20.9	37.61 to 36.71	**1.39**	-	1 U	**12**	-	**1.22**	1 U	-	-	-	-
				25 - 25.8	32.61 to 31.81	**1.09**	-	1 U	**13.9**	-	**1.23**	1 U	-	-	-	-
HMW-19S	9/8/2020	N	58.20	5 - 5.5	53.20 to 52.70	**2.16**	-	1 U	**26.2**	-	**2.33**	1 U	-	-	-	-
				10 - 10.75	48.20 to 47.45	**1.24**	-	1 U	**14**	-	**1.27**	1 U	-	-	-	-
				15 - 16.5	43.20 to 41.70	**3.02**	-	1 U	**30.7**	-	**3.29**	1 U	-	-	-	-
				20 - 21.5	38.20 to 36.70	**2.17**	-	1 U	**31.5**	-	**2.22**	1 U	-	-	-	-
HMW-20S	9/8/2020	N	53.81	5 - 5.5	48.81 to 48.31	**1.57**	-	1 U	**12.6**	-	**1.88**	1 U	-	-	-	-
				10 - 11.5	43.81 to 42.31	**1.36**	-	1 U	**9.22**	-	**4.47**	1 U	-	-	-	-
				15 - 16.5	38.81 to 37.31	**1.55**	-	1 U	**13.5**	-	**1.62**	1 U	-	-	-	-
				20 - 21.25	33.81 to 32.56	**1.77**	-	1 U	**15.6**	-	**1.66**	1 U	-	-	-	-
				25 - 26.4	28.81 to 27.41	**1.9**	-	1 U	**29.1**	-	**2.68**	1 U	-	-	-	-
MBB-1	2/27/2020	N	55.02	5 - 6.5	50.02 to 48.52	**2.38**	-	1 U	**36.7**	-	**4.94**	1 U	-	-	-	-
				10 - 11.5	45.02 to 43.52	**2.69**	-	1 U	**15.8**	-	**1.27**	1 U	-	-	-	-
				15 - 16.5	40.02 to 38.52	**1.29**	-	1 U	**14.1**	-	**1.31**	1 U	-	-	-	-
				20 - 21.5	35.02 to 33.52	**1.23**	-	1 U	**11.7**	-	**1.29**	1 U	-	-	-	-
				25 - 26.5	30.02 to 28.52	**1.56**	-	1 U	**15.6**	-	**1.38**	1 U	-	-	-	-

Boring/ Well ID	Sample Date	Sample Type	Surface Elevation (ft)	Sample Depth (ft)	Sample Elevation (ft)	Inorganic Compounds										
						Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Zinc
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
					Direct Contact[a]	0.67	16000	80	**120000**	3200	**250**	24	1600	400	400	24000
					Protective of Groundwater Vadose Zone[a]	0.34	**1600**	0.69	480000	**280**	3000	**2.1**	**130**	**5.2**	**14**	**6000**
					Natural Background[a]	**7.3**	NA	**0.77**	48	36	17	0.07	38	NA	NA	85
					Median PQL[a]	0.1	0.1	0.1	0.1	0.1	0.1	0.02	0.1	0.5	0.1	5
MBB-2	2/27/2020	N	55.45	5 - 6.5	50.45 to 48.95	**4.5**	-	1 U	**45.9**	-	**4.09**	1 U	-	-	-	-
				10 - 11.5	45.45 to 43.95	**1.53**	-	1 U	**11.2**	-	**1.11**	1 U	-	-	-	-
				15 - 16.5	40.45 to 38.95	**1.27**	-	1 U	**12.2**	-	**1.54**	1 U	-	-	-	-
				20 - 21.5	35.45 to 33.95	**1.21**	-	1 U	**11.7**	-	**1.12**	1 U	-	-	-	-
		FD				**1.29**	-	1 U	**10.7**	-	**1.15**	1 U	-	-	-	-
		N		25 - 26.5	30.45 to 28.95	1 U	-	1 U	**12**	-	**1.12**	1 U	-	-	-	-
MBB-3	2/27/2020	N	54.84	5 - 6.5	49.84 to 48.34	**3.27**	-	1 U	**34.8**	-	**2.88**	1 U	-	-	-	-
				10 - 11.5	44.84 to 43.34	**1.65**	-	1 U	**13.6**	-	**2.3**	1 U	-	-	-	-
				15 - 16.5	39.84 to 38.34	1 U	-	1 U	**12.1**	-	**1.07**	1 U	-	-	-	-
				20 - 21.5	34.84 to 33.34	**2.74**	-	1 U	**9.91**	-	**1.04**	1 U	-	-	-	-
				25 - 26.5	29.84 to 28.34	**1.52**	-	1 U	**15.1**	-	**1.69**	1 U	-	-	-	-
MBB-4	2/27/2020	N	54.61	5 - 6.5	49.61 to 48.11	**2.44**	-	1 U	**28.2**	-	**5.37**	1 U	-	-	-	-
				10 - 12.5	44.61 to 42.11	**1.39**	-	1 U	**12.3**	-	**1.15**	1 U	-	-	-	-
		FD				**1.28**	-	1 U	**14.4**	-	**1.18**	1 U	-	-	-	-
		N		15 - 16.5	39.61 to 38.11	**1.16**	-	1 U	**12.9**	-	**1.15**	1 U	-	-	-	-
				20 - 23	34.61 to 31.61	**1.44**	-	1 U	**13.2**	-	**3.42**	1 U	-	-	-	-
				25 - 26.5	29.61 to 28.11	**1.47**	-	1 U	**14.5**	-	**1.51**	1 U	-	-	-	-
MBB-5	3/2/2020	N	50.53	5 - 6.5	45.53 to 44.03	**23.2**	-	1 U	**20.1**	-	**17.6**	1 U	-	-	-	-
				10 - 11.5	40.53 to 39.03	**6.56**	-	1 U	**17.7**	-	**591**	1 U	-	-	-	-
				15 - 16.5	35.53 to 34.03	**1.81**	-	1 U	**14.8**	-	**1.57**	1 U	-	-	-	-
				20 - 21.5	30.53 to 29.03	**1.34**	-	1 U	**12.6**	-	**1.24**	1 U	-	-	-	-
				25 - 26.5	25.53 to 24.03	**1.51**	-	1 U	**15.2**	-	**1.29**	1 U	-	-	-	-
MBB-6	3/3/2020	N	50.33	5 - 6.5	45.33 to 43.83	**21.2**	-	1 U	**22.7**	-	**20**	1 U	-	-	-	-
				10 - 11.5	40.33 to 38.83	**9.18**	-	1 U	**44.8**	-	**14.8**	1 U	-	-	-	-
				15 - 16.5	35.33 to 33.83	**1.84**	-	1 U	**17.8**	-	**1.4**	1 U	-	-	-	-
				20 - 21.5	30.33 to 28.83	**2.08**	-	1 U	**16.9**	-	**1.61**	1 U	-	-	-	-
				25 - 26.5	25.33 to 23.83	**1.6**	-	1 U	**15.8**	-	**1.44**	1 U	-	-	-	-
MBB-7	2/25/2020	N	49.41	5 - 6.5	44.41 to 42.91	**2.74**	-	1 U	**21.1**	-	**9.26**	1 U	-	-	-	-
				10 - 11.5	39.41 to 37.91	**1.37**	-	1 U	**15.4**	-	**2.14**	1 U	-	-	-	-
				15 - 16.5	34.41 to 32.91	**1.43**	-	1 U	**15.9**	-	**1.46**	1 U	-	-	-	-
				20 - 21.5	29.41 to 27.91	1 U	-	1 U	**16.4**	-	**1.24**	1 U	-	-	-	-
				25 - 26.5	24.41 to 22.91	**1.12**	-	1 U	**17.4**	-	**1.43**	1 U	-	-	-	-
MBB-8	2/26/2020	N	49.66	7 - 7.5	42.66 to 42.16	**21.9**	-	1 U	**18.2**	-	**12.5**	1 U	-	-	-	-
				10 - 11.5	39.66 to 38.16	**1.75**	-	1 U	**13.2**	-	**1.22**	1 U	-	-	-	-
				15 - 16.5	34.66 to 33.16	**1.7**	-	1 U	**19.2 J**	-	**1.26**	1 U	-	-	-	-
		FD				**1.6**	-	1 U	**15.3 J**	-	**1.23**	1 U	-	-	-	-
		N		20 - 21.5	29.66 to 28.16	**1.6**	-	1 U	**14.3**	-	**1.3**	1 U	-	-	-	-
				25 - 26.5	24.66 to 23.16	**1.13**	-	1 U	**16.3**	-	**1.31**	1 U	-	-	-	-

Boring/ Well ID	Sample Date	Sample Type	Surface Elevation (ft)	Sample Depth (ft)	Sample Elevation (ft)	Inorganic Compounds										
						Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Zinc
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
					Direct Contact[a]	0.67	16000	80	**120000**	3200	**250**	24	1600	400	400	24000
					Protective of Groundwater Vadose Zone[a]	0.34	**1600**	0.69	480000	**280**	3000	**2.1**	**130**	**5.2**	**14**	**6000**
					Natural Background[a]	**7.3**	NA	**0.77**	48	36	17	0.07	38	NA	NA	85
					Median PQL[a]	0.1	0.1	0.1	0.1	0.1	0.1	0.02	0.1	0.5	0.1	5
MBB-9	2/26/2020	N	47.55	5.5 - 7	42.05 to 40.55	**9.58**	-	1 U	**16.7**	-	**13.4**	1 U	-	-	-	-
				10 - 11.5	37.55 to 36.05	**1.94**	-	1 U	**18.8**	-	**2.11**	1 U	-	-	-	-
				15 - 16.5	32.55 to 31.05	**1.72**	-	1 U	**14.7**	-	**1.22**	1 U	-	-	-	-
				20 - 21.5	27.55 to 26.05	**1.7**	-	1 U	**18.1**	-	**1.24**	1 U	-	-	-	-
				25 - 26.5	22.55 to 21.05	**1.27**	-	1 U	**17.3**	-	**1.31**	1 U	-	-	-	-
MBB-10	2/26/2020	N	49.66	5 - 6.5	44.66 to 43.16	**1.76**	-	1 U	**17.3**	-	**1.72**	1 U	-	-	-	-
				10 - 11.5	39.66 to 38.16	**2.32**	-	1 U	**25.5**	-	**1.89**	1 U	-	-	-	-
				15 - 16.5	34.66 to 33.16	**1.65**	-	1 U	**17.1**	-	**1.46**	1 U	-	-	-	-
				20 - 21.5	29.66 to 28.16	**1.4**	-	1 U	**15**	-	**1.19**	1 U	-	-	-	-
				25 - 26.5	24.66 to 23.16	**1.51**	-	1 U	**20.8**	-	**1.57**	1 U	-	-	-	-
MBB-11	3/4/2020	N	46.42	15 - 16.5	31.42 to 29.92	-	-	-	-	-	**5.52**	-	-	-	-	-
				20 - 21.5	26.42 to 24.92	-	-	-	-	-	**5.51**	-	-	-	-	-
				25 - 26.5	21.42 to 19.92	-	-	-	-	-	**15.4**	-	-	-	-	-
MBB-12	3/4/2020	N	33.69	15 - 16.5	18.69 to 17.19	-	-	-	-	-	**3.23**	-	-	-	-	-
				20 - 21.5	13.69 to 12.19	-	-	-	-	-	**9**	-	-	-	-	-
				25 - 26.5	8.69 to 7.19	-	-	-	-	-	**1.56**	-	-	-	-	-
MBB-13	3/4/2020	N	35.98	15 - 16.5	20.98 to 19.48	-	-	-	-	-	**7.71**	-	-	-	-	-
				20 - 21.5	15.98 to 14.48	-	-	-	-	-	**9.54**	-	-	-	-	-
				25 - 26.5	10.98 to 9.48	-	-	-	-	-	**1.55**	-	-	-	-	-
		FD				-	-	-	-	-	**1.51**	-	-	-	-	-
MBB-16	9/2/2020	N	53.70	5 - 5.5	48.70 to 48.20	**2.62**	-	1 U	**28.4**	-	**7.58**	1 U	-	-	-	-
				10 - 11.5	43.70 to 42.20	**1.56**	-	1 U	**18.3**	-	**1.89**	1 U	-	-	-	-
				15 - 15.5	38.70 to 38.20	**1.74**	-	1 U	**24.8**	-	**1.3**	1 U	-	-	-	-
				20 - 20.9	33.70 to 32.80	**1.42**	-	1 U	**13.7**	-	**1.17**	1 U	-	-	-	-
MBB-17	9/1/2020	N	54.88	5 - 6	49.88 to 48.88	**1.71**	-	1 U	**23.6**	-	**2.67**	1 U	-	-	-	-
				10 - 10.75	44.88 to 44.13	**1.75**	-	1 U	**15**	-	**4.42**	1 U	-	-	-	-
				15 - 16	39.88 to 38.88	**3.91**	-	1 U	**17.5**	-	**7.13**	1 U	-	-	-	-
				25 - 25.9	29.88 to 28.98	**1.97**	-	1 U	**17.7**	-	**1.75**	1 U	-	-	-	-
MBB-18	9/1/2020	N	51.33	5 - 6.5	46.33 to 44.83	**14.2**	-	1 U	**25.5**	-	**13.5**	1 U	-	-	-	-
				10 - 10.9	41.33 to 40.43	**6.2**	-	1 U	**14.4**	-	**6.61**	1 U	-	-	-	-
				15 - 16.4	36.33 to 34.93	**1.13**	-	1 U	**12.3**	-	**1.02**	1 U	-	-	-	-
				20 - 20.75	31.33 to 30.58	**1.61**	-	1 U	**16.2**	-	**1.69**	1 U	-	-	-	-
MBB-19	9/1/2020	N	51.68	5 - 5.8	46.68 to 45.88	**3.16**	-	1 U	**19.2**	-	**4.27**	1 U	-	-	-	-
				10 - 11	41.68 to 40.68	**4.47**	-	1 U	**15.4**	-	**55.6**	1 U	-	-	-	-
				15 - 15.4	36.68 to 36.28	**2.01**	-	1 U	**20.8**	-	**1.75**	1 U	-	-	-	-
				20 - 20.8	31.68 to 30.88	**1.7**	-	1 U	**13.5**	-	**1.13**	1 U	-	-	-	-

Boring/ Well ID	Sample Date	Sample Type	Surface Elevation (ft)	Sample Depth (ft)	Sample Elevation (ft)	Inorganic Compounds										
						Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Zinc
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
					Direct Contact[a]	0.67	16000	80	**120000**	3200	**250**	24	1600	400	400	24000
					Protective of Groundwater Vadose Zone[a]	0.34	**1600**	0.69	480000	**280**	3000	**2.1**	**130**	**5.2**	**14**	**6000**
					Natural Background[a]	**7.3**	NA	**0.77**	48	36	17	0.07	38	NA	NA	85
					Median PQL[a]	0.1	0.1	0.1	0.1	0.1	0.1	0.02	0.1	0.5	0.1	5
MBB-20	9/2/2020	N	47.53	5 - 6.5	42.53 to 41.03	**2.67**	-	1 U	**16.6**	-	**2.02**	1 U	-	-	-	-
				10 - 11.5	37.53 to 36.03	**3.48**	-	1 U	**19.2**	-	**5.15**	1 U	-	-	-	-
				15 - 16.33	32.53 to 31.2	**1.6**	-	1 U	**20.6**	-	**1.54**	1 U	-	-	-	-
				20 - 20.5	27.53 to 27.03	**1.53**	-	1 U	**17.2**	-	**1.5**	1 U	-	-	-	-
MBB-21	9/2/2020	N	47.60	5 - 5.8	42.60 to 41.80	**2.02**	-	1 U	**20**	-	**1.69**	1 U	-	-	-	-
				10 - 11.5	37.60 to 36.10	**2.21**	-	1 U	**19.3**	-	**1.85**	1 U	-	-	-	-
				15 - 15.9	32.60 to 31.70	**1.52**	-	1 U	**18.3**	-	**1.4**	1 U	-	-	-	-
				20 - 20.9	27.60 to 26.70	**1.53**	-	1 U	**14.3**	-	**1.46**	1 U	-	-	-	-
MBB-22	9/21/2020	N	42.05	5 - 6	37.05 to 36.05	**2.71**	-	1 U	**30.2**	-	**26.7**	1 U	-	-	-	-
				15 - 16.25	27.05 to 25.8	**3.08**	-	1 U	**26.1**	-	**2.58**	1 U	-	-	-	-
				20 - 21.3	22.05 to 20.75	**1.63**	-	1 U	**15.3**	-	**1.39**	1 U	-	-	-	-
				25 - 26.3	17.05 to 15.75	**2.03**	-	1 U	**24.4**	-	**1.14**	1 U	-	-	-	-
MBB-23	9/21/2020	N	47.18	5 - 6.2	42.18 to 40.98	**2.57**	-	1 U	**18.7**	-	**3.58**	1 U	-	-	-	-
				10 - 11.1	37.18 to 36.08	**3.98**	-	1 U	**17.1**	-	**29.5**	1 U	-	-	-	-
				15 - 16.25	32.18 to 30.93	**2.73**	-	1 U	**22.4**	-	**3.6**	1 U	-	-	-	-
				20 - 21.3	27.18 to 25.88	**2.21**	-	1 U	**17.7**	-	**1.99**	1 U	-	-	-	-
				25 - 26	22.18 to 21.18	**1.88**	-	1 U	**16.3**	-	**1.35**	1 U	-	-	-	-
MBB-24	9/9/2020	N	54.10	5 - 6.5	49.10 to 47.60	**2.92**	-	1 U	**25.9**	-	**3.32**	1 U	-	-	-	-
				10 - 11.4	44.10 to 42.70	**1.38**	-	1 U	**15**	-	**1.57**	1 U	-	-	-	-
				15 - 16.5	39.10 to 37.60	**3**	-	1 U	**25.6**	-	**3.04**	1 U	-	-	-	-
				20 - 21	34.10 to 33.10	**1.05**	-	1 U	**10.5**	-	**1.02**	1 U	-	-	-	-
				25 - 25.8	29.10 to 28.30	**1.38**	-	1 U	**14.9**	-	**1.52**	1 U	-	-	-	-
MBGW-1	3/6/2019	N	39.95	4 - 5	35.95 to 34.95	11 U	**49**	0.57 U	**25**	-	**43**	0.28 U	-	11 U	0.57 U	-
				17 - 18	22.95 to 21.95	11 U	**45**	0.57 U	**43**	-	5.7 U	0.29 U	-	11 U	0.57 U	-
MBGW-2	3/4/2019	N	46.11	12.5 - 14	33.61 to 32.11	10 U	**47**	0.52 U	**24**	-	**8.5**	0.26 U	-	10 U	0.52 U	-
				25 - 26.5	21.11 to 19.61	14 U	**130**	0.7 U	**34**	-	**23**	0.35 U	-	14 U	0.7 U	-
MBGW-3	3/7/2019	N	47.77	7 - 8	40.77 to 39.77	11 U	**43**	0.54 U	**32**	-	5.4 U	0.27 U	-	11 U	0.54 U	-
				12 - 13	35.77 to 34.77	11 U	**61**	0.55 U	**40**	-	5.5 U	0.27 U	-	11 U	0.55 U	-
				24 - 25	23.77 to 22.77	12 U	**42**	0.62 U	**33**	-	6.2 U	0.31 U	-	12 U	0.62 U	-
MBGW-4	3/6/2019	N	47.30	2 - 3	45.30 to 44.30	11 U	**50**	0.56 U	**32**	-	5.6 U	0.28 U	-	11 U	1.1 U	-
				4 - 5	43.30 to 42.30	12 U	**65**	0.58 U	**22**	-	**12**	0.29 U	-	12 U	1.2 U	-
				7 - 8	40.30 to 39.30	11 U	**46**	0.54 U	**26**	-	5.4 U	0.27 U	-	11 U	1.1 U	-
				24 - 25	23.30 to 22.30	12 U	**54**	0.6 U	**36**	-	6 U	0.3 U	-	12 U	1.2 U	-
MBGW-6	3/14/2019	N	52.50	10 - 10.7	42.5 to 41.8	11 U	**32**	0.54 U	**21**	-	5.4 U	0.27 U	-	11 U	0.54 U	-
MBGW-7	3/6/2019	N	53.76	10 - 11.5	43.76 to 42.26	11 U	**33**	0.54 U	**21**	-	5.4 U	0.27 U	-	11 U	0.54 U	-
				17.5 - 18.75	36.26 to 35.01	11 U	**37**	0.53 U	**34**	-	5.3 U	0.27 U	-	11 U	0.53 U	-
MBGW-8	3/15/2019	N	47.08	25 - 26	22.08 to 21.08	11 U	**40**	0.55 U	**36**	-	5.5 U	0.27 U	-	11 U	1.1 U	-
MBGW-9	3/13/2019	N	56.84	10 - 10.5	46.84 to 46.34	11 U	**43**	0.53 U	**42**	-	5.3 U	0.26 U	-	11 U	0.53 U	-
MBGW-10	3/13/2019	N	55.25	10 - 10.9	45.25 to 44.35	11 U	**48**	0.54 U	**44**	-	5.4 U	0.27 U	-	11 U	0.54 U	-

Boring/ Well ID	Sample Date	Sample Type	Surface Elevation (ft)	Sample Depth (ft)	Sample Elevation (ft)	Inorganic Compounds										
						Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Zinc
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
					Direct Contact[a]	0.67	16000	80	**120000**	3200	**250**	24	1600	400	400	24000
					Protective of Groundwater Vadose Zone[a]	0.34	**1600**	0.69	480000	**280**	3000	**2.1**	**130**	**5.2**	**14**	**6000**
					Natural Background[a]	**7.3**	NA	**0.77**	48	36	17	0.07	38	NA	NA	85
					Median PQL[a]	0.1	0.1	0.1	0.1	0.1	0.1	0.02	0.1	0.5	0.1	5
MBGW-11	3/12/2019	N	57.55	5 - 6.5	52.55 to 51.05	11 U	**68**	0.55 U	**38**	-	**10**	0.28 U	-	11 U	0.55 U	-
MBGW-12	3/15/2019	N	54.00	5 - 5.75	49 to 48.25	11 U	**56**	0.57 U	**42**	-	5.7 U	0.29 U	-	11 U	1.1 U	-
MBGW-15	3/8/2019	N	40.87	20 - 21.25	20.87 to 19.62	13 U	**170**	0.66 U	**18**	-	6.6 U	0.33 U	-	13 U	0.66 U	-
MBPP-1	3/5/2019	N	45.28	8 - 10	37.28 to 35.28	11 U	**81**	0.55 U	**46**	-	**93**	0.28 U	-	11 U	0.55 U	-
MBPP-2	3/5/2019	N	44.46	9 - 10	35.46 to 34.46	12 U	**100**	0.62 U	**45**	-	**21**	0.31 U	-	12 U	0.62 U	-
MBPP-3	3/6/2019	N	45.89	24 - 25	21.89 to 20.89	11 U	**35**	0.55 U	**26**	-	5.5 U	0.27 U	-	11 U	0.55 U	-
MBPP-4	3/7/2019	N	48.34	9 - 10	39.34 to 38.34	11 U	**48**	0.55 U	**29**	-	**5.6**	0.27 U	-	11 U	0.55 U	-
MBPP-5	3/7/2019	N	45.92	24 - 25	21.92 to 20.92	11 U	**49**	0.56 U	**34**	-	5.6 U	0.28 U	-	11 U	0.56 U	-
MBPP-7	3/8/2019	N	49.77	4 - 5	45.77 to 44.77	12 U	**200**	0.6 U	**38**	-	**6.6**	0.3 U	-	12 U	0.6 U	-
MBPP-8	3/8/2019	N	57.52	14 - 15	43.52 to 42.52	**16**	**80**	0.63 U	**30**	-	**16**	0.32 U	-	13 U	0.63 U	-

Notes:

a. **Bold value** identified the selected screening level to determine if a constituent is retained as a COPC. This value is the lowest protective value unless adjusted for an elevated Natural Background or Median PQL.

Bold indicates a detected concentration at or above the laboratory reporting limit.

Highlighted indicates a detected concentration above the screening level.

Elevations relative to North American Vertical Datum of 1988 (NAVD88).

- = Data not available or not applicable.

COPC = Constituent of Potential Concern.

FD = Field duplicate.

ft = feet.

J = Estimated value.

mg/kg = milligram per kilogram.

N = Primary environmental sample.

NA = Not applicable.

PQL = Practical Quantitation Limit.

U = Not detected at detection limit indicated.

TABLE 7-3g
SATURATED ZONE SOIL RESULTS COMPARED TO SCREENING LEVELS FOR SEMI-VOLATILE ORGANIC COMPOUNDS
SEATTLE DOT MERCER PARCELS SITE
SEATTLE, WASHINGTON

Boring/ Well ID	Sample Date	Sample Type	Surface Elevation (ft)	Sample Depth (ft)	Sample Elevation (ft)	Carcinogenic Semi-Volatile Organic Compounds							
						Benzo(a) anthracene	Benzo(a) pyrene	Benzo(b) fluoranthene	Benzo(k) fluoranthene	Chrysene	Dibenz(a,h) anthracene	Indeno(1,2,3-cd)pyrene	cPAHs-TEQ
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
					Direct Contact[a]	NA	**0.19**	NA	NA	NA	NA	NA	0.19
					Protective of Groundwater Saturated Zone[a]	NA	0.19	NA	NA	NA	NA	NA	**0.022**
					Natural Background[a]	NA	NA	NA	NA	NA	NA	NA	NA
					Median PQL[a]	0.0034	0.005	0.0035	0.0035	0.005	0.005	0.0034	0.0069
HMW-6D	3/2/2020	N	58.58	30 - 31.5	28.58 to 27.08	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
HMW-6IA	3/2/2020	N	58.65	30 - 31.5	28.65 to 27.15	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0006 U
HMW-18S	9/3/2020	N	57.61	30 - 31	27.61 to 26.61	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0019 U
HMW-19S	9/8/2020	N	58.20	26 - 26.8	32.20 to 31.40	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00041 U
				30 - 30.5	28.20 to 27.70	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00041 U
HMW-20S	9/8/2020	N	53.81	30 - 31	23.81 to 22.81	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00041 U
MBB-22	9/21/2020	N	42.05	30 - 30.5	12.05 to 11.55	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0019 U
MBB-23	9/21/2020	N	47.18	30 - 31	17.18 to 16.18	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0019 U
MBB-24	9/9/2020	N	54.10	30 - 31	24.10 to 23.10	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00041 U
MBB-25	10/30/2020	N	58.63	29.5 - 30.5	29.13 to 28.13	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00041 U
				34.5 - 35.5	24.13 to 23.13	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00041 U
				39.5 - 40	19.13 to 18.63	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.00041 U
MBB-26	10/29/2020	N	58.79	29.5 - 30.5	29.29 to 28.29	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0019 U
		FD				0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0019 U
		N		34.5 - 35.5	24.29 to 23.29	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0019 U
				39.5 - 40	19.29 to 18.79	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0019 U
MBGW-2	3/4/2019	N	46.11	30 - 31.5	16.11 to 14.61	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.0076 U
MBGW-3	3/7/2019	N	47.77	26	21.77	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.0076 U

TABLE 7-3g
SATURATED ZONE SOIL RESULTS COMPARED TO SCREENING LEVELS FOR SEMI-VOLATILE ORGANIC COMPOUNDS
SEATTLE DOT MERCER PARCELS SITE
SEATTLE, WASHINGTON

Boring/ Well ID	Sample Date	Sample Type	Surface Elevation (ft)	Sample Depth (ft)	Sample Elevation (ft)	Non-Carcinogenic Semi-Volatile Organic Compounds										
						1-Methyl naphthalene	2-Methyl naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(g,h,i) perylene	Fluoranthene	Fluorene	Naphthalene	Phenanthrene	Pyrene
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
					Direct Contact[a]	**34**	**320**	4800	NA	24000	NA	3200	3200	1600	NA	2400
					Protective of Groundwater Saturated Zone[a]	NA	NA	**5**	NA	**110**	NA	**32**	**5.1**	**0.24**	NA	**33**
					Natural Background[a]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
					Median PQL[a]	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
HMW-6D	3/2/2020	N	58.58	30 - 31.5	28.58 to 27.08	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
HMW-6IA	3/2/2020	N	58.65	30 - 31.5	28.65 to 27.15	-	-	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
HMW-18S	9/3/2020	N	57.61	30 - 31	27.61 to 26.61	-	-	-	-	-	-	-	-	-	-	-
HMW-19S	9/8/2020	N	58.20	26 - 26.8	32.20 to 31.40	-	-	-	-	-	-	-	-	-	-	-
				30 - 30.5	28.20 to 27.70	-	-	-	-	-	-	-	-	-	-	-
HMW-20S	9/8/2020	N	53.81	30 - 31	23.81 to 22.81	-	-	-	-	-	-	-	-	-	-	-
MBB-22	9/21/2020	N	42.05	30 - 30.5	12.05 to 11.55	-	-	-	-	-	-	-	-	-	-	-
MBB-23	9/21/2020	N	47.18	30 - 31	17.18 to 16.18	-	-	-	-	-	-	-	-	-	-	-
MBB-24	9/9/2020	N	54.10	30 - 31	24.10 to 23.10	-	-	-	-	-	-	-	-	-	-	-
MBB-25	10/30/2020	N	58.63	29.5 - 30.5	29.13 to 28.13	-	-	-	-	-	-	-	-	-	-	-
				34.5 - 35.5	24.13 to 23.13	-	-	-	-	-	-	-	-	-	-	-
				39.5 - 40	19.13 to 18.63	-	-	-	-	-	-	-	-	-	-	-
MBB-26	10/29/2020	N	58.79	29.5 - 30.5	29.29 to 28.29	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
		FD				0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
		N		34.5 - 35.5	24.29 to 23.29	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
				39.5 - 40	19.29 to 18.79	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
MBGW-2	3/4/2019	N	46.11	30 - 31.5	16.11 to 14.61	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MBGW-3	3/7/2019	N	47.77	26	21.77	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U

Notes:

a. **Bold value** identified the selected screening level to determine if a constituent is retained as a COPC. This value is the lowest protective value unless adjusted for an elevated Natural Background or Median PQL.

Elevations relative to North American Vertical Datum of 1988 (NAVD88).

- = Data not available or not applicable.

COPC = Constituent of Potential Concern.

cPAHs-TEQ = Carcinogenic polycyclic aromatic hydrocarbons toxic equivalency.

FD = Field duplicate.

ft = feet.

mg/kg = milligram per kilogram.

N = Primary environmental sample.

NA = Not applicable.

PQL = Practical Quantitation Limit.

U = Not detected at detection limit indicated.

TABLE 7-3j
SATURATED ZONE SOIL RESULTS COMPARED TO SCREENING LEVELS FOR INORGANIC COMPOUNDS
SEATTLE DOT MERCER PARCELS SITE
SEATTLE, WASHINGTON

Boring/ Well ID	Sample Date	Sample Type	Surface Elevation (ft)	Sample Depth (ft)	Sample Elevation (ft)	Inorganic Compounds							
						Arsenic mg/kg	Barium mg/kg	Cadmium mg/kg	Chromium mg/kg	Lead mg/kg	Mercury mg/kg	Selenium mg/kg	Silver mg/kg
					Direct Contact	0.67	16000	80	120000	250	24	400	400
					Protective of Groundwater Saturated Zone	0.017	**83**	0.035	**24000**	**150**	**0.1**	0.26	**0.69**
					Natural Background	**7.3**	NA	**0.77**	48	17	0.07	NA	NA
					Median PQL	0.1	0.1	0.1	0.1	0.1	0.02	**0.5**	0.1
21417-MB8	5/11/2017	N	45.28	27	18.28	**2.69**	**31.8**	0.168 U	**29.3**	**2.38**	0.276 U	**0.988**	0.0842 U
21417-MB10	5/11/2017	N	38.08	28	10.08	**7.75**	**42**	0.174 U	**43.2**	**6.75**	0.268 U	**0.99**	0.0872 U
HMW-6D	3/2/2020	N	58.58	30 - 31.5	28.58 to 27.08	**1.61**	-	1 U	**14.4 J**	**1.69**	1 U	-	-
		FD				**1.42**	-	1 U	**10.8 J**	**1.44**	1 U	-	-
HMW-6IA	3/2/2020	N	58.65	30 - 31.5	28.65 to 27.15	**3.1**	-	1 U	**19.9**	**4.88**	1 U	-	-
HMW-11S	2/25/2020	N	41.47	31 - 32.5	10.47 to 8.97	1 U	-	1 U	**16**	**1.33**	1 U	-	-
HMW-18S	9/3/2020	N	57.61	30 - 31	27.61 to 26.61	**1.03**	-	1 U	**15.5**	**1.54**	1 U	-	-
HMW-19S	9/8/2020	N	58.20	26 - 26.8	32.20 to 31.40	**1.44**	-	1 U	**20.5**	**1.31**	1 U	-	-
				30 - 30.5	28.20 to 27.70	**1.31**	-	1 U	**38.2**	**1.49**	1 U	-	-
HMW-20S	9/8/2020	N	53.81	30 - 31	23.81 to 22.81	**1.32**	-	1 U	**29.5**	**1.77**	1 U	-	-
MBB-22	9/21/2020	N	42.05	30 - 30.5	12.05 to 11.55	**1.96**	-	1 U	**40**	**1.97**	1 U	-	-
MBB-23	9/21/2020	N	47.18	30 - 31	17.18 to 16.18	**1.68**	-	1 U	**16.2**	**1.36**	1 U	-	-
MBB-24	9/9/2020	N	54.10	30 - 31	24.10 to 23.10	1 U	-	1 U	**14.1**	**1.34**	1 U	-	-
MBGW-2	3/4/2019	N	46.11	30 - 31.5	16.11 to 14.61	12 U	**46**	0.61 U	**42**	6.1 U	0.31 U	12 U	0.61 U
MBGW-5	3/11/2019	N	49.87	27.5 - 29	22.37 to 20.87	11 U	**39**	0.56 U	**25**	5.6 U	0.28 U	11 U	0.56 U
MBGW-7	3/6/2019	N	53.76	40 - 40.5	13.76 to 13.26	11 U	**42**	0.56 U	**36**	5.6 U	0.28 U	11 U	0.56 U

Notes:

a. **Bold value** identified the selected screening level to determine if a constituent is retained as a COPC. This value is the lowest protective value unless adjusted for an elevated Natural Background or Median PQL.

Bold indicates a detected concentration at or above the laboratory reporting limit.

Highlighted indicates a detected concentration above the screening level.

Elevations relative to North American Vertical Datum of 1988 (NAVD88).

- = Data not available or not applicable.

COPC = Constituent of Potential Concern.

FD = Field duplicate.

ft = feet.

J = Estimated value.

mg/kg = milligram per kilogram.

N = Primary environmental sample.

NA = Not applicable.

PQL = Practical Quantitation Limit.

U = Not detected at detection limit indicated.

TABLE 7-3I
GROUNDWATER RESULTS COMPARED TO SCREENING LEVELS FOR
SEMI-VOLATILE ORGANIC COMPOUNDS
SEATTLE DOT MERCER PARCELS SITE
SEATTLE, WASHINGTON

Boring/ Well ID	Sample Type	Surface Elevation (ft)	Sample Depth (ft)	Sample Elevation (ft)	Grab or Monitoring Well?	Sample Date	Carcinogenic Semi-Volatile Organic Compounds							
							Benzo(a) anthracene	Benzo(a) pyrene	Benzo(b) fluoranthene	Benzo(k) fluoranthene	Chrysene	Dibenz (a,h)anthracene	Indeno (1,2,3-cd) pyrene	cPAHs-TEQ
							ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Protective of Drinking Water[a]							NA	**0.2**	NA	NA	NA	NA	NA	0.023
Protective of Indoor Air[a]							NA	NA	NA	NA	NA	NA	NA	NA
Natural Background[a]							NA	NA	NA	NA	NA	NA	NA	NA
Median PQL[a]							0.02	0.02	0.02	0.02	0.02	0.02	0.02	**0.05**
SHALLOW ZONE														
HMW-17S	N	57.21	35 - 45	22.21 to 12.21	MW	9/17/2020	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.0068 U
HMW-18S	N	57.61	35 - 45	22.61 to 12.61	MW	9/17/2020	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.0068 U
HMW-19S	N	58.20	35 - 45	23.20 to 13.20	MW	9/17/2020	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.0068 U
HMW-20S	N	53.81	25 - 35	28.81 to 18.81	MW	9/18/2020	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.0068 U
MBB-1	N	55.02	32 - 37	23.02 to 18.02	G	3/3/2020	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.0051 U
MBB-2	N	55.45	32 - 37	23.45 to 18.45	G	3/3/2020	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.0051 U
MBB-3	N	54.84	32 - 37	22.84 to 17.84	G	3/4/2020	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.0051 U
MBB-4	N	54.61	32 - 37	22.61 to 17.61	G	3/5/2020	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.0051 U
MBB-15	N	37.73	30 - 35	7.73 to 2.73	G	3/6/2020	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.0051 U
MBB-16	N	53.70	30 - 40	23.70 to 13.70	G	9/3/2020	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.0068 U
MBB-24	N	54.10	30 - 40	24.10 to 14.10	G	9/10/2020	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.0068 U
MBB-25	N	58.63	30 - 40	28.63 to 18.63	G	10/31/2020	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.0086 U
MBB-26	N	58.79	30 - 40	28.79 to 18.79	G	10/30/2020	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.0086 U
INTERMEDIATE A ZONE														
HMW-6IA	N	58.65	37.5 - 47.5	21.15 to 11.15	MW	3/13/2020	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.0051 U
HMW-20IA	N	53.83	41 - 51	12.83 to 2.83	MW	9/18/2020	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.0068 U
INTERMEDIATE B ZONE														
HMW-4IA	N	58.70	50 - 60	8.7 to -1.30	MW	3/10/2020	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.0051 U
HMW-5IB	N	58.44	49.7 - 59.7	8.74 to -1.26	MW	3/17/2020	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.0051 U
HMW-6IB	N	58.67	50 - 60	8.67 to -1.33	MW	3/13/2020	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.0051 U
HMW-7IB	N	58.69	49.7 - 59.7	8.99 to -1.01	MW	3/12/2020	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.0051 U
HMW-8IB	N	57.97	50.5 - 60.5	7.47 to -2.53	MW	3/11/2020	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.0051 U
HMW-15IB	N	58.86	64 - 73	-5.14 to -14.14	MW	9/16/2020	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.0068 U
HMW-16IB	N	57.02	55 - 65	2.02 to -7.98	MW	9/18/2020	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.0068 U
DEEP ZONE														
HMW-6D	N	58.58	79.9 - 89.7	-21.32 to -31.12	MW	3/16/2020	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.0051 U
HMW-12D	N	33.52	82 - 92	-48.48 to -58.48	MW	9/10/2020	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.0068 U
HMW-13D	N	45.30	89.5 - 99.5	-44.20 to -54.20	MW	9/10/2020	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.0068 U
HMW-14D	N	46.35	70 - 80	-23.65 to -33.65	MW	9/16/2020	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.0068 U

TABLE 7-3I
GROUNDWATER RESULTS COMPARED TO SCREENING LEVELS FOR
SEMI-VOLATILE ORGANIC COMPOUNDS
SEATTLE DOT MERCER PARCELS SITE
SEATTLE, WASHINGTON

Boring/ Well ID	Sample Type	Surface Elevation (ft)	Sample Depth (ft)	Sample Elevation (ft)	Grab or Monitoring Well?	Sample Date	Non-Carcinogenic Semi-Volatile Organic Compounds										
							1-Methyl naphthalene	2-Methyl naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo (g,h,i) perylene	Fluoranthene	Fluorene	Naphthalene	Phenanthrene	Pyrene
							ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Protective of Drinking Water[a]							**1.5**	**32**	**960**	NA	**4800**	NA	**640**	**640**	160	NA	**480**
Protective of Indoor Air[a]							NA	NA	NA	NA	NA	NA	NA	NA	**8.9**	NA	NA
Natural Background[a]							NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Median PQL[a]							0.05	0.05	0.05	0.05	0.05	0.035	0.05	0.05	0.05	0.05	0.035
SHALLOW ZONE																	
HMW-17S	N	57.21	35 - 45	22.21 to 12.21	MW	9/17/2020	0.4 U	0.4 U	0.04 U	0.04 U	0.04 U	0.08 U	0.04 U	0.04 U	0.4 U	0.04 U	0.04 U
HMW-18S	N	57.61	35 - 45	22.61 to 12.61	MW	9/17/2020	0.4 U	0.4 U	0.04 U	0.04 U	0.04 U	0.08 U	0.04 U	0.04 U	0.4 U	0.04 U	0.04 U
HMW-19S	N	58.20	35 - 45	23.20 to 13.20	MW	9/17/2020	0.4 U	0.4 U	0.04 U	0.04 U	0.04 U	0.08 U	0.04 U	0.04 U	0.4 U	0.04 U	0.04 U
HMW-20S	N	53.81	25 - 35	28.81 to 18.81	MW	9/18/2020	0.4 U	0.4 U	0.04 U	0.04 U	0.04 U	0.08 U	0.04 U	0.04 U	0.4 U	0.04 U	0.04 U
MBB-1	N	55.02	32 - 37	23.02 to 18.02	G	3/3/2020	-	-	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.4 U	0.04 U	0.04 U
MBB-2	N	55.45	32 - 37	23.45 to 18.45	G	3/3/2020	-	-	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.4 U	0.04 U	0.04 U
MBB-3	N	54.84	32 - 37	22.84 to 17.84	G	3/4/2020	-	-	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	**2.2**	0.04 U	0.04 U
MBB-4	N	54.61	32 - 37	22.61 to 17.61	G	3/5/2020	-	-	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.4 U	0.04 U	0.04 U
MBB-15	N	37.73	30 - 35	7.73 to 2.73	G	3/6/2020	-	-	**0.25**	0.04 U	0.04 U	0.04 U	0.04 U	**0.098**	0.4 U	**0.18**	0.04 U
MBB-16	N	53.70	30 - 40	23.70 to 13.70	G	9/3/2020	0.4 U	0.4 U	0.04 U	0.04 U	0.04 U	0.08 U	0.04 U	0.04 U	0.4 U	0.04 U	0.04 U
MBB-24	N	54.10	30 - 40	24.10 to 14.10	G	9/10/2020	**1.6**	**1.6**	0.04 U	0.04 U	0.04 U	0.08 U	0.04 U	0.04 U	**6**	0.04 U	0.04 U
MBB-25	N	58.63	30 - 40	28.63 to 18.63	G	10/31/2020	0.4 U	0.4 U	0.04 U	0.04 U	0.04 U	0.08 U	0.04 U	0.04 U	0.4 U	0.04 U	0.04 U
MBB-26	N	58.79	30 - 40	28.79 to 18.79	G	10/30/2020	-	-	-	-	-	-	-	-	-	-	-
INTERMEDIATE A ZONE																	
HMW-6IA	N	58.65	37.5 - 47.5	21.15 to 11.15	MW	3/13/2020	-	-	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.4 U	0.04 U	0.04 U
HMW-20IA	N	53.83	41 - 51	12.83 to 2.83	MW	9/18/2020	0.4 U	0.4 U	0.04 U	0.04 U	0.04 U	0.08 U	0.04 U	0.04 U	0.4 U	0.04 U	0.04 U
INTERMEDIATE B ZONE																	
HMW-4IA	N	58.70	50 - 60	8.7 to -1.30	MW	3/10/2020	-	-	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.4 U	0.04 U	0.04 U
HMW-5IB	N	58.44	49.7 - 59.7	8.74 to -1.26	MW	3/17/2020	-	-	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.4 U	0.04 U	0.04 U
HMW-6IB	N	58.67	50 - 60	8.67 to -1.33	MW	3/13/2020	-	-	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.4 U	0.04 U	0.04 U
HMW-7IB	N	58.69	49.7 - 59.7	8.99 to -1.01	MW	3/12/2020	-	-	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.4 U	0.04 U	0.04 U
HMW-8IB	N	57.97	50.5 - 60.5	7.47 to -2.53	MW	3/11/2020	-	-	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.4 U	0.04 U	0.04 U
HMW-15IB	N	58.86	64 - 73	-5.14 to -14.14	MW	9/16/2020	0.4 U	0.4 U	0.04 U	0.04 U	0.04 U	0.08 U	0.04 U	0.04 U	0.4 U	0.04 U	0.04 U
HMW-16IB	N	57.02	55 - 65	2.02 to -7.98	MW	9/18/2020	0.4 U	0.4 U	0.04 U	0.04 U	0.04 U	0.08 U	0.04 U	0.04 U	0.4 U	0.04 U	0.04 U

TABLE 7-3I
GROUNDWATER RESULTS COMPARED TO SCREENING LEVELS FOR
SEMI-VOLATILE ORGANIC COMPOUNDS
SEATTLE DOT MERCER PARCELS SITE
SEATTLE, WASHINGTON

Boring/ Well ID	Sample Type	Surface Elevation (ft)	Sample Depth (ft)	Sample Elevation (ft)	Grab or Monitoring Well?	Sample Date	Non-Carcinogenic Semi-Volatile Organic Compounds										
							1-Methyl naphthalene	2-Methyl naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo (g,h,i) perylene	Fluoranthene	Fluorene	Naphthalene	Phenanthrene	Pyrene
							ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Protective of Drinking Water[a]							**1.5**	**32**	**960**	NA	**4800**	NA	**640**	**640**	160	NA	**480**
Protective of Indoor Air[a]							NA	NA	NA	NA	NA	NA	NA	NA	**8.9**	NA	NA
Natural Background[a]							NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Median PQL[a]							0.05	0.05	0.05	0.05	0.05	0.035	0.05	0.05	0.05	0.05	0.035
DEEP ZONE																	
HMW-6D	N	58.58	79.9 - 89.7	-21.32 to -31.12	MW	3/16/2020	-	-	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.4 U	0.04 U	0.04 U
HMW-12D	N	33.52	82 - 92	-48.48 to -58.48	MW	9/10/2020	0.4 U	0.4 U	0.04 U	0.04 U	0.04 U	0.08 U	0.04 U	0.04 U	0.4 U	0.04 U	0.04 U
HMW-13D	N	45.30	89.5 - 99.5	-44.20 to -54.20	MW	9/10/2020	0.4 U	0.4 U	0.04 U	0.04 U	0.04 U	0.08 U	0.04 U	0.04 U	0.4 U	0.04 U	0.04 U
HMW-14D	N	46.35	70 - 80	-23.65 to -33.65	MW	9/16/2020	0.4 U	0.4 U	0.04 U	0.04 U	0.04 U	0.08 U	0.04 U	0.04 U	0.4 U	0.04 U	0.04 U

Notes:

a. **Bold value** identified the selected screening level to determine if a constituent is retained as a COPC. This value is the lowest protective value unless adjusted for an elevated Natural Background or Median PQL.

Bold indicates a detected concentration at or above the laboratory reporting limit.

Highlighted indicates a detected concentration above the screening level.

Elevations relative to North American Vertical Datum of 1988 (NAVD88).

- = Data not available or not applicable.

COPC = Constituent of Potential Concern.

cPAHs-TEQ = Carcinogenic polycyclic aromatic hydrocarbons toxic equivalency.

ft = feet.

G = Grab groundwater sample.

MW = Monitoring well sample.

N = Primary environmental sample.

NA = Not applicable.

PQL = Practical Quantitation Limit.

U = Not detected at detection limit indicated.

ug/L = microgram per liter.

TABLE 7-3n
GROUNDWATER RESULTS COMPARED TO SCREENING LEVELS FOR INORGANIC COMPOUNDS
SEATTLE DOT MERCER PARCELS SITE
SEATTLE, WASHINGTON

Boring/ Well ID	Sample Type	Surface Elevation (ft)	Sample Depth (ft)	Sample Elevation (ft)	Grab or Monitoring Well?	Sample Date	Inorganic Compounds, Dissolved													
							Antimony, Dissolved	Arsenic, Dissolved	Barium, Dissolved	Beryllium, Dissolved	Cadmium, Dissolved	Chromium, Dissolved	Copper, Dissolved	Lead, Dissolved	Mercury, Dissolved	Nickel, Dissolved	Selenium, Dissolved	Silver, Dissolved	Thallium, Dissolved	Zinc, Dissolved
							ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Protective of Drinking Water[a]							**6**	0.58	**2000**	**4**	**5**	**100**	**640**	**15**	2	**100**	**50**	**80**	**0.16**	**4800**
Protective of Indoor Air[a]							NA	NA	NA	NA	NA	NA	NA	NA	**0.83**	NA	NA	NA	NA	NA
Natural Background[a]							NA	**8**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Median PQL[a]							0.2	0.5	0.05	0.06	0.06	0.2	0.1	0.06	0.15	0.15	1	0.25	0.02	5
SHALLOW ZONE																				
21417-MB9	N	39.05	15 - 25	24.05 to 14.05	G	5/11/2017	**0.646**	1 U	-	0.2 U	0.2 U	0.5 U	**0.733**	0.5 U	0.1 U	**3.11**	1 U	0.2 U	0.2 U	**4.48**
21417-MB10	N	38.08	20 - 30	18.08 to 8.08	G	5/11/2017	**0.206**	**1.87**	-	0.2 U	0.2 U	0.5 U	**1.01**	0.5 U	0.1 U	**3.72**	1 U	0.2 U	0.2 U	**1.56**
21417-MB11	N	39.04	15 - 25	24.04 to 14.04	G	5/11/2017	**0.214**	1 U	-	0.2 U	0.2 U	**0.852**	0.5 U	0.5 U	0.1 U	**5.12**	1 U	0.2 U	0.2 U	**1.91**
HMW-1S	N	36.01	20 - 30	16.01 to 6.01	MW	3/25/2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-
						3/11/2020	-	**12.3**	-	-	1 U	50 U	-	1 U	1 U	-	-	-	-	-
HMW-2S	N	47.39	19.8 - 29.8	27.59 to 17.59	MW	3/12/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HMW-9S	N	55.39	25 - 35	30.39 to 20.39	MW	3/17/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HMW-10S	N	48.21	24.7 - 34.7	23.51 to 13.51	MW	3/16/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HMW-11S	N	41.47	25 - 35	16.47 to 6.47	MW	3/11/2020	-	**2.57**	-	-	1 U	5 U	-	1 U	1 U	-	-	-	-	-
HMW-17S	N	57.21	35 - 45	22.21 to 12.21	MW	9/17/2020	-	**1.32**	-	-	1 U	**2.12**	-	1 U	1 U	-	-	-	-	-
HMW-18S	N	57.61	35 - 45	22.61 to 12.61	MW	9/17/2020	-	**2.5**	-	-	1 U	1 U	-	1 U	1 U	-	-	-	-	-
HMW-19S	N	58.2	35 - 45	23.20 to 13.20	MW	9/17/2020	-	**1.97**	-	-	1 U	1 U	-	1 U	1 U	-	-	-	-	-
HMW-20S	N	53.81	25 - 35	28.81 to 18.81	MW	9/18/2020	-	**2.03**	-	-	1 U	**4.26**	-	1 U	1 U	-	-	-	-	-
MBB-1	N	55.02	32 - 37	23.02 to 18.02	G	3/3/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MBB-2	N	55.45	32 - 37	23.45 to 18.45	G	3/3/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MBB-3	N	54.84	32 - 37	22.84 to 17.84	G	3/4/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MBB-4	N	54.61	32 - 37	22.61 to 17.61	G	3/5/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MBB-5	N	50.53	32 - 37	18.53 to 13.53	G	3/5/2020	-	**4.01**	-	-	1 U	1 U	-	1 U	1 U	-	-	-	-	-
MBB-6	N	50.33	25 - 30	25.33 to 20.33	G	3/5/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MBB-7	N	49.41	27 - 32	22.41 to 17.41	G	3/4/2020	-	1 U	-	-	1 U	1 U	-	1 U	1 U	-	-	-	-	-
MBB-8	N	49.66	27 - 32	22.66 to 17.66	G	2/27/2020	-	1 U	-	-	1 U	1 U	-	1 U	1 U	-	-	-	-	-
MBB-9	N	47.55	27 - 32	20.55 to 15.55	G	2/28/2020	-	**2.37**	-	-	1 U	1 U	-	1 U	1 U	-	-	-	-	-
MBB-10	N	49.66	35 - 40	14.66 to 9.66	G	2/27/2020	-	**3.22**	-	-	1 U	1 U	-	1 U	1 U	-	-	-	-	-
MBB-12	N	33.69	27 - 32	6.69 to 1.69	G	3/6/2020	-	**14.4**	-	-	1 U	1 U	-	1 U	1 U	-	-	-	-	-
MBB-13	N	35.98	30 - 35	5.98 to 0.98	G	3/9/2020	-	**41.2**	-	-	1 U	1 U	-	1 U	1 U	-	-	-	-	-
MBB-16	N	53.7	30 - 40	23.70 to 13.70	G	9/3/2020	-	**2.6**	-	-	1 U	**1.21**	-	1 U	1 U	-	-	-	-	-
MBB-24	N	54.1	30 - 40	24.10 to 14.10	G	9/10/2020	-	**7.49**	-	-	1 U	1 U	-	1 U	1 UJ	-	-	-	-	-
MBGW-1	N	39.95	20 - 30	19.95 to 9.95	G	3/6/2019	-	3 U	25 U	-	4 U	10 U	-	1 U	0.5 UJ	-	5 U	10 U	-	-
MBGW-2	N	46.11	20 - 30	26.11 to 16.11	G	3/4/2019	-	3 U	**44**	-	4 U	10 U	-	1 U	0.5 U	-	5 U	10 U	-	-
MBGW-3	N	47.77	16 - 26	31.77 to 21.77	G	3/7/2019	-	3 U	25 U	-	4 U	10 U	-	1 U	0.5 UJ	-	5 U	10 U	-	-
MBGW-5	N	49.87	20 - 30	29.87 to 19.87	G	3/15/2019	-	3 U	25 U	-	4 U	10 U	-	1 U	0.5 U	-	5 U	10 U	-	-
MBGW-6	N	52.5	20 - 30	32.50 to 22.50	G	3/15/2019	-	3 U	25 U	-	4 U	10 U	-	1 U	0.5 U	-	5 U	10 U	-	-
MBGW-7	N	53.76	30 - 40	23.76 to 13.76	G	3/6/2019	-	3 U	**28**	-	4 U	10 U	-	1 U	0.5 UJ	-	5 U	10 U	-	-
MBGW-8	N	47.08	15 - 25	32.08 to 22.08	G	3/19/2019	-	3 U	**45**	-	4 U	10 U	-	1 U	0.5 U	-	5 U	10 U	-	-
MBGW-9	N	56.84	20 - 30	36.84 to 26.84	G	3/15/2019	-	3 U	25 U	-	4 U	10 U	-	1 U	0.5 U	-	5 U	10 U	-	-
MBGW-10	N	55.25	20 - 30	35.25 to 25.25	G	3/15/2019	-	3 U	**26**	-	4 U	10 U	-	1 U	0.5 U	-	5 U	10 U	-	-
MBGW-11	N	57.55	35 - 45	22.55 to 12.55	G	3/15/2019	-	**6.9**	**32**	-	4 U	10 U	-	1 U	0.5 U	-	5 U	10 U	-	-
MBGW-13	N	54.72	20 - 30	34.72 to 24.72	G	3/15/2019	-	**3.3**	25 U	-	4 U	10 U	-	1 U	0.5 U	-	5 U	10 U	-	-
MBGW-14	N	46.09	20 - 30	26.09 to 16.09	G	3/6/2019	-	3 U	**40**	-	4 U	10 U	-	1 U	0.5 UJ	-	5 U	10 U	-	-

TABLE 7-3n
GROUNDWATER RESULTS COMPARED TO SCREENING LEVELS FOR
INORGANIC COMPOUNDS
SEATTLE DOT MERCER PARCELS SITE
SEATTLE, WASHINGTON

Boring/ Well ID	Sample Type	Surface Elevation (ft)	Sample Depth (ft)	Sample Elevation (ft)	Grab or Monitoring Well?	Sample Date	Inorganic Compounds, Dissolved													
							Antimony, Dissolved	Arsenic, Dissolved	Barium, Dissolved	Beryllium, Dissolved	Cadmium, Dissolved	Chromium, Dissolved	Copper, Dissolved	Lead, Dissolved	Mercury, Dissolved	Nickel, Dissolved	Selenium, Dissolved	Silver, Dissolved	Thallium, Dissolved	Zinc, Dissolved
							ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Protective of Drinking Water[a]							**6**	0.58	**2000**	**4**	**5**	**100**	**640**	**15**	2	**100**	**50**	**80**	**0.16**	**4800**
Protective of Indoor Air[a]							NA	NA	NA	NA	NA	NA	NA	NA	**0.83**	NA	NA	NA	NA	NA
Natural Background[a]							NA	**8**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Median PQL[a]							0.2	0.5	0.05	0.06	0.06	0.2	0.1	0.06	0.15	0.15	1	0.25	0.02	5
MBGW-15	N	40.87	20 - 30	20.87 to 10.87	G	3/15/2019	-	3 U	**95**	-	4 U	10 U	-	1 U	0.5 UJ	-	5 U	10 U	-	-
MBGW-16	N	52.14	20 - 30	32.14 to 22.14	G	3/8/2019	-	3 U	**25**	-	4 U	10 U	-	1 U	0.5 UJ	-	5 U	10 U	-	-
MBPP-5	N	45.92	18 - 28	27.92 to 17.92	G	3/7/2019	-	3 U	**26**	-	4 U	10 U	-	1 U	0.5 UJ	-	5 U	10 U	-	-
INTERMEDIATE A ZONE																				
HMW-2IA	N	45.55	34.8 - 44.8	10.75 to 0.75	MW	3/12/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HMW-3IA	N	55.02	34.8 - 44.8	20.22 to 10.22	MW	3/13/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HMW-6IA	N	58.65	37.5 - 47.5	21.15 to 11.15	MW	3/13/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HMW-9IA	N	55.26	36.7 - 46.7	18.56 to 8.56	MW	3/19/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HMW-20IA	N	53.83	41 - 51	12.83 to 2.83	MW	9/18/2020	-	**4.39**	-	-	1 U	1 U	-	1 U	1 U	-	-	-	-	-
INTERMEDIATE B ZONE																				
HMW-1IB	N	38.29	54.3 - 64.3	-16.01 to -26.01	MW	3/10/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HMW-2IB	N	47.41	52.8 - 62.8	-5.39 to -15.39	MW	3/12/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HMW-4IA	N	58.7	50 - 60	8.70 to -1.30	MW	3/10/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HMW-5IB	N	58.44	49.7 - 59.7	8.74 to -1.26	MW	3/17/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HMW-6IB	N	58.67	50 - 60	8.67 to -1.33	MW	3/13/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HMW-7IB	N	58.69	49.7 - 59.7	8.99 to -1.01	MW	3/12/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HMW-8IB	N	57.97	50.5 - 60.5	7.47 to -2.53	MW	3/11/2020	-	**9.67**	-	-	1 U	5 U	-	1 U	1 U	-	-	-	-	-
HMW-9IB	N	55.36	57 - 67	-1.64 to -11.64	MW	3/19/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HMW-11IB	N	39.7	44.87 - 54.87	-5.17 to -15.17	MW	3/16/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	FD						-	-	-	-	-	-	-	-	-	-	-	-	-	-
HMW-15IB	N	58.86	64 - 73	-5.14 to -14.14	MW	9/16/2020	-	**7.66**	-	-	1 U	**1.52**	-	1 U	1 U	-	-	-	-	-
HMW-16IB	N	57.02	55 - 65	2.02 to -7.98	MW	9/18/2020	-	**8.23**	-	-	1 U	1 U	-	1 U	1 U	-	-	-	-	-

TABLE 7-3n
GROUNDWATER RESULTS COMPARED TO SCREENING LEVELS FOR
INORGANIC COMPOUNDS
SEATTLE DOT MERCER PARCELS SITE
SEATTLE, WASHINGTON

Boring/ Well ID	Sample Type	Surface Elevation (ft)	Sample Depth (ft)	Sample Elevation (ft)	Grab or Monitoring Well?	Sample Date	Inorganic Compounds, Dissolved													
							Antimony, Dissolved	Arsenic, Dissolved	Barium, Dissolved	Beryllium, Dissolved	Cadmium, Dissolved	Chromium, Dissolved	Copper, Dissolved	Lead, Dissolved	Mercury, Dissolved	Nickel, Dissolved	Selenium, Dissolved	Silver, Dissolved	Thallium, Dissolved	Zinc, Dissolved
							ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Protective of Drinking Water[a]							**6**	0.58	**2000**	**4**	**5**	**100**	**640**	**15**	2	**100**	**50**	**80**	**0.16**	**4800**
Protective of Indoor Air[a]							NA	NA	NA	NA	NA	NA	NA	NA	**0.83**	NA	NA	NA	NA	NA
Natural Background[a]							NA	**8**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Median PQL[a]							0.2	0.5	0.05	0.06	0.06	0.2	0.1	0.06	0.15	0.15	1	0.25	0.02	5
DEEP ZONE																				
HMW-1D	N	38.07	80 - 90	-41.93 to -51.93	MW	3/9/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HMW-2D	N	47.34	80 - 90	-32.66 to -42.66	MW	3/12/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HMW-3D	N	56.56	80 - 90	-23.44 to -33.44	MW	3/13/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HMW-6D	N	58.58	79.9 - 89.7	-21.32 to -31.12	MW	3/16/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HMW-9D	N	55.32	79.7 - 89.7	-24.38 to -34.38	MW	3/17/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	FD						-	-	-	-	-	-	-	-	-	-	-	-	-	-
HMW-10D	N	48.16	79 - 89	-30.84 to -40.84	MW	3/16/2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HMW-12D	N	33.52	82 - 92	-48.48 to -58.48	MW	9/10/2020	-	**1.54**	-	-	1 U	1 U	-	1 U	1 U	-	-	-	-	-
HMW-13D	N	45.3	89.5 - 99.5	-44.20 to -54.20	MW	9/10/2020	-	**5.25**	-	-	1 U	1 U	-	1 U	1 U	-	-	-	-	-
HMW-14D	N	46.35	70 - 80	-23.65 to -33.65	MW	9/16/2020	-	**6.05**	-	-	1 U	1 U	-	1 U	1 U	-	-	-	-	-

TABLE 7-3n
GROUNDWATER RESULTS COMPARED TO SCREENING LEVELS FOR
INORGANIC COMPOUNDS
SEATTLE DOT MERCER PARCELS SITE
SEATTLE, WASHINGTON

Boring/ Well ID	Sample Type	Surface Elevation (ft)	Sample Depth (ft)	Sample Elevation (ft)	Grab or Monitoring Well?	Sample Date	Inorganic Compounds, Total													
							Antimony, Total	Arsenic, Total	Barium, Total	Beryllium, Total	Cadmium, Total	Chromium, Total	Copper, Total	Lead, Total	Mercury, Total	Nickel, Total	Selenium, Total	Silver, Total	Thallium, Total	Zinc, Total
							ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Protective of Drinking Water[a]							**6**	0.58	**2000**	**4**	**5**	**100**	**640**	**15**	2	**100**	**50**	**80**	**0.16**	**4800**
Protective of Indoor Air[a]							NA	NA	NA	NA	NA	NA	NA	NA	**0.83**	NA	NA	NA	NA	NA
Natural Background[a]							NA	**8**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Median PQL[a]							0.2	0.5	0.05	0.06	0.06	0.2	0.1	0.06	0.15	0.15	1	0.25	0.02	5
SHALLOW ZONE																				
21417-MB9	N	39.05	15 - 25	24.05 to 14.05	G	5/11/2017	**0.694**	**2.88**	-	0.2 U	0.2 U	**6.59**	**23.7**	**123**	0.1 U	**7.56**	**1.06**	0.2 U	1 U	**49.2**
21417-MB10	N	38.08	20 - 30	18.08 to 8.08	G	5/11/2017	0.2 U	**13.5**	-	**0.264**	0.2 U	**27.7**	**17.2**	**24.1**	0.1 U	**11.2**	**1.92**	0.2 U	1 U	**20.8**
21417-MB11	N	39.04	15 - 25	24.04 to 14.04	G	5/11/2017	0.2 U	**6.34**	-	**0.248**	**0.353**	**9.77**	**13.2**	**19**	0.1 U	**14.3**	**1.02**	0.2 U	0.2 U	**44.2**
HMW-1S	N	36.01	20 - 30	16.01 to 6.01	MW	3/25/2019	-	**14**	**83**	-	4.4 U	11 U	-	**2.7**	0.5 U	-	5.6 U	11 U	-	-
						3/11/2020	-	**13.5**	-	-	1 U	50 U	-	1 U	1 U	-	-	-	-	-
HMW-2S	N	47.39	19.8 - 29.8	27.59 to 17.59	MW	3/12/2020	-	5 U	-	-	1 U	**7.48**	-	1 U	1 U	-	-	-	-	-
HMW-9S	N	55.39	25 - 35	30.39 to 20.39	MW	3/17/2020	-	5 U	-	-	1 U	1 U	-	1 U	1 U	-	-	-	-	-
HMW-10S	N	48.21	24.7 - 34.7	23.51 to 13.51	MW	3/16/2020	-	5 U	-	-	1 U	1 U	-	1 U	1 U	-	-	-	-	-
HMW-11S	N	41.47	25 - 35	16.47 to 6.47	MW	3/11/2020	-	**4.14**	-	-	1 U	**5.81**	-	**1.65**	1 U	-	-	-	-	-
HMW-17S	N	57.21	35 - 45	22.21 to 12.21	MW	9/17/2020	-	**1.57**	-	-	1 U	**5.45**	-	1 U	1 U	-	-	-	-	-
HMW-18S	N	57.61	35 - 45	22.61 to 12.61	MW	9/17/2020	-	**2.58**	-	-	1 U	1 U	-	1 U	1 U	-	-	-	-	-
HMW-19S	N	58.2	35 - 45	23.20 to 13.20	MW	9/17/2020	-	**1.87**	-	-	1 U	**1.73**	-	1 U	1 U	-	-	-	-	-
HMW-20S	N	53.81	25 - 35	28.81 to 18.81	MW	9/18/2020	-	**2.04**	-	-	1 U	**4.99**	-	1 U	1 U	-	-	-	-	-
MBB-1	N	55.02	32 - 37	23.02 to 18.02	G	3/3/2020	-	**1.02**	-	-	1 U	**4.06**	-	1 U	1 U	-	-	-	-	-
MBB-2	N	55.45	32 - 37	23.45 to 18.45	G	3/3/2020	-	1 U	-	-	1 U	**1.65**	-	1 U	1 U	-	-	-	-	-
MBB-3	N	54.84	32 - 37	22.84 to 17.84	G	3/4/2020	-	1 U	-	-	1 U	1 U	-	1 U	1 U	-	-	-	-	-
MBB-4	N	54.61	32 - 37	22.61 to 17.61	G	3/5/2020	-	**2.23**	-	-	1 U	1 U	-	1 U	1 U	-	-	-	-	-
MBB-5	N	50.53	32 - 37	18.53 to 13.53	G	3/5/2020	-	**4.15**	-	-	1 U	**4.55**	-	1 U	1 U	-	-	-	-	-
MBB-6	N	50.33	25 - 30	25.33 to 20.33	G	3/5/2020	-	**3.11**	-	-	1 U	**3.35**	-	1 U	1 U	-	-	-	-	-
MBB-7	N	49.41	27 - 32	22.41 to 17.41	G	3/4/2020	-	**1.09**	-	-	1 U	**12.4**	-	1 U	1 U	-	-	-	-	-
MBB-8	N	49.66	27 - 32	22.66 to 17.66	G	2/27/2020	-	**10.5**	-	-	1 U	**192**	-	**7.82**	1 U	-	-	-	-	-
MBB-9	N	47.55	27 - 32	20.55 to 15.55	G	2/28/2020	-	**3.59**	-	-	1 U	**12**	-	**1.27**	1 U	-	-	-	-	-
MBB-10	N	49.66	35 - 40	14.66 to 9.66	G	2/27/2020	-	**3.32**	-	-	1 U	1 U	-	1 U	1 U	-	-	-	-	-
MBB-12	N	33.69	27 - 32	6.69 to 1.69	G	3/6/2020	-	**15.8**	-	-	1 U	**2.14**	-	1 U	1 U	-	-	-	-	-
MBB-13	N	35.98	30 - 35	5.98 to 0.98	G	3/9/2020	-	**38.1**	-	-	1 U	**1.33**	-	1 U	1 U	-	-	-	-	-
MBB-16	N	53.7	30 - 40	23.70 to 13.70	G	9/3/2020	-	**2.61**	-	-	1 U	**1.58**	-	1 U	1 U	-	-	-	-	-
MBB-24	N	54.1	30 - 40	24.10 to 14.10	G	9/10/2020	-	**7.53**	-	-	1 U	**3.22**	-	1 U	1 U	-	-	-	-	-
MBGW-1	N	39.95	20 - 30	19.95 to 9.95	G	3/6/2019	-	3.3 U	**65**	-	4.4 U	**12**	-	**1.7**	0.5 U	-	5.6 U	11 U	-	-
MBGW-2	N	46.11	20 - 30	26.11 to 16.11	G	3/4/2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MBGW-3	N	47.77	16 - 26	31.77 to 21.77	G	3/7/2019	-	**5.9**	**140**	-	4.4 U	**61**	-	**5.1**	0.5 U	-	5.6 U	11 U	-	-
MBGW-5	N	49.87	20 - 30	29.87 to 19.87	G	3/15/2019	-	**130**	**3200**	-	**5.8**	**1500**	-	**140**	**2.2**	-	**25**	11 U	-	-
MBGW-6	N	52.5	20 - 30	32.50 to 22.50	G	3/15/2019	-	**15**	**200**	-	4.4 U	**74**	-	**10**	0.5 U	-	5.6 U	11 U	-	-
MBGW-7	N	53.76	30 - 40	23.76 to 13.76	G	3/6/2019	-	**130**	**3500**	-	**7.5**	**1700**	-	**190**	**2.2**	-	**18**	11 U	-	-
MBGW-8	N	47.08	15 - 25	32.08 to 22.08	G	3/19/2019	-	**37**	**800**	-	4.4 U	**360**	-	**30**	0.5 U	-	5.6 U	11 U	-	-
MBGW-9	N	56.84	20 - 30	36.84 to 26.84	G	3/15/2019	-	**71**	**1900**	-	4.4 U	**930**	-	**89**	**0.88**	-	**7.9**	11 U	-	-
MBGW-10	N	55.25	20 - 30	35.25 to 25.25	G	3/15/2019	-	**180**	**4200**	-	**6.1**	**2300**	-	**200**	**2.3**	-	**20**	22 U	-	-
MBGW-11	N	57.55	35 - 45	22.55 to 12.55	G	3/15/2019	-	**14**	**240**	-	4.4 U	**86**	-	**8.9**	0.5 U	-	5.6 U	11 U	-	-
MBGW-13	N	54.72	20 - 30	34.72 to 24.72	G	3/15/2019	-	**110**	**1600**	-	4.4 U	**910**	-	**110**	**1.8**	-	**9.5**	11 U	-	-
MBGW-14	N	46.09	20 - 30	26.09 to 16.09	G	3/6/2019	-	**6.1**	**130**	-	4.4 U	**38**	-	**16**	0.5 U	-	5.6 U	11 U	-	-

TABLE 7-3n
GROUNDWATER RESULTS COMPARED TO SCREENING LEVELS FOR
INORGANIC COMPOUNDS
SEATTLE DOT MERCER PARCELS SITE
SEATTLE, WASHINGTON

Boring/ Well ID	Sample Type	Surface Elevation (ft)	Sample Depth (ft)	Sample Elevation (ft)	Grab or Monitoring Well?	Sample Date	Inorganic Compounds, Total													
							Antimony, Total	Arsenic, Total	Barium, Total	Beryllium, Total	Cadmium, Total	Chromium, Total	Copper, Total	Lead, Total	Mercury, Total	Nickel, Total	Selenium, Total	Silver, Total	Thallium, Total	Zinc, Total
							ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Protective of Drinking Water[a]							**6**	0.58	**2000**	**4**	**5**	**100**	**640**	**15**	2	**100**	**50**	**80**	**0.16**	**4800**
Protective of Indoor Air[a]							NA	NA	NA	NA	NA	NA	NA	NA	**0.83**	NA	NA	NA	NA	NA
Natural Background[a]							NA	**8**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Median PQL[a]							0.2	0.5	0.05	0.06	0.06	0.2	0.1	0.06	0.15	0.15	1	0.25	0.02	5
MBGW-15	N	40.87	20 - 30	20.87 to 10.87	G	3/15/2019	-	**35**	**390**	-	4.4 U	**170**	-	**20**	0.5 U	-	5.6 U	11 U	-	-
MBGW-16	N	52.14	20 - 30	32.14 to 22.14	G	3/8/2019	-	**210**	**4600**	-	**5.3**	**2400**	-	**190**	**1.8**	-	**31**	11 U	-	-
MBPP-5	N	45.92	18 - 28	27.92 to 17.92	G	3/7/2019	-	**15**	**230**	-	4.4 U	**93**	-	**9.3**	0.5 U	-	5.6 U	11 U	-	-
INTERMEDIATE A ZONE																				
HMW-2IA	N	45.55	34.8 - 44.8	10.75 to 0.75	MW	3/12/2020	-	**5.1**	-	-	1 U	1 U	-	1 U	1 U	-	-	-	-	-
HMW-3IA	N	55.02	34.8 - 44.8	20.22 to 10.22	MW	3/13/2020	-	**4.57**	-	-	1 U	1 U	-	1 U	1 U	-	-	-	-	-
HMW-6IA	N	58.65	37.5 - 47.5	21.15 to 11.15	MW	3/13/2020	-	**7.84**	-	-	1 U	**9.31**	-	1 U	1 U	-	-	-	-	-
HMW-9IA	N	55.26	36.7 - 46.7	18.56 to 8.56	MW	3/19/2020	-	**3**	-	-	1 U	**3.63**	-	1 U	1 U	-	-	-	-	-
HMW-20IA	N	53.83	41 - 51	12.83 to 2.83	MW	9/18/2020	-	**4.4**	-	-	1 U	1 U	-	1 U	1 U	-	-	-	-	-
INTERMEDIATE B ZONE																				
HMW-1IB	N	38.29	54.3 - 64.3	-16.01 to -26.01	MW	3/10/2020	-	1 U	-	-	1 U	5 U	-	1 U	1 U	-	-	-	-	-
HMW-2IB	N	47.41	52.8 - 62.8	-5.39 to -15.39	MW	3/12/2020	-	**7.49**	-	-	1 U	**1.09**	-	1 U	1 U	-	-	-	-	-
HMW-4IA	N	58.7	50 - 60	8.70 to -1.30	MW	3/10/2020	-	**6.03**	-	-	1 U	5 U	-	1 U	1 U	-	-	-	-	-
HMW-5IB	N	58.44	49.7 - 59.7	8.74 to -1.26	MW	3/17/2020	-	5 U	-	-	1 U	1 U	-	1 U	1 U	-	-	-	-	-
HMW-6IB	N	58.67	50 - 60	8.67 to -1.33	MW	3/13/2020	-	**8.55**	-	-	1 U	1 U	-	1 U	1 U	-	-	-	-	-
HMW-7IB	N	58.69	49.7 - 59.7	8.99 to -1.01	MW	3/12/2020	-	**6.36**	-	-	1 U	1 U	-	1 U	1 U	-	-	-	-	-
HMW-8IB	N	57.97	50.5 - 60.5	7.47 to -2.53	MW	3/11/2020	-	**10.7**	-	-	1 U	**25.3**	-	1 U	1 U	-	-	-	-	-
HMW-9IB	N	55.36	57 - 67	-1.64 to -11.64	MW	3/19/2020	-	**2.07**	-	-	1 U	1 U	-	1 U	1 U	-	-	-	-	-
HMW-11IB	N	39.7	44.87 - 54.87	-5.17 to -15.17	MW	3/16/2020	-	5 U	-	-	1 U	1 U	-	1 U	1 U	-	-	-	-	-
	FD						-	5 U	-	-	1 U	1 U	-	1 U	1 U	-	-	-	-	-
HMW-15IB	N	58.86	64 - 73	-5.14 to -14.14	MW	9/16/2020	-	**7.78**	-	-	1 U	**40.9**	-	1 U	1 U	-	-	-	-	-
HMW-16IB	N	57.02	55 - 65	2.02 to -7.98	MW	9/18/2020	-	**8.21**	-	-	1 U	**8.12**	-	1 U	1 U	-	-	-	-	-

TABLE 7-3n
GROUNDWATER RESULTS COMPARED TO SCREENING LEVELS FOR
INORGANIC COMPOUNDS
SEATTLE DOT MERCER PARCELS SITE
SEATTLE, WASHINGTON

Boring/ Well ID	Sample Type	Surface Elevation (ft)	Sample Depth (ft)	Sample Elevation (ft)	Grab or Monitoring Well?	Sample Date	Inorganic Compounds, Total													
							Antimony, Total	Arsenic, Total	Barium, Total	Beryllium, Total	Cadmium, Total	Chromium, Total	Copper, Total	Lead, Total	Mercury, Total	Nickel, Total	Selenium, Total	Silver, Total	Thallium, Total	Zinc, Total
							ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Protective of Drinking Water[a]							**6**	0.58	**2000**	**4**	**5**	**100**	**640**	**15**	2	**100**	**50**	**80**	**0.16**	**4800**
Protective of Indoor Air[a]							NA	NA	NA	NA	NA	NA	NA	NA	**0.83**	NA	NA	NA	NA	NA
Natural Background[a]							NA	**8**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Median PQL[a]							0.2	0.5	0.05	0.06	0.06	0.2	0.1	0.06	0.15	0.15	1	0.25	0.02	5
DEEP ZONE																				
HMW-1D	N	38.07	80 - 90	-41.93 to -51.93	MW	3/9/2020	-	**2.59**	-	-	1 U	1 U	-	1 U	1 U	-	-	-	-	-
HMW-2D	N	47.34	80 - 90	-32.66 to -42.66	MW	3/12/2020	-	**6.36**	-	-	1 U	1 U	-	1 U	1 U	-	-	-	-	-
HMW-3D	N	56.56	80 - 90	-23.44 to -33.44	MW	3/13/2020	-	**4.69**	-	-	1 U	**2.29**	-	1 U	1 U	-	-	-	-	-
HMW-6D	N	58.58	79.9 - 89.7	-21.32 to -31.12	MW	3/16/2020	-	**5.53**	-	-	1 U	**1.4**	-	1 U	1 U	-	-	-	-	-
HMW-9D	N	55.32	79.7 - 89.7	-24.38 to -34.38	MW	3/17/2020	-	**7.95**	-	-	1 U	1 U	-	1 U	1 U	-	-	-	-	-
	FD						-	**7.82**	-	-	1 U	1 U	-	1 U	1 U	-	-	-	-	-
HMW-10D	N	48.16	79 - 89	-30.84 to -40.84	MW	3/16/2020	-	**5.22**	-	-	1 U	1 U	-	1 U	1 U	-	-	-	-	-
HMW-12D	N	33.52	82 - 92	-48.48 to -58.48	MW	9/10/2020	-	**1.75**	-	-	1 U	1 U	-	1 U	1 U	-	-	-	-	-
HMW-13D	N	45.3	89.5 - 99.5	-44.20 to -54.20	MW	9/10/2020	-	**5.47**	-	-	1 U	**9.39**	-	1 U	1 U	-	-	-	-	-
HMW-14D	N	46.35	70 - 80	-23.65 to -33.65	MW	9/16/2020	-	**5.91**	-	-	1 U	**1.34**	-	1 U	1 U	-	-	-	-	-

TABLE 7-3n
GROUNDWATER RESULTS COMPARED TO SCREENING LEVELS FOR INORGANIC COMPOUNDS
SEATTLE DOT MERCER PARCELS SITE
SEATTLE, WASHINGTON

Boring/ Well ID	Sample Type	Surface Elevation (ft)	Sample Depth (ft)	Sample Elevation (ft)	Grab or Monitoring Well?	Sample Date	Inorganic Compounds, Total													
							Antimony, Total	Arsenic, Total	Barium, Total	Beryllium, Total	Cadmium, Total	Chromium, Total	Copper, Total	Lead, Total	Mercury, Total	Nickel, Total	Selenium, Total	Silver, Total	Thallium, Total	Zinc, Total
							ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Protective of Drinking Water[a]							**6**	0.58	**2000**	**4**	**5**	**100**	**640**	**15**	2	**100**	**50**	**80**	**0.16**	**4800**
Protective of Indoor Air[a]							NA	NA	NA	NA	NA	NA	NA	NA	**0.83**	NA	NA	NA	NA	NA
Natural Background[a]							NA	**8**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Median PQL[a]							0.2	0.5	0.05	0.06	0.06	0.2	0.1	0.06	0.15	0.15	1	0.25	0.02	5

Notes:

a. **Bold value** identified the selected screening level to determine if a constituent is retained as a COPC. This value is the lowest protective value unless adjusted for an elevated Natural Background or Median PQL.

Bold indicates a detected concentration at or above the laboratory reporting limit.

Highlighted indicates a detected concentration above the screening level.

Elevations relative to North American Vertical Datum of 1988 (NAVD88).

- = Data not available or not applicable.

COPC = Constituent of Potential Concern.

FD = Field duplicate.

ft = feet.

G = Grab groundwater sample.

J = Estimated value.

MW = Monitoring well sample.

N = Primary environmental sample.

NA = Not applicable.

PQL = Practical Quantitation Limit.

U = Not detected at detection limit indicated.

ug/L = microgram per liter.

TABLE 7-4a
IDENTIFICATION OF COCs IN SOIL
SEATTLE DOT MERCER PARCELS SITE
SEATTLE, WASHINGTON

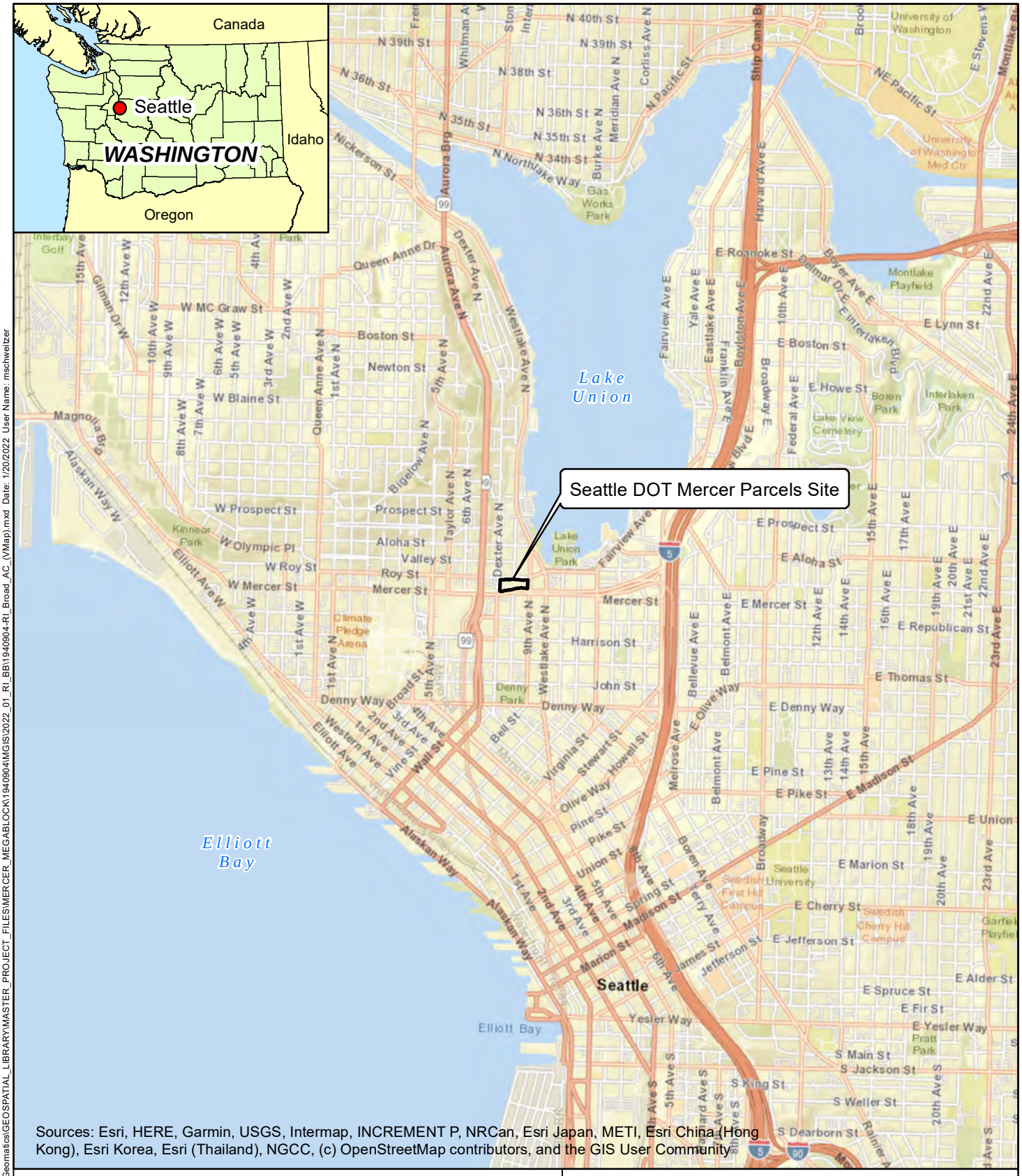
COPC	Screening Levels: Vadose Zone (less than or equal to 25 feet bgs)			Screening Levels: Saturated Zone (greater than 25 feet bgs)			COC?	Rationale
	Direct Contact	Protective of Groundwater Vadose Zone	Natural Background	Direct Contact	Protective of Groundwater Saturated Zone	Natural Background		
Volatile Organic Compounds								
cis-1,2-Dichloroethene	--	--	NA	--	**X**	NA	no	Constituent associated with groundwater plume originating from nearby site being addressed separately.
Methylene Chloride	--	--	NA	--	**X**	NA	no	1. Constituent does not pose an unacceptable direct contact risk. 2. Constituent does not pose an unacceptable risk to drinking water. Although constituent exceeds screening level in soil indicating it could potentially cause an exceedance of drinking water levels in groundwater, empirical groundwater data indicates that methylene chloride is not a COC in groundwater. This indicates that the soil-to-drinking-water pathway is not complete and methylene chloride in soil does not pose an unacceptable risk to drinking water. 3. Constituent is a common laboratory contaminant and is likely a false positive.
Tetrachloroethene	--	--	NA	--	**X**	NA	no	Constituent associated with groundwater plume originating from nearby site being addressed separately.
Trichloroethene	--	--	NA	--	**X**	NA	no	Constituent associated with groundwater plume originating from nearby site being addressed separately.
Vinyl chloride	--	--	NA	--	**X**	NA	no	Constituent associated with groundwater plume originating from nearby site being addressed separately.
Semi-Volatile Organic Compounds								
Benzo(a)pyrene	**X**	--	NA	--	--	NA	yes	Retained as COC
cPAHs-TEQ	**X**	**X**	NA	--	--	NA	yes	Retained as COC
Total Petroleum Hydrocarbons								
Gasoline Range Organics	--	**X**	NA	--	--	NA	yes	Retained as COC
Inorganic Compounds								
Arsenic	**X**	**X**	**X**	**X**	**X**	**X**	yes	Retained as COC
Lead	**X**	--	**X**	--	--	--	yes	Retained as COC
Selenium	--	--	NA	--	**X**	NA	no	1. Constituent does not pose an unacceptable direct contact risk. 2. Constituent does not pose an unacceptable risk to drinking water. Although constituent exceeds screening level in soil indicating it could potentially cause an exceedance of drinking water levels in groundwater, empirical groundwater data indicates that selenium is not a COC in groundwater. This indicates that the soil-to-drinking-water pathway is not complete and selenium in soil does not pose an unacceptable risk to drinking water. 3. There are no known historical sources or releases of constituent on the Property. The greatest proportion of selenium released to the environment is coal fly ash. Other anthropogenic emission sources of selenium include coal and oil combustion facilities, selenium refining factories, base metal smelting and refining factories, mining and milling operations, and end-product manufacturers (e.g., some semiconductor manufacturers) (ATSDR 2003). None of these activities are known or suspected of having taken place on the property.

Notes:
Screening levels provided by Ecology (November 17, 2020).
Pink = COC.
X = Maximum detected conctration exceeded available screening level.
-- = Maximum detected concentration below available screening level.
bgs = Below ground surface.
COC = Constituent of Concern.
COPC = Constituent of Potential Concern.
cPAHs-TEQ = Carcinogenic polycyclic aromatic hydrocarbons toxic equivalency.
NA = No screening level available.

TABLE 7-4b
IDENTIFICATION OF COCs IN GROUNDWATER
SEATTLE DOT MERCER PARCELS SITE
SEATTLE, WASHINGTON

COPC	Screening Levels			COC?	Rationale
	Protective of Drinking Water	Protective of Indoor Air	Natual Background		
Volatile Organic Compounds					
1,1-Dichloroethene	**X**	--	NA	no	Constituent associated with groundwater plume originating from nearby site being addressed separately.
1,2-Dichloroethane	**X**	**X**	NA	no	Low frequency of detection (only one sample); low maximum exceedance factor (<1.7x most protective screening level; and never detected in soil).
Benzene	**X**	**X**	NA	yes	Retained as COC
cis-1,2-Dichloroethene	**X**	NA	NA	no	Constituent associated with groundwater plume originating from nearby site being addressed separately.
Tetrachloroethene	**X**	**X**	NA	no	Constituent associated with groundwater plume originating from nearby site being addressed separately.
Trichloroethene	**X**	**X**	NA	no	Constituent associated with groundwater plume originating from nearby site being addressed separately.
Vinyl chloride	**X**	**X**	NA	no	Constituent associated with groundwater plume originating from nearby site being addressed separately.
Methylene Chloride	**X**	**X**	NA	no	Frequent lab contaminant and low frequency of detection. Exceedance appears to be an anomaly.
Semi-Volatile Organic Compounds					
1-Methylnaphthalene	**X**	NA	NA	no	Low frequency of detection, low exceedance factor, and co-occurs with high gasoline range organics (which is a COC).
Total Petroleum Hydrocarbons					
Diesel Range Organics	**X**	NA	NA	yes	Retained as COC
Gasoline Range Organics	**X**	NA	NA	yes	Retained as COC
Heavy Oil Range Organics	**X**	NA	NA	no	Low frequency of detection, low frequency of exceedance, low exceedance factor. Detections appears to be biased high due to grab groundwater sample. Heavy oil was not detected in soil samples from nearby borings, indicating the groundwater exceedance is not associated with a release from the Property, as an on-Property source to groundwater would be expected to have left residual heavy oil in shallow soil as it migrated downward to the water table.
Inorganic Compounds					
Arsenic	**X**	NA	**X**	no	Constituent is associated with background conditions.
Barium	**X**	NA	NA	no	High levels of total metals associated with excess turbidity and are not representative of actual transport/exposure potential.
Cadmium	**X**	NA	NA	no	High levels of total metals associated with excess turbidity and are not representative of actual transport/exposure potential.
Chromium	**X**	NA	NA	no	High levels of total metals associated with excess turbidity and are not representative of actual transport/exposure potential.
Lead	**X**	NA	NA	no	High levels of total metals associated with excess turbidity and are not representative of actual transport/exposure potential.
Mercury	**X**	**X**	NA	no	High levels of total metals associated with excess turbidity and are not representative of actual transport/exposure potential.

Notes:
Screening levels provided by Ecology (November 17, 2020).
Pink = COC.
X = Maximum detected conctration exceeded available screening level.
-- = Maximum detected concentration below available screening level.
COC = Constituent of Concern.
COPC = Constituent of Potential Concern.
NA = No screening level available.



0 0.25 0.5 1 Miles

N

Seattle DOT Mercer Parcels Site
Seattle, Washington

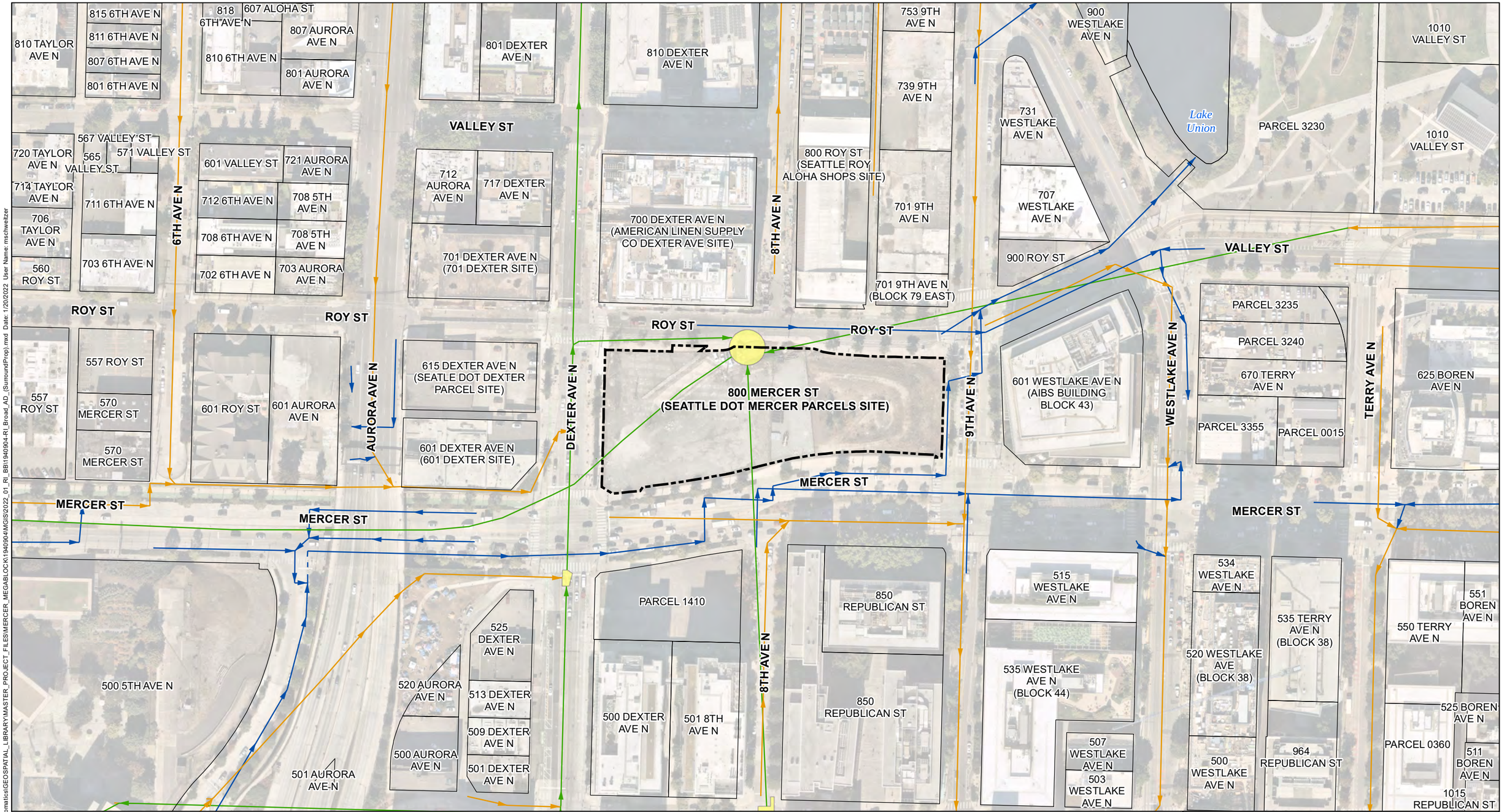
Vicinity Map

19409-04 01/22

HARTCROWSER
A division of Haley & Aldrich

Figure
1-1

Document Path: \\haleyaldrich.com\share\pdx_data\Geomatics\GEOSPATIAL_LIBRARY\MASTER_PROJECT_FILES\MERCER_MEGABLOCK\1940904\MGIS\2022_01_RI_BB\1940904-RI_Broad_AC_(VMap).mxd Date: 1/20/2022 User Name: mschweitzer



Legend

- Other Parcel Boundary
- Property Boundary

Underground Sewer Lines

- King County Main
- SPU Drainage Main
- SPU Combined Main

- King County Main Facility Structures

0 75 150 300 Feet

N

Sources: Aerial photograph provided by Nearmap, dated September 21, 2021. Address information obtained from King County GIS Open Data portal's Parcel Address Area shapefile, published April 4, 2019. Stormwater line data obtained from City of Seattle ArcGIS Online data, published August 6, 2019.

Seattle DOT Mercer Parcels Site
Seattle, Washington

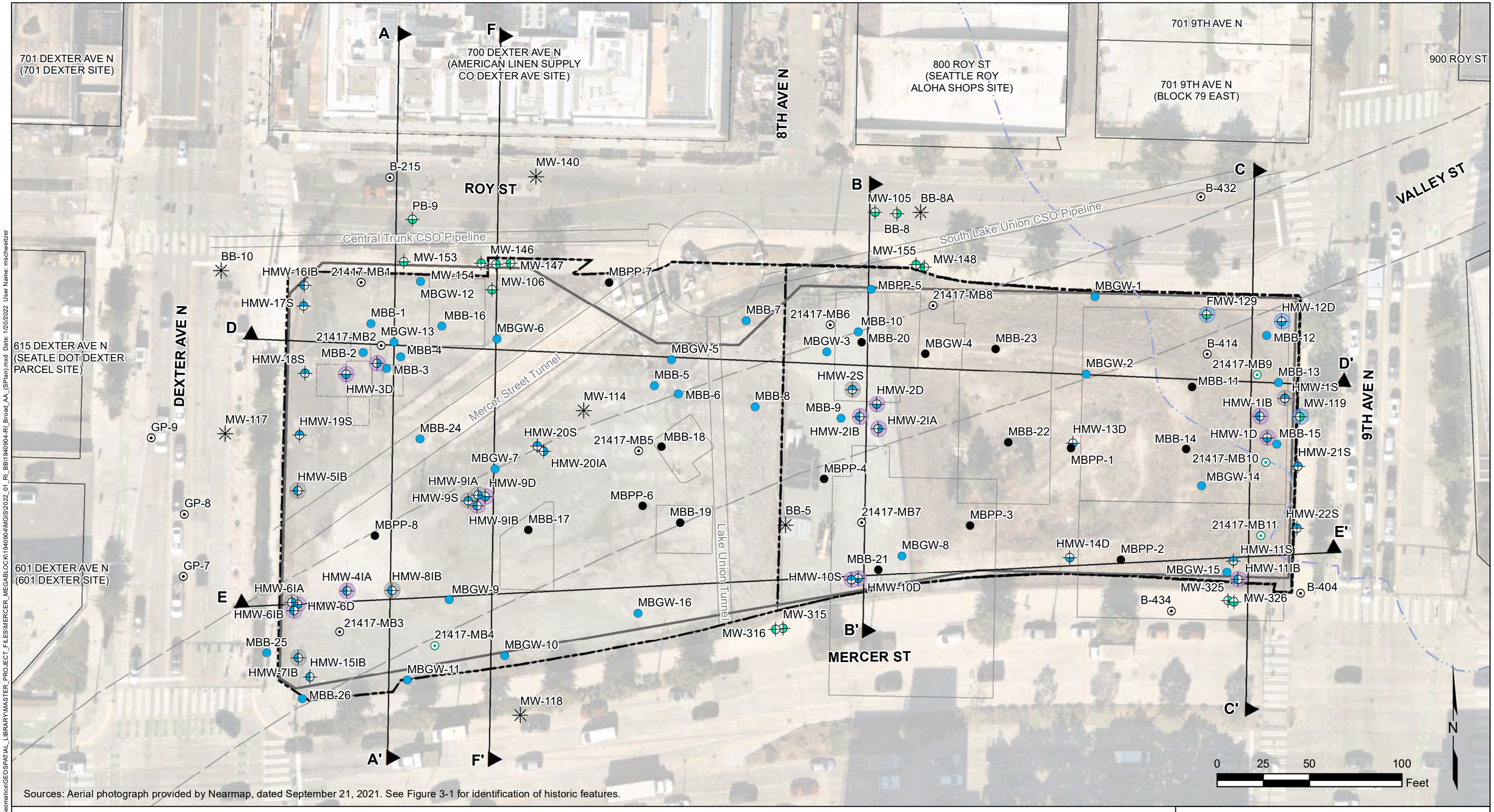
Site Conditions Map

19409-04 01/22

HARTCROWSER
A division of Haley & Aldrich

Figure
2-1

Document Path: \\haleyaldrich.com\share\pdx_data\Geomatics\GEOSPATIAL_LIBRARY\MASTER_PROJECT_FILES\MERCER_MEGABLOCK\19409041\MGIS\2022_01_RI_BB\19409041_01_RI_BB\19409041_01_RI_Broad_AD_(SurroundProp).mxd Date: 1/20/2022 User Name: mschweltzer



Sources: Aerial photograph provided by Nearmap, dated September 21, 2021. See Figure 3-1 for identification of historic features.

Legend

RI Investigations

- Soil Boring
- Soil Boring with Grab Groundwater Sample
- Shallow Zone Monitoring Well
- Intermediate A Zone Monitoring Well
- Intermediate B Zone Monitoring Well
- Deep Zone Monitoring Well
- Slug Test Performed
- Slug Test Performed & Transducer/Datalogger Deployed
- Transducer/Datalogger Deployed
- Potential Historical Contaminant Source

Other Investigations

- Soil Boring
- Soil Boring with Grab Groundwater Sample
- Shallow Zone Monitoring Well
- Intermediate A Zone Monitoring Well
- Intermediate B Zone Monitoring Well
- Deep Zone Monitoring Well
- Abandoned or Decommissioned Monitoring Well
- Cross Section
- Excavation Limits (Shoring Permit Plans by NBBJ dated 12/17/2020)
- King County Main Facility Structures
- Other Parcel Boundary
- Property Boundary

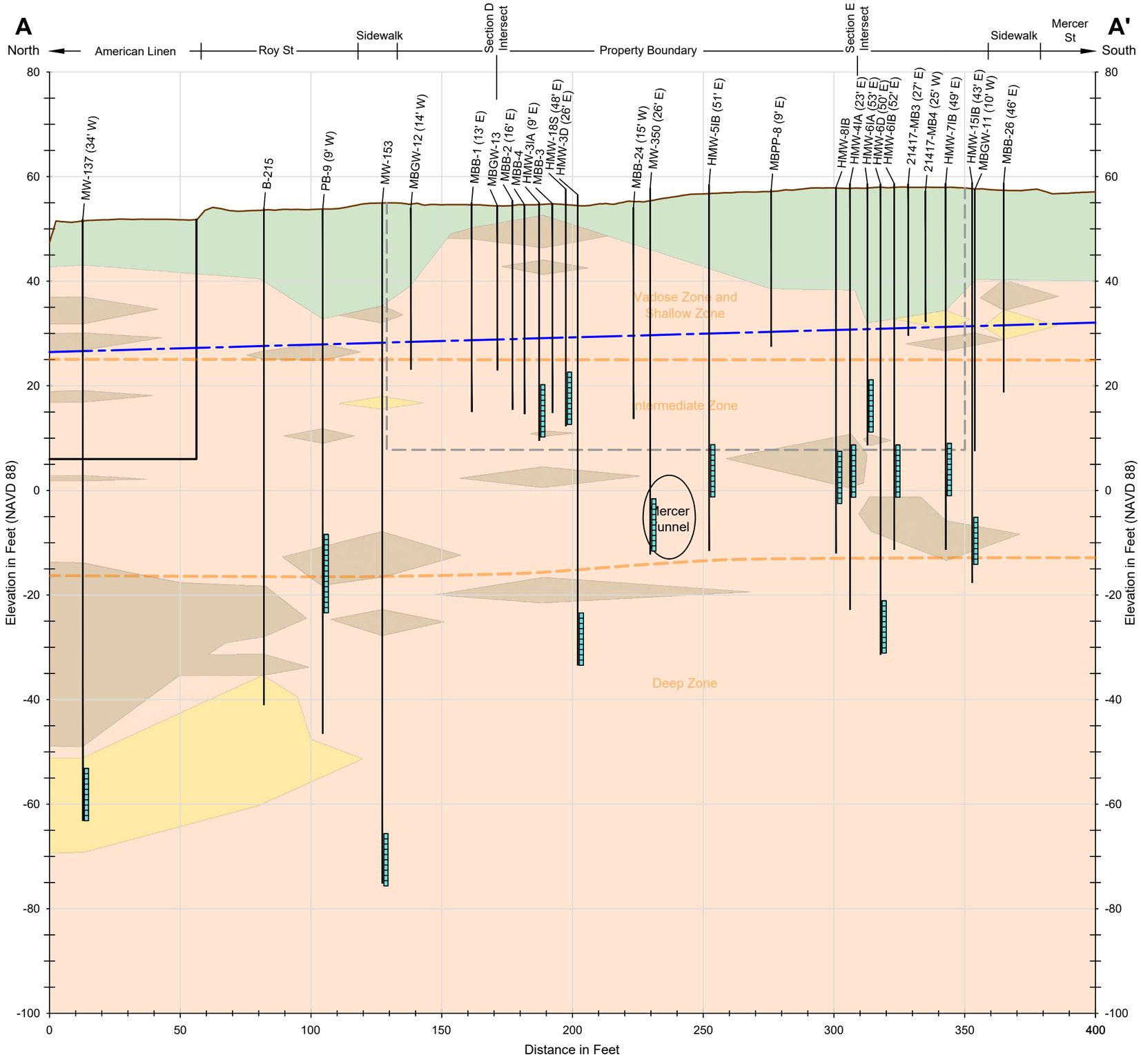
Seattle DOT Mercer Parcels Site
Seattle, Washington

Investigation Locations

19409-04 01/22

HARTCROWSER
A division of Haley & Aldrich

Figure
4-1



Explorations MBB-4, HMW-3IA, MBB-3, HMW-18S, HMW-3D, HMW-8IB, HMW-6D, and HMW-6IB have been shifted horizontally for visual clarity.

Legend

Boring Name with Offset — MW-1(15' W)

Boring Location

Approximate Average Water Table (25ft bgs)

Inferred Groundwater Zone Boundary

Screen Interval

Approximate Limits of Proposed Excavation at Seattle DOT Mercer Parcels Site ("Schematic Design, ARE Mercer Blocks," NBBJ, 04/20/2020)

Approximate Limits of 2020 Building Excavation at American Linen Site

Geologic Units (Predominant Component)

- Fill
- Clean Sand and/or Gravel
- Silty Sand and Silty Gravel
- Silt and/or Clay with or without Sand

INSET MAP

Horizontal Scale in Feet
0 40 80
0 20 40
Vertical Scale in Feet
Vertical Exaggeration x 2

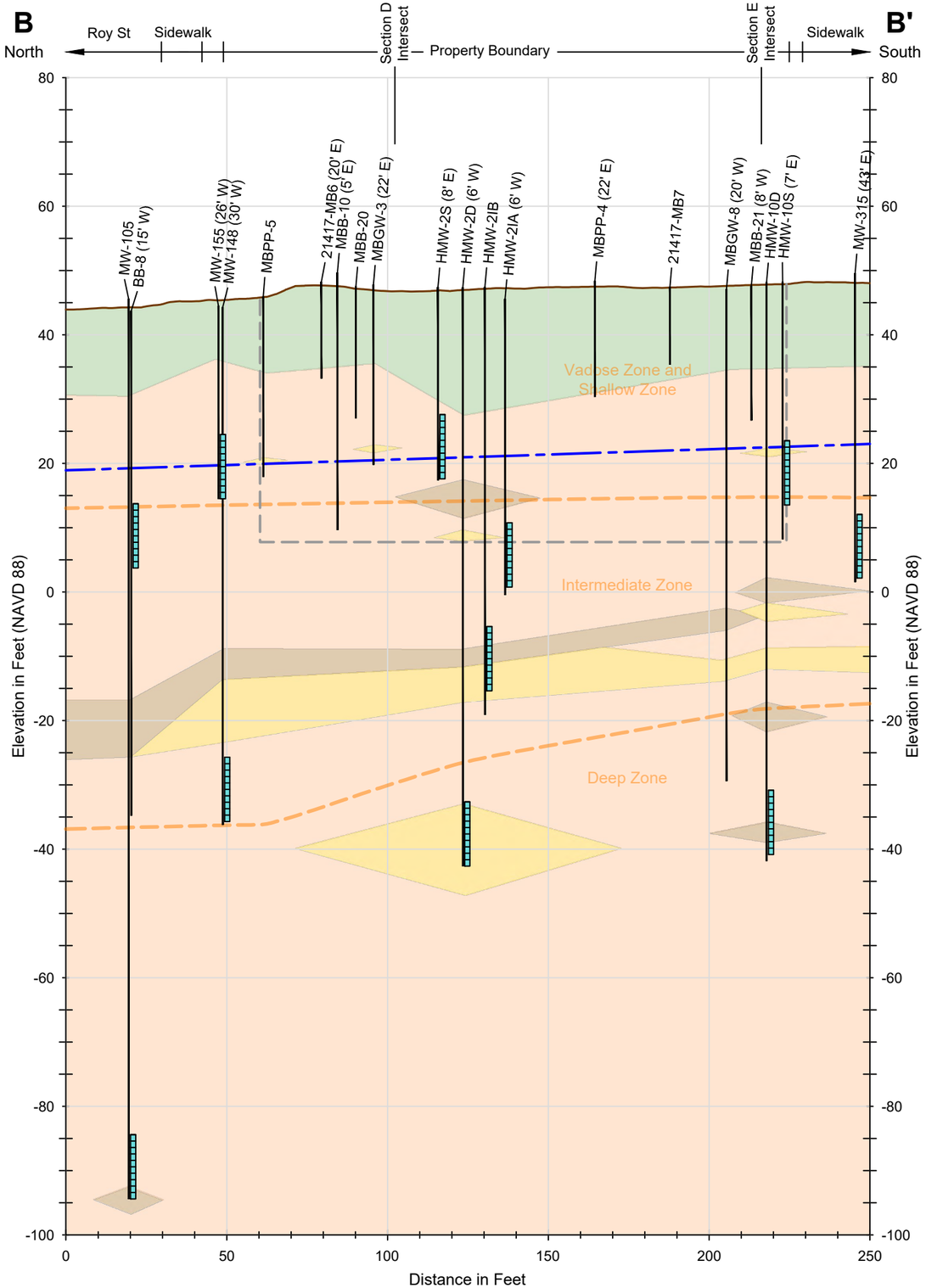
Seattle DOT Mercer Parcels Site
Seattle, Washington

Geological Cross Section A-A'

19409-04 01/22

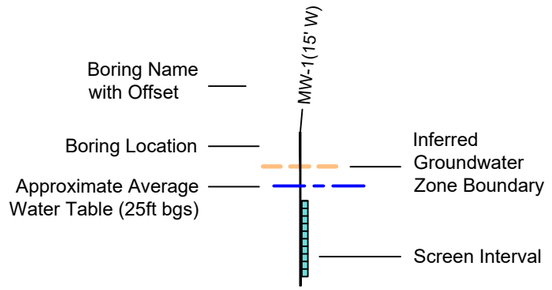
HARTCROWSER A division of Haley & Aldrich

Figure **4-2a**



Explorations 21417-MB6 and HMW-10S have been shifted horizontally for visual clarity.

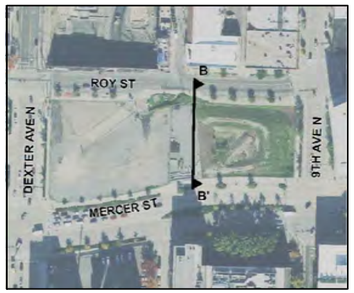
Legend



Approximate Limits of Proposed Excavation at Seattle DOT Mercer Parcels Site ("Schematic Design, ARE Mercer Blocks," NBBJ, 04/20/2020)

Geologic Units (Predominant Component)

- Fill
- Clean Sand and/or Gravel
- Silty Sand and Silty Gravel
- Silt and/or Clay with or without Sand



INSET MAP

Horizontal Scale in Feet
0 40 80
0 20 40
Vertical Scale in Feet
Vertical Exaggeration x 2

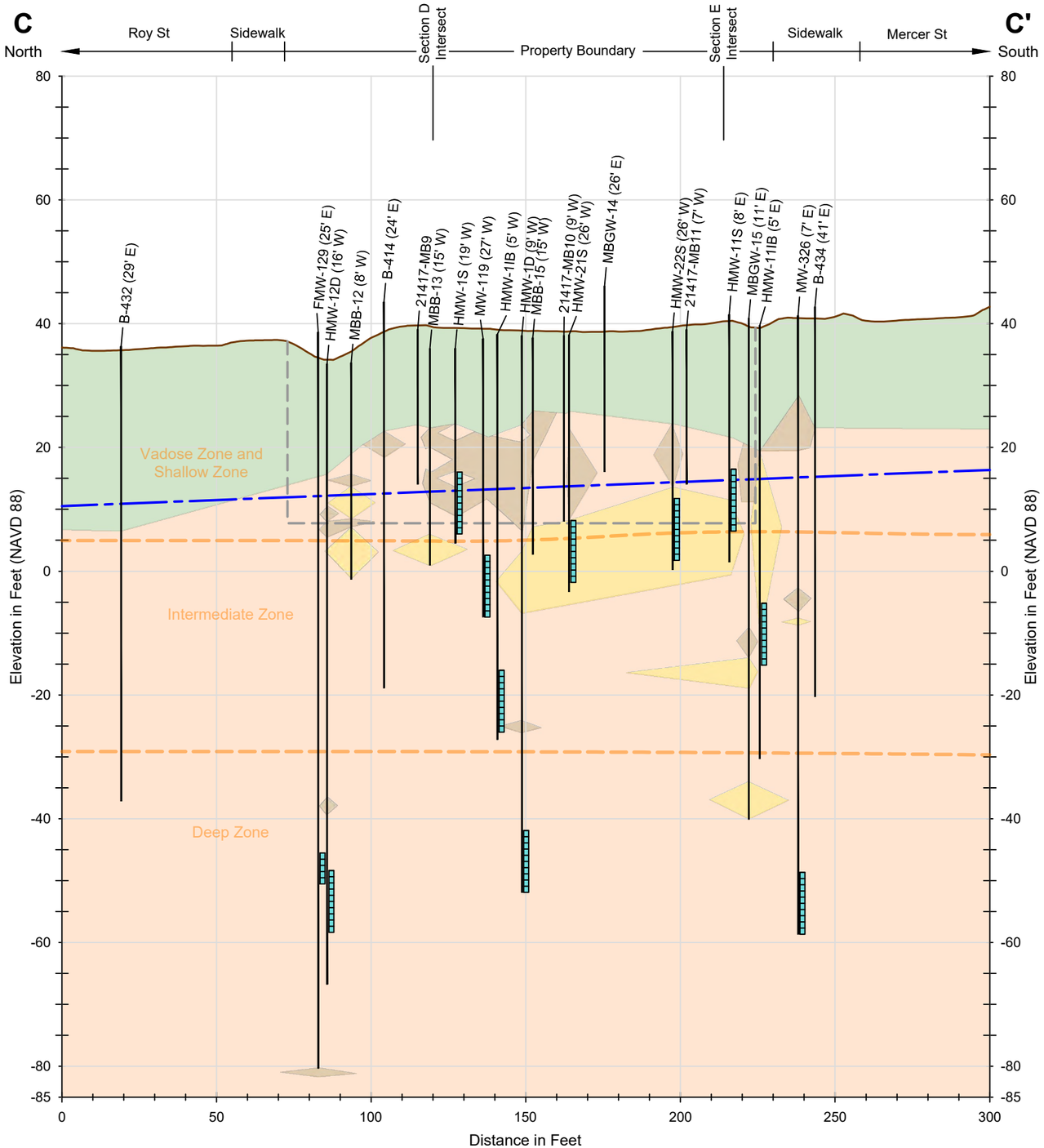
Seattle DOT Mercer Parcels Site
Seattle, Washington

Geological Cross Section B-B'

19409-04 01/22

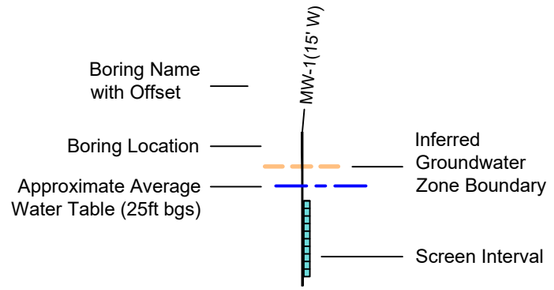
HARTCROWSER
A division of Haley & Aldrich

Figure
4-2b



Explorations MW-119 and HMW-1IB have been shifted horizontally for visual clarity.

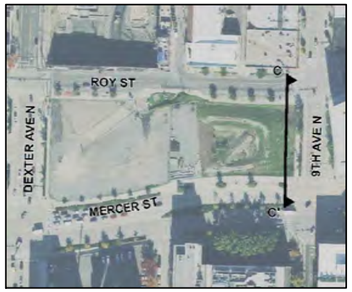
Legend



Approximate Limits of Proposed Excavation at Seattle DOT Mercer Parcels Site ("Schematic Design, ARE Mercer Blocks," NBBJ, 04/20/2020)

Geologic Units (Predominant Component)

- Fill
- Clean Sand and/or Gravel
- Silty Sand and Silty Gravel
- Silt and/or Clay with or without Sand



INSET MAP

Horizontal Scale in Feet
0 40 80
0 20 40
Vertical Scale in Feet
Vertical Exaggeration x 2

Seattle DOT Mercer Parcels Site
Seattle, Washington

Geological Cross Section C-C'

19409-04 01/22

HARTCROWSER
A division of Haley & Aldrich

Figure
4-2c

D West Dexter Ave — Sidewalk — Section A Intersect — Section F Intersect — Property Boundary — Section B Intersect — Historic Broad Street Extents — Section C Intersect — Sidewalk — 9th Ave N East **D'**

Elevation in Feet (NAVD 88)

Distance in Feet

HMW-18S (17' N)
HMW-3D (17' N)
MBB-2
MBB-1 (11' S)
HMW-3A (10' N)
MBB-3 (13' N)
MBGW-13
MBB-4 (6' N)
MBB-16 (11' S)
MW-106 (32' S)
MBGW-6 (6' S)
MBB-5 (16' N)
MBGW-5
MBB-6 (20' N)
MBB-7 (21' S)
MBB-8 (25' N)
MBGW-3 (6' S)
HMW-2S (13' N)
MBB-10 (18' S)
MBB-20 (12' S)
HMW-2D (21' N)
MBGW-4 (8' S)
21417-MB8 (34' S)
MBB-23 (12' S)
MBGW-2
MBB-11
B-414 (14' S)
21417-MB9
HMW-1IB (18' N)
HMW-1D (29' N)
MBB-13
HMW-1S (8' N)
MW-119 (17' N)

Vadose Zone and Shallow Zone

Intermediate Zone

Deep Zone

Mercer Tunnel

Lake Union Tunnel

Horizontal Scale in Feet
0 40 80
0 20 40
Vertical Scale in Feet
Vertical Exaggeration x 2

Legend

Boring Name with Offset — MW-1(15' W)

Boring Location

Approximate Average Water Table (25ft bgs)

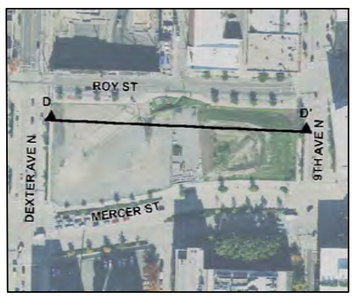
Inferred Groundwater Zone Boundary

Screen Interval

Geologic Units (Predominant Component)

- Fill
- Clean Sand and/or Gravel
- Silty Sand and Silty Gravel
- Silt and/or Clay with or without Sand

Approximate Limits of Proposed Excavation at Seattle DOT Mercer Parcels Site ("Schematic Design, ARE Mercer Blocks," NBBJ, 04/20/2020)



INSET MAP

Explorations MBB-1, MBB-2, MBB-4, and MBGW-13 have been shifted horizontally for visual clarity.

Seattle DOT Mercer Parcels Site
Seattle, Washington

Geological Cross Section D-D'

19409-04 01/22

HARTCROWSER A division of Haley & Aldrich

Figure **4-2d**

E West — Dexter Ave — Sidewalk — Section A Intersect — Section F Intersect — Property Boundary — Section B Intersect — Property Boundary — Section C Intersect — Sidewalk — 9th Ave N — **E'** East

Elevation in Feet (NAVD 88)

Distance in Feet

Vadose Zone and Shallow Zone

Intermediate Zone

Deep Zone

Lake Union Tunnel

MBB-25 (26' N)
HMW-6IA
HMW-6IB
HMW-7IB (29' N)
HMW-6D
MBB-26 (51' N)
HMW-15IB (40' N)
21417-MB3 (16' N)
HMW-4IA (6' S)
MBPP-8 (35' S)
HMW-8IB
21417-MB4 (26' N)
MBGW-9
MBGW-16 (14' N)
MBB-19 (34' S)
MW-316 (27' N)
MW-315 (26' N)
BB-5 (30' S)
HMW-10S
HMW-10D
21417-MB7 (29' S)
MBB-21
MBGW-8 (10' S)
MBPP-3 (24' S)
HMW-14D
MBPP-2
B-434 (27' N)
MW-325 (23' N)
MBGW-15 (8' N)
MW-326 (24' N)
HMW-11S
HMW-11IB (12' N)
21417-MB11 (11' S)
B-404 (21' N)
HMW-22S (14' S)

Horizontal Scale in Feet
0 40 80
0 20 40
Vertical Scale in Feet
Vertical Exaggeration x 2

Legend

Boring Name with Offset — MW-1(15' W)

Boring Location

Approximate Average Water Table (25ft bgs)

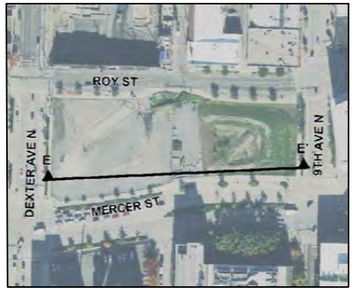
Inferred Groundwater Zone Boundary

Screen Interval

Geologic Units (Predominant Component)

- Fill
- Clean Sand and/or Gravel
- Silty Sand and Silty Gravel
- Silt and/or Clay with or without Sand

Approximate Limits of Proposed Excavation at Seattle DOT Mercer Parcels Site ("Schematic Design, ARE Mercer Blocks," NBBJ, 04/20/2020)



INSET MAP

Explorations HMW-6IA, HMW-6IB, HMW-6D, MBB-26, HMW-15IB, HMW-10S, HMW-11IB, HMW-11S, MBGW-15, and MW-325 have been shifted horizontally for visual clarity.

Seattle DOT Mercer Parcels Site
Seattle, Washington

Geological Cross Section E-E'

19409-04 01/22

HARTCROWSER A division of Haley & Aldrich

Figure **4-2e**

F

North — American Linen — Roy St — Sidewalk — Section D Intersect — Property Boundary — Historic Broad Street Extents — Section E Intersect — Sidewalk — Mercer St — South

F'

MW-137 (21' E)
MW-140 (21' W)
MW-147 (7' W)
MW-154 (8' E)
MW-146
MW-106
MBGW-6
MW-114 (10' W)
MBB-24 (40' E)
HMW-20S (23' W)
HMW-20IA (27' W)
MBGW-7
HMW-9IA (8' E)
HMW-9D
HMW-9S (13' E)
HMW-9IB (8' E)
MBB-17 (19' W)
MBGW-9 (23' E)
MBGW-10 (8' W)
MW-118 (17' W)

Vadose Zone and Shallow Zone

Intermediate Zone

Mercer Tunnel

Deep Zone

Elevation in Feet (NAVD 88)

80, 60, 40, 20, 0, -20, -40, -60, -80, -100

0, 50, 100, 150, 200, 250, 300, 350, 400

Distance in Feet

Explorations MW-146, MW-147, HMW-9D, HMW-9ID, HMW-9S, HMW-20IA, and HMW-20S have been shifted horizontally for visual clarity.

Legend

Boring Name with Offset — MW-1(15' W)

Boring Location

Approximate Average Water Table (25ft bgs)

Inferred Groundwater Zone Boundary

Screen Interval

Approximate Limits of Proposed Excavation at Seattle DOT Mercer Parcels Site ("Schematic Design, ARE Mercer Blocks," NBBJ, 04/20/2020)

Approximate Limits of 2020 Building Excavation at American Linen Site

Geologic Units (Predominant Component)

- Fill
- Clean Sand and/or Gravel
- Silty Sand and Silty Gravel
- Silt and/or Clay with or without Sand

INSET MAP

Horizontal Scale in Feet
0 40 80
0 20 40
Vertical Scale in Feet
Vertical Exaggeration x 2

Seattle DOT Mercer Parcels Site
Seattle, Washington

Geological Cross Section F-F'

19409-04 01/22

HARTCROWSER A division of Haley & Aldrich

Figure **4-2f**

File: \\haleyaldrich.com\share\sea_projects\Notebooks\190409_Mercer_Mega_Block_Remedial_Investigations\CAD\190409-006 (XSec-Mercer).dwg Layout:RI-SEC_BroadF Date: 01-25-2022 Author: mschweitzer

MBB-1	02/27/2020 5 ft el 50.02	02/27/2020 10 ft el 45.02	02/27/2020 15 ft el 40.02	02/27/2020 20 ft el 35.02	02/27/2020 25 ft el 30.02
GRO	5 U	5 U	7.7	570	5 U

MBGW-13	03/14/2019 5 ft el 49.47	03/14/2019 10 ft el 44.47	03/14/2019 15 ft el 39.47	03/14/2019 20 ft el 34.47
GRO	5 U	730 J	16	5 U

MBB-16	09/02/2020 5 ft el 48.7	09/02/2020 10 ft el 43.7	09/02/2020 15 ft el 38.7	09/02/2020 20 ft el 33.7
GRO	1200	200	20	5 U

HMW-18S	09/03/2020 5 ft el 52.61	09/03/2020 10 ft el 47.61	09/03/2020 15 ft el 42.61	09/03/2020 20 ft el 37.61	09/03/2020 25 ft el 32.61
GRO	5 U	45	5 U	5 U	5 U

MBB-3	02/27/2020 5 ft el 49.84	02/27/2020 10 ft el 44.84	02/27/2020 15 ft el 39.84	02/27/2020 20 ft el 34.84	02/27/2020 25 ft el 29.84
GRO	5 U	350	5 U	5 U	52

MBB-4	02/27/2020 5 ft el 49.61	02/27/2020 10 ft el 44.61	02/27/2020 15 ft el 39.61	02/27/2020 20 ft el 34.61	02/27/2020 25 ft el 29.61
GRO	5 U	5 U/7.3	5 U	210	5 U

GRO IN SOIL (mg/kg)
- ≥ 300
- ≥ 60 TO 300
- ≥ 30 TO 60
- ND/0 TO < 30
- NO DATA

SAMPLE DEPTH INTERVALS
- ≤ 5 FT BELOW GROUND SURFACE (BGS)
- 5 TO 10
- 10 TO 15
- 15 TO 20
- 20 TO 25
- > 25

- EXCAVATION LIMITS; TO BE EXCAVATED DOWN TO ELEVATION 8 FT OR LOWER
- POTENTIAL HISTORICAL CONTAMINANT SOURCE
- PROPERTY BOUNDARY
- FORMER LAKE UNION SHORELINE
- FORMER BROAD STREET AND 8TH AVENUE N, THROUGH 1950s
- FORMER BROAD STREET 1958-2012

SOME SAMPLING LOCATIONS MAY HAVE BEEN SLIGHTLY OFFSET ON THIS MAP TO REDUCE SYMBOL OVERLAP

RED TEXT INDICATES EXCEEDANCE OF PROTECTIVE OF GROUNDWATER SCREENING LEVELS

SCREENING LEVELS PROVIDED BY ECOLOGY (NOVEMBER 17, 2020)

CONCENTRATIONS IN MILLIGRAMS PER KILOGRAM (mg/kg)

DEPTH IN FEET BELOW GROUND SURFACE (BGS)

ELEVATION IN FEET (NAVD 88); EL. = GROUND SURFACE ELEVATION

U = NON-DETECT AT DETECTION LIMIT AS INDICATED
J = ESTIMATED VALUE
/ = MULTIPLE RESULTS INDICATE THAT A FIELD DUPLICATE WAS TAKEN

AERIAL IMAGERY SOURCE: EAGLEVIEW

SCREENING LEVELS FOR GASOLINE RANGE ORGANICS (GRO) IN SOIL (mg/kg)	
ZONE	PROTECTIVE OF GW
Vadose (0 to 25 ft bgs) and Saturated (>25 ft bgs)	30

Seattle DOT Mercer Parcels Site
Seattle, Washington

GRO Distribution in Soil

19409-04 06/21

HARTCROWSER A division of Haley & Aldrich

Figure **7-5a**

GIS FILE PATH: C:\Users\craumann\Desktop\LOCAL_DATA\135568_Broad_Block\Maps\2020_12_BB_R#\135568_0\MB_BB_SOIL_SMARTIES_R.mxd - USER: craumann - LAST SAVED: 6/22/2021 3:24:13 PM

MBB-25	10/30/2020 5 ft el 53.63	10/30/2020 10 ft el 48.63	10/30/2020 15 ft el 43.63	10/30/2020 20 ft el 38.63	10/30/2020 25 ft el 33.63
cPAHs-TEQ	0.002 U	0.09	0.002 U	0.00041 U/0.00041 U	0.32

HMW-4IA	03/07/2019 7.5 ft el 51.2
cPAHs-TEQ	0.36

MBB-23	09/21/2020 5 ft el 42.18	09/21/2020 10 ft el 37.18	09/21/2020 15 ft el 32.18	09/21/2020 20 ft el 27.18	09/21/2020 25 ft el 22.18
cPAHs-TEQ	0.0097 U	2.4	0.0019 U	0.0019 U	0.0019 U

MBB-22	09/21/2020 5 ft el 37.05	09/21/2020 15 ft el 27.05	09/21/2020 20 ft el 22.05	09/21/2020 25 ft el 17.05
cPAHs-TEQ	0.42	0.0019 U	0.0019 U	0.0019 U

HMW-7IB	02/28/2020 5 ft el 53.69	02/28/2020 10 ft el 48.69	02/28/2020 15 ft el 43.69	02/28/2020 20 ft el 38.69	02/28/2020 25 ft el 33.69
cPAHs-TEQ	0.089	0.017	0.44	0.016	0.072

cPAHs-TEQ IN SOIL (mg/kg)

- ≥ 1.90
- ≥ 0.38 TO 1.90
- ≥ 0.19 - 0.38
- ND/0 TO < 0.19
- NO DATA

SAMPLE DEPTH INTERVALS

- ≤ 5 FT BELOW GROUND SURFACE (BGS)
- 5 TO 10
- 10 TO 15
- 15 TO 20
- 20 TO 25
- > 25

- EXCAVATION LIMITS; TO BE EXCAVATED DOWN TO ELEVATION 8 FT OR LOWER
- POTENTIAL HISTORICAL CONTAMINANT SOURCE
- PROPERTY BOUNDARY
- FORMER LAKE UNION SHORELINE
- FORMER BROAD STREET AND 8TH AVENUE N, THROUGH 1950s
- FORMER BROAD STREET 1958-2012

SOME SAMPLING LOCATIONS MAY HAVE BEEN SLIGHTLY OFFSET ON THIS MAP TO REDUCE SYMBOL OVERLAP

RED TEXT INDICATES EXCEEDANCE OF DIRECT CONTACT OR PROTECTIVE OF GROUNDWATER SCREENING LEVELS

SCREENING LEVELS PROVIDED BY ECOLOGY (NOVEMBER 17, 2020)

CONCENTRATIONS IN MILLIGRAMS PER KILOGRAM (mg/kg)

DEPTH IN FEET BELOW GROUND SURFACE (BGS)

ELEVATION IN FEET (NAVD 88); EL. = GROUND SURFACE ELEVATION

U = NON-DETECT AT DETECTION LIMIT AS INDICATED
J = ESTIMATED VALUE
/ = MULTIPLE RESULTS INDICATE THAT A FIELD DUPLICATE WAS TAKEN

AERIAL IMAGERY SOURCE: EAGLEVIEW

SCREENING LEVELS FOR cPAHs-TEQ IN SOIL (mg/kg)		
ZONE	DIRECT CONTACT	PROTECTIVE OF GW
Vadose (0 to 25 ft bgs)	0.19	0.45
Saturated (>25 ft bgs)	0.19	0.022

Seattle DOT Mercer Parcels Site
Seattle, Washington

cPAH Distribution in Soil

19409-04 06/21

HARTCROWSER
A division of Haley & Aldrich

Figure
7-5b

HMW-6D	03/02/2020 5 ft el 53.58	03/02/2020 10 ft el 48.58	03/02/2020 15 ft el 43.58	03/02/2020 25 ft el 33.58	03/02/2020 30 ft el 28.58
As	16.4	21.8	24.4	18	1.61/1.42

HMW-6IB	03/03/2020 5 ft el 53.67	03/03/2020 10 ft el 48.67	03/03/2020 15 ft el 43.67	03/03/2020 20 ft el 38.67	03/03/2020 25 ft el 33.67
As	13.4	15.9/14.9	22.2	25.6	2.23

MBPP-8	03/08/2019 14 ft el 43.52
As	16

MBB-5	03/02/2020 5 ft el 45.53	03/02/2020 10 ft el 40.53	03/02/2020 15 ft el 35.53	03/02/2020 20 ft el 30.53	03/02/2020 25 ft el 25.53
As	23.2	6.56	1.81	1.34	1.51

MBB-18	09/01/2020 5 ft el 46.33	09/01/2020 10 ft el 41.33	09/01/2020 15 ft el 36.33	09/01/2020 20 ft el 31.33
As	14.2	6.2	1.13	1.61

MBB-6	03/03/2020 5 ft el 45.33	03/03/2020 10 ft el 40.33	03/03/2020 15 ft el 35.33	03/03/2020 20 ft el 30.33	03/03/2020 25 ft el 25.33
As	21.2	9.18	1.84	2.08	1.6

MBB-8	02/26/2020 7 ft el 42.66	02/26/2020 10 ft el 39.66	02/26/2020 15 ft el 34.66	02/26/2020 20 ft el 29.66	02/26/2020 25 ft el 24.66
As	21.9	1.75	1.7/1.6	1.6	1.13

MBB-9	02/26/2020 5.5 ft el 42.05	02/26/2020 10 ft el 37.55	02/26/2020 15 ft el 32.55	02/26/2020 20 ft el 27.55	02/26/2020 25 ft el 22.55
As	9.58	1.94	1.72	1.7	1.27

21417-MB10	05/11/2017 28 ft el 10.08
As	7.75

HMW-6IA	03/02/2020 5 ft el 53.65	03/02/2020 10 ft el 48.65	03/02/2020 15 ft el 43.65	03/02/2020 20 ft el 38.65	03/02/2020 30 ft el 28.65
As	15.6	13.6	18.6	18.3	3.1

HMW-7IB	02/28/2020 5 ft el 53.69	02/28/2020 10 ft el 48.69	02/28/2020 15 ft el 43.69	02/28/2020 20 ft el 38.69	02/28/2020 25 ft el 33.69
As	15.3	13.8	19.9	25.6	8.13/8.49

HMW-9IB	02/28/2020 5 ft el 50.36	02/28/2020 13 ft el 42.36	02/28/2020 15 ft el 40.36	02/28/2020 20 ft el 35.36	02/28/2020 25 ft el 30.36
As	7.75	1.64	17.8	1.6	1.26

HMW-8IB	03/02/2020 5 ft el 52.97	03/02/2020 10 ft el 47.97	03/02/2020 15 ft el 42.97	03/02/2020 20 ft el 37.97	03/02/2020 25 ft el 32.97
As	21.4	19.5	17.1	4.86	1.12/1.06

HMW-9D	02/27/2020 5 ft el 50.32	02/27/2020 10 ft el 45.32	02/27/2020 15 ft el 40.32	02/27/2020 20 ft el 35.32	02/27/2020 25 ft el 30.32
As	1.78	1.38	15.3	2.55	1.46

HMW-9S	03/02/2020 5 ft el 50.39	03/02/2020 14 ft el 41.39	03/02/2020 17 ft el 38.39	03/02/2020 20 ft el 35.39	03/02/2020 25 ft el 30.39
As	2.64	14.5	17.7	1.3	1.36

ROY ST
8TH AVE N
DEXTER AVE N
MERCER ST

21417-MB1 EL 55.4
MBGW-12 EL 54.0
HMW-17S EL 57.7
MBB-1 EL 55.0
MBB-16 EL 53.7
MBGW-6 EL 52.5
MBB-2 EL 55.5
MBB-4 EL 54.6
HMW-18S EL 57.5
HMW-3IA EL 55.0
MBB-3 EL 54.8
HMW-19S EL 58.4
MBB-24 EL 54.1
HMW-20S EL 53.6
HMW-5IB EL 58.4
MBGW-7 EL 53.8
HMW-9S EL 55.4
HMW-9IA EL 55.3
HMW-9D EL 55.3
MBB-17 EL 54.9
MBPP-8 EL 57.5
HMW-9IB EL 55.4
HMW-8IB EL 58.0
MBGW-9 EL 56.8
HMW-6IA EL 58.6
HMW-6IB EL 58.7
HMW-6D EL 58.6
HMW-7IB EL 58.7
21417-MB4 EL 57.2
MBGW-10 EL 55.3
MBGW-11 EL 57.5
MBPP-7 EL 49.8
MBGW-5 EL 49.9
MBB-5 EL 50.5
MBB-6 EL 50.3
MBB-7 EL 49.4
MBB-8 EL 49.7
MBB-18 EL 51.3
MBB-19 EL 51.7
MBPP-4 EL 48.3
MBPP-5 EL 45.9
21417-MB6 EL 48.2
MBB-10 EL 49.7
MBGW-3 EL 47.8
MBB-20 EL 47.5
21417-MB8 EL 45.3
MBGW-4 EL 47.3
MBB-9 EL 47.5
HMW-2IB EL 47.4
MBB-23 EL 47.2
MBB-22 EL 42.0
MBPP-3 EL 45.9
MBGW-8 EL 47.1
MBB-21 EL 47.6
HMW-10D EL 48.2
HMW-10S EL 48.2
MBPP-2 EL 44.5
MBGW-1 EL 40.0
MBGW-2 EL 46.1
MBPP-1 EL 45.3
21417-MB9 EL 39.0
21417-MB10 EL 38.1
21417-MB11 EL 39.0
HMW-11S EL 41.5
MBGW-15 EL 40.9
HMW-11IB EL 39.7

0 20 40 80 Feet
N

ARSENIC IN SOIL (mg/kg)
- ≥ 14.6 TO 73
- ≥ 7.3 TO 14.6
- ND/0 TO < 7.3
- NO DATA

SAMPLE DEPTH INTERVALS
- ≤ 5 FT BELOW GROUND SURFACE (BGS)
- 5 TO 10
- 10 TO 15
- 15 TO 20
- 20 TO 25
- > 25

- EXCAVATION LIMITS; TO BE EXCAVATED DOWN TO ELEVATION 8 FT OR LOWER
- POTENTIAL HISTORICAL CONTAMINANT SOURCE
- PROPERTY BOUNDARY
- FORMER LAKE UNION SHORELINE
- FORMER BROAD STREET AND 8TH AVENUE N, THROUGH 1950s
- FORMER BROAD STREET 1958-2012

SOME SAMPLING LOCATIONS MAY HAVE BEEN SLIGHTLY OFFSET ON THIS MAP TO REDUCE SYMBOL OVERLAP

RED TEXT INDICATES EXCEEDANCE OF PROTECTIVE OF GROUNDWATER SCREENING LEVELS ADJUSTED UP TO NATURAL BACKGROUND

SCREENING LEVELS PROVIDED BY ECOLOGY (NOVEMBER 17, 2020)

CONCENTRATIONS IN MILLIGRAMS PER KILOGRAM (mg/kg)

DEPTH IN FEET BELOW GROUND SURFACE (BGS)

ELEVATION IN FEET (NAVD 88); EL. = GROUND SURFACE ELEVATION

U = NON-DETECT AT DETECTION LIMIT AS INDICATED
J = ESTIMATED VALUE
/ = MULTIPLE RESULTS INDICATE THAT A FIELD DUPLICATE WAS TAKEN

AERIAL IMAGERY SOURCE: EAGLEVIEW

SCREENING LEVELS FOR ARSENIC IN SOIL (mg/kg) All levels adjusted up to natural background	
ZONE	PROTECTIVE OF GW
Vadose (0 to 25 ft bgs) and Saturated (>25 ft bgs)	7.3

Seattle DOT Mercer Parcels Site
Seattle, Washington

Arsenic Distribution in Soil

19409-04 06/21

HARTCROWSER A division of Haley & Aldrich

Figure **7-5c**

MBB-5	03/02/2020 5 ft el 45.53	03/02/2020 10 ft el 40.53	03/02/2020 15 ft el 35.53	03/02/2020 20 ft el 30.53	03/02/2020 25 ft el 25.53
Lead	17.6	591	1.57	1.24	1.29

21417-MB9	05/11/2017 13 ft el 26.05	05/11/2017 22 ft el 17.05
Lead	19.3	279

ROY ST

8TH AVE N

DEXTER AVE N

MERCER ST

21417-MB1 EL 55.4
MBGW-12 EL 54.0
MBPP-7 EL 49.8
MBPP-5 EL 45.9
21417-MB8 EL 45.3
MBGW-1 EL 40.0
HMW-17S EL 57.7
MBB-1 EL 55.0
MBB-16 EL 53.7
MBB-7 EL 49.4
21417-MB6 EL 48.2
MBB-10 EL 49.7
MBB-12 EL 33.7
MBB-2 EL 55.5
MBB-4 EL 54.6
MBGW-6 EL 52.5
MBGW-5 EL 49.9
MBGW-3 EL 47.8
MBB-20 EL 47.5
MBGW-4 EL 47.3
MBB-23 EL 47.2
MBGW-2 EL 46.1
21417-MB9 EL 39.0
HMW-18S EL 57.5
HMW-3IA EL 55.0
MBB-3 EL 54.8
MBB-5 EL 50.5
MBB-6 EL 50.3
MBB-11 EL 46.4
MBB-13 EL 36.0
GP-9 EL 58.0
HMW-19S EL 58.4
MBB-24 EL 54.1
HMW-20S EL 53.6
MBB-8 EL 49.7
MBB-9 EL 47.5
HMW-2IB EL 47.4
MBB-18 EL 51.3
MBB-22 EL 42.0
MBPP-1 EL 45.3
21417-MB10 EL 38.1
HMW-5IB EL 58.4
MBGW-7 EL 53.8
HMW-9S EL 55.4
HMW-9IA EL 55.3
HMW-9D EL 55.3
MBPP-4 EL 48.3
GP-8 EL 58.3
HMW-9IB EL 55.4
MBB-19 EL 51.7
MBPP-3 EL 45.9
21417-MB11 EL 39.0
MBPP-8 EL 57.5
MBB-17 EL 54.9
MBPP-2 EL 44.5
HMW-11S EL 41.5
MBGW-15 EL 40.9
HMW-11IB EL 39.7
GP-7 EL 58.5
HMW-10S EL 48.2
HMW-10D EL 48.2
MBB-21 EL 47.6
MBGW-8 EL 47.1
HMW-8IB EL 58.0
HMW-6IA EL 58.6
HMW-6IB EL 58.7
HMW-6D EL 58.6
MBGW-9 EL 56.8
21417-MB4 EL 57.2
MBGW-10 EL 55.3
HMW-7IB EL 58.7
MBGW-11 EL 57.5

N

0 20 40 80 Feet

LEAD IN SOIL (mg/kg)
- ≥ 2,500
- ≥ 500 TO 2,500
- ≥ 250 TO 500
- ND/0 TO < 250
- NO DATA

SAMPLE DEPTH INTERVALS
- ≤ 5 FT BELOW GROUND SURFACE (BGS)
- 5 TO 10
- 10 TO 15
- 15 TO 20
- 20 TO 25
- > 25

- EXCAVATION LIMITS; TO BE EXCAVATED DOWN TO ELEVATION 8 FT OR LOWER
- POTENTIAL HISTORICAL CONTAMINANT SOURCE
- PROPERTY BOUNDARY
- FORMER LAKE UNION SHORELINE
- FORMER BROAD STREET AND 8TH AVENUE N, THROUGH 1950s
- FORMER BROAD STREET 1958-2012

SOME SAMPLING LOCATIONS MAY HAVE BEEN SLIGHTLY OFFSET ON THIS MAP TO REDUCE SYMBOL OVERLAP

RED TEXT INDICATES EXCEEDANCE OF DIRECT CONTACT OR PROTECTIVE OF GROUNDWATER SCREENING LEVELS

SCREENING LEVELS PROVIDED BY ECOLOGY (NOVEMBER 17, 2020)

CONCENTRATIONS IN MILLIGRAMS PER KILOGRAM (mg/kg)

DEPTH IN FEET BELOW GROUND SURFACE (BGS)

ELEVATION IN FEET (NAVD 88); EL. = GROUND SURFACE ELEVATION

U = NON-DETECT AT DETECTION LIMIT AS INDICATED
J = ESTIMATED VALUE
/ = MULTIPLE RESULTS INDICATE THAT A FIELD DUPLICATE WAS TAKEN

AERIAL IMAGERY SOURCE: EAGLEVIEW

SCREENING LEVELS FOR LEAD (mg/kg) IN SOIL		
ZONE	DIRECT CONTACT	PROTECTIVE OF GW
Vadose (0 to 25 ft bgs)	250	3000
Saturated (>25 ft bgs)	250	150

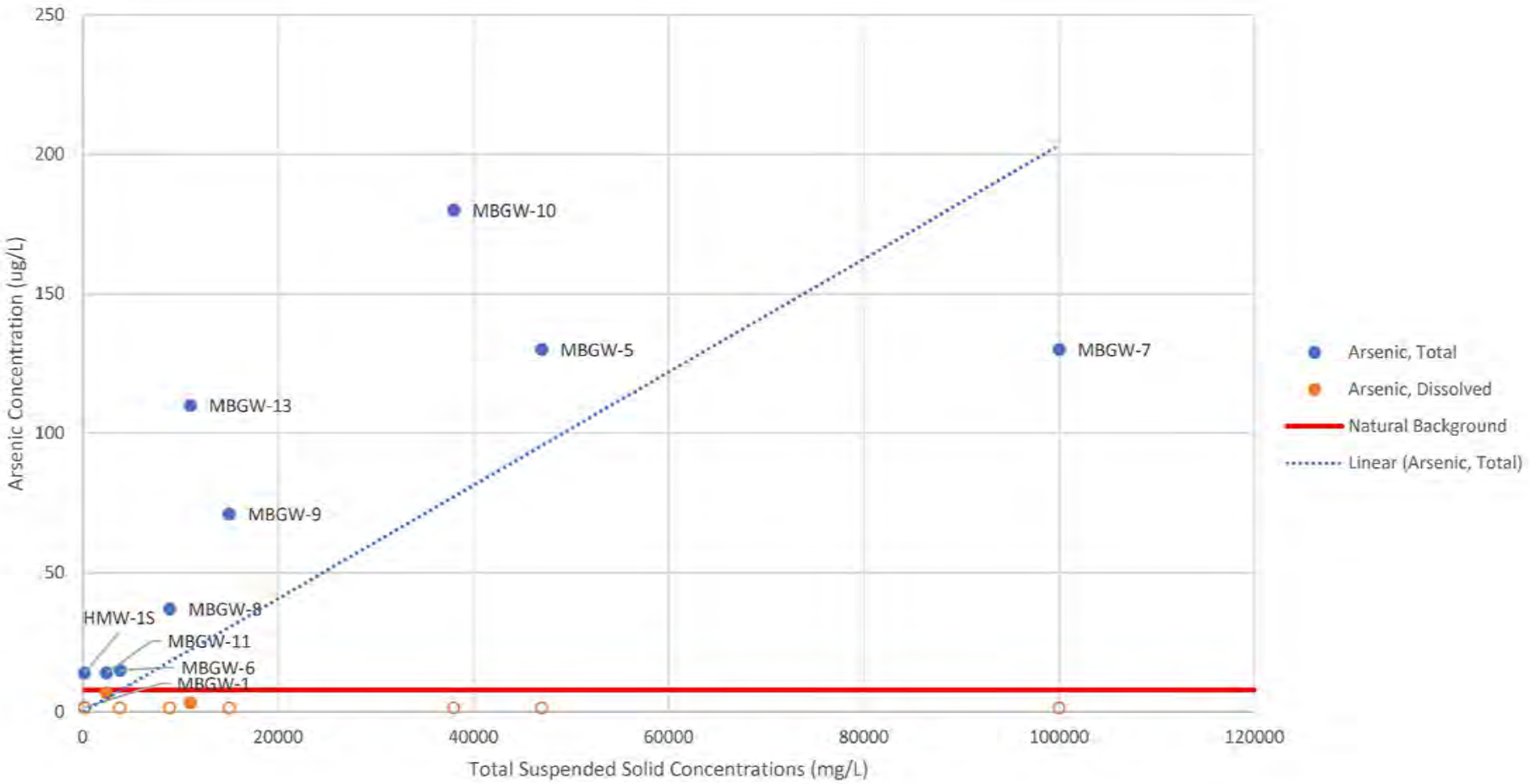
Seattle DOT Mercer Parcels Site
Seattle, Washington

Lead Distribution in Soil

19409-04 06/21

HARTCROWSER A division of Haley & Aldrich

Figure **7-5d**



NOTES:

1. Solid symbol indicates a detected concentration. Open symbol indicates a non-detect, one-half the laboratory reporting limit is graphed.
2. Screening Level shown is the Natural Background.
3. Screening levels provided by Ecology (November 17, 2020).

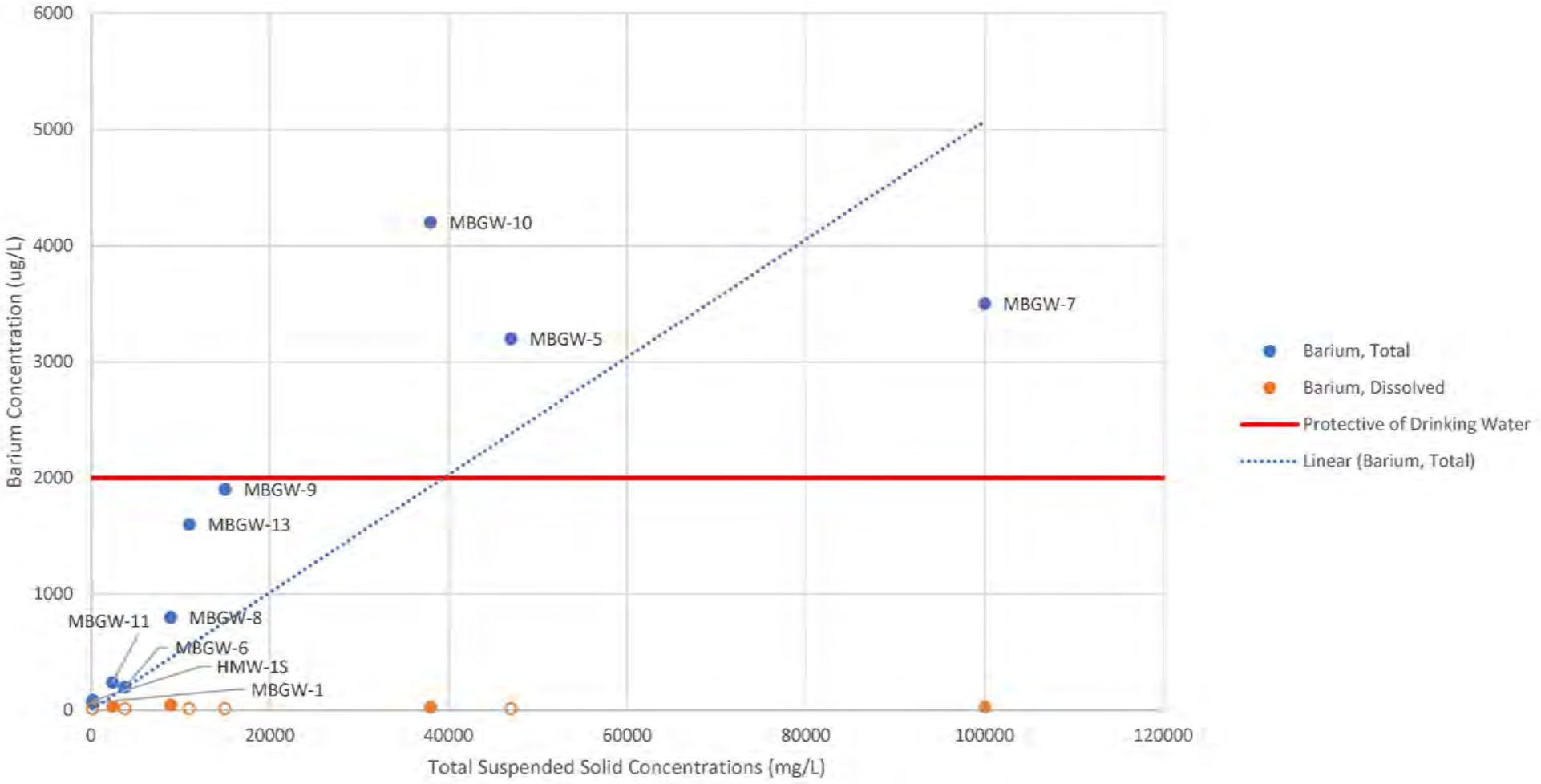
Seattle DOT Mercer Parcels Site
Seattle, Washington

ARSENIC CONCENTRATION VS. TOTAL SUSPENDED SOLIDS (TSS) IN GROUNDWATER

19409-04 01/22

HARTCROWSER A division of Haley & Aldrich

Figure **7-6a**



NOTES:

1. Solid symbol indicates a detected concentration. Open symbol indicates a non-detect, one-half the laboratory reporting limit is graphed.
2. Screening Level shown is the Protective of Drinking Water.
3. Screening levels provided by Ecology (November 17, 2020).

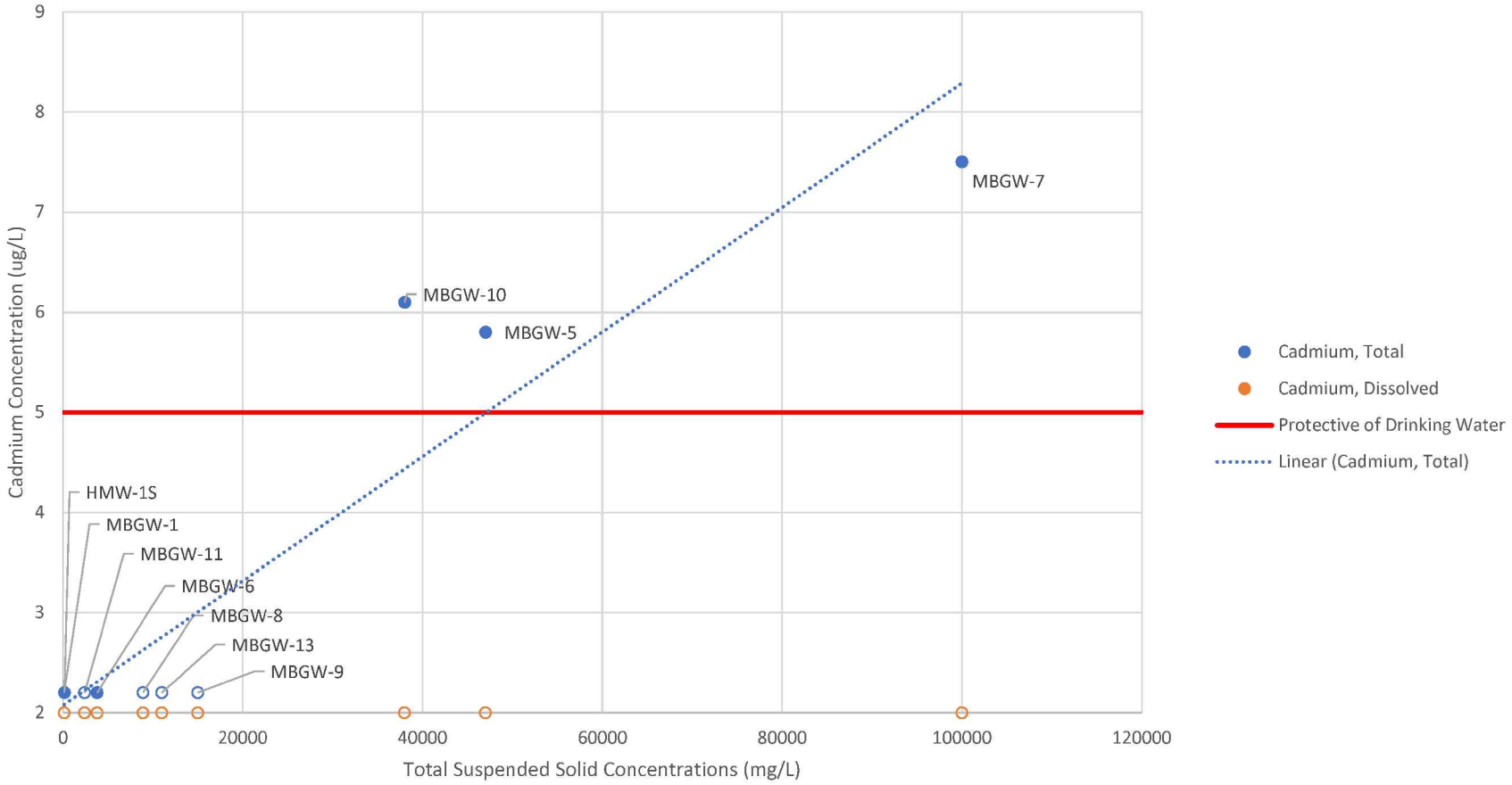
Seattle DOT Mercer Parcels Site
Seattle, Washington

BARIUM CONCENTRATION VS. TOTAL SUSPENDED SOLIDS (TSS) IN GROUNDWATER

19409-04 01/22

HARTCROWSER A division of Haley & Aldrich

Figure
7-6b



NOTES:
1. Solid symbol indicates a detected concentration. Open symbol indicates a non-detect, one-half the laboratory reporting limit is graphed.
2. Screening Level shown is the Protective of Drinking Water.
3. Screening levels provided by Ecology (November 17, 2020).

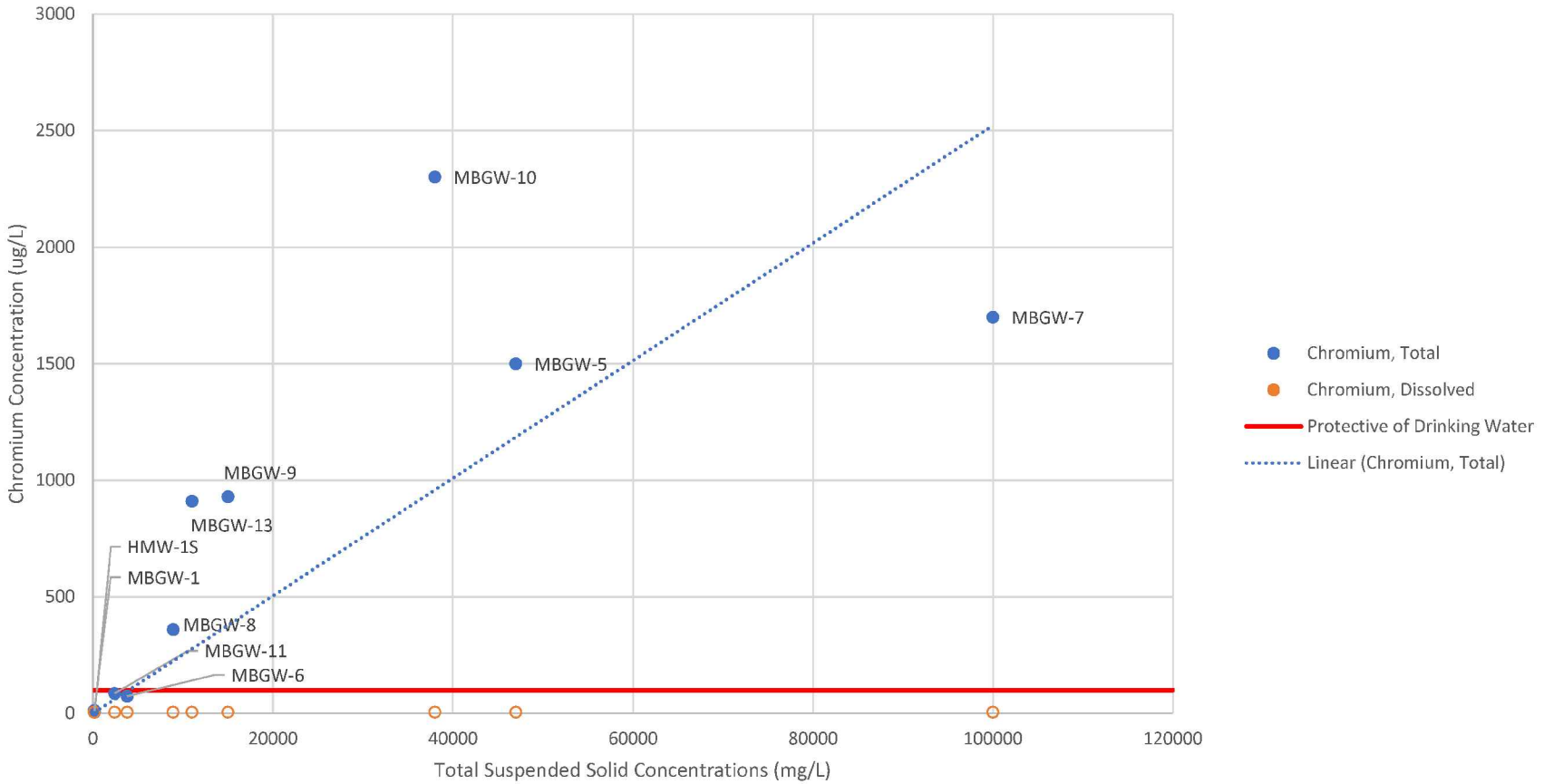
Seattle DOT Mercer Parcels Site
Seattle, Washington

CADMIUM CONCENTRATION VS. TOTAL SUSPENDED SOLIDS (TSS) IN GROUNDWATER

19409-04 01/22

HARTCROWSER
A division of Haley & Aldrich

Figure
7-6c



NOTES:

1. Solid symbol indicates a detected concentration. Open symbol indicates a non-detect, one-half the laboratory reporting limit is graphed.
2. Screening Level shown is the Protective of Drinking Water.
3. Screening levels provided by Ecology (November 17, 2020).

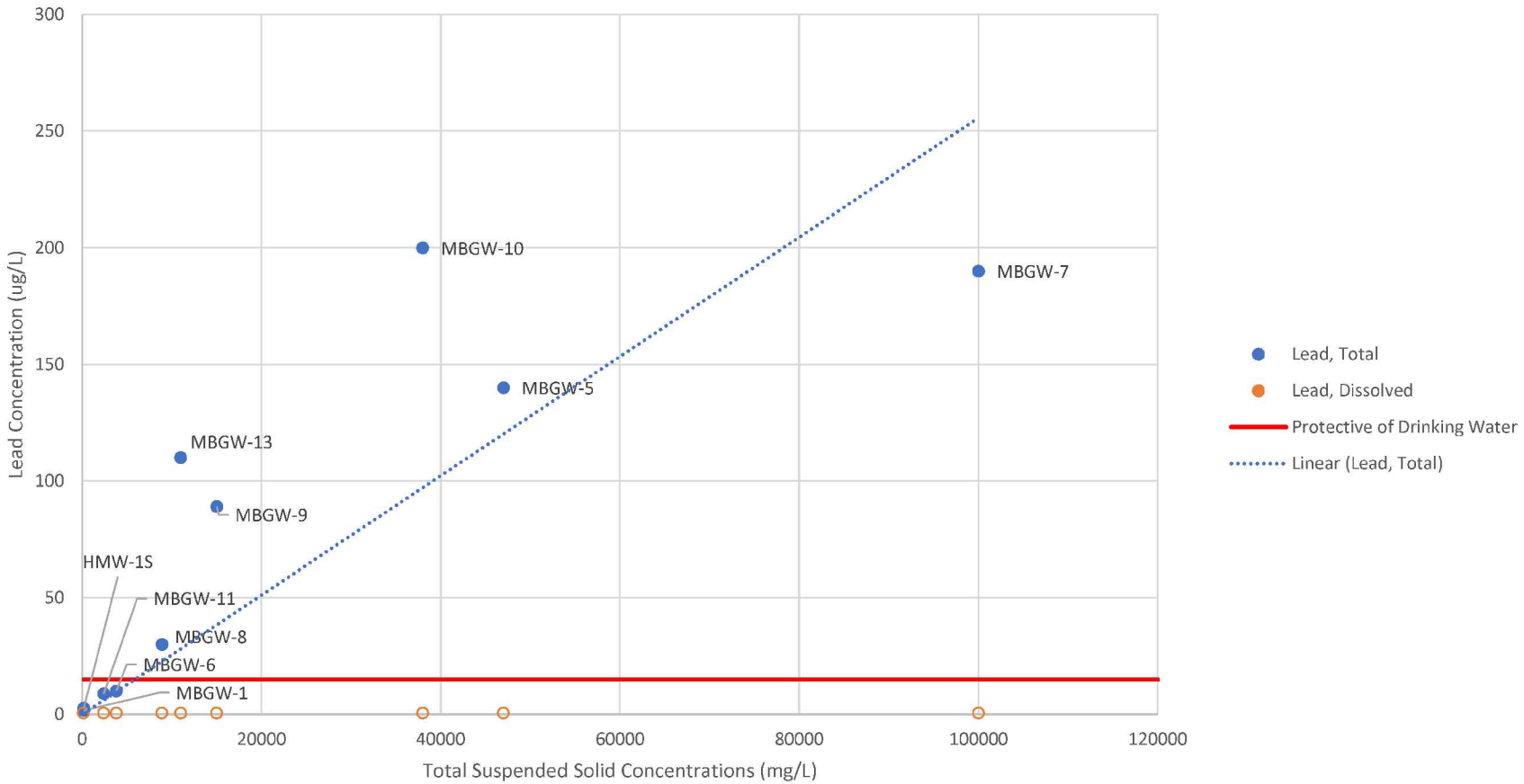
Seattle DOT Mercer Parcels Site
Seattle, Washington

CHROMIUM CONCENTRATION VS. TOTAL SUSPENDED SOLIDS (TSS) IN GROUNDWATER

19409-04 01/22

HARTCROWSER
A division of Haley & Aldrich

Figure
7-6d



NOTES:

1. Solid symbol indicates a detected concentration. Open symbol indicates a non-detect, one-half the laboratory reporting limit is graphed.
2. Screening Level shown is the Protective of Drinking Water.
3. Screening levels provided by Ecology (November 17, 2020).

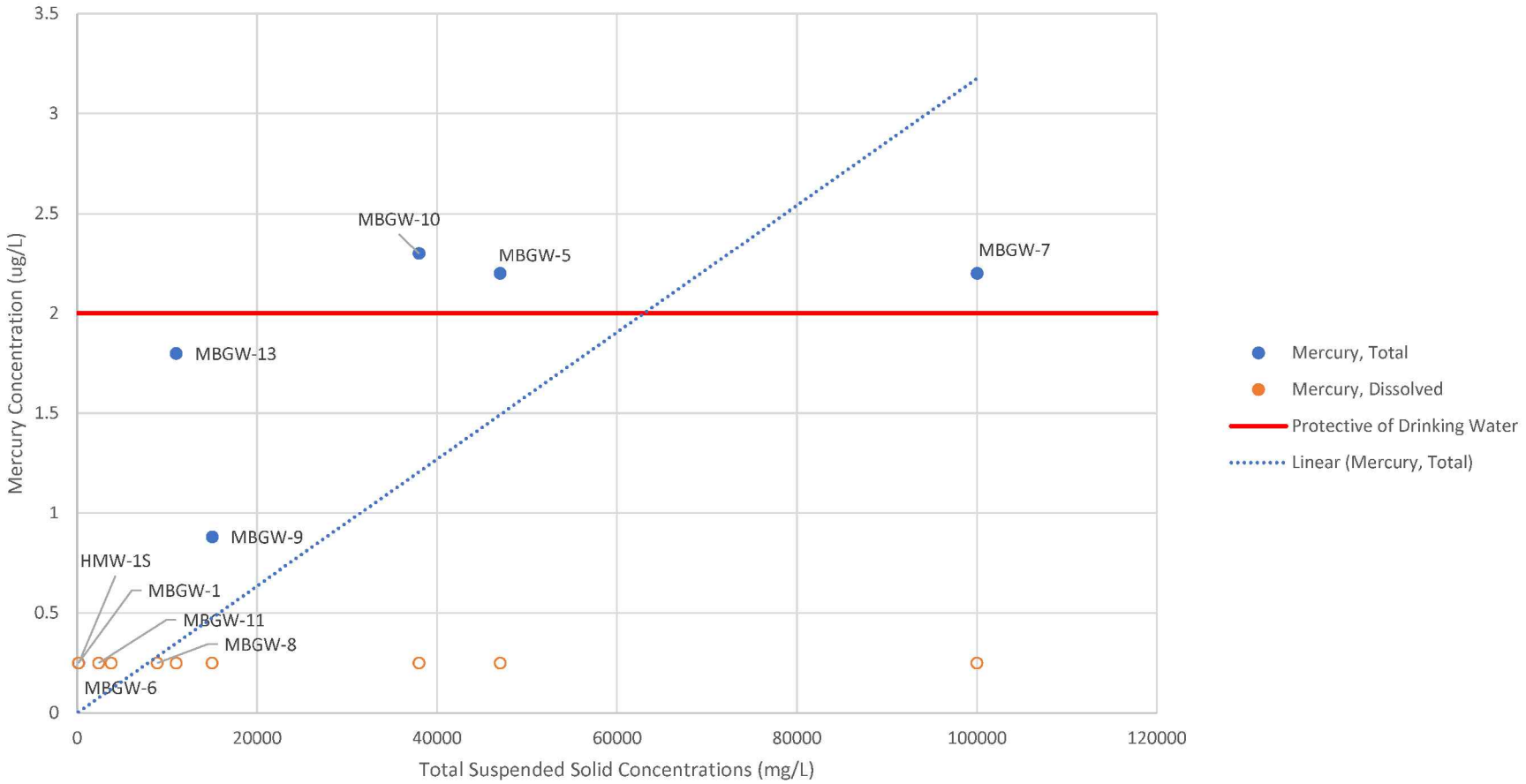
Seattle DOT Mercer Parcels Site
Seattle, Washington

LEAD CONCENTRATION VS. TOTAL SUSPENDED SOLIDS (TSS) IN GROUNDWATER

19409-04 01/22

HARTCROWSER A division of Haley & Aldrich

Figure
7-6e



NOTES:
1. Solid symbol indicates a detected concentration. Open symbol indicates a non-detect, one-half the laboratory reporting limit is graphed.
2. Screening Level shown is the Protective of Drinking Water.
3. Screening levels provided by Ecology (November 17, 2020).

Seattle DOT Mercer Parcels Site
Seattle, Washington

MERCURY CONCENTRATION VS. TOTAL SUSPENDED SOLIDS (TSS) IN GROUNDWATER

19409-04 01/22

HARTCROWSER
A division of Haley & Aldrich

Figure
7-6f

A

North ← American Linen | Roy St | Sidewalk | Section D Intersect | Property Boundary | Section E Intersect | Sidewalk | Mercer St → South

A'

MW-137 (34' W)
B-215
PB-9 (9' W)
MW-153
MBGW-12 (14' W)
MBB-1 (13' E)
MBGW-13
MBB-2 (16' E)
MBB-4
HMW-3IA (9' E)
MBB-3
HMW-18S (48' E)
HMW-3D (26' E)
MBB-24 (15' W)
MW-350 (26' E)
HMW-5IB (51' E)
MBPP-8 (9' E)
HMW-8IB
HMW-4IA (23' E)
HMW-6IA (53' E)
HMW-6D (50' E)
HMW-6IB (52' E)
21417-MB3 (27' E)
21417-MB4 (25' W)
HMW-7IB (49' E)
HMW-15IB (43' E)
MBGW-11 (10' W)
MBB-26 (46' E)

Vadose Zone and Shallow Zone

Intermediate Zone

Mercer Tunnel

Deep Zone

Elevation in Feet (NAVD 88)

80
60
40
20
0
-20
-40
-60
-80
-100

0 50 100 150 200 250

Distance in Feet

Explorations MBB-4, HMW-3IA, MBB-3, HMW-18S, HMW-3D, HMW-8IB, HMW-6D, and HMW-6IB have been shifted horizontally for visual clarity.

Legend

Boring Name with Offset — MW-1(15' W)

Boring Location

Approximate Average Water Table (25ft bgs)

Inferred Groundwater Zone Boundary

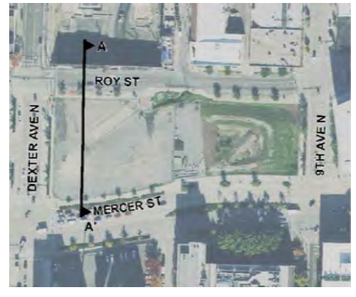
Screen Interval

Approximate Limits of Proposed Excavation at Seattle DOT Mercer Parcels Site ("Schematic Design, ARE Mercer Blocks," NBBJ, 04/20/2020)

Approximate Limits of 2020 Building Excavation at American Linen Site

Geologic Units (Predominant Component)

- Fill
- Clean Sand and/or Gravel
- Silty Sand and Silty Gravel
- Silt and/or Clay with or without Sand



INSET MAP

SOIL SAMPLE
cPAHs-TEQ

green = Constituent(s) below applicable screening level

red = Constituent(s) above applicable screening level

Soil	Applicable Screening Level* (mg/kg)
cPAHs-TEQ[1]	0.19

* Screening levels provided by Ecology (November 17, 2020)

[1] Direct Contact

Horizontal Scale in Feet
0 40 80
0 20 40
Vertical Scale in Feet
Vertical Exaggeration x 2

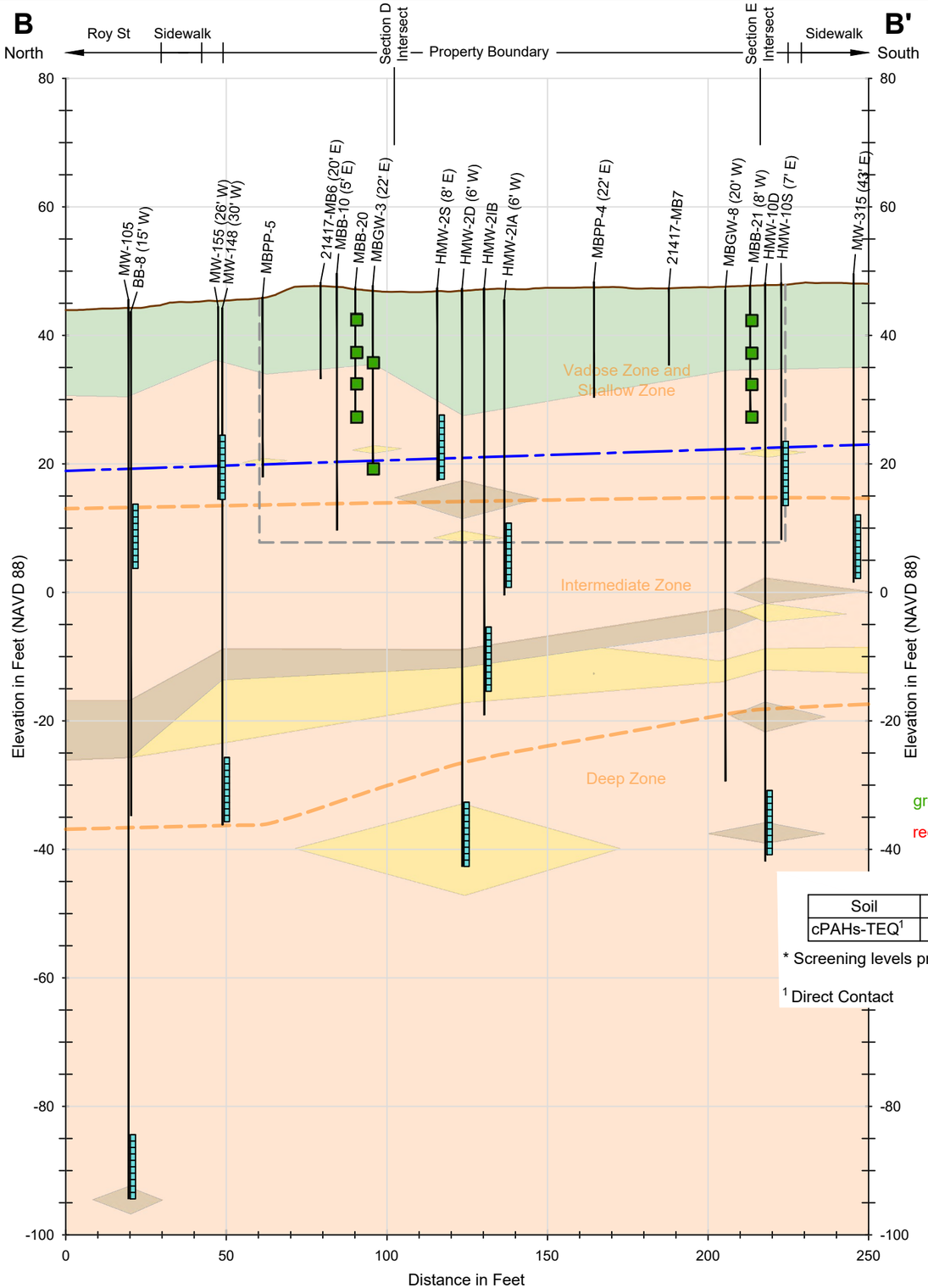
Seattle DOT Mercer Parcels Site
Seattle, Washington

COCs, Cross Section A-A': cPAHs-TEQ in Soil

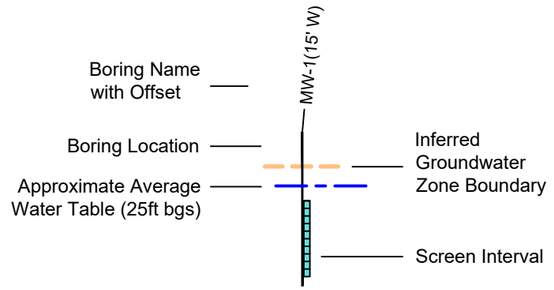
19409-04 01/22

HARTCROWSER
A division of Haley & Aldrich

Figure
7-9a



Legend



Approximate Limits of Proposed Excavation at Seattle DOT Mercer Parcels Site ("Schematic Design, ARE Mercer Blocks," NBBJ, 04/20/2020)

Geologic Units (Predominant Component)

- Fill
- Clean Sand and/or Gravel
- Silty Sand and Silty Gravel
- Silt and/or Clay with or without Sand

SOIL SAMPLE
cPAHs-TEQ

green = Constituent(s) below applicable screening level

red = Constituent(s) above applicable screening level

Soil	Applicable Screening Level* (mg/kg)
cPAHs-TEQ[1]	0.19

* Screening levels provided by Ecology (November 17, 2020)

[1] Direct Contact

INSET MAP

Horizontal Scale in Feet
0 40 80
0 20 40
Vertical Scale in Feet
Vertical Exaggeration x 2

Explorations 21417-MB6 and HMW-10S have been shifted horizontally for visual clarity.

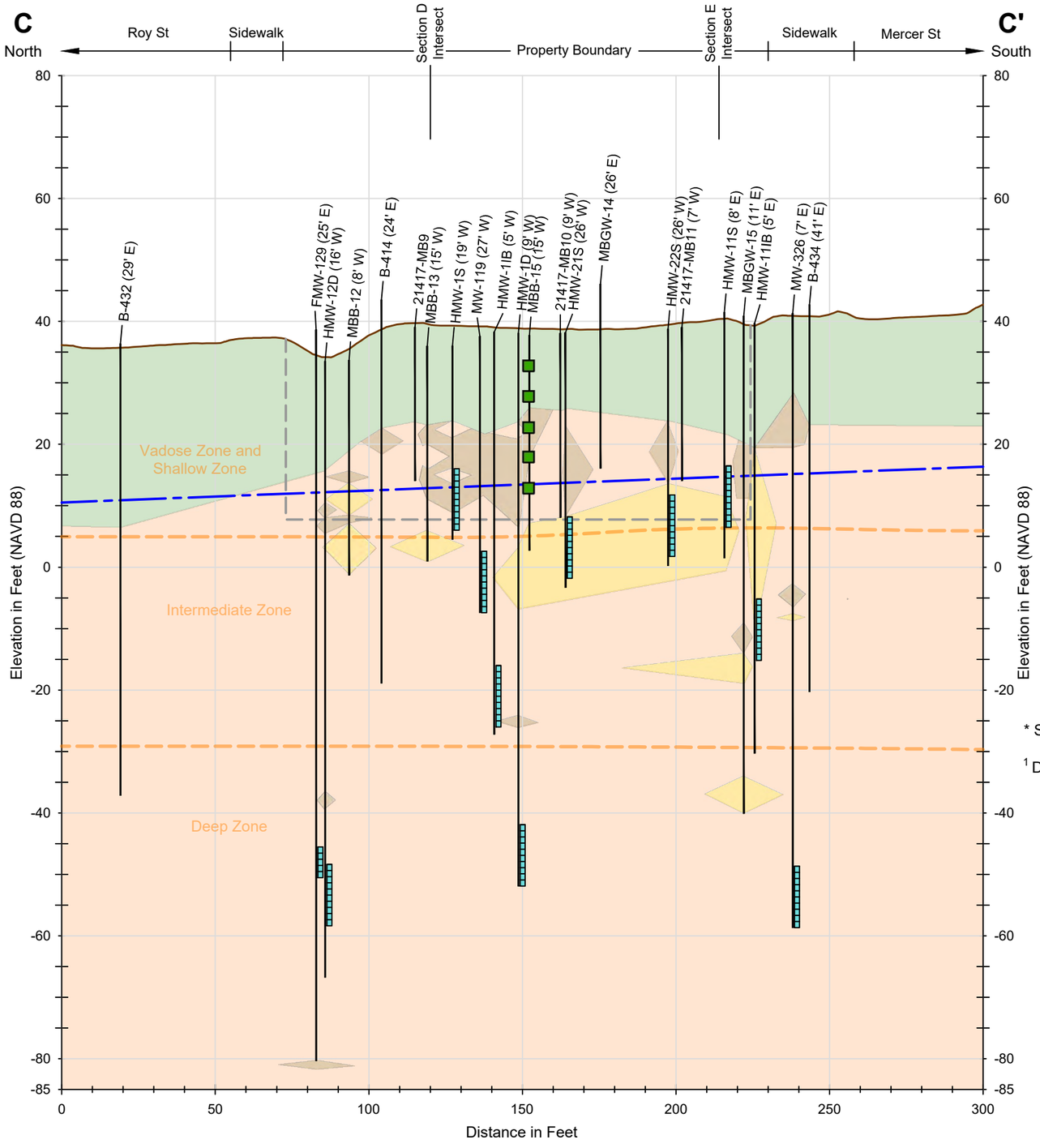
Seattle DOT Mercer Parcels Site
Seattle, Washington

COCs, Cross Section B-B': cPAHs-TEQ in Soil

19409-04 01/22

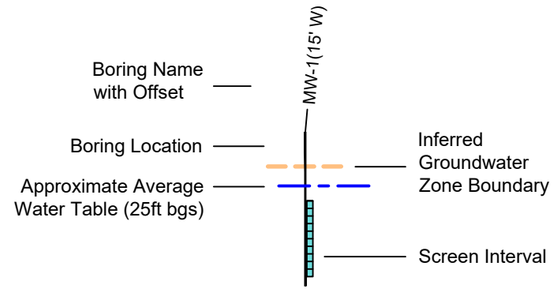
HARTCROWSER
A division of Haley & Aldrich

Figure
7-9b



Explorations MW-119 and HMW-1IB have been shifted horizontally for visual clarity.

Legend



Approximate Limits of Proposed Excavation at Seattle DOT Mercer Parcels Site ("Schematic Design, ARE Mercer Blocks," NBBJ, 04/20/2020)

Geologic Units (Predominant Component)

- Fill
- Clean Sand and/or Gravel
- Silty Sand and Silty Gravel
- Silt and/or Clay with or without Sand

SOIL SAMPLE
cPAHs-TEQ

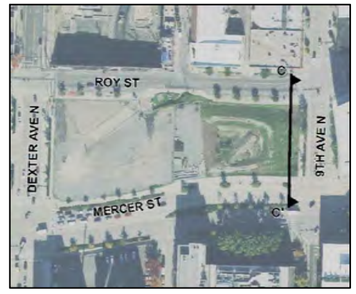
green = Constituent(s) below applicable screening level

red = Constituent(s) above applicable screening level

Soil	Applicable Screening Level* (mg/kg)
cPAHs-TEQ[1]	0.19

* Screening levels provided by Ecology (November 17, 2020)

[1] Direct Contact



INSET MAP

Horizontal Scale in Feet
0 40 80
0 20 40
Vertical Scale in Feet
Vertical Exaggeration x 2

Seattle DOT Mercer Parcels Site
Seattle, Washington

COCs, Cross Section C-C': cPAHs-TEQ in Soil

19409-04 01/22

HARTCROWSER
A division of Haley & Aldrich

Figure
7-9c

D West Dexter Ave — Sidewalk — Section A Intersect — Section F Intersect — Property Boundary — Section B Intersect — Section C Intersect — Sidewalk — 9th Ave N East **D'**

Historic Broad Street Extents

HMW-18S (17' N)
HMW-3D (17' N)
MBB-2
MBB-1 (11' S)
HMW-3A (10' N)
MBB-3 (13' N)
MBGW-13
MBB-4 (6' N)
MBB-16 (11' S)
MW-106 (32' S)
MBGW-6 (6' S)
MBB-5 (16' N)
MBGW-5
MBB-6 (20' N)
MBB-7 (21' S)
MBB-8 (25' N)
MBGW-3 (6' S)
HMW-2S (13' N)
MBB-10 (18' S)
MBB-20 (12' S)
HMW-2D (21' N)
MBGW-4 (8' S)
21417-MB8 (34' S)
MBB-23 (12' S)
MBGW-2
MBB-11
B-414 (14' S)
21417-MB9
HMW-1IB (18' N)
HMW-1D (29' N)
MBB-13
HMW-1S (8' N)
MW-119 (17' N)

Vadose Zone and Shallow Zone

Intermediate Zone

Deep Zone

Mercer Tunnel

Lake Union Tunnel

Elevation in Feet (NAVD 88)

80, 60, 40, 20, 0, -20, -40, -55

0, 50, 100, 150, 200, 250, 300, 350, 400, 450, 500, 550, 600

Distance in Feet

Legend

Boring Name with Offset — MW-1(15' W)

Boring Location

Approximate Average Water Table (25ft bgs)

Inferred Groundwater Zone Boundary

Screen Interval

Geologic Units (Predominant Component)

- Fill
- Clean Sand and/or Gravel
- Silty Sand and Silty Gravel
- Silt and/or Clay with or without Sand

SOIL SAMPLE
cPAHs-TEQ

green = Constituent(s) below applicable screening level

red = Constituent(s) above applicable screening level

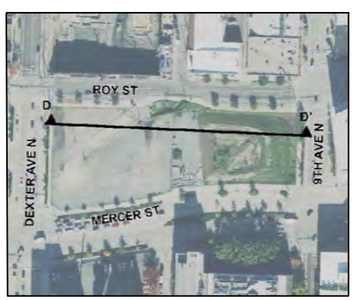
Soil	Applicable Screening Level* (mg/kg)
cPAHs-TEQ[1]	0.19

* Screening levels provided by Ecology (November 17, 2020)

[1] Direct Contact

Explorations MBB-1, MBB-2, MBB-4, and MBGW-13 have been shifted horizontally for visual clarity.

Horizontal Scale in Feet
0 40 80
0 20 40
Vertical Scale in Feet
Vertical Exaggeration x 2



INSET MAP

Seattle DOT Mercer Parcels Site
Seattle, Washington

COCs, Cross Section D-D': cPAHs-TEQ in Soil

19409-04 01/22

HARTCROWSER Division of Haley & Aldrich

Figure **7-9d**

E West — Dexter Ave — Sidewalk — Section A Intersect — Section F Intersect — Property Boundary — Section B Intersect — Property Boundary — Section C Intersect — Sidewalk — 9th Ave N — E' East

Elevation in Feet (NAVD 88)

Vadose Zone and Shallow Zone

Intermediate Zone

Deep Zone

Lake Union Tunnel

MBB-25 (26' N)
HMW-6IA
HMW-6IB
HMW-7IB (29' N)
HMW-6D
MBB-26 (51' N)
HMW-15IB (40' N)
21417-MB3 (16' N)
HMW-4IA (6' S)
MBPP-8 (35' S)
HMW-8IB
21417-MB4 (26' N)
MBGW-9
MBGW-16 (14' N)
MBB-19 (34' S)
MW-316 (27' N)
MW-315 (26' N)
BB-5 (30' S)
HMW-10S
HMW-10D
21417-MB7 (29' S)
MBB-21
MBGW-8 (10' S)
MBPP-3 (24' S)
HMW-14D
MBPP-2
B-434 (27' N)
MW-325 (23' N)
MBGW-15 (8' N)
MW-326 (24' N)
HMW-11S
HMW-11IB (12' N)
21417-MB11 (11' S)
B-404 (21' N)
HMW-22S (14' S)

Distance in Feet

Horizontal Scale in Feet: 0 40 80

Vertical Scale in Feet: 0 20 40

Vertical Exaggeration x 2

Legend

Boring Name with Offset — MW-1(15' W)

Boring Location

Approximate Average Water Table (25ft bgs)

Inferred Groundwater Zone Boundary

Screen Interval

Geologic Units (Predominant Component)

- Fill
- Clean Sand and/or Gravel
- Silty Sand and Silty Gravel
- Silt and/or Clay with or without Sand

SOIL SAMPLE
cPAHs-TEQ

green = Constituent(s) below applicable screening level

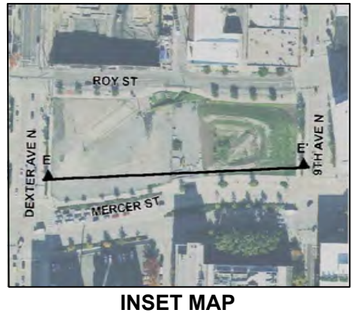
red = Constituent(s) above applicable screening level

Soil	Applicable Screening Level* (mg/kg)
cPAHs-TEQ[1]	0.19

* Screening levels provided by Ecology (November 17, 2020)

[1] Direct Contact

Explorations HMW-6IA, HMW-6IB, HMW-6D, MBB-26, HMW-15IB, HMW-10S, HMW-11IB, HMW-11S, MBGW-15, and MW-325 have been shifted horizontally for visual clarity.



INSET MAP

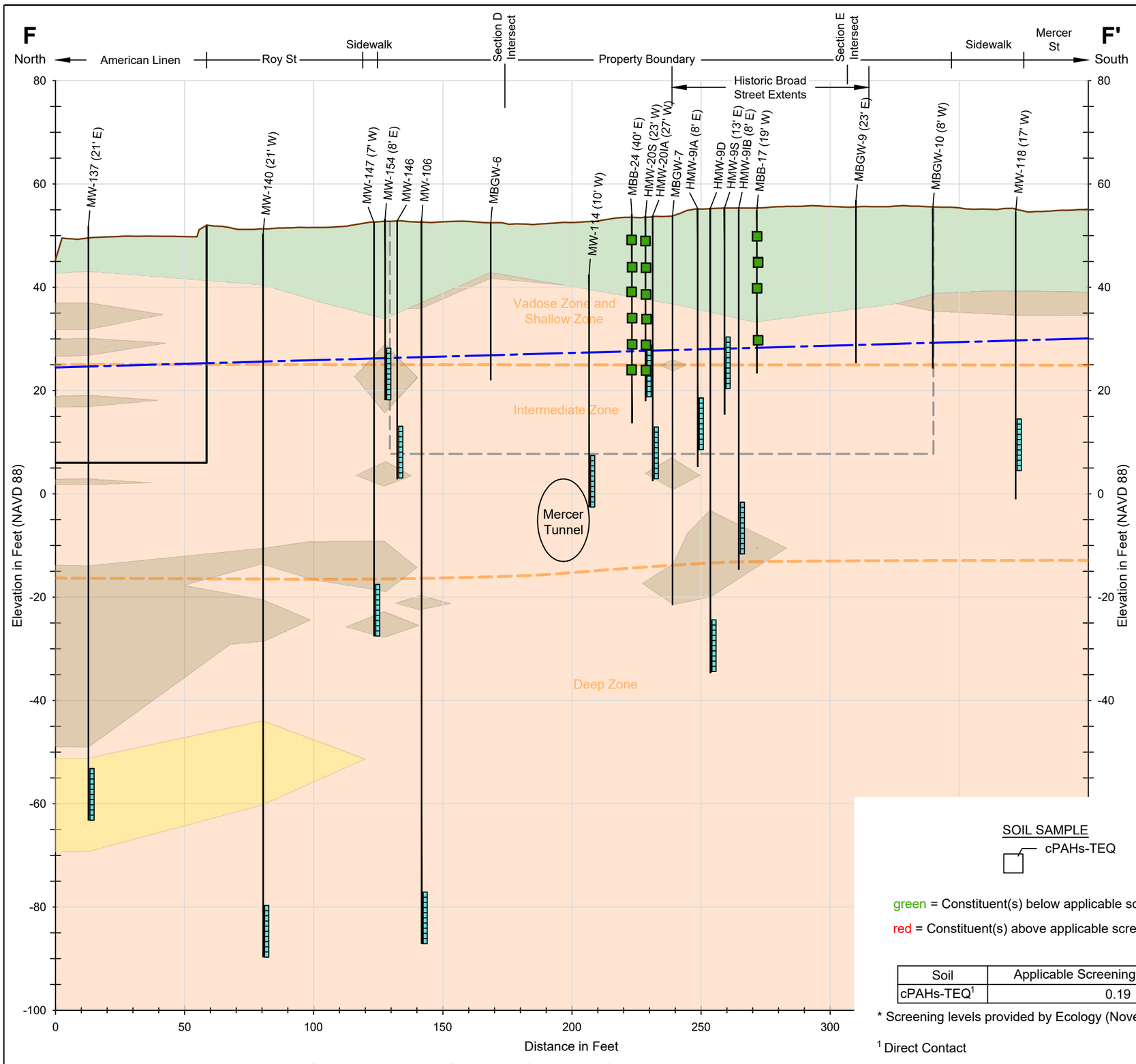
Seattle DOT Mercer Parcels Site
Seattle, Washington

COCs, Cross Section E-E': cPAHs-TEQ in Soil

19409-04 01/22

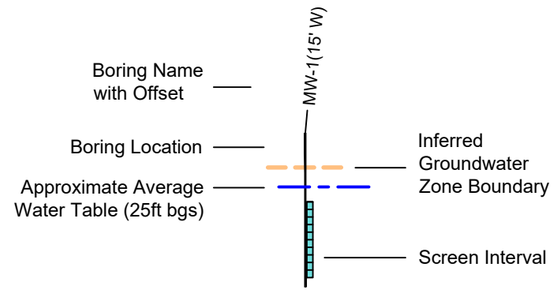
HARTCROWSER A division of Haley & Aldrich

Figure **7-9e**



Explorations MW-146, MW-147, HMW-9D, HMW-9ID, HMW-9S, HMW-20IA, and HMW-20S have been shifted horizontally for visual clarity.

Legend

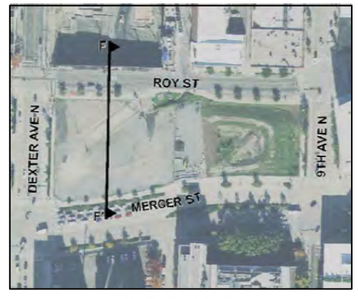


Approximate Limits of Proposed Excavation at Seattle DOT Mercer Parcels Site ("Schematic Design, ARE Mercer Blocks," NBBJ, 04/20/2020)

Approximate Limits of 2020 Building Excavation at American Linen Site

Geologic Units (Predominant Component)

- Fill
- Clean Sand and/or Gravel
- Silty Sand and Silty Gravel
- Silt and/or Clay with or without Sand



INSET MAP

SOIL SAMPLE
cPAHs-TEQ

green = Constituent(s) below applicable screening level

red = Constituent(s) above applicable screening level

Soil	Applicable Screening Level* (mg/kg)
cPAHs-TEQ[1]	0.19

* Screening levels provided by Ecology (November 17, 2020)

[1] Direct Contact

Horizontal Scale in Feet
0 40 80
0 20 40
Vertical Scale in Feet
Vertical Exaggeration x 2

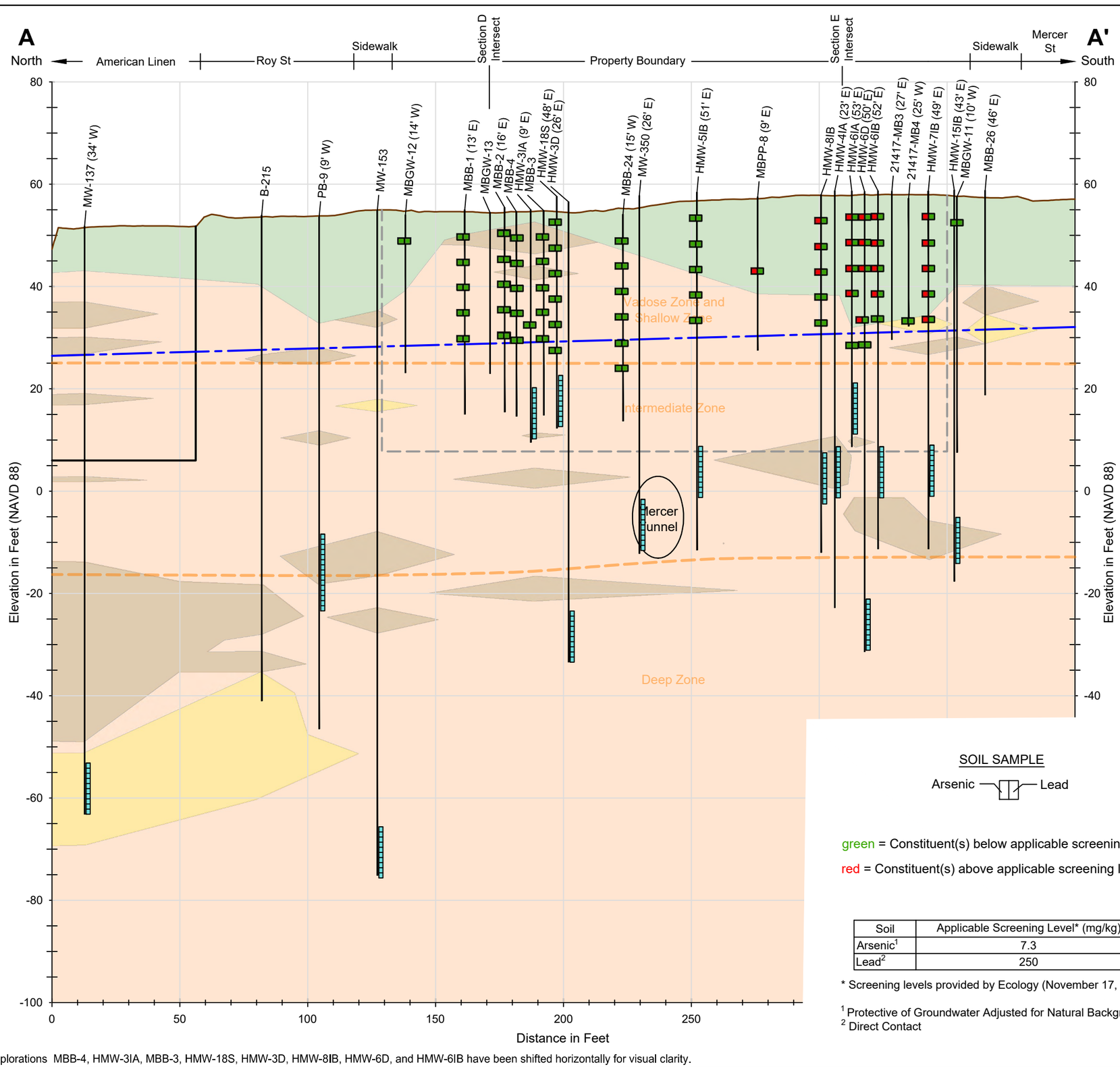
Seattle DOT Mercer Parcels Site
Seattle, Washington

COCs, Cross Section F-F':
cPAHs-TEQ in Soil

19409-04 01/22

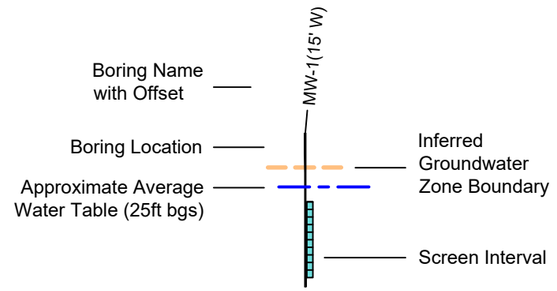
HARTCROWSER
A division of Haley & Aldrich

Figure
7-9f



Explorations MBB-4, HMW-3IA, MBB-3, HMW-18S, HMW-3D, HMW-8IB, HMW-6D, and HMW-6IB have been shifted horizontally for visual clarity.

Legend

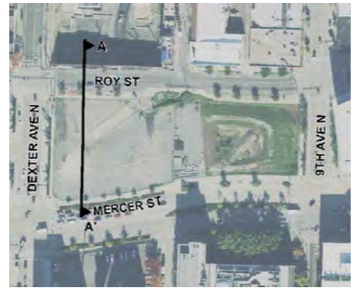


Approximate Limits of Proposed Excavation at Seattle DOT Mercer Parcels Site ("Schematic Design, ARE Mercer Blocks," NBBJ, 04/20/2020)

Approximate Limits of 2020 Building Excavation at American Linen Site

Geologic Units (Predominant Component)

- Fill
- Clean Sand and/or Gravel
- Silty Sand and Silty Gravel
- Silt and/or Clay with or without Sand



INSET MAP

SOIL SAMPLE

Arsenic — Lead

green = Constituent(s) below applicable screening level

red = Constituent(s) above applicable screening level

Soil	Applicable Screening Level* (mg/kg)
Arsenic[1]	7.3
Lead[2]	250

* Screening levels provided by Ecology (November 17, 2020)

[1] Protective of Groundwater Adjusted for Natural Background
[2] Direct Contact

Horizontal Scale in Feet
0 40 80
0 20 40
Vertical Scale in Feet
Vertical Exaggeration x 2

Seattle DOT Mercer Parcels Site
Seattle, Washington

COCs, Cross Section A-A': Arsenic and Lead in Soil

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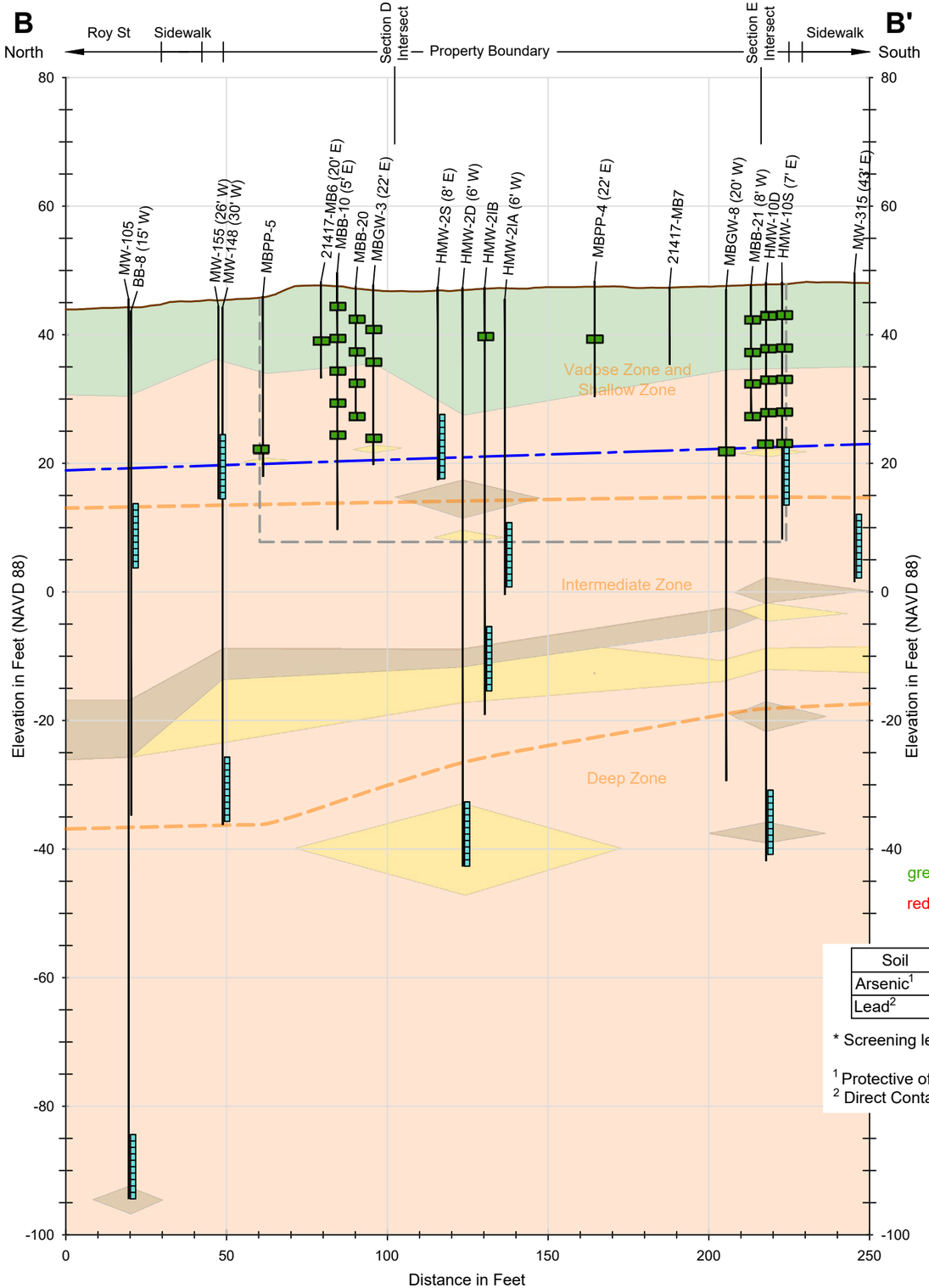
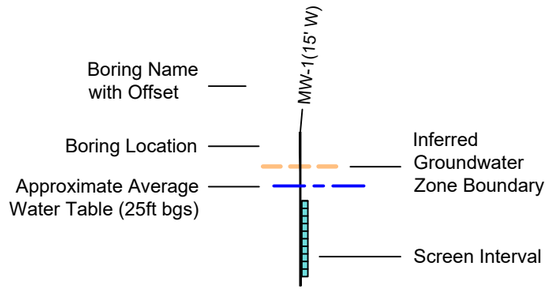
HARTCROWSER
A division of Haley & Aldrich

Figure
7-10a



Explorations 21417-MB6 and HMW-10S have been shifted horizontally for visual clarity.

Legend



Approximate Limits of Proposed Excavation at Seattle DOT Mercer Parcels Site ("Schematic Design, ARE Mercer Blocks," NBBJ, 04/20/2020)

Geologic Units (Predominant Component)

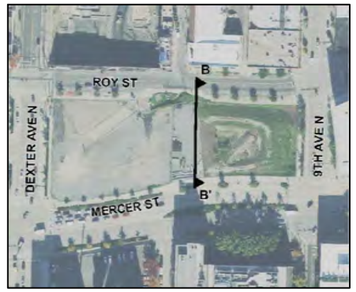
- Fill
- Clean Sand and/or Gravel
- Silty Sand and Silty Gravel
- Silt and/or Clay with or without Sand

SOIL SAMPLE

Arsenic — Lead

green = Constituent(s) below applicable screening level

red = Constituent(s) above applicable screening level



INSET MAP

Soil	Applicable Screening Level* (mg/kg)
Arsenic[1]	7.3
Lead[2]	250

* Screening levels provided by Ecology (November 17, 2020)

[1] Protective of Groundwater Adjusted for Natural Background
[2] Direct Contact

Horizontal Scale in Feet
0 40 80
0 20 40
Vertical Scale in Feet
Vertical Exaggeration x 2

Seattle DOT Mercer Parcels Site
Seattle, Washington

COCs, Cross Section B-B': Arsenic and Lead in Soil

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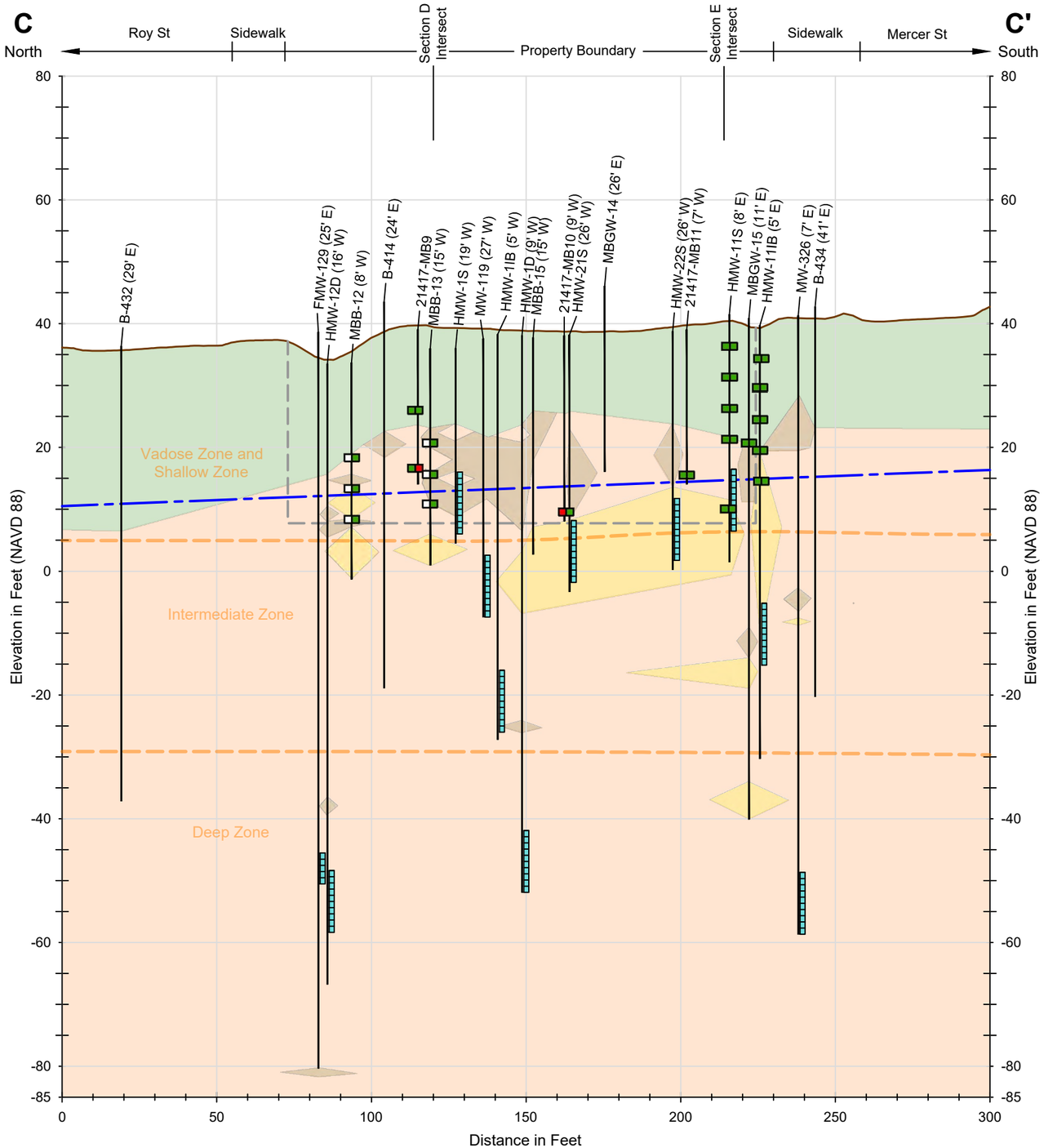
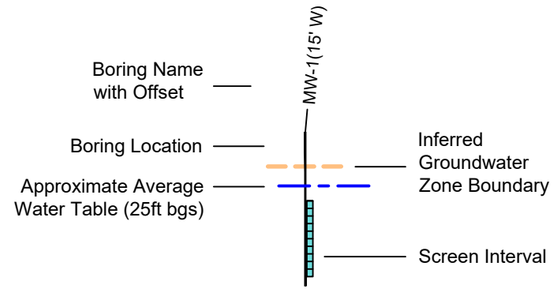
Figure **7-10b**



Explorations MW-119 and HMW-1IB have been shifted horizontally for visual clarity.

Legend



Approximate Limits of Proposed Excavation at Seattle DOT Mercer Parcels Site ("Schematic Design, ARE Mercer Blocks," NBBJ, 04/20/2020)

Geologic Units (Predominant Component)

- Fill
- Clean Sand and/or Gravel
- Silty Sand and Silty Gravel
- Silt and/or Clay with or without Sand

SOIL SAMPLE

Arsenic — Lead

green = Constituent(s) below applicable screening level

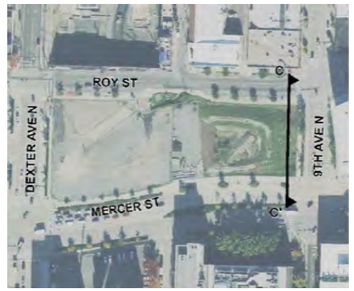
red = Constituent(s) above applicable screening level

white = Constituent(s) not tested

Soil	Applicable Screening Level* (mg/kg)
Arsenic[1]	7.3
Lead[2]	250

* Screening levels provided by Ecology (November 17, 2020)

[1] Protective of Groundwater Adjusted for Natural Background
[2] Direct Contact



INSET MAP

Horizontal Scale in Feet
0 40 80
0 20 40
Vertical Scale in Feet
Vertical Exaggeration x 2

Seattle DOT Mercer Parcels Site
Seattle, Washington

COCs, Cross Section C-C': Arsenic and Lead in Soil

19409-04 01/22

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Figure **7-10c**

D — West Dexter Ave — Sidewalk — Section A Intersect — Section F Intersect — Property Boundary — Section B Intersect — Historic Broad Street Extents — Section C Intersect — Sidewalk — 9th Ave N East — **D'**

Elevation in Feet (NAVD 88)

80 60 40 20 0 -20 -40 -55

HMW-18S (17' N)
HMW-3D (17' N)
MBB-2
MBB-1 (11' S)
HMW-3A (10' N)
MBB-3 (13' N)
MBGW-13
MBB-4 (6' N)
MBB-16 (11' S)
MW-106 (32' S)
MBGW-6 (6' S)
MBB-5 (16' N)
MBGW-5
MBB-6 (20' N)
MBB-7 (21' S)
MBB-8 (25' N)
MBGW-3 (6' S)
HMW-2S (13' N)
MBB-10 (18' S)
MBB-20 (12' S)
HMW-2D (21' N)
MBGW-4 (8' S)
21417-MB8 (34' S)
MBB-23 (12' S)
MBGW-2
MBB-11
B-414 (14' S)
21417-MB9
HMW-1IB (18' N)
HMW-1D (29' N)
MBB-13
HMW-1S (8' N)
MW-119 (17' N)

Vadose Zone and Shallow Zone

Mercer Tunnel

Lake Union Tunnel

Intermediate Zone

Deep Zone

0 50 100 300 350 400 450 500 550 600

Distance in Feet

Horizontal Scale in Feet
0 40 80
0 20 40
Vertical Scale in Feet
Vertical Exaggeration x 2

Legend

Boring Name with Offset — MW-1(15' W)

Boring Location

Approximate Average Water Table (25ft bgs)

Inferred Groundwater Zone Boundary

Screen Interval

Geologic Units (Predominant Component)

- Fill
- Clean Sand and/or Gravel
- Silty Sand and Silty Gravel
- Silt and/or Clay with or without Sand

SOIL SAMPLE

Arsenic — Lead

green = Constituent(s) below applicable screening level

red = Constituent(s) above applicable screening level

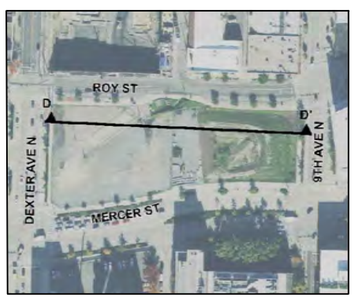
white = Constituent(s) not tested

Soil	Applicable Screening Level* (mg/kg)
Arsenic[1]	7.3
Lead[2]	250

* Screening levels provided by Ecology (November 17, 2020)

[1] Protective of Groundwater Adjusted for Natural Background
[2] Direct Contact

Explorations MBB-1, MBB-2, MBB-4, and MBGW-13 have been shifted horizontally for visual clarity.



INSET MAP

Seattle DOT Mercer Parcels Site
Seattle, Washington

COCs, Cross Section D-D': Arsenic and Lead in Soil

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Figure **7-10d**

E West — Dexter Ave — Sidewalk — Section A Intersect — Section F Intersect — Property Boundary — Section B Intersect — Property Boundary — Section C Intersect — Sidewalk — 9th Ave N — East E'

Elevation in Feet (NAVD 88)

Vadose Zone and Shallow Zone

Intermediate Zone

Deep Zone

Lake Union Tunnel

MBB-25 (26' N)
HMW-6IA
HMW-6IB
HMW-7IB (29' N)
HMW-6D
MBB-26 (51' N)
HMW-15IB (40' N)
21417-MB3 (16' N)
HMW-4IA (6' S)
MBPP-8 (35' S)
HMW-8IB
21417-MB4 (26' N)
MBGW-9
MBGW-16 (14' N)
MBB-19 (34' S)
MW-316 (27' N)
MW-315 (26' N)
BB-5 (30' S)
HMW-10S
HMW-10D
21417-MB7 (29' S)
MBB-21
MBGW-8 (10' S)
MBPP-3 (24' S)
HMW-14D
MBPP-2
B-434 (27' N)
MW-325 (23' N)
MBGW-15 (8' N)
MW-326 (24' N)
HMW-11S
HMW-11IB (12' N)
21417-MB11 (11' S)
B-404 (21' N)
HMW-22S (14' S)

Distance in Feet

Horizontal Scale in Feet: 0 40 80

Vertical Scale in Feet: 0 20 40

Vertical Exaggeration x 2

Legend

Boring Name with Offset — MW-1(15' W)

Boring Location

Approximate Average Water Table (25ft bgs)

Inferred Groundwater Zone Boundary

Screen Interval

Geologic Units (Predominant Component)

- Fill
- Clean Sand and/or Gravel
- Silty Sand and Silty Gravel
- Silt and/or Clay with or without Sand

SOIL SAMPLE

Arsenic — Lead

green = Constituent(s) below applicable screening level

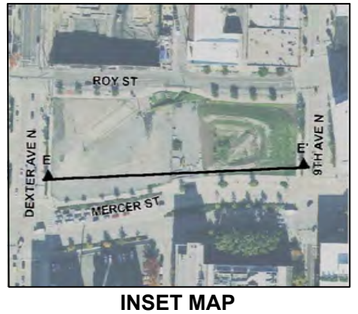
red = Constituent(s) above applicable screening level

Soil	Applicable Screening Level* (mg/kg)
Arsenic[1]	7.3
Lead[2]	250

* Screening levels provided by Ecology (November 17, 2020)

[1] Protective of Groundwater Adjusted for Natural Background
[2] Direct Contact

Explorations HMW-6IA, HMW-6IB, HMW-6D, MBB-26, HMW-15IB, HMW-10S, HMW-11IB, HMW-11S, MBGW-15, and MW-325 have been shifted horizontally for visual clarity.



INSET MAP

Seattle DOT Mercer Parcels Site
Seattle, Washington

COCs, Cross Section E-E': Arsenic and Lead in Soil

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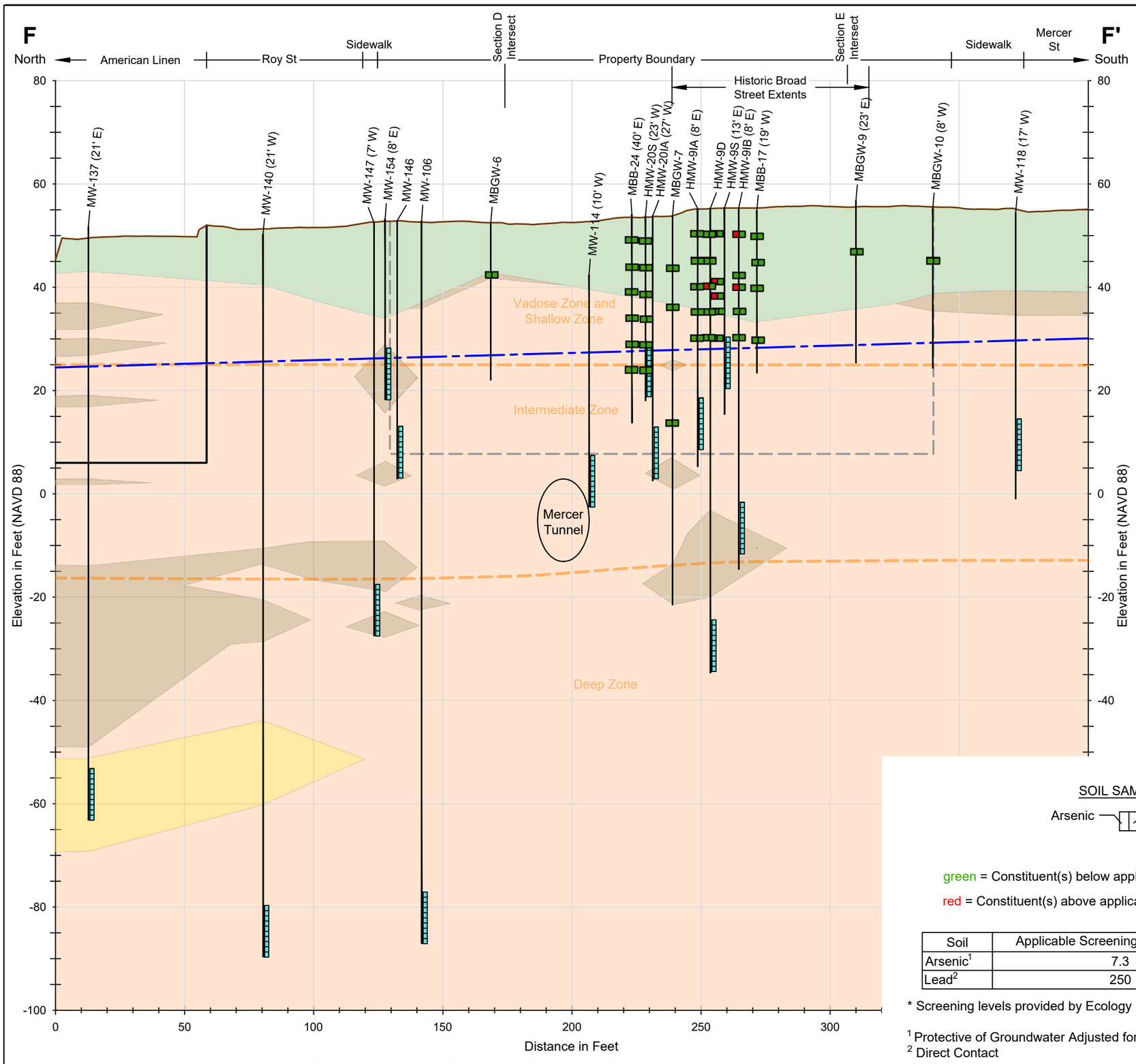
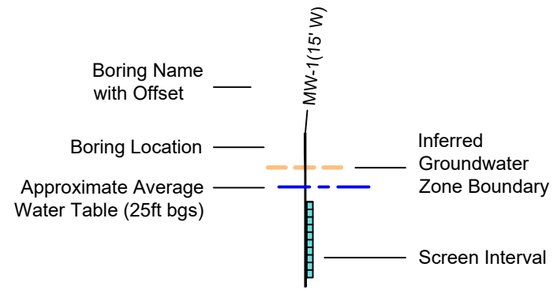
Figure **7-10e**



Explorations MW-146, MW-147, HMW-9D, HMW-9ID, HMW-9S, HMW-20IA, and HMW-20S have been shifted horizontally for visual clarity.

Legend

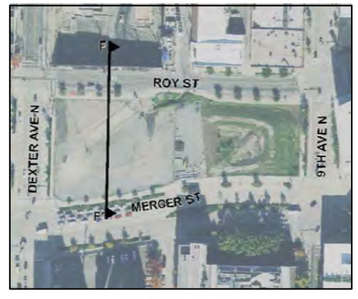


Approximate Limits of Proposed Excavation at Seattle DOT Mercer Parcels Site ("Schematic Design, ARE Mercer Blocks," NBBJ, 04/20/2020)

Approximate Limits of 2020 Building Excavation at American Linen Site

Geologic Units (Predominant Component)

- Fill
- Clean Sand and/or Gravel
- Silty Sand and Silty Gravel
- Silt and/or Clay with or without Sand



INSET MAP

SOIL SAMPLE

Arsenic — Lead

green = Constituent(s) below applicable screening level

red = Constituent(s) above applicable screening level

Soil	Applicable Screening Level* (mg/kg)
Arsenic[1]	7.3
Lead[2]	250

* Screening levels provided by Ecology (November 17, 2020)

[1] Protective of Groundwater Adjusted for Natural Background
[2] Direct Contact

Horizontal Scale in Feet
0 40 80
0 20 40
Vertical Scale in Feet
Vertical Exaggeration x 2

Seattle DOT Mercer Parcels Site
Seattle, Washington

COCs, Cross Section F-F': Arsenic and Lead in Soil

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HARTCROWSER A division of Haley & Aldrich

Figure **7-10f**

American Linen Site | Roy Street | Bend in Section | Seattle DOT Mercer Parcels Site | 9th Ave N

Former Dry Cleaners

Former Gas Station/ Repair Shop

Old Road Fill

Old Road Fill

Arsenic and Lead Exceedance in Soil

Current Ground Surface

cPAH Impacts

Petroleum Impacts

Fill

Water Table

Vadose Soil

Saturated Soil

Planned Soil Removal Limit

Lead Exceedance in Soil

Groundwater Flow

Dry Cleaning Solvent Plume

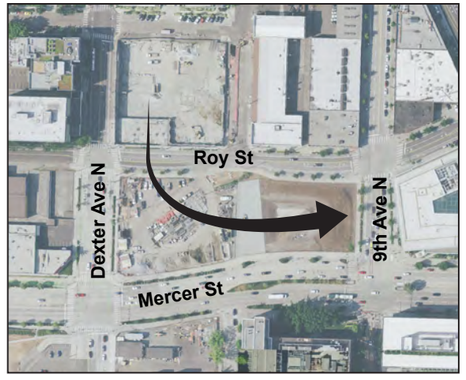
Elevation in Feet (NAVD 88)

80 60 40 20 0 -20 -40 -60 -80 -100

0 50 100 150 200 250 300 350 400 450 500 550 600 650 700 750 800 845

Approximate Distance in Feet

Note
This cross section does not represent a single snapshot in time. Rather, it graphically depicts general groundwater flow directions over time that have led to the migration of contaminants observed in the Remedial Investigation.



Seattle DOT Mercer Parcels Site
Seattle, Washington

Generalized Diagrammatic Conceptual Cross Section

19409-04 01/22

HARTCROWSER
A division of Haley & Aldrich

Figure
7-11

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