

SIT

RECEIVED
JAN 31 2019
DEPT OF ECOLOGY
TCP - NWRO

REMEDIAL INVESTIGATION WORK PLAN

Grand Street Commons Property

1750 22nd Avenue South

Seattle, Washington

PPCD Nos. 18-2-14708-5 SEA and 18-2-147414-0

Facility Site ID #97763114, Cleanup Site ID #3018

Prepared for: Grand Street Commons, LLC

Project No. 170304 • January 30, 2019



earth + water



RECEIVED
JAN 31 2019
DEPT OF ECOLOGY
TCP - NWRO

TRANSMITTAL

Project No.: 170304

January 31, 2019

Attn: Ching-Pi Wang WA State Department of Ecology 3190 160 th Ave SE NWRO Bellevue, WA 98008	Re: Remedial Investigation Work Plan Grand Street Commons Property 1750 22 nd Avenue South Seattle, Washington
--	---

We are sending the following via:

- Regular Mail Express Mail Hand Deliver
 Overnight Delivery Courier Client Pickup

Qty	Description
2 hard copies	Remedial Investigation Work Plan Grand Street Commons Property 1750 22 nd Avenue South Seattle, Washington PPCD Nos. 18-2-14708-5 SEA and 18-2-147414-0 Facility Site ID #97763114, Cleanup Site #3018 Prepared for: Grand Street Commons, LLC

Remarks: Please find enclosed the reports referenced above. If you have any questions, please do not hesitate to contact me. Thank you.

cc: <hr/> <hr/>	Sent by: <u>Dave Cook, LG</u> <u>Principal Geologist</u> <u>dcook@aspectconsulting.com</u>
---------------------------	---

V:\170304 Mt Baker Housing and Lake Union Partners - Belshaw Site - Rainier Ave S\Deliverables\RI Work Plan\Transmittal 20190131.docx



REMEDIAL INVESTIGATION WORK PLAN

Grand Street Commons Property

1750 22nd Avenue South

Seattle, Washington

PPCD Nos. 18-2-14708-5 SEA and 18-2-147414-0

Facility Site ID #97763114, Cleanup Site ID #3018

Prepared for: Grand Street Commons, LLC

Project No. 170304 • January 30, 2019

Aspect Consulting, LLC



David A. Cook

Dave Cook, LG, CPG
Principal Geologist
dcook@aspectconsulting.com

Fasih Khan
Environmental Project Engineer
fkhan@aspectconsulting.com

V:\170304 Mt Baker Housing and Lake Union Partners – Belshaw Site - Rainier Ave S\Deliverables\RI Work Plan\GSC_RI Work Plan_20190130.docx



Contents

EXECUTIVE SUMMARY	ES-1
1 INTRODUCTION.....	1
1.1 Subject Property Information	2
1.2 Subject Property Current Features and Uses.....	4
1.3 Utility Considerations.....	4
1.4 Regulatory History/Current Status.....	4
1.4.1 Regulatory History	5
1.4.2 Current Regulatory Status.....	6
1.5 Future Use of Subject Property.....	6
1.6 RI Objectives and Purpose	6
1.7 RI Work Plan Organization	7
2 ENVIRONMENTAL SETTING	8
2.1 Topography and Surface Water.....	8
2.2 Geology	8
2.3 Hydrogeology	9
2.3.1 Shallow Groundwater.....	9
2.3.2 Deeper Groundwater	9
3 SITE USE HISTORY	11
3.1 Subject Property Use History.....	11
3.2 Adjacent Properties	12
4 PREVIOUS ENVIRONMENTAL INVESTIGATIONS AND ENVIRONMENTAL ACTIONS.....	14
4.1 Previous Environmental Investigations.....	14
4.2 Environmental Actions	15
4.3 RI/FS Activities by Others (2010 – 2014) on Portions of the West Block	16
4.3.1 Remedial Investigation – West Block.....	16
4.3.2 Feasibility Study – West Block	18
4.4 Draft Cleanup Action Plan (2015) – Area 1 of West Block	20
4.5 Aspect 2018 Phase I ESA – East, West, South Blocks.....	21
4.6 Aspect 2017-2018 Environmental Investigation – East, West, South Blocks	22

5	PRELIMINARY CONCEPTUAL SITE MODEL.....	25
5.1	Grand Street Commons Site - Preliminary CSM.....	25
5.2	Potential Exposure Pathways.....	26
5.3	Terrestrial Ecological Protection.....	26
5.4	Constituents of Potential Concern.....	27
5.5	Preliminary Screening Levels.....	27
6	DATA GAPS AND REMEDIAL INVESTIGATION APPROACH.....	28
6.1	Data Gaps.....	28
6.2	RI Soil Investigation.....	30
6.3	RI Groundwater Evaluation.....	31
6.4	Soil Gas Evaluation and Vapor Intrusion Assessment.....	38
7	RI SCHEDULE AND REPORTING.....	40
7.1	Schedule.....	40
7.2	Reporting.....	40
8	REFERENCES.....	42
9	LIMITATIONS.....	44

List of Tables

1	Subject Property Information Summary, RI (<i>in text</i>)
2	Summary of September and November 2017 Groundwater Elevations
3	Summary of Monitoring Well Construction Information
4	Summary of Soil Chemical Data
5	Summary of Groundwater Chemical Data
6	Summary of Soil Gas Chemical Data
7	Predicted Contaminant Concentrations in Indoor Air - J&E Model (<i>in text</i>)
8	Summary of Proposed Soil Sampling Locations (<i>in text</i>)
9	Summary of Proposed Monitoring Wells and Groundwater Sampling (<i>in text</i>)
10	Summary of Tentative Monitoring Wells and Groundwater Sampling (<i>in text</i>)
11	Summary of Proposed Soil Gas Sampling Locations and Testing (<i>in text</i>)

List of Figures

- 1 Subject Property Map
- 2 Subject Property – Parcels Map
- 3 Historic and Existing Site Features
- 4 Environmental Explorations by Others (2002 – 2013)
- 5 Environmental Explorations by Aspect (2017)
- 6 Petroleum Hydrocarbons and BTEX Concentrations in Soil
- 7 Chlorinated Solvents Concentrations in Soil
- 8 1, 4-Dioxane Concentrations in Soil
- 9 Metals Concentrations in Soil
- 10 Summary of MTCA Exceedances in Soil
- 11 November 2017 – Shallow Groundwater Elevations
- 12 Petroleum Hydrocarbons and BTEX Concentrations in Groundwater
- 13 Chlorinated Solvents Concentrations in Groundwater
- 14 1, 4-Dioxane Concentrations in Groundwater
- 15 Metals Concentrations in Groundwater
- 16 Summary of MTCA Exceedances in Groundwater
- 17 Soil Gas Chemical Data and Predicted Indoor Air Concentrations
- 18 Cross-Section Line Overview
- 19 Cross-Section A-A'
- 20 Cross-Section B-B'
- 21 Cross-Section C-C'
- 22 Cross-Section D-D'
- 23 Cross-Section E-E'
- 24 Cross-Section F-F'
- 25 Cross-Section G-G'
- 26 Proposed Locations of Additional Soil Borings, Monitoring Wells, and Soil Gas Samples
- 27 Existing, Proposed, and Tentative Monitoring Wells

List of Appendices

- A Available Boring Logs from Previous Investigations
- B Summary of Historical Wells Screening and Groundwater Elevations
- C Previous Investigations and Interim Action Details
- D 2014 RI/FS Figures and Ecology Letters
- E Electrical Resistance Heating System Plans
- F Aspect 2017 Explorations Logs
- G 2017 VI Modeling Sheets
- H Subject Property Photos – Photos of Unsafe Buildings
- I Report Limitations and Guidelines for Use

Acronyms

Aspect	Aspect Consulting, LLC
ASTM	American Society for Testing and Materials
bgs	below ground surface
BETX	benzene, ethylbenzene, toluene and xylenes
CAP	Cleanup Action Plan
CSM	conceptual site model
DNR	Washington State Department of Natural Resources
Ecology	Washington Department of Ecology
EPA	U.S. Environmental Protection Agency
ERH	electrical resistance heating
ESA	Environmental Site Assessment
FS	Feasibility Study
JE Model	Johnson and Ettinger Model
MBHA	Mt. Baker Housing Association
mg/kg	milligrams/kilograms
µg/L	micrograms per liter
MTCA	Model Toxics Control Act
PAH	polycyclic aromatic hydrocarbon
PCB	polychlorinated biphenyls
PCE	Tetrachloroethene
PPCD	Prospective Purchaser Consent Decree
REC	Recognized Environmental Condition ¹
RI	Remedial Investigation
ROW	rights-of-way

¹As defined by Section 1.1.1 of American Society for Testing and Materials (ASTM) E1527-13, RECs are: hazardous substances or petroleum products under conditions that indicate an existing release, a past release, or a material threat of a release into structures on the properties or into the ground, groundwater, or surface water of the properties.

ROZ	Redevelopment Opportunity Zone
SHA	Site Hazard Assessment
SVE	soil vapor extraction
TCE	trichloroethylene
UST	underground storage tank
VCP	Voluntary Cleanup Program
VOC	volatile organic compound
WAC	Washington Administrative Code

EXECUTIVE SUMMARY

Aspect Consulting, LLC (Aspect) has prepared this Remedial Investigation (RI) Work Plan on behalf of the Grand Street Commons, LLC (GSC) for the Grand Street Commons property located between South State and Holgate Streets and Rainier and 23rd Avenues South in Seattle, Washington. The Grand Street Commons property consists of 16 King County tax parcels totaling 3.2-acres (herein collectively referred to as the Subject Property or Property). The purpose of this RI Work Plan is to describe the plan to obtain sufficient subsurface information to address data gaps, prepare a RI report in accordance with Washington Administrative Code (WAC) 173-340-350, and select a cleanup action under WAC 173-340-360.

The following soil, groundwater, and soil gas contamination has been identified at concentrations that exceed the Model Toxics Control Act (MTCA) cleanup levels at the Subject Property and a north-adjacent property by studies completed between 1989 and 2018:

- Petroleum hydrocarbons, metals and 1,4-dioxane related to former bakery equipment manufacturing operations that utilized these hazardous chemicals and/or were stored in underground storage tanks [USTs] at the Subject Property; and
- Migration of chlorinated solvents onto the Subject Property from a north adjacent property that was historically occupied by a drycleaner (former Penthouse Drapery Cleaners [Ecology Cleanup Site ID #3184 with an address of 1742 Rainier Ave S]). These migrating chlorinated solvents have commingled with 1,4-dioxane (and possibly other contaminants - petroleum hydrocarbons and metals) related to former bakery equipment manufacturing operations released at the Subject Property. The north-adjacent property is currently occupied by Seattle Collision Center, an auto body repair facility.

The Grand Street Commons Site is listed in the Washington State Department of Ecology's (Ecology) Cleanup Sites database as *Grand Street Commons* or *Belshaw Bros Inc*, with a Facility Site ID: 97763114, Cleanup Site ID: 3018, and physical address of 1750 22nd Avenue S, Seattle, Washington.

Although several environmental investigations have been completed, the lateral and vertical extent of tetrachloroethene (PCE) and breakdown products released at, and sourced from, the north-adjacent property (former Penthouse Drapery Cleaners) and the petroleum hydrocarbons-, metals-, and 1,4-dioxane contamination released at, and sourced from, past industrial operations at the Subject Property in soil, groundwater, and/or soil gas has not been established yet to fully define the Grand Street Commons "Site" (where "Site" is defined by Ecology as wherever contamination has come to be located).

Additional soil, groundwater, and soil gas evaluation is necessary to understand the nature and vertical and lateral extent of the subsurface contamination. The additional evaluation outlined in this RI Work Plan consist of:

- Completion of 17 soil borings;
- Installation of 21 “proposed” groundwater monitoring wells (20 shallow wells screened from approximate depths of 10 to 30 feet below ground surface [bgs] and 1 deep well screened from approximate depths of 80 to 100 feet bgs);
- Collection of 7 soil gas samples;
- Soil/groundwater/soil gas sampling and chemical testing.
- Possible completion of 14 “tentative” groundwater monitoring wells (8 shallow wells and 6 deep wells) and soil/groundwater chemical testing.

The 14 “tentative” groundwater monitoring wells may or may not be needed depending on the field observations and chemical analytical results of the “proposed” RI explorations (17 soil borings and 21 groundwater monitoring wells). The proposed explorations are described in Section 6.0 of this report.

The results of this supplemental investigation will be combined with past studies to prepare a RI report, followed by a Feasibility Study (FS), and a Cleanup Action Plan (CAP).

1 INTRODUCTION

Aspect Consulting, LLC (Aspect) has prepared this Remedial Investigation (RI) Work Plan on behalf of the Grand Street Commons, LLC (GSC) for the Grand Street Commons property located between South State and Holgate Streets and Rainier and 23rd Avenues South in Seattle, Washington. The Grand Street Commons property consists of 16 King County tax parcels totaling approximately 3.2-acres (herein collectively referred as the Subject Property or the Property). The Subject Property is shown relative to surrounding physical features in Figure 1, *Subject Property Location*.

This RI Work Plan has been prepared to comply with actions outlined in a Prospective Purchaser Consent Decree (PPCD) between the Washington State Department of Ecology (Ecology) and GSC (PPCD No. 18-2-14708-5 SEA dated July 3, 2018) and a PPCD between Ecology and Mt. Baker Housing Association (PPCD No.18-2-147414-0 dated July 5, 2018). Grand Street Commons, LLC is a joint venture between Mt. Baker Housing Association (MBHA) and Lake Union Partners (LUP) and HAL Real Estate (HAL).

For this RI Work Plan, Aspect divided the Subject Property into three blocks: East, West, and South. The Subject Property blocks and corresponding parcels are shown in Figure 2, *Subject Property – Parcels Map*.

The sources of soil and groundwater contamination identified by the environmental studies completed thus far at the Subject Property by others (2002 – 2014; herein referred to as others) and Aspect (2017) discussed later in Section 4 of this report consists of:

- 1) Petroleum hydrocarbons, metals, and 1,4-dioxane related to former bakery equipment manufacturing operations that utilized these hazardous chemicals and/or were stored in underground storage tanks [USTs]) at the Subject Property, and
- 2) Migration of chlorinated solvents onto the Subject Property from a north adjacent property that was historically occupied by a drycleaner (former Penthouse Drapery Cleaners [Ecology Cleanup Site ID #3184 with an address of 1742 Rainier Ave S, Seattle]) These migrating chlorinated solvents have commingled with 1,4-dioxane (and possibly other contaminants - petroleum hydrocarbons and metals) related to former bakery equipment manufacturing operations released at the Subject Property.

The locations where contaminated soil or groundwater originating from these sources has come to be located is referred to herein as the “Site” and remains to be fully identified. The Site is listed in Ecology’s Cleanup Sites database as *Grand Street Commons* or *Belshaw Bros Inc*, with a Facility Site ID: 97763114, Cleanup Site ID: 3018, and physical address of 1750 22nd Avenue S, Seattle, Washington.

ASPECT CONSULTING

The Subject Property will be remediated in accordance with the PPCDs and redeveloped with a mix of affordable and workforce housing, market-rate housing, retail space, and underground parking (Grand Street Commons Project).

1.1 Subject Property Information

Relevant information for the Subject Property including the contact information of key team members for the Grand Street Commons Project are summarized in Table 1 below.

Table 1. Subject Property Information Summary

Subject Property Information	
Property Addresses	<p>East Block: 1722 22nd Avenue S, 1750 22nd Ave S, and 2200 S Grand Street, in Seattle, WA 98144</p> <p>West Block: 1762 Rainier Avenue S, and 2100 S Grand Street, in Seattle, WA 98144.</p> <p>South Block: No address. (NE of Rainier Ave S and S Holgate Street intersection in Seattle, WA 98144)</p>
Name	Grand Street Commons
Ecology Site IDs	PPCD Nos. 18-2-14708-5 SEA and 18-2-147414-0 Facility Site ID #97763114 and Cleanup Site ID #3018
Parcel Numbers	<p>East Block: Parcel Nos. 1822300175, 1822300180, and 0924049007.</p> <p>West Block: Parcel Nos. 7548301150, 7548301100, 7548301095, 1822300005, 7548301115, 7548301120, 1822300020, 7548301125, and 1822300025.</p> <p>South Block: Parcels Nos. 3881900515, 3881900540, 3881900550, and 3881900560.</p>
Grand Street Commons Project – Key Contacts	
Property Owner(s)	<p>Grand Street Commons, LLC</p> <p>Contact: Brendan Lawrence 2030 Dexter Avenue North, Suite #100 Seattle, WA 98109 Phone: 206.290.1097</p> <p>Contact: Conor Hansen 2916 S McClellan Street Seattle, WA 98144 Phone: 206.257.2939</p>
Environmental Consultant	<p>Aspect Consulting, LLC Dave Cook, LG, CPG 710 2nd Ave, Suite 550 Seattle, Washington 98104 Phone: 206.838.5837</p>
Ecology Site Manager	<p>Ching-Pi Wang 3190 160th Avenue SE Bellevue, Washington 98008-5452 Phone: 425.649.7134</p>

1.2 Subject Property Current Features and Uses

The Subject Property is in a mixed-use commercial and residential area of the North Rainier/Mt. Baker neighborhood of Seattle, Washington. The following is a block-wise summary of the current features and use of the Subject Property. All the buildings on the East and West Blocks were demolished in December 2018 under demolition permits (Permit Nos. 6691985, 669479, and 6694980) issued by the City of Seattle (City). No buildings were present on the South Block. Demolition of the buildings was a critical path element to proceeding with the supplemental work outlined in this RI Work Plan.

East Block. Until December 2018, the East Block was occupied by three buildings (Main Building, Foundry, and Assembly Building) associated with the historical bakery equipment manufacturing operations by Belshaw Bros, Inc, (Belshaw) the prior owner/operator of the Subject Property. (Figure 3).

West Block. The north and central portion of the West Block is an un-paved gravel lot utilized by a local construction contractor for staging mobile office trailers and construction-related equipment/machinery. Until December 2018, the south portion of the West Block had a small vacant building (formerly used for retail). The northwest portion of the West Block is currently enclosed in a chain-link fence where an electrical resistance heating (ERH) remediation system is operating to clean up tetrachloroethene (PCE) contaminated soil and groundwater (sourced from the north-adjacent property, the former Penthouse Drapery Cleaners, and discussed in Section 4.4 of this report). (Figure 3).

South Block. Unpaved gravel lot being utilized by a local construction contractor for staging construction-related equipment and materials (Figure 3).

The approximate location of the buildings demolished in 2018 is shown in Figure 3, *Subject Property – Historical and Current Features*.

1.3 Utility Considerations

The Subject Property is located between S State Street, Rainier Avenue S, S Holgate Street, and 23rd Avenue S. 22nd Avenue S extends north-south between the East and West Blocks and terminates at S Grand Street which is located to the north of the South Block, of the Subject Property (Figure 2).

Several utilities (power, water, gas, storm drain, sanitary sewer) are present in utility corridors within the adjacent rights-of-way. It is possible that the utility corridors are acting as a preferential pathway for contaminant migration in groundwater, but further evaluation is needed to confirm this potential. The approximate locations of the known utilities are shown in plain view in Figure 18, *Cross-Section Lines Overview*, and in the cross sections, Figures 19 through 25.

1.4 Regulatory History/Current Status

Following is a chronological summary of the regulatory history/status and a snapshot of the proposed future use of the Subject Property.

1.4.1 Regulatory History

2002

Belshaw Bros. Inc. (Belshaw) and the Enodis Corporation (Enodis), a successor to Belshaw (collectively Belshaw/Enodis) notified Ecology of petroleum and chlorinated solvents contamination on the Subject Property identified by an environmental investigation that was performed in 2002 (AW, 2002) for due diligence to support a property transaction.

2004

In 2004, Belshaw/Enodis enrolled the petroleum-contaminated portion (east central portion of the West Block, Figure 2) of the Subject Property into the Voluntary Cleanup Program (VCP; Project No. NW1254). Ecology assigned Cleanup Site ID: 3018 and Facility Site ID: 97763114 to this portion of the Subject Property.

2004 - 2008

Following enrollment in the VCP of this portion of the Subject Property, supplemental soil and groundwater investigations were performed by Belshaw/Enodis (URS, 2002; URS, 2003; URS, 2006). These investigations identified PCE, a common dry-cleaning chemical, in groundwater beneath the north-adjacent property and the northwest portion of the West Block.

Additionally, an interim remedial action (Dual Phase Extraction Groundwater Treatment System, 2004 through 2008) was implemented by Belshaw/Enodis to address the petroleum contamination on a portion of the West Block (blue hatched area in Figure 3). The interim remedial action (summarized in Section 4.2 and in Appendix C) did not fully remedy the gasoline and benzene contamination in this area of the Subject Property and further cleanup is needed. Ecology terminated the Subject Property from the VCP in 2008 because Belshaw/Enodis were not actively cleaning up the contamination (Ecology, 2008).

2010 - 2015

On May 10, 2010, Penthouse Drapery enrolled into the VCP for the PCE contamination that was identified related to releases at the former Penthouse Drapery Dry Cleaner (the current location of the Seattle Collision Center). Penthouse Drapery enrolled the north adjacent property and a limited northwest portion of the West Block (green hatched area, Figure 3) into the VCP (Project No. NW2278 and Facility/Site No. 23408).

In 2011, a remedial investigation and feasibility study (RI/FS) report (Pacific Crest, 2011) documenting the PCE contamination related to the former Penthouse Drapery Cleaners was submitted to Ecology by the potentially liable parties (PLPs) (Penthouse Drapery and Belshaw/Enodis) for review and comment. Ecology provided an opinion in the VCP that additional soil, groundwater, and soil vapor evaluation was needed for site characterization (Ecology, 2011).

The 2011 RI/FS was revised based on Ecology's comments and resubmitted by the PLPs as a draft RI/FS in 2014 (Pacific Crest, 2014). Ecology provided a further opinion that requested further revisions to the draft RI/FS (Ecology, 2014). A response letter was

ASPECT CONSULTING

submitted by the PLPs to Ecology in April 2015 (Pacific Crest, 2015a) that addressed Ecology's review comments regarding the draft RI/FS.

In July 2015, Ecology conducted a Site Hazard Assessment (SHA) of the Subject Property relative to the former Belshaw operations. Based on the results of the SHA, Ecology determined that the Subject Property is contaminated with diesel, 1,1-dichloroethene, trichloroethene, and benzene. Ecology ranked the Subject Property as a 3, where 1 represents the highest relative risk and 5 the lowest (Ecology, 2015a).

In July 2015, a draft Cleanup Action Plan (dCAP) for addressing the PCE contamination on the north-adjacent property (SCC/former Penthouse Drapery property) and in the northwest portion of the West Block on the Subject Property was submitted by the PLPs to Ecology for comment (Pacific Crest, 2015b). Ecology provided an opinion that approved the cleanup remedy (combination of in-situ electrical resistance heating [ERH] and soil vapor extraction [SVE] system) for the PCE-affected soil and groundwater area only (Ecology, 2015b).

1.4.2 Current Regulatory Status

Following approval of the PCE cleanup remedy by Ecology for the north-adjacent property and the northwest portion of the West Block, ERH electrodes installation started in 2016 and was completed in 2017. The ERH system was energized from March through October 2018. Aspect understands that performance sampling by the former Penthouse Drapery to verify achievement of remediation objectives is pending.

1.5 Future Use of Subject Property

In June 2018, Grand Street Commons LLC purchased the 16 tax parcels comprising the Subject Property and executed PPCDs for the Subject Property aka *Grand Street Commons Site* with Ecology and the Washington State Attorney General's office in July 2018.

On September 25, 2018, the parcels comprising the Subject Property were designated by the City of Seattle (City) as a Redevelopment Opportunity Zone (ROZ). GSC and MBHA will redevelop the Subject Property for a mix of affordable, workforce and market-rate, transit-oriented housing.

1.6 RI Objectives and Purpose

The objective of this RI Work Plan is to describe the plan to obtain sufficient subsurface information to address the data gaps (discussed in Section 6 of this report), prepare a RI report in accordance with Washington Administrative Code (WAC) 173-340-350, and select a cleanup action under WAC 173-340-360. This RI Work Plan serves the following purposes:

- Provide a summary of the completed investigations to date at the Grand Street Commons Site.
- Describe the preliminary conceptual site model (CSM) explaining contaminant movement through the subsurface and exposure pathways.

- Identify data gaps that require investigation to fully define the Site, that will enable evaluation and selection of a cleanup action as part of a Feasibility Study (FS).
- Provide the description and rationale for the scope of work to be performed for the RI.

1.7 RI Work Plan Organization

The RI Work Plan is presented in Sections 2.0 through 8.0.

- Section 2.0 presents the Environmental Setting.
- Section 3.0 discusses the Site Use History.
- Section 4.0 discusses previous investigations and existing data.
- Section 5.0 describes the preliminary conceptual site model (CSM) for the Site, including sources and preliminary contaminants of potential concern (COPCs), the potential exposure pathways and receptors, and the applicable preliminary Site screening levels for the RI.
- Section 6.0 describes the data gaps and the general approach for the RI to address those data gaps.
- Section 7.0 presents the RI schedule and reporting.
- Section 8.0 presents the references used for the creation of this draft RI Work Plan.

2 ENVIRONMENTAL SETTING

2.1 Topography and Surface Water

Following is a block-wise summary of the Subject Property topography based on our review of a surveyed drawing (Goldsmith, 2017) and site reconnaissance:

East Block. The Subject Property slopes gradually from north to south with elevations ranging from approximately 82 feet (NAVD88)² to 72 feet (NAVD88).

West Block. The Subject Property slopes gradually from northeast to southwest with elevations ranging from approximately 77 feet (NAVD88) to 70 feet (NAVD88).

South Block. The Subject Property slopes gradually from northeast to southwest with elevations ranging from approximately 78 feet (NAVD88) to 69 feet (NAVD88).

Overall, the ground surface topography at the Subject Property slopes towards the south, consistent with the local physical characteristics (elevated areas on either side of Rainier Ave S near East and West Blocks of the Subject Property).

2.2 Geology

According to the *Washington Interactive Geologic Map*, provided by the Washington State Department of Natural Resources (DNR)³, the Subject Property and vicinity are underlain by Quaternary glacial drift deposits (Qgd) of the Pleistocene's Fraser-age glaciation (about 30,000 to 10,000 years ago). According to the Geologic Map of Seattle, produced by the U.S. Geological Survey and the Pacific Northwest Center for Geological Mapping Studies, the Subject Property and vicinity are underlain mainly by Quaternary continental glacial drift deposits, including till and outwash deposits, from the Pleistocene Fraser-age glaciation, about 30,000 to 10,000 years ago (Troost et al., 2005).

Based on explorations completed during a geotechnical study at the Subject Property (Aspect, 2017), soils beneath the Subject Property generally consists of silty and gravelly sand fill soil overlying dense to very dense glacially consolidated silty sand with gravel.

- Fill soil at the Subject Property consisted of loose, dry, sandy gravel (GP) and loose, moist, silty sand (SM). The fill ranged in thickness from approximately 2 feet (East and South Blocks) to 10 feet (West Block) below the existing ground surface (bgs).
- Low permeability recessional lacustrine deposits consisting of low-plasticity clay (CL) extended below the fill to an approximate depth of about 13 to 15 feet bgs across all blocks of the Subject Property.
- Glacial deposits consisting of very dense, slightly moist, silty sand (SM) and hard, slightly moist, slightly sandy silt (ML) were encountered below the lacustrine deposits across all blocks of the Subject Property.

² North American Vertical Datum (NAVD).

³ <https://www.dnr.wa.gov/geologyportal>

2.3 Hydrogeology

Based on our understanding of the results from environmental studies completed thus far, there appears to be two groundwater zones beneath the Subject Property. A shallow groundwater zone between approximate depths of 14- to 24 feet below existing ground surface (bgs) and a deeper groundwater zone between approximate depths of 60- to 100 feet bgs (regional aquifer). Following is a preliminary summary of the Subject Property hydrogeology.

2.3.1 Shallow Groundwater

Based on the measurements obtained by Aspect in September and November 2017 from the top of well casings in the 17 existing monitoring wells (Aspect, 2018a), the depth to shallow groundwater zone beneath the Subject Property varies as follows:

- Approximately 15 to 24 feet bgs at the East Block;
- Approximately 14 to 22 feet bgs at the West Block; and
- Approximately 16 feet bgs at the South Block.

The corresponding elevations⁴ ranged from a low of 52.45 feet (South Block) to a high of 64.56 feet (East Block). The shallow groundwater elevations are unusual in that there is no clear groundwater flow direction or consistent gradient at the Subject Property. This is possibly due to the urban setting, heterogenous fill placed during several iterations of historical development (discussed in Section 3.1 of this report).

Based on our preliminary understanding of the subsurface geologic and hydrogeologic conditions, Aspect generally mapped the shallow groundwater contours by considering only the groundwater elevations from the new monitoring wells (total depth ranged from approximately 25 to 35 feet bgs) that were installed and uniformly screened within the shallow groundwater zone by Aspect in 2017 (Figure 11).

Groundwater elevation data from older monitoring wells that were installed by others was ignored due to absence of well construction logs and variable well screening intervals.

The September and November 2017 shallow groundwater elevations obtained by Aspect are summarized in Table 2. The November 2017 groundwater elevations obtained from Aspect's monitoring wells are shown in Figure 11, *Groundwater Elevations*.

2.3.2 Deeper Groundwater

The depth to the deeper regional groundwater aquifer (separated from the shallow groundwater by a hard silt layer) is greater than 50 feet at the Subject Property based on the historical groundwater well measurements made by, and reported by, others.

Specifically, the approximate depth to deeper regional groundwater ranged from approximately 65 to 80 feet in the northwest portion of the West Block (Pacific Crest, 2014).

⁴ Elevations in North American Vertical Datum (NAVD) 88.

ASPECT CONSULTING

Aspect could not locate the groundwater monitoring wells that were completed to the deeper regional aquifer by others because these wells were performed in the northwest portion of the West Block that is currently inaccessible due to the operation of Electrical Resistance Heating (ERH) remediation system (see Section 4.3).

The maximum depth of the monitoring wells that were installed by Aspect in 2017 was approximately 35 feet bgs because the study was focused on evaluating the shallow groundwater conditions.

3 SITE USE HISTORY

Historical uses of the Subject Property and adjacent properties of environmental significance are described below. Parcel numbers and corresponding addresses are shown in Figure 2. The historical and existing features at the Subject Property are shown in Figure 3.

3.1 Subject Property Use History

The Subject property was first developed in the early 1900s (prior to 1920) with residential dwellings. Between approximately 1924 and 2004, Belshaw Brothers (Belshaw) and their corporate successors owned, occupied and operated the Subject Property for manufacturing bakery and restaurant equipment (Aspect, 2018b). Following is a summary of the Subject Property's uses by Block.:

East Block: Residences then Bakery Equipment Manufacturing. The East Block was first developed with residential dwellings and a grocery store in the early 1910s. By the early 1920s when Belshaw took ownership, the residential dwellings in the west half were replaced by three industrial-use structures (Main Building, Foundry, and Assembly Building) associated with the former bakery equipment manufacturing operations performed by Belshaw and its successors (Figure 3). These three industrial-use structures were poorly maintained and in severely dilapidated condition at the time of GSC's acquisition of the Subject Property. Pursuant to City of Seattle Permit Nos. 6691985, 669479, and 6694980, these buildings were demolished in December 2018 to facilitate this supplemental investigation.

West Block: Residences then Auto Repair and Machine Shops. The north half of West Block was first developed with residential dwellings in the early 1900s that were present until the 2000s in the north and south portions. At least one of these dwellings utilized a UST for storing home heating oil (Figure 3). Belshaw further developed the West Block by constructing two industrial-use structures, an Auto Repair Shop (later converted to a Paint building) and a Machine Shop (also used as a Welding Shop) in the southeast and central portions of the West Block by the early 1930s (Figure 3).

The southwest portion of the West Block was utilized as a parking lot by Belshaw and the southeast portion was occupied by a residence between the 1920s and 1960s. A small structure was later added in the southwest portion that reduced the parking lot footprint (Figure 3). Multiple retail businesses utilized the small structure for office/retail space until it was demolished in December 2018.

By 2012, all structures except the small office structure in the southwest portion of the Block were demolished and the majority of the West Block became vacant with grass and small plants becoming established.

In 2014, a construction contractor rented the West Block from the owner at the time, the Centioli Family LLC, for staging construction materials, mobile offices, and equipment. The West Block was graded by the tenant and improved with the placement of 1 to 2-foot thick layer of imported gravel to ease construction-related equipment staging and vehicle movement (Figure 3).

ASPECT CONSULTING

In 2017, a limited northwest portion of the West Block was enclosed in a chain-link fence for the installation and operation of the ERH remediation system associated with the cleanup of the PCE contamination originating from the north-adjacent property (Penthouse Drapery Dry Cleaners – currently Seattle Collision Center) (Figure 3).

The West Block appears in the same configuration today except for the small office building in the southwest portion that was demolished in December 2018.

South Block. Residences then Parking. The east half of the South Block was first developed with residential dwellings in the early 1910s that were demolished in the late 1980s. The west half of the South Block was used as unpaved parking lot by Belshaw starting in the 1920s when Belshaw started industrial operations on the East and West Blocks.

The entire South Block was vacant from the 1980s until it was improved with gravel in 2014 by the tenant at the time, a construction contractor and used as an unpaved parking lot/staging yard for construction vehicles, equipment and materials by various construction contractors in 2014. The South Block is currently unpaved.

3.2 Adjacent Properties

Based on Aspect's review of historical documents, adjoining and surrounding properties have been developed and used over time for commercial, retail, and residential purposes (Aspect, 2018b). The following provides a summary of the properties surrounding the Subject Property:

North – Some of the north-adjacent properties were first developed as residential dwellings in the early 1910s. Additional residences were added between the 1910s and 1940s. Commercial development included the construction of a parts manufacturing facility (Associated Industries, Inc.) on one of the north-adjacent properties located at 1752 Rainier Avenue S in 1950.

A patio, pool and furniture supply retail business replaced the parts manufacturing facility in the 1970s. Penthouse Drapery, a drycleaner facility then operated at the north-adjacent property from the 1980s through the mid-1990s. The Seattle Collision Center, an auto body repair facility, has occupied this property since 1998 (Figure 3) and is currently operating. Single- and multi-family residences occupy the remainder of the north adjacent properties located across S State Street (Figure 3).

South – A south-adjacent property located at 1818 Rainier Avenue S has been used as an auto repair facility since the 1940s under various business names. Currently the Dere Car Care Center operates there (Figure 3). Historical information suggests that this property utilized a UST for gasoline and oil storage.

The property located across S Holgate Street at 1900 Rainier Avenue S appears to have been first developed as an office/retail building in the 1960s. Development increased on the property with additional commercial structures added in 1990. This property was redeveloped in the early 2000s with a single large office building and is currently occupied by Well Spring Family Services (Figure 3).

East – The east-adjacent property 1740 23rd Avenue S located across 23rd Avenue S was first developed as Coleman playfield in the 1930s and is present today (Figure 3).

West –The west-adjacent properties located at 1761, 1801 and 1811 Rainier Ave S across Rainier Ave S were first developed with residential dwellings in the early 1910s. Two large commercial-use structures were constructed in the 1930s on these properties.

One of the structures located at 1761 Rainier Avenue S has been occupied by a lumber/retail business since the 1950s through present day and is currently Stewart Lumber. (Figure 3).

The other structure located at 1801 and 1811 Rainier Avenue S was occupied by several commercial and light-industrial facilities (printing facilities, welding shops, beverage wholesale) from the 1930s through 1980s. Auto body/vehicle repair businesses under various names (Speedway Collision Center, Muffler City, Seattle Engine Rebuilt, A-1 Auto Repair and Rainier Auto Repair) have operated here from 1980s through 2017 (Aspect, 2018b).

The 1801 and 1811 Rainier Ave S property is currently vacant.

4 PREVIOUS ENVIRONMENTAL INVESTIGATIONS AND ENVIRONMENTAL ACTIONS

Environmental activities consisting of assessments (multiple Phase I and Phase II Environmental Site Assessments [ESA] and supplemental soil/groundwater/soil gas investigations) and interim actions (UST removals and dual phase extraction remediation system) including regulatory interactions were completed by others between the late-1980s and 2015, at the Site.

Aspect completed a limited subsurface environmental study at the Subject Property in 2017 and a Phase I ESA in 2018 as part of GSC/MBHA's due diligence for property acquisition. The findings of the 2017 limited environmental study (Aspect, 2018a) and the Phase I ESA (Aspect, 2018b) were reported under separate covers in 2018.

4.1 Previous Environmental Investigations

Based on Aspect's review of the available environmental reports provided by GSC and in Ecology files, previous environmental investigations at the Site consisted of at least four Phase I ESAs and eight subsurface investigations that were performed by others between 1986 and 2009. A summary of the previous investigations is presented below:

According to the results of the previous investigations:

- **Phase I ESA's.** Four Phase I ESA's were performed in 1995, 2001, 2005, and 2006 for the Subject Property to support real estate transactions. The historical bakery equipment manufacturing operations that utilized several USTs and hazardous chemicals (Subject Property) and the historical drycleaner (former Penthouse Drapery) on the north-adjacent property (currently occupied by Seattle Collision Center) were identified as recognized environmental conditions (RECs).
- **Investigations.** Eight subsurface investigations were performed in 2002 (two studies), 2003, 2005 (two studies), 2006, 2008, and 2009. Aspect was provided reports for 5 of the 8 subsurface investigations. These investigations were performed by Enodis/Belshaw to evaluate soil and groundwater conditions at the Subject Property (Figure 4).
- **On-Property Contaminants of Concern.** Gasoline- and diesel-range hydrocarbons, benzene, and 1,4-dioxane contamination sourced from the Subject Property (former Belshaw equipment manufacturing operations that utilized USTs and hazardous chemicals) were identified in soil and/or groundwater beneath the West and East at concentrations that exceeded the regulatory cleanup levels. These investigations provided only very limited data on the South and East Blocks.

- **Off-Property Contaminants of Concern.** Tetrachloroethylene (PCE) and Trichloroethene (TCE) sourced from the north-adjacent property (existing SCC, former Penthouse Drapery Cleaners) was identified in soil and groundwater beneath the north-adjacent SCC property and the Subject Property (northwest portion of the West Block) at concentrations that exceeded the regulatory cleanup levels.

The approximate location of the explorations completed by others is shown in Figure 4. A graphical summary of the soil chemical analytical results from the previous investigations is shown in Figures 5 through 10. A graphical summary of the groundwater chemical analytical results for samples that were obtained from monitoring wells during the previous investigations is shown in Figures 12 through 16.

Available boring logs of the explorations performed by others are presented in Appendix A. The well screening information and groundwater elevations data from the previous monitoring wells as reported by others is presented in Appendix B. A brief discussion of each of the previous investigation for which reports were available is presented in Appendix C.

4.2 Environmental Actions

At least 7 USTs and various hazardous chemicals were utilized at the Subject Property (Figure 3) during the former bakery equipment manufacturing operations by Enodis/Belshaw. Undocumented releases from these USTs and lack of appropriate waste management and disposal practices by Enodis/Belshaw resulted in gasoline-, diesel-, and 1,4-dioxane contamination in soil and groundwater beneath the Subject Property. Enodis/Belshaw performed the following interim actions to address the contamination at the Subject Property:

- **Independent Actions (UST Removals).** USTs were used for storing gasoline-, diesel-, and oil-range hydrocarbons, including a home heating oil at the Subject Property. UST decommissioning and/or removal occurred at the Subject Property in 1986, 1989, 1993, and 2005. At least 5 of the 8 USTs were removed and one UST was buried-in-place (1993). Reportedly, contaminated soil associated with the USTs was successfully removed from only one location (north portion of the West Block) at the Subject Property. Petroleum-contaminated soil is documented to be present in at least three former UST locations (East and West Blocks) on the Subject Property.
- **VCP Action (VCP Project #NW1254).** A dual phase extraction (DPE) soil and groundwater remediation system was installed by Enodis/Belshaw within the gasoline affected area on the east-central portion of the West Block (Figure 3) in 2004 to remediate the gasoline- and benzene-contamination sourced from the former USTs. The system reportedly operated until 2008. Approximately 202 pounds of liquid phase hydrocarbons were recovered from groundwater extraction. Approximately 715,000 gallons of treated water was discharged to the sanitary sewer under a discharge permit from the King County and estimated 919 pounds of total vapor phase total petroleum hydrocarbons (TPH) were recovered

during the DPE system operations (Pacific Crest, 2014). However, contaminated soil and groundwater are still present at this location on the Subject Property.

A brief discussion of UST removals and the DPE system is presented in Appendix C.

4.3 RI/FS Activities by Others (2010 – 2014) on Portions of the West Block

The 2011 VCP RI/FS report stated that “*following the settlement of a private mediation between Penthouse Drapery, Belshaw, Enodis, and SCC, Penthouse Drapery became the lead potentially liable party (PLP) for cleanup action activities to address the Former Penthouse Drapery Site.*” It appears that Enodis/Belshaw remained as the lead potentially liable party for the gasoline- and diesel-range hydrocarbons, benzene, and 1,4-dioxane contamination sourced from the historical Belshaw manufacturing operations at the East and West Blocks of the Subject Property.

This arrangement that resulted from the PLPs’ settlement did not result in the full evaluation or investigation of the Site, in particular where contaminants of concern may have become commingled. Further details related to the investigation of the Former Penthouse Drapery Site are outlined in later sections of this Work Plan.

Pacific Crest Environmental, LLC (Pacific Crest) is the environmental consultant of Penthouse Drapery and URS Corporation (URS) is the environmental consultant of Enodis/Belshaw. Remedial Investigation and Feasibility Study (RI/FS) activities were performed jointly by the PLPs (Penthouse Drapery and Enodis/Belshaw) between 2010 and 2014 under the Voluntary Cleanup Program (VCP Project No. NW2278) at a portion of the West Block.

A joint Draft RI/FS report prepared by Pacific Crest and URS on behalf of the PLPs (Penthouse Drapery and Enodis/Belshaw) was submitted to Ecology for review and comment. Key elements from the draft RI/FS (Pacific Crest, 2014) is presented in the following section.

4.3.1 Remedial Investigation – West Block

The RI study area (Investigation Area) included the former Penthouse Drapery on the north-adjacent property, the south- and east-adjacent Belshaw property (West Block only); some of the public rights-of-way adjacent to the properties; and the topographically up- and down-gradient areas of the Former Penthouse Drapery (SCC property). The following summary is based on Aspect’s review of the draft RI/FS report (Pacific Crest, 2014):

Soil

According to the soil chemical analytical results:

- PCE concentrations in soil ranged from 0.0087 milligrams per kilogram [mg/kg] to 4.2 mg/kg at depths ranging from approximately 1 to 80 feet bgs beneath the north-adjacent property and in northwest portion of the West Block (Subject Property).

- Other CVOCs were not detected above the laboratory reporting limits in the soil samples analyzed during the RI/FS.
- Gasoline-range hydrocarbons were detected at a concentration (4,300 mg/kg) exceeding the regulatory cleanup level only in the 26-foot sample from one boring completed at the east-central portion of the West Block (Subject Property). Gasoline was detected at a concentration below the cleanup level in the 41-foot sample from the same boring.
- Benzene was detected at concentrations (0.034 mg/kg to 0.586 mg/kg) exceeding the regulatory cleanup level between approximate depths of 20 to 31 feet bgs only in one boring completed at the east-central portion of the West Block (Subject Property). Benzene was not detected in the 41-foot sample from the same boring.
- Lead was detected at concentrations below the Natural Background Concentrations⁵ for the Puget Sound Region on the West Block.

Groundwater

According to the groundwater chemical analytical results:

- PCE concentrations ranged from 0.23 micrograms per liter ($\mu\text{g/L}$) to 14,000 $\mu\text{g/L}$, Trichloroethylene (TCE) concentrations ranged from 0.24 $\mu\text{g/L}$ to 45 $\mu\text{g/L}$, and cis-1,2-Dichloroethene (DCE) concentrations ranged from 0.22 $\mu\text{g/L}$ to 159 $\mu\text{g/L}$ primarily beneath the north-adjacent property (Former Penthouse Drapery Cleaners) and in a limited northwest portion of the West Block. Vinyl chloride was not detected.
- Additionally, 1,1,1-TCA concentrations ranged from 0.2 $\mu\text{g/L}$ to 195 $\mu\text{g/L}$ beneath the West Block of the Subject Property.
- The PCE concentrations in shallow groundwater (at approximate depths ranging from 15 to 40 feet bgs) were indicative of the presence of dense non-aqueous phase liquid (DNAPL)⁶ (ITRC, 2003) in a limited area beneath the north-adjacent SCC property/former Penthouse Drapery. The DNAPL likely extended south into the northwest portion of the West Block (Subject Property).
- PCE concentrations exceeded Model Toxics Control Act (MTCA) cleanup levels in the deeper regional groundwater aquifer (at approximate depths ranging from 60 to at least 80 feet bgs) beneath the north-adjacent SCC property/former Penthouse Drapery and in the northwest portion of the West Block (Subject

⁵ Natural Background Soil Metals Concentrations in Washington State, Washington State Department of Ecology, Publication #94-115, October 1994.

⁶ Environmental Protection Agency (EPA) guidance (*Estimating the potential for occurrence of DNAPL at Superfund sites. Publication 9355.4-07FS*) recommends 1% of the effective solubility as a rule of thumb for evaluating the presence of DNAPL. The solubility of PCE in groundwater is 200,000 $\mu\text{g/L}$; therefore, groundwater with PCE concentrations greater than 2,000 $\mu\text{g/L}$ exceed the 1% rule of thumb value.

ASPECT CONSULTING

Property). The lateral and vertical extent of the PCE contamination in deeper regional groundwater was not defined.

- Benzene was detected at a concentration (26.4 µg/L) exceeding the regulatory cleanup level of 5 µg/L in one monitoring well at the east-central portion of the West Block (Subject Property). Gasoline-range hydrocarbons and lead either were not detected and/or detected at concentrations of no regulatory significance.
- The lateral and vertical extent of petroleum contamination is undefined at the West Block of the Subject Property. No explorations were performed on the East Block of the Subject Property to evaluate soil and groundwater contamination identified by previous environmental investigations (see Section 4.1 and Appendix C). Also, the potential for presence of chlorinated VOCs and 1,4-dioxane needs to be evaluated.

Soil Gas

- PCE was detected in a sub-slab soil gas sample obtained from beneath the slab of the north-adjacent SCC/former Penthouse Drapery at a concentration (4,700 micrograms per cubic meter [$\mu\text{g}/\text{m}^3$]) exceeding the MTCA Method B Sub-Slab Soil Gas Screening Level of 321 $\mu\text{g}/\text{m}^3$. TCE, cis-1,2-DCE or VC were not detected in the sub-slab soil gas sample.

Soil Vapor Extraction (SVE) Pilot Test

- The mass of PCE recovered during the SVE pilot test was calculated to be approximately 1,200 milligrams (mg) using the laboratory analytical results. The rate of recovery for PCE was calculated to be 281 milligrams per hour (mg/hr) for the SVE pilot test. The contaminant recovery rate, air flow and effective radius calculated from the SVE pilot test results indicated that SVE alone is unlikely to be an effective technology for soil remediation (Pacific Crest, 2011).

Select figures from the draft RI/FS report prepared jointly by Pacific Crest and URS (Pacific Crest, 2014) are presented in the attached Appendix D.

4.3.2 Feasibility Study – West Block

Based on the RI results and for evaluating cleanup alternatives, Pacific Crest/URS divided the contamination area into three cleanup subareas of the West Block (Area-1, Area-2, and Area-3). The sub-areas generally included:

- Area 1: Area affected by the release of PCE sourced from the north-adjacent property (SCC/former Penthouse Drapery). Area-1 includes the north-adjacent property and the west half of the West Block.
- Area 2: The release of gasoline from the former USTs utilized by Belshaw on the West Block of the Subject Property. Area-2 comprises of the east-central portion of the West Block.
- Area 3: The low concentrations of 1,1,1-TCA and 1,4-dioxane sourced from the former Belshaw bakery-equipment manufacturing operations on the Subject

Property. Area-3 comprised of the south half of the West Block and appeared to extend in groundwater to the east half of the South Block.

Per the draft RI/FS (Pacific Crest, 2014), the preferred cleanup remedy for each of the sub-areas is as follows:

- Area – 1: ERH and Enhanced *In Situ* Anaerobic Bioremediation.
- Area – 2: Excavation and Enhanced Aerobic Bioremediation.
- Area – 3: Enhanced *In Situ* Anaerobic Bioremediation and Monitored Natural Attenuation.

Ecology reviewed the Draft RI/FS in 2014 and issued comments through an October 27, 2014 opinion letter (Ecology, 2014). Ecology concurred with the preferred cleanup remedy for each of the sub-areas and requested the PLPs address several elements of the draft RI/FS. Ecology noted the following (Ecology, 2014):

“Ecology concurs with the remedial alternative selected for Area 1 - electric resistive heating (ERH) and enhanced in-situ anaerobic bioremediation (Alternative 4). The draft cleanup action plan (dCAP) should describe the extent to which the area beneath Rainier Avenue South will be affected by the ERH”,

“Ecology concurs with the remedial alternative selected for Area 2 - excavation and enhanced aerobic bioremediation (Alternative 2). The dCAP should include a contingency if contamination is found to extend deeper than the proposed excavation depth of 30 feet below the ground surface”, and

“Ecology concurs with the remedial alternative selected for Area 3 – enhanced reductive dechlorination and monitored natural attenuation (Alternative 2). The dCAP should include documentation that sufficient natural attenuation processes will be demonstrable on the Site to achieve cleanup in the stated time frame”.

Ecology conducted a Site Hazard Assessment (SHA) of the Subject Property in July 2015 and assigned a hazard rank of 3 relative to the petroleum and solvents contamination sourced from the former Belshaw operations at the Subject Property (Ecology, 2015a).

Pacific Crest responded to Ecology’s comments for the draft RI/FS through a letter dated April 3, 2015 (Pacific Crest, 2015a). Ecology accepted the response letter and stated the following (Ecology, 2015b):

“The April 3, 2015 response letter to Ecology’s opinion letter dated October 27, 2014 generally clarified the questions and issues raised in the opinion letter. The draft Remedial Investigation/Feasibility Study (RI/FS) should be finalized with the additional information and revised tables and figures provided with the response letter”.

Although petroleum and/or solvents contamination was identified by previous investigations on the East Block, no explorations were completed nor were any cleanup remedies evaluated for the East Block by the 2014 RI/FS. Thus, the PLPs did not conduct a Site-wide RI/FS or propose Site-wide cleanup actions.

ASPECT CONSULTING

Select figures showing soil and groundwater chemical data summary and the approximate boundaries of the sub-areas as reported by Others (Pacific Crest, 2014) and a copy of Ecology communication letters (Ecology; 2014, 2015a, and 2015b) is presented in Appendix D.

4.4 Draft Cleanup Action Plan (2015) – Area 1 of West Block

A draft Cleanup Action Plan (dCAP) was prepared by Pacific Crest (Pacific Crest, 2015b) to implement the ERH to address Area 1, the area of chlorinated solvents beneath the north-adjacent SCC /former Penthouse Drapery and a limited northwest portion of the West Block (Subject Property). The dCAP was submitted by Pacific Crest on behalf of the Penthouse Drapery to Ecology for approval. The dCAP did not specify any cleanup at Areas 2 and 3 on the Subject Property.

The following is based on Aspect's review of the dCAP submitted by Pacific Crest that addressed only Area 1 of the West Block (Pacific Crest, 2015b):

- Twenty ERH electrodes were to be installed to approximate depths of 50 to 85 feet bgs.
- The steam condensate recovered during extraction will be stored onsite and discharged to the sanitary sewer under a continuous discharge permit. The recovered vapors and groundwater will be treated using granular activated carbon and then discharged to the atmosphere.
- Temperature monitoring probes, and associated piping/equipment were to be installed to support the ERH operations.
- Performance monitoring would include installation of 9 new monitoring wells, sampling soil, groundwater, indoor and ambient air; and effluent air and condensate water from the vapor recovery components of the ERH system to verify the results of the cleanup remedy.
- Confirmation monitoring included four consecutive quarters of groundwater sampling from the monitoring wells at the Site to confirm that concentrations of chlorinated VOCs in groundwater remain below the FS cleanup levels.

Based on its review of the dCAP, Ecology listed the requirements of the ERH system and confirmation sampling in an October 15, 2015 opinion letter (Ecology, 2015b). Ecology stated: "*The above list confirms Ecology's understanding of the implementation of FS Alternative 1 in SA-1. Ecology agrees with the approach*". A copy of Ecology's opinion letter (Ecology, 2015b) is presented in Appendix D.

Select figures showing various components of the ERH system as illustrated by others in the dCAP (Pacific Crest, 2015b) is presented in Appendix E.

ERH Cleanup Action Status – January 2019

Following approval of the PCE cleanup remedy by Ecology, ERH electrode installation was started in 2016 and completed in 2017 by TRS, a remediation company on behalf of the Penthouse Drapery. The ERH system was energized from March through October

2018. Aspect understands that performance sampling to be conducted by Pacific Crest and TRS on behalf of the Penthouse Drapery is pending.

4.5 Aspect 2018 Phase I ESA – East, West, South Blocks

Aspect completed a Phase I ESA (Aspect, 2018b) to identify, to the extent practicable using standard methods, the presence or likely presence of RECs associated with the Subject Property to support GSC/MBHA's due diligence activities for acquiring the Subject Property. Aspect's Phase I ESA research was completed concurrently with a supplemental investigation (see Section 4.6). The Aspect Phase I ESA identified the following RECs:

1. The historical use of the Subject Property by residences that utilized UST(s) for heating oil storage.
2. The decades-long historical use of the Subject Property by Belshaw Brothers Inc., and its corporate successors or subsidiaries for equipment manufacturing operations, including the documented use of UST systems, and use of various hazardous chemicals that had documented impacts to the soil, soil gas, and groundwater beneath the Subject Property.
3. The documented petroleum and chlorinated solvents contamination in soil, soil gas, and groundwater beneath the East and West Blocks, and documented metals contamination in soil at the South Block at concentrations exceeding the MTCA cleanup levels.
4. The historical use of the north adjacent property as a dry cleaner (Former Penthouse Drapery) and the current use as an auto body repair shop (Seattle Collision Center) with documented releases of PCE that have migrated to and impacted soil and groundwater beneath the Subject Property. A portion of the PCE plume (including onto the north part of the Subject Property) is currently undergoing an interim cleanup action utilizing ERH which started in March 2018. This interim action is being completed by the Former Penthouse Drapery through Ecology's VCP.
5. The presence of an auto repair facility operating for decades under different ownership (currently Dere Car Care Center) on south adjacent property with documented use of UST(s) and hazardous chemicals typically associated with auto repair operations.
6. The presence of auto repair facilities operating for decades under different ownership (currently Rainier Auto Repair and A-1 Auto Repair) on one of the west adjacent properties that typically use hazardous chemicals and UST systems associated with auto repair operations.

Aspect recommended additional environmental investigation consisting of soil, soil gas, and groundwater sampling/chemical testing to further evaluate the above RECs.

4.6 Aspect 2017-2018 Environmental Investigation – East, West, South Blocks

Aspect completed an environmental investigation at the Subject Property to support GSC/MBHA's due diligence for potential purchase of the Subject Property in 2017 and 2018. The focus of Aspect's due diligence work was to (1) review existing environmental investigation data and (2) complete additional subsurface soil, groundwater and soil gas investigation (as warranted) to evaluate data gaps or areas of significant unknowns prior to GSC/MBHA's potential purchase of the Subject Property (East, West and South Blocks).

Because of limited information related to Belshaw's historic bakery manufacturing operation that occurred on the East and West Blocks, most of Aspect's investigation work focused on potential sources of contamination associated with those activities. Because the former Penthouse Drapery Cleaners-sourced PCE plume extended onto the West Block, Aspect also reviewed the results of the investigation and cleanup plan (completed by Pacific Crest and URS) for that particular PCE plume.

Aspect 2017 Study Scope. Aspect's investigation was performed between August and December 2017. Aspect completed 37 explorations (Figure 5) including testing of 79 soil samples, 18 groundwater samples, and 8 soil gas samples across the East, West, and/or South Blocks for the following contaminants: gasoline-, diesel-, and heavy oil-range hydrocarbons, BTEX, VOCs, 1,4-dioxane, polycyclic aromatic hydrocarbons (PAHs), polychlorinated-biphenyls (PCBs), and metals.

The results of Aspect's 2017 study were provided in a report that also included pre-2017 data (previous environmental investigations by others) along with the new results obtained by Aspect (Aspect, 2018a). A copy of the Aspect's exploration logs is presented in Appendix F.

Following are the key findings of the Aspect 2017 Study (Aspect, 2018a):

- A geophysical survey performed in southeast portion of the West Block and adjacent right-of-way (22nd Avenue S) did not identify USTs within the surveyed area (Figure 5).
- **Soil Summary.** Contaminated soil exceeding MTCA cleanup levels exists on the Subject Property from multiple sources (Figures 5 through 10):
 - **East Block:** Gasoline- and diesel-range hydrocarbons, and benzene sourced from former Subject Property USTs and manufacturing operations or factory maintenance activities by Enodis/Belshaw (Figure 10).
 - **West Block:** PCE sourced from the north-adjacent SCC/former Penthouse Drapery property; and benzene, xylenes, and gasoline-range hydrocarbons sourced from the former Subject Property USTs and paint/welding activities associated with Enodis/Belshaw (Figure 10).
 - **South Block:** A localized hotspot of cadmium- and lead-contaminated soil possibly associated with fill soil (Figure 10). The sample was

additionally analyzed for Toxicity Characteristic Leachate Procedure (TCLP). The TCLP cadmium and lead were non-detect.

- **Groundwater Summary.** Contaminated groundwater exceeding MTCA cleanup levels exists on the Subject Property from multiple sources (Figures 12 through 16):
 - **East Block:** 1,4-dioxane and diesel-range hydrocarbons sourced from the former Enodis/Belshaw operations in south portion of the East Block (Figure 16).
 - **West Block:** PCE sourced from the north-adjacent SCC/former Penthouse Drapery property; commingled with 1,4-dioxane, and possibly with other contaminants (gasoline-and diesel-range hydrocarbons, benzene, and xylenes) sourced from the former Enodis/Belshaw operations at the Subject Property (Figure 16).
 - **South Block:** Groundwater beneath the South Block is not contaminated (Figure 16).
- **Soil Gas Summary.** Contaminants (benzene, xylenes, trichloroethylene, vinyl chloride, and naphthalene) were detected at concentrations exceeding the MTCA Method B Sub-Slab Soil Gas Screening Levels in one or more of the soil gas samples obtained from the East and West Blocks (Figure 17).
 - The results of subsequent VI modeling (performed using the Johnson & Ettinger [JE] Model⁷ with future building-specific and conservative values for model parameters) indicated no risk of vapor intrusion into the future buildings that are planned at the Subject Property (Figure 17) based on the 2017 testing dataset.

The highest predicted contaminant concentrations in Indoor Air are tabulated in Table 7 below:

⁷ The JE Model is a mathematical model that is endorsed by the EPA and Ecology for predicting estimated indoor air concentrations of volatile contaminants identified in the subsurface. The estimate includes consideration of exposure rates, contaminant chemical properties, contaminant transport mechanisms, soil and groundwater properties, and building construction specifications. Default values for these parameters developed by the EPA and recommended for use by Ecology are the most conservative in the range of values, including use of exposure rates for the residential scenario. Alternatively, the EPA and Ecology allow for inputting of non-default values for some select parameters to tailor the estimate to known site conditions (such as building construction parameters, soil types, depth to groundwater or the contaminant mass, etc.).

Table 7. Predicted Contaminant Concentrations in Indoor Air - J&E Model

Location	Soil Gas Sample ID	Chemical Name	Highest Predicted Concentration of Contaminant in Indoor Air – J&E Model ($\mu\text{g}/\text{m}^3$)	MTCA Method B Indoor Air Cleanup Level of Contaminant ($\mu\text{g}/\text{m}^3$)
East Block	SG-1	m-Xylenes	0.1218	45.7
	SG-1	Naphthalene	0.000662	0.0735
	SG-2	Trichloroethylene	0.0204	0.37
	SG-3	Benzene	0.00406	0.321
	SG-4	Vinyl Chloride	0.000611	0.28
West Block	SG-6	m,p-Xylenes	0.1364	45.7
	SG-7	Vinyl Chloride	0.000691	0.28
	SG-7	Naphthalene	0.000595	0.0735
	SG-8	Benzene	0.00458	0.321
	SG-8	Trichloroethylene	0.0229	0.37

$\mu\text{g}/\text{m}^3$ = micrograms per cubic meter

Although the 2017 VI modeling results indicated no risk of vapor intrusion for the future buildings planned at the Subject Property, further study is needed to fully evaluate the VI risk because soil gas samples could not be obtained from the northwest portion of the West Block where PCE contamination is greatest at the Subject Property. This area is currently inaccessible due to the ERH remediation system operation.

A copy of the 2017 VI modeling sheets is presented in Appendix G.

5 PRELIMINARY CONCEPTUAL SITE MODEL

The preliminary conceptual site model (CSM) considers multiple releases that have become commingled in soil, groundwater and/or soil gas across the Site. The contaminants of concern consist of petroleum and 1,4-dioxane sourced from past industrial operations by Enodis/Belshaw, and chlorinated solvents sourced from former Penthouse Drapery Cleaners.

5.1 Grand Street Commons Site - Preliminary CSM

Because releases of the contaminants of concern occurred from different sources over decades, the following preliminary CSM is described by contaminant type (petroleum hydrocarbons, 1,4-dioxane, and PCE and associated breakdown products).

The applicable transport mechanisms for the migration of contaminants include: direct release to soil; migration/leaching to groundwater; volatilization from soil and groundwater to air; and transport by groundwater flow (advection).

Petroleum Hydrocarbons. At least seven USTs were historically utilized at the Site for storing gasoline, diesel, and home heating oil (Figure 3). Petroleum products likely released from the former USTs to soil that leached to groundwater (Figure 10).

Further study is needed to confirm the lateral and vertical extent of gasoline-, diesel- and benzene contamination in soil and/or groundwater at the East and West Blocks (Figures 10 and 16), evaluate the potential for utility corridor in the 22nd Avenue S as a preferential pathway for migration of contaminated groundwater (Figure 26), and further evaluate the potential for vapor intrusion at the Site. Based on the proximity and the undefined lateral extent of contamination plumes, it is likely that the gasoline- and benzene-contamination beneath the West Block is commingled with the 1,4-dioxane contamination discussed below.

1,4-Dioxane. Historically, 1,4-dioxane⁸ was primarily used as a stabilizer for solvents (particularly 1,1,1-trichloroethane [TCA], a chemical used in the bakery equipment manufacturing process at the Site). Historical information suggests that spent solvents may have been used for weed control on unpaved portions of the Site by Belshaw (Aspect, 2018a). The miscellaneous dumping of spent solvents on the Site soil leached to groundwater on the south half of East and West Blocks. Further study is needed to delineate the extent of 1,4-dioxane contamination in groundwater at the East and West Blocks of the Site (Figure 26).

Based on the proximity and the undefined lateral extent of contamination plumes, it is likely that the 1,4-dioxane-contamination beneath the West Block is commingled with the PCE contamination sourced from the north-adjacent property as discussed below.

PCE. Although the exact mechanism of PCE release at the former Penthouse Drapery Cleaners (north-adjacent property) is unknown, it is presumed that the PCE was released

⁸ The 1,4-Dioxane is a synthetic industrial chemical that is completely miscible in water and does not stick to soil particles, so it can move from soil to groundwater easily (ATSDR, 2012).

ASPECT CONSULTING

to soil during the former dry-cleaner operations from 1980s to 1998 through inappropriate housekeeping practices, or releases from containers that may have been used for storing PCE, or leaks from the drains where drycleaner solvents may have been dumped.

PCE leached from soil into groundwater at the north-adjacent property and migrated over groundwater to the downgradient West Block. It is possible that PCE contamination may have migrated into the adjacent right-of-way (Rainier Avenue S) and the utility corridor within the Rainier Avenue S could be acting as a possible preferential pathway for contamination migration. The lateral and/or vertical extent of the PCE contamination in soil and groundwater has not been identified across the Site (Figures 7 and 13).

According to the results of sub-slab soil gas sampling and vapor intrusion assessment performed by others at the north-adjacent property (see Section 4.3.1), PCE and TCE concentrations exceeded their MTCA screening levels resulting in a potential for vapor intrusion at the existing Seattle Collision Center building on the north adjacent property (Pacific, 2015).

Although the former Penthouse Drapery performed remediation of the PCE source area (includes the north-adjacent property and a limited northwest portion of the West Block) from 2016 through today using an Ecology-approved cleanup remedy of ERH and SVE system (Appendix F), verification of the remediation objectives is pending completion of confirmation sampling.

5.2 Potential Exposure Pathways

Future receptors exposed to contaminants in soil at the Site include future construction workers and residents for the dermal and ingestion exposure pathways during site redevelopment. Exposure pathways considered for the Site include direct contact to soil, soil to groundwater, groundwater to surface water, soil to groundwater, soil direct contact, and soil vapor inhalation.

Of these potential exposure pathways, the only complete pathways are soil direct contact, soil to groundwater, and soil vapor inhalation, as described in the CSM. The proposed explorations in this RI Work Plan will address each of the complete pathways, as described in Section 8.

5.3 Terrestrial Ecological Protection

MTCA requires an evaluation of the potential impact for the constituents of concern on terrestrial ecological receptors in accordance with the procedures outlined in WAC 173-340-7490. The Site qualifies for an exclusion from the terrestrial ecological evaluation because there is less than 1.5 acres of contiguous undeveloped land on the Site or within 500 feet of any area of the Site (WAC 173-340-7491(c)(i)(ii)(iii)).

5.4 Constituents of Potential Concern

The primary sources of contamination at the Grand Street Commons Site are:

1. the historical dry-cleaning operations (former Penthouse Drapery Cleaners, north-adjacent property), and
2. the former bakery equipment manufacturing operations that utilized hazardous chemicals and USTs (Enodis/Belshaw, Subject Property).

Constituents of potential concern (COPCs) for the Grand Street Commons Site include: chlorinated solvents (PCE, TCE, 1,1-Dichloroethane, cis-1,2-Dichloroethene, and VC), 1,4-dioxane, TPHs (gasoline-, diesel- and oil-range organics), benzene, xylenes, naphthalene, and metals (arsenic, cadmium, and lead). Additional evaluation is necessary to evaluate the vertical and/or lateral extents of the above COPCs.

Also, testing of additional potential constituents of concern based on MTCA 173-340-900 Table 830-1 (including PAHs, PCBs, and other VOCs) may have to be completed at the Subject Property due to historical utilization of former USTs, hazardous chemicals associated with the former bakery equipment manufacturing operations, and impacted fill soil at the Subject Property.

5.5 Preliminary Screening Levels

MTCA Method A or B or C cleanup levels for soil and groundwater are available for all the COPCs at the Grand Street Commons Site are shown in Tables 4 and 5 of this report. Following completion of the RI, additional evaluation will be conducted to evaluate whether MTCA Method A (unrestricted use) cleanup levels are appropriate for the contaminants at the Site.

6 DATA GAPS AND REMEDIAL INVESTIGATION APPROACH

Several environmental studies have been completed at the Subject Property and the north-adjacent property (former Penthouse Drapery Cleaners); however, data gaps remain that must be resolved. The purpose of this section is to outline the data gaps and the remedial investigation (RI) approach to evaluate/address the data gaps.

6.1 Data Gaps

Following are the data gaps based on the results of the environmental investigations:

Demolition of Existing Buildings. To complete the RI, the four unsafe and dangerous buildings on the East and West Blocks of the Subject Property were demolished in December 2018. The buildings demolition was permitted by the City (Demolition Permit Nos. 6691985, 669479, and 6694980) and approved by Ecology to facilitate the RI work. A photo log of the Subject Property showing the former buildings is presented in Appendix H.

Soil Data Gaps

- a) **Nature and extent of petroleum-contaminated soil on the East Block associated with the former USTs.** Evaluate the lateral and vertical extent of the petroleum-contaminated soil left in place following removal of the UST in the northwest portion of the East Block. Also, evaluate the soil conditions near the former UST location in the south portion of the East Block.
- b) **Evaluate soil conditions in areas with limited to no data on the East Block.** Due to the presence of the severely dilapidated and unsafe buildings, a limited number of explorations were completed to shallow depths on the East Block. Now that these structures have been removed, additional explorations are needed at the East Block to further evaluate soil conditions at deeper depths, and to evaluate possible sources of 1,4-dioxane which has been observed in groundwater beneath this block.
- c) **Evaluate soil conditions in unexplored areas on the West Block.** Due to the presence of the ERH remediation system infrastructure (associated with the Penthouse Drapery Dry Cleaner PCE plume sourced from the north-adjacent property); as well as the past presence of the vacant unsafe building on the southwest portion of the West Block, explorations have not been completed in the western half of the West Block to evaluate soil conditions. Additional explorations are needed to evaluate possible sources of 1,4-dioxane which has been observed in groundwater beneath this block.
- d) **Delineate the extent of cadmium- and lead-contaminated fill soil on the South Block.** Evaluate the lateral extent of the metals-contaminated soil in southwest portion of the South Block.

Groundwater Data Gaps

- e) **Delineate the lateral extent of the 1,4-Dioxane- and diesel-contaminated groundwater on the East Block.** Delineate the western extent of the 1,4-dioxane groundwater plume and the southern extent of the diesel-range hydrocarbons groundwater plume on the East Block. Also, additional verification of whether contaminants may be following preferential utility pathways needs to be evaluated along 22nd Avenue S and S Grand Street.
- f) **Delineate the lateral extent of the 1,4-dioxane, gasoline-, benzene-, and arsenic-contaminated groundwater on the West Block.** Delineate the lateral extent of 1,4-dioxane groundwater plume in southwest portion and delineate the eastern extent of the gasoline-range hydrocarbons, benzene, and arsenic groundwater plume on the east-central portion of the West Block. Also, additional verification of whether contaminants may be following preferential utility pathways needs to be evaluated along 22nd Avenue S.
- g) **Evaluate groundwater conditions of the deeper regional aquifer.** Explorations need to be completed to approximate depths ranging from 80- to 100-feet bgs for evaluating the groundwater conditions of the deeper regional aquifer on the West Block because PCE contamination is present in groundwater at approximate depths of 80 feet bgs beneath the upgradient north-adjacent SCC /former Penthouse Drapery.
- h) **Evaluate effects of utility corridors on contaminant migration.** Although utilities are much shallower than regional groundwater (50-feet of separation, or more), it is prudent to evaluate whether (or not) PCE contaminants may be following preferential utility pathways present in Rainier Avenue S. Additional groundwater monitoring wells are needed to evaluate the influence of Utility corridor.

Soil Gas Data Gaps.

- i) **Evaluate the potential for vapor intrusion via soil gas testing on the West Block.** Although, results of a preliminary vapor intrusion assessment performed by Aspect in 2017 indicated no threat of vapor intrusion at the West Block of the Subject Property, additional assessment is needed to evaluate the potential vapor intrusion of volatile compounds such as chlorinated solvents, gasoline and gasoline additives by collecting and chemical testing soil gas samples from the west half of the West Block where the PCE concentrations in groundwater are the greatest.

Soil gas samples could not be obtained previously in 2017 Aspect Study from this area due to the presence of remediation infrastructure, mobile construction office trailers, and a small vacant building (demolished in December 2018).
- j) **Evaluate the potential for vapor intrusion via soil gas testing on the East Block.** Although, results of a preliminary vapor intrusion assessment performed by Aspect in 2017 indicated no threat of vapor intrusion at the East Block of the Subject Property, additional assessment is needed to evaluate the potential vapor intrusion of volatile compounds such as chlorinated solvents, gasoline and gasoline additives by collecting and chemical testing soil gas samples from the

ASPECT CONSULTING

northwest and central portion of the East Block where benzene contamination is likely to be greatest.

Soil gas samples could not be obtained during the 2017 Aspect study from this area due to the presence of unsafe and dangerous building (demolished in December 2018).

- k) **Evaluate the potential for vapor intrusion via soil gas testing on the South Block.** Although no threat of vapor intrusion is anticipated at the South Block due to absence of historical sources of contamination, collection and chemical testing of a soil gas sample is needed to confirm the presumption of no vapor intrusion threat.

6.2 RI Soil Investigation

Seventeen soil borings are proposed to be completed at the Subject Property to an approximate depth ranging from 10 feet bgs (DP-23, DP-24, and DP-25) to 30 feet bgs (AC-SB-07 through AC-SB-20) for evaluating the lateral and vertical extents of the soil contamination (Figure 26). The proposed borings are essential for obtaining soil data at deeper depths compared to the explorations (Figure 5) completed during the Aspect's 2017 study.

Three borings (DP-23, DP-24, and DP-25) will be completed using a direct-push drill rig and remaining fourteen borings (AC-SB-07 through AC-SB-20) will be completed with a hollow-stem auger drill rig to achieve target depths. The locations of the proposed borings are shown on Figure 26, *Proposed Locations of Additional Borings, Monitoring Wells, and Soil Gas Samples*.

The rationale for each proposed soil boring location is summarized in Table 8 below. Note that the proposed sample depths in Table 8 indicate the depths from which soil samples will be collected during drilling and put on "HOLD" at an Ecology-accredited laboratory. Only select soil samples (1 or 2 per each boring) will be submitted for chemical analysis of one or more of the proposed analytes listed in Table 8 based on field observations, contamination depth, and the RI objectives.

Table 8. Summary of Proposed Soil Sampling Locations

Proposed Boring ID	Proposed Depth of Boring (feet bgs)	Purpose	Proposed Sample Depths (feet bgs)	Proposed Chemical Analysis of select soil samples (1 or 2 samples per boring)
AC-SB-07 through AC-SB-12	20 to 30	East Block. Evaluate the lateral and vertical soil impacts associated with the former heating oil UST in northwest portion where petroleum-contaminated soil was left-in-place. Also, the UST may have been used to store other petroleum products and chemicals associated with the former equipment manufacturing operations.	5, 10, 15, 20, 25, and 30.	Gasoline-, diesel- and oil-range hydrocarbons, Volatile organic compounds (VOCs), 1,4-dioxane, Polychlorinated biphenyls (PCBs), and Metals.
AC-SB-13 through AC-SB-18	20 to 30	East Block. Evaluate soil impacts associated with the former diesel UST where fuel was reportedly spilled during tank removal in July 1994. Also, the UST may have been used to store other petroleum products and chemicals associated with the former equipment manufacturing operations.	5, 10, 15, 20, 25, and 30	Gasoline-, diesel- and oil-range hydrocarbons, VOCs, 1,4-dioxane, PCBs, and Metals.
AC-SB-19	20 to 30	East Block. Evaluate soil conditions for identifying the source of the 1,4-dioxane contamination in groundwater.	5, 10, 15, 20, 25, and 30	VOCs and 1,4-dioxane.
AC-SB-20	20 to 30	West Block. Evaluate soil conditions near the former heating oil UST that was removed in October 2005.	5, 10, 15, 20, 25, and 30	Diesel- and oil-range hydrocarbons, VOCs, 1,4-dioxane.
DP-23, DP-24, and DP-25	10	South Block. Evaluate the lateral extent of the cadmium- and lead-contaminated soil identified in previous boring DP-7.	5 and 10	Metals.

Note: Soil borings AC-SB-01 through AC-SB-06 and DP-01 through DP-22 were completed at the Subject Property by Aspect in 2017 (Figure 5).

6.3 RI Groundwater Evaluation

Of the 45 monitoring wells installed at the Site by others between 2002 and 2013, Aspect was only able to locate 16 wells and only 8 wells were observed to be suitable for sampling during the 2017 study. It is likely that the remaining wells are buried under approximately two feet of gravel that was placed at the West and South Blocks in 2014 (as discussed in Section 3.1). According to the results of the Aspect's 2017 study, petroleum and chlorinated solvents contamination (from multiple historical sources) was observed in shallow groundwater (approximate depths ranging from 15 to 24 feet bgs) at the Subject Property (Aspect, 2018a).

ASPECT CONSULTING

According to the results of the West Block Remedial Investigation by others (see Section 4.3.1), PCE related to the former Penthouse Drapery release has been detected in shallower (approximate depths 14- to 26-feet bgs) and deeper groundwater (approximate depths 60- to 80-feet bgs) at concentrations exceeding the MTCA Method A Cleanup Level beneath the north-adjacent property and in the northwest portion of the West Block (Subject Property).

The following data gaps exist pertaining to the contaminated groundwater:

- 1) The extent of the former Penthouse Drapery PCE plume in both the shallow and deep aquifers has not been fully defined (Figure 16).
- 2) The extent of the 1,4-dioxane plumes in the shallow aquifer beneath the East and West Blocks has not been fully defined (Figure 16).
- 3) The extent of the gasoline/benzene plume in the shallow aquifer beneath the West Block and the diesel plume beneath the East Block are not defined (Figure 16).
- 4) Evaluate groundwater conditions near a former gasoline UST location in northwest portion of the East Block (Figure 12) where residual benzene-contaminated soil is reportedly present.

Aspect recommends completion of 21 “proposed” groundwater monitoring wells⁹ (a combination of 20 shallow [approximate depth 30 to 40-feet bgs] wells and 1 deep [approximate depth 80 to 100-feet bgs] well) for evaluating the above data gaps (Figure 27).

Also, 14 additional “**tentative**” monitoring well locations are considered for the RI study (Figure 27). These wells are “tentative” because they may or may not be needed depending on the chemical analytical results of the soil and groundwater results from the proposed 21 wells.

The locations of the proposed monitoring wells are shown on Figure 26, *Proposed Locations of Additional Borings, Monitoring Wells, and Soil Gas Samples*. The approximate location of the existing monitoring wells, the proposed monitoring wells, and the tentative monitoring wells relative to the interpreted extent of the contaminated

⁹ Monitoring wells will be installed using a hollow-stem auger drill rig. Each of the monitoring wells will be completed with a 2-inch polyvinyl chloride (PVC) screen with 0.010-inch slots. The well annulus will be backfilled with a 10-20 size washed sand pack to at least 1 foot above the top of the well screen and sealed with hydrated bentonite chips and concrete. The monitoring wells will be finished with a flush-mount traffic-rated monument.

Following installation, the new monitoring wells will be surveyed by a professional surveyor, and water levels and groundwater samples will be obtained from each of the new monitoring wells including the monitoring wells that were sampled by Aspect in 2017 (Figure 16). The groundwater samples will be submitted to an Ecology-accredited analytical laboratory for chemical analysis of one or more of the analytes listed in Tables 9 or 10 of this report.

groundwater plumes are shown on Figure 27, *Existing, Proposed, and Tentative Monitoring Wells*.

The rationale for the 21 “proposed” monitoring wells and the 14 “tentative” monitoring wells is summarized below in Table 9 and 10, respectively.

Table 9. Summary of Proposed Monitoring Wells and Groundwater Sampling

Proposed Monitoring Well ID	Proposed Depth of Monitoring Well (feet bgs)	Purpose	Proposed Chemical Analysis (one or more of the analytes)
AC-MW-08	30 to 40	East Block. Evaluate soil and groundwater conditions at the location of the former UST in northwest portion.	Gasoline-, diesel- and oil-range hydrocarbons, VOCs, 1,4-dioxane, and Metals
AC-MW-11 through AC-MW-14	30 to 40	East Block. Evaluate soil conditions and delineate the lateral extents of the 1,4-dioxane-contaminated groundwater.	1,4-dioxane
AC-MW-15	30 to 40	S Grand Street. Delineate the lateral extent of the diesel-contaminated groundwater and evaluate the potential of the utility corridor as preferential pathway.	Gasoline-, diesel- and oil-range hydrocarbons
AC-MW-16	30 to 40	22nd Avenue S. Delineate the east lateral extent of the gasoline-, benzene-, and arsenic-contaminated groundwater. Also, evaluate the potential of the utility corridor as preferential pathway for contamination migration	Gasoline-, diesel- and oil-range hydrocarbons, and Metals.
AC-MW-17	30 to 40	West Block. Evaluate soil conditions and groundwater in the previously unexplored area.	Gasoline-, diesel- and oil-range hydrocarbons, VOCs, and Metals.
AC-MW-18	30 to 40	West Block. Delineate the southeast extent of the gasoline- and benzene-contaminated groundwater and northeast extent of the 1,4-dioxane-contaminated groundwater	Gasoline-, diesel- and oil-range hydrocarbons, 1,4-dioxane, and Metals.

ASPECT CONSULTING

AC-MW-19	30 to 40	West Block. Evaluate soil conditions in the previously unexplored area and refine the eastern extent of the 1,4-dioxane-contaminated groundwater.	Gasoline-, diesel- and oil-range hydrocarbons, 1,4-dioxane, and Metals.
AC-MW-20	30 to 40	West Block. Evaluate the southeast extent of PCE-contaminated groundwater sourced from the north-adjacent property and the 1,4-dioxane contaminated groundwater	Chlorinated VOCs and 1,4-dioxane.
AC-MW-21 and AC-MW-22	30 to 40	West Block. Evaluate eastern extent of PCE-contaminated groundwater sourced from the north-adjacent property	Chlorinated VOCs
AC-MW-23 and AC-MW-24	30 to 40	West Block. Evaluate northern extent of PCE-contaminated groundwater sourced from the north-adjacent property. Also, evaluate the potential of the utility corridor as preferential pathway for contamination migration	Chlorinated VOCs
AC-MW-25 And AC-MW-26	30 to 40	West Block. Evaluate groundwater quality post completion of the PCE remediation operations consisting of the ERH and SVE system.	Chlorinated VOCs
AC-MW-27 and AC-MW-28	30 to 40	West Block. Evaluate the south extent of PCE-contaminated groundwater sourced from the north-adjacent property. Also, evaluate the northwest and southwest extent of 1,4-dioxane-contaminated groundwater.	Chlorinated VOCs and 1,4-dioxane.
AC-MW-29	30 to 40	Rainier Avenue S. Evaluate groundwater quality relative to the PCE-contaminated groundwater sourced from the north-adjacent property. Also, evaluate the potential of utility corridor as preferential pathway for contamination migration.	Gasoline-, diesel- and oil-range hydrocarbons and metals (for drilling waste profiling purpose). Chlorinated VOCs.
AC-DMW-1	80 to 100	West Block. Evaluate groundwater quality of the deeper regional aquifer relative to the PCE-contamination sourced from the north-adjacent property.	Chlorinated VOCs

Note: Monitoring wells AC-MW-01 through AC-MW-07 and AC-MW-09 and AC-MW-10 were completed at the Subject Property by Aspect in 2017 (Figure 5).

Table 10. Summary of Tentative Monitoring Wells and Groundwater Sampling

Tentative Monitoring Well ID	Planned Depth of Monitoring Well (feet bgs)	Rationale for "Tentative" Status and Purpose	Proposed Chemical Analysis (one or more of the analytes)
Shallow "Tentative" Wells (to be considered after the proposed 21 wells are completed)			
AC-MW-30	30 to 40	<p>If Chlorinated VOCs are detected at concentrations greater than MTCA cleanup levels in groundwater from AC-MW-26 and/or AC-MW-29, then, this well (AC-MW-30) may be needed. Completion will also depend on the presence of utilities.</p> <p>Rainier Avenue S. Delineate the west extent of PCE-contaminated groundwater in Rainier Avenue S.</p>	Chlorinated VOCs
AC-MW-31	30 to 40	<p>If Chlorinated VOCs or 1,4-dioxane are detected at concentrations greater than MTCA cleanup levels in groundwater from AC-MW-27 and/or AC-MW-30, then, this well (AC-MW-31) is needed. Completion will also depend on the presence of utilities.</p> <p>Rainier Avenue S. Delineate the southwest extent of PCE- and 1,4-dioxane-contaminated groundwater in Rainier Avenue S.</p>	Chlorinated VOCs and 1,4-dioxane
AC-MW-32	30 to 40	<p>If chlorinated VOCs are detected at concentrations greater than MTCA cleanup levels in groundwater from AC-MW-24 and/or AC-MW-29, then, this well (AC-MW-32) is needed. Completion will also depend on the presence of utilities.</p> <p>Rainier Avenue S. Delineate the northwest extent of deeper PCE-contaminated groundwater sourced from the north-adjacent property.</p>	Chlorinated VOCs
AC-MW-33	30 to 40	<p>If chlorinated VOCs are detected at concentrations greater than MTCA cleanup levels in groundwater from AC-MW-29 and/or AC-MW-30, then, this well (AC-MW-33) is needed. Completion will also depend on the presence of utilities.</p> <p>Rainier Avenue S. Delineate the lateral extent of the PCE-contaminated groundwater sourced from the north-adjacent property.</p>	Chlorinated VOCs

ASPECT CONSULTING

AC-MW-34	30 to 40	<p>If chlorinated VOCs or 1,4-dioxane are detected at concentrations greater than MTCA cleanup levels in groundwater from AC-MW-31 and/or AC-MW-35, then, this well (AC-MW-34) is needed. Completion will also depend on the presence of utilities.</p> <p>Rainier Avenue S. Delineate the lateral extent of the PCE-contaminated groundwater sourced from the north-adjacent property and the 1,4-dioxane contaminated groundwater sourced from the Subject Property.</p>	Chlorinated VOCs and/or 1,4-dioxane
AC-MW-35	30 to 40	<p>If chlorinated VOCs or 1,4-dioxane are detected at concentrations greater than MTCA cleanup levels in groundwater from AC-MW-28 and/or AC-MW-31, then, this well (AC-MW-35) is needed. Completion will also depend on the presence of utilities.</p> <p>Rainier Avenue S. Delineate the lateral extent of the PCE-contaminated groundwater sourced from the north-adjacent property and the 1,4-dioxane contaminated groundwater sourced from the Subject Property.</p>	Chlorinated VOCs and/or 1,4-dioxane
AC-MW-36	30 to 40	<p>If analytes are detected at concentrations greater than MTCA cleanup levels in soil and/or groundwater from AC-MW-8 and/or soil boring AC-SB-12, then, this well (AC-MW-36) is needed. Completion will also depend on the presence of utilities.</p> <p>22nd Avenue S. Delineate the west extent of the potentially benzene-contaminated soil and/or groundwater likely sourced from the former UST in northwest portion of the East Block.</p>	Gasoline-, diesel- and oil-range hydrocarbons, VOCs, 1,4-dioxane, and Metals.
AC-MW-37	30 to 40	<p>If analytes are detected at concentrations greater than MTCA cleanup levels in soil and/or groundwater from AC-MW-8 and/or soil boring AC-SB-8, then, this well (AC-MW-37) is needed.</p> <p>East Block. Delineate the north extent of the potentially benzene-contaminated soil and/or groundwater likely sourced from the former UST in northwest portion of the East Block.</p>	Gasoline-, diesel- and oil-range hydrocarbons, VOCs, 1,4-dioxane, and Metals.

Deep "Tentative" Wells (to be considered after the proposed deep well is completed)			
AC-DMW-2 and AC-DMW-4	80 to 100	<p>If chlorinated VOCs are detected at concentrations greater than MTCA cleanup levels in deeper groundwater from AC-DMW-1, then, these deep wells (AC-DMW-2 and AC-DMW-4) will be needed.</p> <p>West Block. Evaluate groundwater quality of the deeper regional aquifer relative to the PCE-contamination sourced from the north-adjacent property.</p>	Chlorinated VOCs
AC-DMW-3	80 to 100	<p>If chlorinated VOCs are detected at concentrations greater than MTCA cleanup levels in deeper groundwater from AC-DMW-2, then, this deep well (AC-DMW-3) will be needed.</p> <p>West Block. Delineate the south extent of the deeper PCE-contaminated groundwater sourced from the north-adjacent property.</p>	Chlorinated VOCs
AC-DMW-5	80 to 100	<p>If chlorinated VOCs are detected at concentrations greater than MTCA cleanup levels in deeper groundwater from AC-DMW-3, then, this deep well (AC-DMW-5) will be needed.</p> <p>South Block. Delineate the south extent of the deeper PCE-contaminated groundwater sourced from the north-adjacent property.</p>	Chlorinated VOCs
AC-DMW-6	80 to 100	<p>If chlorinated VOCs are detected at concentrations greater than MTCA cleanup levels in deeper groundwater from AC-DMW-1 and/or AC-DMW-2, then, this deep well (AC-DMW-6) will be needed. Completion will also depend on the presence of utilities.</p> <p>Rainier Avenue S. Delineate the west extent of the deeper PCE-contaminated groundwater sourced from the north-adjacent property.</p>	Chlorinated VOCs
AC-DMW-7	80 to 100	<p>If chlorinated VOCs are detected at concentrations greater than MTCA cleanup levels in deeper groundwater from AC-DMW-3, then, this deep well (AC-DMW-7) will be needed. Completion will also depend on the presence of utilities.</p> <p>Rainier Avenue S. Delineate the south extent of the deeper PCE-contaminated groundwater sourced from the north-adjacent property.</p>	Chlorinated VOCs

6.4 Soil Gas Evaluation and Vapor Intrusion Assessment

Initial soil gas chemical data and vapor intrusion modeling using the Johnson-Ettinger Model¹⁰ indicated that the potential for chemical vapor intrusion may be low (based on 2017 testing). However, additional soil gas sampling and testing is warranted to resolve the following:

- PCE-contaminated soil and groundwater on the northwest portion of the West Block (near the SCC/former Penthouse Drapery Cleaners) that has not been evaluated since ERH remediation started,
- Benzene-contaminated soil and groundwater related to an historic UST release on the east portion of the West Block, and
- Benzene-contaminated soil (and potentially groundwater) on the northwest portion of the East Block related to a former gasoline UST at this location.
- At the South Block which has never been evaluated for vapor intrusion potential.

Seven soil gas samples (SG-9 through SG-15) will be collected to evaluate the potential for vapor intrusion into the future buildings at the Subject Property. The soil gas samples will be completed in the approximate locations shown on Figure 26, *Proposed Locations of Additional Borings, Monitoring Wells, and Soil Gas Samples*.

Each of the soil gas samples will be completed using sub-slab soil vapor sampling methods at depths directly below the future concrete slab of the planned sub-grade parking garage at the Subject Property. Soil gas sampling and vapor intrusion assessment will be performed in accordance with the Ecology's Draft Vapor Intrusion Guidance¹¹.

¹⁰ EPA recommended Johnson & Ettinger model, an on-line calculator that implements the Johnson and Ettinger (J&E) simplified model (Johnson and Ettinger, 1991) to evaluate the potential for vapor intrusion into buildings.

¹¹ Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remedial Action, Toxics Cleanup Program, Publication No. 09-09-047, review draft revised February 2016.

Table 11. Summary of Proposed Soil Gas Sampling Locations and Testing

Proposed Soil Gas Sample ID	Proposed Depth of the Soil Gas Sample (feet bgs)	Purpose	Proposed Chemical Analysis (one or more of the analytes)
SG-9 and SG-10	12	<p>East Block. Evaluate potential for vapor intrusion into the future building relative to the presence of benzene-contaminated soil in northwest portion and 1,4-dioxane-contaminated groundwater in the central portion.</p> <p>Construction excavation is anticipated to an approximate depth of 10 feet bgs because the future building will have one level of subgrade parking.</p>	VOCs and/or 1,4-dioxane
SG-11	12	<p>South Block. Evaluate potential for vapor intrusion into the future building at the South Block that will have one level of subgrade parking.</p> <p>Construction excavation is anticipated to an approximate depth of 10 feet bgs, because the future building will have one level of subgrade parking.</p>	VOCs
SG-12	22	<p>West Block. Evaluate potential for vapor intrusion into the future building relative to the benzene-contaminated groundwater in east-central portion.</p> <p>Construction excavation is anticipated to an approximate depth of 20 feet bgs because the future building will have two levels of subgrade parking.</p>	VOCs
SG-13	22	<p>West Block. Evaluate potential for vapor intrusion into the future building relative to the PCE- and 1,4-dioxane- contaminated groundwater in southwest portion.</p> <p>Construction excavation is anticipated to an approximate depth of 20 feet bgs because the future building will have two levels of subgrade parking.</p>	VOCs
SG-14 and SG-15	22	<p>West Block. Evaluate potential for vapor intrusion into the future building relative to the PCE-contaminated groundwater which is undergoing cleanup using a combination of ERH and SVE remediation system.</p> <p>Construction excavation is anticipated to an approximate depth of 20 feet bgs because the future building will have two levels of subgrade parking.</p>	VOCs

Note: *Soil gas samples SG-1 through SG-8 collected at approximate depths of 5 feet bgs from the Subject Property by Aspect in 2017 (Figure 17).

7 RI SCHEDULE AND REPORTING

The schedule and reporting elements of the RI study is provided below. The RI will be completed in accordance with the requirements of the PPCDs executed for this project.

7.1 Schedule

Implementation of the RI scope of work described herein will commence within 30 days of Ecology's approval of the RI Work Plan. The field components of the RI will be completed in three stages per the following proposed schedule:

STAGE 1 – Proposed Explorations

- A. **Feb 2019:** Ecology approves the RI Work Plan. Planning and permitting is started for physical evaluation/location of the aboveground and underground utilities in the Rainier Avenue S (expected to be completed in 4 to 8 weeks).
- B. **March/April 2019:** Based on the exploration location, ease of access, and minimal permitting requirements, all 17 proposed soil borings (AC-SB-7 through AC-SB-20 and DP-23 through DP-25), 13 of the proposed 20 shallow monitoring wells (AC-MW-8 and AC-MW-11 through AC-MW-22), and 5 of the 7 soil gas samples (SG-9 through SG-13) will be completed along with chemical testing. Necessary permits from applicable agencies shall be obtained and any notification requirements for appropriate agencies shall be accomplished to perform utility location work in Rainier Avenue S.

STAGE 2 – Proposed Explorations

- C. **April/May 2019:** Depending on the chemical analytical results of the March 2019 explorations, availability of access, and completion of permitting requirements, the remaining 7 shallow monitoring wells (AC-MW-23 through AC-MW-28 and AC-MW-29 [in Rainier Avenue S]), the remaining 2 soil gas samples (SG-14 and SG-15 in northwest portion of the West Block) and, the one proposed deep monitoring well (AC-DMW-1 on the West Block) will be completed along with chemical testing.

STAGE 3 – Tentative Wells

- D. **May/June 2019:** After completion of the proposed 17 soil borings, 20 shallow and 1 deep groundwater monitoring wells, Aspect will discuss with Ecology whether completion of the "tentative" wells is warranted. Any "tentative" wells will be completed, if needed, based on Ecology's opinion.

7.2 Reporting

A draft RI report will be prepared within 90 days from the date of receipt of all chemical analytical results. The draft RI report will be prepared in accordance with the guidance provided in WAC 173-340-350. The draft RI Report will present the data collected for the RI, summarize the sources of contamination, the nature and extent of contamination, and a refined CSM of exposure pathways. The data will be presented in both electronic and printed format.

The draft RI Report will be submitted to Ecology for review. Revisions based on Ecology's review comments will be incorporated into a Final RI Report submitted to Ecology for approval within 30 days from receipt of Ecology's comments.

8 REFERENCES

- Aaron & Wright, Inc., (AW), 2002, Limited Subsurface Investigation of Belshaw Brothers, Inc., 1750 22nd Avenue S, Seattle, Washington dated March 4, 2002.
- Aspect Consulting, LLC (Aspect), 2017, Preliminary and Conceptual Geotechnical Engineering Report, Mt. Baker Housing Association, Belshaw Assemblage Development, intersection of South Grand Street and 22nd Ave S, Seattle, Washington dated September 22, 2017.
- Aspect Consulting, LLC (Aspect), 2018a, Environmental Site Characterization Summary, Mt. Baker – Belshaw Property, Grand Street Commons Project, Housing Association, Belshaw Assemblage Development, Rainier Avenue S and S State Street, Seattle, Washington dated June 1, 2018.
- Aspect Consulting, LLC (Aspect), 2018b, Phase I Environmental Site Assessment – Grand Street Commons Property, 1750 and 1765 22nd Avenue S, Seattle, Washington dated June 27, 2018.
- G-Logics, Inc., (G-Logics), 2005a, Phase I Environmental Site Assessment, State Street Properties, 2113-2117 South State Street, Seattle, Washington dated January 24, 2005.
- G-Logics, Inc., (G-Logics), 2005b, Phase II Environmental Site Assessment, State Street Properties, 2113-2117 South State Street, Seattle, Washington dated March 14, 2005.
- G-Logics, Inc., (G-Logics), 2005c, UST Removal and Soil Remediation, State Street Properties, 2117 S State Street, Seattle, Washington dated December 22, 2005.
- Goldsmith Land Development Services, (Goldsmith), 2017, ALTA/NSPS Land Title Survey, Sheets 1 and 2 dated August 24, 2017.
- Interstate Technology Regulatory and Council (ITRC). 2003. Technology Overview: An Introduction to Characterizing Sites Contaminated with DNAPLs.
- Pacific Crest Environmental, LLC (Pacific), 2011, Remedial Investigation-Feasibility Study Report, Former Penthouse Drapery, 1752 Rainier Avenue S dated July 28, 2011.
- Pacific Crest Environmental, LLC (Pacific), 2014, Draft for Ecology Review Remedial Investigation-Feasibility Study Report, Former Penthouse Drapery and Belshaw Site, 1752 Rainier Avenue S and 1750 22nd Avenue S, Seattle, Washington, Site ID No. 23408, VCP No. NW 2278, dated July 25, 2014.
- Pacific Crest Environmental, LLC (Pacific), 2015a, Response Letter to Ecology for draft Remedial Investigation-Feasibility Study Report, Former Penthouse Drapery and Belshaw Site, 1752 Rainier Avenue S, Seattle, Washington, Cleanup Site ID No.: 3184, Facility/Site No.: 23408, VCP No. NW 2278, dated April 3, 2015.

- Pacific Crest Environmental, LLC (Pacific), 2015b, Draft for Ecology Review Cleanup Action Plan – Site Area 1, Former Penthouse Drapery and Belshaw Site, 1752 Rainier Avenue S, Seattle, Washington, Site ID No. 23408, VCP No. NW 2278, dated July 9, 2015.
- Troost, K.G., Booth, D.B., Wisher, A.P, and Shimel, S.A., 2005, Geologic Map of Seattle, United States Geological Survey, Open-File Report 2005-1252.
- URS Corporation (URS), 2002, Report Soil and Groundwater Investigation, Belshaw Bros., Seattle, Washington dated October 1, 2002.
- URS Corporation (URS), 2003, Report Additional Site Characterization, Belshaw Bros., Seattle, Washington dated April 15, 2003.
- URS Corporation (URS), 2006, Report Additional Site Assessment and Voluntary Cleanup Characterization, Belshaw Brothers Inc., Main/Assembly Buildings, 1750 22nd Ave S, Seattle, Washington, TCP ID# NW 1254, dated May 16, 2006.
- Washington State Department of Ecology (Ecology), 2008, Termination of VCP Agreement, dated August 18, 2008 for Belshaw Bros. Inc., 1750 22nd Avenue S, Seattle, Washington, Facility/Site No. 97763114, VCP No. NW1254.
- Washington State Department of Ecology (Ecology), 2011, Opinion Letter on Proposed Cleanup of a Property, dated September 20, 2011 for Penthouse Drapery Cleaners and Manufacturers, Inc., 1752 Rainier Avenue S, Seattle, Washington, Facility/Site No. 23408, VCP No. NW2278, Cleanup Site ID:3184.
- Washington State Department of Ecology (Ecology), 2014, Opinion Letter on Proposed Remedial Action, dated October 27, 2014 for Penthouse Drapery Cleaners, 1752 Rainier Avenue S, Seattle, Washington, Facility/Site No. 23408, VCP No. NW2278, and Cleanup Site ID No. 3184.
- Washington State Department of Ecology (Ecology), 2015a, Site Hazard Assessment Rank Letter, dated July 1, 2015 for Belshaw Bros. Inc., 1750 22nd Avenue S, Seattle, Washington, Facility/Site No. 97763114, Cleanup Site ID: 3018.
- Washington State Department of Ecology (Ecology), 2015b, Opinion Letter on Proposed Remedial Action, dated October 15, 2015 for Penthouse Drapery Cleaners, 1752 Rainier Avenue S, Seattle, Washington, Facility/Site No. 23408, VCP No. NW2278, and Cleanup Site ID No. 3184.

9 LIMITATIONS

Work for this project was performed for the Grand Street Commons, LLC (Client), and this report was prepared in accordance with generally accepted professional practices for the nature and conditions of work completed in the same or similar localities, at the time the work was performed. This report does not represent a legal opinion. No other warranty, expressed or implied, is made.

All reports prepared by Aspect Consulting for the Client apply only to the services described in the Agreement(s) with the Client. Any use or reuse by any party other than the Client is at the sole risk of that party, and without liability to Aspect Consulting. Aspect Consulting's original files/reports shall govern in the event of any dispute regarding the content of electronic documents furnished to others.

Please refer to Appendix I titled "Report Limitations and Guidelines for Use" for additional information governing the use of this report.

TABLES

Table 2. Summary of September and November 2017 Groundwater Elevations

Project No. 170304, Grand Street Commons Project, Seattle, Washington

Exploration Name	Top of Casing Elevation (feet)	Date Measured	Depth-to-Groundwater (feet)	Groundwater Elevation (feet)
AC-MW-1	73.95	9/1/2017	20.62	53.33
		11/15/2017	21.01	52.94
AC-MW-2	69.40	9/1/2017	16.11	53.29
		11/15/2017	15.87	53.53
AC-MW-3	68.58	9/1/2017	15.02	53.56
		11/15/2017	14.97	53.61
AC-MW-4	77.39	9/2/2017	23.82	53.57
		11/15/2017	24.29	53.10
AC-MW-5	77.52	11/15/2017	18.6	58.92
AC-MW-6	77.47	11/15/2017	21.61	55.86
AC-MW-7	77.53	11/15/2017	23.55	53.98
AC-MW-9	76.28	11/15/2017	22.4	53.88
AC-MW-10	72.69	11/15/2017	19.18	53.51
PC-MW-30S	69.58	9/2/2017	15.12	54.46
		11/15/2017	15.11	54.47
URS-MW-2	68.98	9/1/2017	14.65	54.33
		11/15/2017	12.48	56.50
URS-MW-3	71.54	9/1/2017	15.18	56.36
		11/15/2017	15.11	56.43
URS-MW-12	73.83	9/1/2017	15.35	58.48
		11/15/2017	9.42	64.41
URS-MW-13	74.11	9/1/2017	20.31	53.80
		11/15/2017	20.74	53.37
URS-MW-16	71.99	9/1/2017	15.57	56.42
		11/15/2017	10.51	61.48
URS-MW-27S	68.94	9/1/2017	13.92	55.02
		11/15/2017	14.01	54.93
URS-MW-28I	69.73	9/1/2017	15.36	54.37
		11/15/2017	15.19	54.54

Notes:

Depth-to-groundwater was measured from the top of well casing.

Elevation datum is North American Vertical Datum, 1988.

Aspect wells are identified as AC in exploration name.

Aspect well AC-MW-8 was proposed but not completed at the Site in 2017.

Aspect wells were surveyed relative to the known top-of-casing elevation of the well URS-MW-13.

Table 3. Summary of Monitoring Well Construction Information

Project No. 170304, Grand Street Commons Project, Seattle, WA

Well Location on the Property	Monitoring Well ID	Consultant	Type of Monitoring Well	Installation Date	Bottom of Well (feet bgs)	Screened Interval (feet bgs)	Sand Pack Interval (feet bgs)	Ground Elevation (feet NAVD88)	TOC Elevation (feet NAVD88)
Central Portion - West Block	AC-MW-1	Aspect	Permanent	8/28/2017	30	15-30	15-30	74	74.1
South Block	AC-MW-2			8/28/2017	25	10-25	8-25	69	68.6
S Grand Street and Rainier Ave S intersection	AC-MW-3			8/29/2017	30	15-30	15-30	69	68.8
North-central Portion - East Block	AC-MW-4			8/29/2017	35	20-35	18-35	78	77.5
Central Portion - East Block	AC-MW-5			11/8/2017	35	20-35	18-35	78	77.6
East Portion - East Block	AC-MW-6			11/9/2017	30	20-30	18-30	78	77.5
Southeast Portion - East Block	AC-MW-7			11/10/2017	30	20-30	18-30	78	77.5
Northeast Portion - West Block	AC-MW-9			11/3/2017	35	15-35	13-35	76	75.2
East Portion - West Block	AC-MW-10			11/6/2017	35	15-35	13-35	74	73.4

Notes:

AC-MW-8 was not completed at the Site due to no access.

bgs = below existing ground surface

NAVD = Elevation relative to the North American Vertical Datum

Table 4. Summary of Soil Chemical Data
 Project No. 170304, Grand Street Commons Project, Seattle, Washington

Exploration Name	Sample Identification	Sample Depth (ft bgs)	Sample Date	Sample Location	Total Petroleum Hydrocarbons			BTEX			
					Gasoline-Range Organics	Diesel-Range Organics	Motor Oil-Range Organics	Benzene	Toluene	Ethylbenzene	Total Xylenes
					Method A	Method A	Method A	Method A	Method A	Method A	Method A
					30	2,000	2,000	0.03	7	6	9
AC-MW1	AC-MW1-3.0	3	08/28/2017	Subject Property	< 2 U	< 50 U	< 250 U	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U
AC-MW1	AC-MW1-10.0	10	08/28/2017		< 2 U	< 50 U	< 250 U	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U
AC-MW2	AC-MW2-5.0	5	08/28/2017		< 2 U	< 50 U	< 250 U	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U
AC-MW2	AC-MW2-10.0	10	08/28/2017		< 2 U	< 50 U	< 250 U	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U
AC-MW3	AC-MW3-5.0	5	08/29/2017		< 2 U	< 50 U	< 250 U	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U
AC-MW3	AC-MW3-15.0	15	08/29/2017		< 2 U	< 50 U	< 250 U	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U
AC-MW4	AC-MW4-5.0	5	08/29/2017		< 2 U	< 50 U	< 250 U	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U
AC-MW4	AC-MW4-15.0	15	08/29/2017		< 2 U	< 50 U	< 250 U	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U
AC-MW5	AC-MW-5-5.0	5	11/08/2017		< 5 U	< 50 U	< 250 U	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U
AC-MW5	AC-MW-5-15.0	15	11/08/2017		--	--	--	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U
AC-MW5	AC-MW-5-35.0	35	11/08/2017		--	--	--	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U
AC-MW6	AC-MW-6-5.0	5	11/09/2017		< 5 U	< 50 U	< 250 U	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U
AC-MW6	AC-MW-6-15.0	15	11/09/2017		--	--	--	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U
AC-MW6	AC-MW-6-30.0	30	11/10/2017		--	--	--	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U
AC-MW7	AC-MW-7-5.0	5	11/10/2017		< 5 U	< 50 U	< 250 U	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U
AC-MW7	AC-MW-7-10.0	10	11/10/2017		--	--	--	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U
AC-MW7	AC-MW-7-15.0	15	11/10/2017		--	--	--	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U
AC-MW9	AC-MW-9-15.0	15	11/03/2017		< 5 U	< 50 U	< 250 U	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U
AC-MW9	AC-MW-9-20.0	20	11/03/2017		--	--	--	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U
AC-MW10	AC-MW-10-15.0	15	11/06/2017		< 5 U	< 50 U	< 250 U	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U
AC-MW10	AC-MW-10-20.0	20	11/06/2017		< 5 U	100 X	< 250 U	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U
AC-MW10	AC-MW-10-35.0	35	11/06/2017		< 5 U	< 50 U	< 250 U	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U
AC-SB-1	AC-SB-1-5.0	5	11/08/2017		< 5 U	< 50 U	< 250 U	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U
AC-SB-1	AC-SB-1-10.0	10	11/08/2017		--	--	--	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U
AC-SB-1	AC-SB-1-20.0	20	11/08/2017		--	--	--	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U
AC-SB-2	AC-SB-2-5.0	5	11/09/2017		< 5 U	< 50 U	< 250 U	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U
AC-SB-2	AC-SB-2-10.0	10	11/09/2017		--	--	--	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U
AC-SB-2	AC-SB-2-20.0	20	11/09/2017		--	--	--	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U
AC-SB-3	AC-SB-3-5.0	5	11/07/2017		< 5 U	< 50 U	< 250 U	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U
AC-SB-3	AC-SB-3-15.0	15	11/07/2017		--	--	--	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U
AC-SB-3	AC-SB-3-35.0	35	11/07/2017		--	--	--	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U
AC-SB-4	AC-SB-4-5.0	5	11/06/2017		< 5 U	< 50 U	< 250 U	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U
AC-SB-4	AC-SB-4-10.0	10	11/06/2017		650	2,300	< 250 U	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U
AC-SB-4	AC-SB-4-15.0	15	11/06/2017		< 5 U	< 50 U	< 250 U	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U
AC-SB-4	AC-SB-4-30.0	30	11/06/2017		--	--	--	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U
AC-SB-5	AC-SB-5-5.0	5	11/07/2017		< 5 U	< 50 U	< 250 U	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U
AC-SB-5	AC-SB-5-20.0	20	11/07/2017		< 5 U	< 50 U	< 250 U	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U
AC-SB-5	AC-SB-5-30.0	30	11/07/2017		< 5 U	< 50 U	< 250 U	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U
AC-SB-5	AC-SB-5-35.0	35	11/07/2017		--	--	--	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U
AC-SB-6	AC-SB-6-15.0	15	11/03/2017		< 5 U	< 50 U	< 250 U	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U
AC-SB-6	AC-SB-6-25.0	25	11/03/2017		--	--	--	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U
DP-1	DP-1-5.0	5	09/02/2017		< 2 U	< 50 U	< 250 U	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U
DP-1	DP-1-15.0	15	09/05/2017	< 2 U	< 50 U	< 250 U	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U	
DP-2	DP-2-5.0*	5	09/05/2017	< 2 U	< 50 U	< 250 U	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U	
DP-2	DP-2-10.0	10	09/05/2017	< 2 U	< 50 U	< 250 U	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U	
DP-3	DP-3-5.0	5	09/05/2017	< 2 U	< 50 U	< 250 U	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U	
DP-3	DP-3-15.0	15	09/05/2017	< 2 U	< 50 U	< 250 U	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U	
DP-4	DP-4-5.0	5	09/05/2017	< 2 U	< 50 U	< 250 U	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U	
DP-4	DP-4-10.0	10	09/05/2017	< 2 U	< 50 U	< 250 U	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U	
DP-5	DP-5-5.0	5	09/05/2017	< 2 U	< 50 U	< 250 U	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U	
DP-5	DP-5-10.0	10	09/05/2017	< 2 U	< 50 U	< 250 U	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U	
DP-6	DP-6-5.0	5	09/05/2017	< 2 U	< 50 U	< 250 U	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U	
DP-7	DP-7-5.0**	5	09/05/2017	< 2 U	< 50 U	< 250 U	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U	
DP-7	DP-7-10.0	10	09/05/2017	< 2 U	< 50 U	< 250 U	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U	
DP-8	DP-8-5.0	5	09/05/2017	< 2 U	< 50 U	< 250 U	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U	
DP-8	DP-8-10.0	10	09/05/2017	< 2 U	< 50 U	< 250 U	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U	
DP-9	DP-9-3.0	3	09/05/2017	< 2 U	< 50 U	< 250 U	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U	
DP-9	DP-9-10.0	10	09/05/2017	< 2 U	< 50 U	< 250 U	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U	

Table 4. Summary of Soil Chemical Data
 Project No. 170304, Grand Street Commons Project, Seattle, Washington

Exploration Name	Sample Identification	Sample Depth (ft bgs)	Sample Date	Sample Location	Total Petroleum Hydrocarbons			BTEX					
					Chemical Name	Gasoline-Range Organics	Diesel-Range Organics	Motor Oil-Range Organics	Benzene	Toluene	Ethylbenzene	Total Xylenes	
					MTCA Cleanup Level Source	Method A	Method A	Method A	Method A	Method A	Method A	Method A	
					Cleanup Level Concentration (mg/kg)	30	2,000	2,000	0.03	7	6	9	
Explorations by Aspect Consulting 2017	DP-10	DP-10-5.0	5	09/05/2017		< 2 U	< 50 U	< 250 U	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U	
	DP-11	DP-11-5.0	5	09/05/2017		2.6	< 50 U	< 250 U	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U	
	DP-11	DP-11-10.0	10	09/05/2017		< 2 U	< 50 U	< 250 U	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U	
	DP-12	DP-12-5.0	5	09/05/2017		< 2 U	< 50 U	< 250 U	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U	
	DP-12	DP-12-7.5	7.5	09/05/2017		< 2 U	< 50 U	< 250 U	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U	
	DP-13	DP-13-5.0	5	09/05/2017		4	< 50 U	< 250 U	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U	
	DP-13	DP-13-10.0	10	09/05/2017		< 2 U	< 50 U	< 250 U	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U	
	DP-14	DP-14-3.0	3	09/06/2017		4.3	100 X	870	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U	
	DP-14	DP-14-10.0	10	09/06/2017		< 2 U	< 50 U	< 250 U	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U	
	DP-15	DP-15-3.0	3	09/06/2017		< 2 U	< 50 U	460	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U	
	DP-15	DP-15-15.0	15	09/06/2017		< 2 U	< 50 U	< 250 U	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U	
	DP-16	DP-16-3.0	3	09/06/2017		< 2 U	< 50 U	< 250 U	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U	
	DP-16	DP-16-10.0	10	09/06/2017		< 2 U	< 50 U	< 250 U	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U	
	DP-17	DP-17-3.0	3	09/06/2017		< 2 U	< 50 U	< 250 U	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U	
	DP-17	DP-17-10.0	10	09/06/2017		< 2 U	< 50 U	< 250 U	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U	
	DP-18	DP-18-3.0	3	09/06/2017		< 2 U	< 50 U	< 250 U	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U	
	DP-18	DP-18-7.0	7	09/06/2017		< 2 U	< 50 U	< 250 U	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U	
	DP-19	DP-19-2.0	2	09/06/2017		< 2 U	< 50 U	< 250 U	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U	
	DP-20	DP-20-3.0	3	09/06/2017		< 2 U	< 50 U	< 250 U	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U	
	DP-21	DP-21-2.0	2	09/06/2017		< 2 U	< 50 U	< 250 U	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U	
	DP-22	DP-22-3.0	3	09/06/2017		< 2 U	< 50 U	< 250 U	< 0.03 U	< 0.05 U	< 0.05 U	< 0.1 U	
	Explorations by Others between 2002 and 2013	AW-SB-1	SB-1-2.5	2.5	02/18/2002	Subject Property	--	--	--	< 0.0065 U	0.00386 J	< 0.0065 U	0.00158 J
AW-SB-2		SB-2-2.5	2.5	02/18/2002	--		--	--	< 0.0055 U	< 0.0055 U	< 0.0055 U	< 0.0055 U	< 0.0055 U
AW-SB-3		SB-3-2.5	2.5	02/18/2002	--		--	--	< 0.0055 U	< 0.0055 U	< 0.0055 U	< 0.0055 U	< 0.0055 U
AW-SB-4		SB-4-7	7	02/18/2002	13.4		--	--	0.0824	< 0.0302 U	0.671	1.12	
AW-SB-4		SB-4-12	12	02/18/2002	--		--	--	0.00551 J	0.00334 J	0.00514 J	0.00514 J	
AW-SB-5		SB-5-12	12	02/18/2002	--		--	--	0.00187 J	< 0.0055 U	< 0.0055 U	< 0.0055 U	
AW-SB-6		SB-6-12	12	02/18/2002	--		--	--	< 0.00535 U	0.00114 J	0.00258 J	0.00258 J	
AW-SB-6		SB-6-27	27	02/18/2002	18		--	--	--	0.851	1.34	7.96	
AW-SB-7		SB-7-2.5	2.5	02/19/2012	--		--	--	< 0.0127 U	0.0211	0.0157	0.115	
AW-SB-8		SB-8-7	7	02/19/2012	--		--	--	--	0.00401 J	0.026	0.0772	
PC-PH-SB-6		SB6-2.5-5.0	2.5-5	09/05/2016	--		--	--	--	--	--	--	
PC-PH-SB-6		SB6-7.5-10.0	7.5-10	09/05/2016	--		--	--	--	--	--	--	
PC-PH-SB-6		SB6-12.5-15.0	12.5-15	09/05/2016	--		--	--	--	--	--	--	
PC-PH-SB-6		SB6-22.5-25.0	22.5-25	9/5/2012	--		--	--	--	--	--	--	
PC-PH-SB-6		SB6-33.0-36.0	33-36	09/05/2012	--		--	--	--	--	--	--	
PC-PH-SB-6		SB6-46.0-47.0	46-47	09/05/2012	--		--	--	--	--	--	--	
PC-PH-SB-6		SB6-51.0-55.0	51-55	09/05/2012	--		--	--	--	--	--	--	
PC-PH-SB-6		SB6-62.5-65.0	62.5-65	09/06/2012	--		--	--	--	--	--	--	
PC-PH-SB-6		SB6-75.0-78.0	75-78	09/06/2012	--		--	--	--	--	--	--	
PC-PH-SB-7		SB7-2.0-4.0	4-Feb	09/04/2012	--		--	--	--	--	--	--	
PC-PH-SB-7		SB7-7.5-9.5	7.5-9.5	09/04/2012	--		--	--	--	--	--	--	
PC-PH-SB-7		SB7-13.0-17.0	13-17	09/04/2012	--		--	--	--	--	--	--	
PC-PH-SB-7		SB7-25.0-26.5	25-26.5	09/04/2012	--		--	--	--	--	--	--	
PC-PH-SB-7		SB7-34.0-35.0	34-35	09/04/2012	--		--	--	--	--	--	--	
PC-PH-SB-7		SB7-42.0-45.0	42-45	09/04/2012	--		--	--	--	--	--	--	
PC-PH-SB-7		SB7-52.5-55.0	52.5-55	09/04/2012	--		--	--	--	--	--	--	
PC-PH-SB-7		SB7-62.5-65.0	62.5-65	09/04/2012	--		--	--	--	--	--	--	
PC-PH-SB-7		SB7-75.0-77.5	75-77.5	9/5/2012	--		--	--	--	--	--	--	
PC-PH-SB-8		SB8-0.5-6.0	0.5-6	09/10/2012	--		--	--	--	--	--	--	
PC-PH-SB-8		SB8-6.0-10.0	6-10	09/10/2012	--		--	--	--	--	--	--	
PC-PH-SB-8		SB8-10.0-16.5	10-16.5	09/10/2012	--		--	--	--	--	--	--	
PC-PH-SB-8		SB8-20.0-26.0	20-26	09/10/2012	--		--	--	--	--	--	--	
PC-PH-SB-8	SB8-33.0-35.0	33-35	09/10/2012	--	--	--	--	--	--	--			
PC-PH-SB-8	SB8-40.0-46.0	40-46	09/10/2012	--	--	--	--	--	--	--			
PC-PH-SB-8	SB8-50.0-55.0	50-55	09/10/2012	--	--	--	--	--	--	--			
PC-PH-SB-8	SB8-64.0-66.0	64-66	09/10/2012	--	--	--	--	--	--	--			

Table 4. Summary of Soil Chemical Data
 Project No. 170304, Grand Street Commons Project, Seattle, Washington

Exploration Name	Sample Identification	Sample Depth (ft bgs)	Sample Date	Sample Location	Chemical Name	Total Petroleum Hydrocarbons			BTEX				
						Gasoline-Range Organics	Diesel-Range Organics	Motor Oil-Range Organics	Benzene	Toluene	Ethylbenzene	Total Xylenes	
						Method A	Method A	Method A	Method A	Method A	Method A	Method A	
						30	2,000	2,000	0.03	7	6	9	
PC-PH-SB-8	SB8-74.0-80.0	74-80	09/10/2012			--	--	--	--	--	--	--	--
PC-PH-SB-9	SB9-63.5-70.0	63.5-70	09/07/2012			--	--	--	--	--	--	--	--
PC-PH-SB-9	SB9-70.0-78.5	70-78.5	09/07/2012			--	--	--	--	--	--	--	--
PC-PH-SB-9	SB9-85.0-87.5	85-87.5	09/07/2012			--	--	--	--	--	--	--	--
PC-PH-SB-9	SB9-95.0-97.5	95-97.5	09/07/2012			--	--	--	--	--	--	--	--
PC-PH-SB-13	SB13-34-36	34-36	01/04/2013			--	--	--	--	--	--	--	--
PC-PH-SB-13	SB13-44-46	44-46	01/04/2013			--	--	--	--	--	--	--	--
PC-PH-SB-13	SB13-54-56	54-56	01/04/2013			--	--	--	--	--	--	--	--
PC-PH-SB-13	SB13-64-66	64-66	01/07/2013			--	--	--	--	--	--	--	--
PC-PH-SB-13	SB13-74-76	74-76	01/07/2013			--	--	--	--	--	--	--	--
PC-PH-SB-13	SB13-86-88	86-88	01/07/2013			--	--	--	--	--	--	--	--
PC-PH-SB-13	SB13-94-96	94-96	01/07/2013			--	--	--	--	--	--	--	--
PC-PH-SB-13	SB13-104-106	104-106	01/07/2013			--	--	--	--	--	--	--	--
PC-PH-SB-14	SB14-34-36	34-36	12/26/2012			--	--	--	--	--	--	--	--
PC-PH-SB-14	SB14-44-46	44-46	12/26/2012			--	--	--	--	--	--	--	--
PC-PH-SB-14	SB14-54-56	54-56	12/27/2012			--	--	--	--	--	--	--	--
PC-PH-SB-14	SB14-64-66	64-66	12/27/2012			--	--	--	--	--	--	--	--
PC-PH-SB-14	SB14-74-76	74-76	12/27/2012			--	--	--	--	--	--	--	--
PC-PH-SB-14	SB14-84-86	84-86	12/28/2012			--	--	--	--	--	--	--	--
PC-PH-SB-14	SB14-94-96	94-96	12/28/2012			--	--	--	--	--	--	--	--
PC-PH-SB-14	SB14-104-106	104-106	12/28/2012			--	--	--	--	--	--	--	--
PC-PH-SB-15	SB15-64-66	64-66	01/02/2013			--	--	--	--	--	--	--	--
PC-PH-SB-15	SB15-74-76	74-76	01/02/2013			--	--	--	--	--	--	--	--
PC-PH-SB-15	SB15-84-86	84-86	01/02/2013			--	--	--	--	--	--	--	--
PC-PH-SB-15	SB15-94-96	94-96	01/03/2013			--	--	--	--	--	--	--	--
PC-PH-SB-15	SB15-104-106	104-106	01/03/2013			--	--	--	--	--	--	--	--
URS-B-5	B2F0080-03	5.5-8	05/30/2002			5.9	< 10 U	< 25 U	--	--	--	--	--
URS-B-9	B2F0080-24	4-8	05/30/2002			17 X	< 10 U	< 25 U	--	--	--	--	--
URS-B-11	B-11-20	20	02/20/2003			< 5 U	< 10 U	< 25 U	--	--	--	--	--
URS-B-12	B-12-25	25	02/20/2003			3150	< 10 U	< 25 U	< 0.1 U	0.326	3.25	25.19	--
URS-B-13	B-13-5	5	02/21/2003			< 5 U	< 10 U	< 25 U	--	--	--	--	--
URS-MW-5	B2F0409-02	10	06/13/2002			--	< 10 U	< 25 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.2 U	--
URS-MW-6	B2F0409-08	10	06/13/2002			--	< 10 U	< 25 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.2 U	--
URS-MW-8	MW-8-2.5	2.5	02/20/2003			--	--	--	< 0.1 U	< 0.1 U	< 0.1 U	< 0.2 U	--
URS-MW-10	MW-10-7.5	7.5	02/20/2003			< 5 U	< 10 U	< 25 U	--	--	--	--	--
URS-MW-11	MW-11-4	4	02/21/2003			--	37.2 X	25.7	< 0.1 U	< 0.1 U	< 0.1 U	< 0.2 U	--
URS-MW-13	MW-13-25	25	02/21/2003			< 5 U	< 10 U	< 25 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.2 U	--
URS-SB-1	URS-SB-1-26	23	09/04/2012			4300 X	--	--	< 0.0160 U	< 0.0160 U	< 0.0240 U	< 0.0160 U	--
URS-SB-1	URS-SB-1-31	31	09/04/2012			30.2	--	--	< 0.0127 U	< 0.0127 U	< 0.0190 U	< 0.0127 U	--
URS-SB-1	URS-SB-1-41	41	09/04/2012			10.2 X	--	--	< 0.0124 U	< 0.0124 U	< 0.0186 U	< 0.0124 U	--
URS-SB-2	URS-SB-2-25.5	25.5	09/04/2012			< 5.07 U	--	--	< 0.0203 U	< 0.0203 U	< 0.0304 U	< 0.0203 U	--
URS-SB-2	URS-SB-2-36	36	09/04/2012			< 4.21 U	--	--	< 0.0168 U	< 0.0168 U	< 0.0253 U	< 0.0168 U	--
URS-SB-2	URS-SB-2-46	46	09/04/2012			< 5.16 U	--	--	< 0.0206 U	< 0.0206 U	< 0.0310 U	< 0.0206 U	--
URS-SB-3	URS-SB-3-20.5	20.5	09/04/2012			< 3.89 U	--	--	0.0455	< 0.0155 U	< 0.0233 U	0.1835	--
URS-SB-3	URS-SB-3-31	31	09/04/2012			5.15 X	--	--	0.586	0.318	0.232	0.947	--
URS-SB-3	URS-SB-3-36	36	09/04/2012			< 4.92 U	--	--	0.0379	< 0.0197 U	< 0.0295 U	< 0.0197 U	--
URS-SB-4	URS-SB-4-26	26	09/05/2012			16.2	--	--	< 0.0382 U	2.22	0.473	2.514	--
URS-SB-4	URS-SB-4-31	31	09/05/2012			< 4.73 U	--	--	0.0345	< 0.0189 U	< 0.0284 U	0.2301	--
URS-SB-4	URS-SB-4-41	41	09/05/2012			< 4.76 U	--	--	< 0.0191 U	< 0.0191 U	< 0.0286 U	< 0.0191 U	--
URS-SB-5	URS-SB-5-26	26	09/05/2012			< 4.49 U	--	--	< 0.0179 U	< 0.0179 U	< 0.0269 U	< 0.0179 U	--
URS-SB-5	URS-SB-5-41	41	09/05/2012			< 7.23 U	--	--	< 0.0289 U	< 0.0289 U	< 0.0434 U	< 0.0289 U	--
URS-SB-5	URS-SB-5-56.5	56.5	09/05/2012			< 6.17 U	--	--	< 0.0247 U	< 0.0247 U	< 0.0370 U	< 0.0247 U	--
URS-SB-6	URS-SB-6-21	21	09/05/2012			< 6.89 U	--	--	< 0.0276 U	< 0.0276 U	< 0.0414 U	< 0.0276 U	--
URS-SB-6	URS-SB-6-31	31	09/05/2012			< 5.58 U	--	--	< 0.0223 U	< 0.0223 U	< 0.0335 U	< 0.0223 U	--
URS-SB-6	URS-SB-6-46	46	09/05/2012			< 7.16 U	--	--	< 0.0286 U	< 0.0286 U	< 0.0429 U	< 0.0286 U	--
URS-SB-7	URS-SB-7-26	26	09/06/2012			< 5.29 U	--	--	< 0.0212 U	< 0.0212 U	< 0.0317 U	< 0.0212 U	--
URS-SB-7	URS-SB-7-31	31	09/06/2012			< 5.44 U	--	--	< 0.0217 U	< 0.0217 U	< 0.0326 U	< 0.0217 U	--
URS-SB-7	URS-SB-7-41	41	09/06/2012			< 4.58 U	--	--	< 0.0183 U	< 0.0183 U	< 0.0275 U	< 0.0183 U	--

Table 4. Summary of Soil Chemical Data

Project No. 170304, Grand Street Commons Project, Seattle, Washington

	Exploration Name	Sample Identification	Sample Depth (ft bgs)	Sample Date	Sample Location	Total Petroleum Hydrocarbons			BTEX				
						Chemical Name	Gasoline-Range Organics	Diesel-Range Organics	Motor Oil-Range Organics	Benzene	Toluene	Ethylbenzene	Total Xylenes
						MTCA Cleanup Level Source	Method A	Method A	Method A	Method A	Method A	Method A	Method A
						Cleanup Level Concentration (mg/kg)	30	2,000	2,000	0.03	7	6	9
Explorations by Others between 2012 and 2013	URS-SB-8	URS-SB-8-21	21	09/06/2012	Subject Property	< 4.91 U	--	--	< 0.0197 U	< 0.0197 U	< 0.0295 U	< 0.0197 U	
	URS-SB-8	URS-SB-8-31	31	09/06/2012		< 7.07 U	--	--	< 0.0283 U	< 0.0283 U	< 0.0424 U	< 0.0283 U	
	URS-SB-8	URS-SB-8-41.5	41.5	09/06/2012		< 6.77 U	--	--	< 0.0271 U	< 0.0271 U	< 0.0406 U	< 0.0271 U	
	URS-SB-9	URS-SB-9-26	26	09/06/2012		< 5.04 U	--	--	< 0.0202 U	< 0.0202 U	< 0.0303 U	< 0.0202 U	
	URS-SB-9	URS-SB-9-36	36	09/06/2012		< 4.98 U	--	--	< 0.0199 U	< 0.0199 U	< 0.0299 U	< 0.0199 U	
	URS-SB-9	URS-SB-9-41	41	09/06/2012		< 4.1 U	--	--	< 0.0164 U	< 0.0164 U	< 0.0246 U	< 0.0164 U	
Explorations by Others in 2012	PC-PH-SB-1	SB1-0.25-5.0	0.25-5	09/11/2012	North-adjacent SCC/Former Penthouse Drapery property	--	--	--	--	--	--	--	
	PC-PH-SB-1	SB1-6.5-10.0	6.5-10	09/11/2012		--	--	--	--	--	--	--	--
	PC-PH-SB-1	SB1-10.0-16.0	10-16	09/11/2012		--	--	--	--	--	--	--	--
	PC-PH-SB-1	SB1-25.0-30.0	25-30	09/11/2012		--	--	--	--	--	--	--	--
	PC-PH-SB-1	SB1-34.0-35.0	34-35	09/11/2012		--	--	--	--	--	--	--	--
	PC-PH-SB-1	SB1-40.0-45.0	40-45	09/11/2012		--	--	--	--	--	--	--	--
	PC-PH-SB-1	SB1-52.5-55.0	52.5-55	09/11/2012		--	--	--	--	--	--	--	--
	PC-PH-SB-1	SB1-63.5-65.0	63.5-65	09/11/2012		--	--	--	--	--	--	--	--
	PC-PH-SB-1	SB1-70.0-75.0	70-75	09/12/2012		--	--	--	--	--	--	--	--
	PC-PH-SB-10	SB10-0-1	0-1	12/08/2012		--	--	--	--	--	--	--	--
	PC-PH-SB-11	SB11-2-4	2-4	12/08/2012		--	--	--	--	--	--	--	--
	PC-PH-SB-11	SB11-8-10	8-10	12/08/2012		--	--	--	--	--	--	--	--
	PC-PH-SB-11	SB11-10-12	10-12	12/08/2012		--	--	--	--	--	--	--	--
	PC-PH-SB-12	SB12-2-4	2-4	12/08/2012		--	--	--	--	--	--	--	--

Notes

ft bgs = feet below existing ground surface

mg/kg = milligrams per kilogram

-- = Not analyzed

* = Samples were additionally analyzed for polychlorinated

** = Samples were additionally analyzed for Lead and cadmium

U = Analyte not detected above the listed reporting limit

X = Chromatographic pattern does not match quantitation standard. However, the listed values are considered detections based on field screening evidence (moderate sheen and slight odor).

J = Listed value is an estimate.

NE = Not Established

MTCA = Model Toxics Control Act

Bolded value indicates analyte detected at the listed concentration.

Blue shading indicates analyte detected at a concentration greater than the corresponding MTCA cleanup level.

Table 4. Summary of Soil Chemical Data

Project No. 170304, Grand Street Commons Project, Seattle, Washington

Chemical Name MTCA Cleanup Level Source Cleanup Level Concentration (mg/kg)					Volatile Organic Compounds							
					Tetrachloroethene (PCE)	Trichloroethene (TCE)	cis-1,2-Dichloroethene (DCE)	trans-1,2-Dichloroethene	Methylene Chloride	Vinyl Chloride	1,1,1-Trichloroethane	
					Method A	Method A	Method B	Method B	Method A	Method B	Method A	
					0.05	0.03	160	1,600	0.02	0.67	2	
Exploration Name	Sample Identification	Sample Depth (ft bgs)	Sample Date	Sample Location								
Explorations by Aspect Consulting 2017	AC-MW1	AC-MW1-3.0	3	08/28/2017	Subject Property	< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U
	AC-MW1	AC-MW1-10.0	10	08/28/2017		< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U
	AC-MW2	AC-MW2-5.0	5	08/28/2017		< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U
	AC-MW2	AC-MW2-10.0	10	08/28/2017		< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U
	AC-MW3	AC-MW3-5.0	5	08/29/2017		< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U
	AC-MW3	AC-MW3-15.0	15	08/29/2017		< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U
	AC-MW4	AC-MW4-5.0	5	08/29/2017		< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U
	AC-MW4	AC-MW4-15.0	15	08/29/2017		< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U
	AC-MW5	AC-MW-5-5.0	5	11/08/2017		< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U
	AC-MW5	AC-MW-5-15.0	15	11/08/2017		< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U
	AC-MW5	AC-MW-5-35.0	35	11/08/2017		< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U
	AC-MW6	AC-MW-6-5.0	5	11/09/2017		< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U
	AC-MW6	AC-MW-6-15.0	15	11/09/2017		< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U
	AC-MW6	AC-MW-6-30.0	30	11/10/2017		< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U
	AC-MW7	AC-MW-7-5.0	5	11/10/2017		< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U
	AC-MW7	AC-MW-7-10.0	10	11/10/2017		< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U
	AC-MW7	AC-MW-7-15.0	15	11/10/2017		< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U
	AC-MW9	AC-MW-9-15.0	15	11/03/2017		< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U
	AC-MW9	AC-MW-9-20.0	20	11/03/2017		< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U
	AC-MW10	AC-MW-10-15.0	15	11/06/2017		< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U
	AC-MW10	AC-MW-10-20.0	20	11/06/2017		< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U
	AC-MW10	AC-MW-10-35.0	35	11/06/2017		< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U
	AC-SB-1	AC-SB-1-5.0	5	11/08/2017		< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U
	AC-SB-1	AC-SB-1-10.0	10	11/08/2017		< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U
	AC-SB-1	AC-SB-1-20.0	20	11/08/2017		< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U
	AC-SB-2	AC-SB-2-5.0	5	11/09/2017		< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U
	AC-SB-2	AC-SB-2-10.0	10	11/09/2017		< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U
	AC-SB-2	AC-SB-2-20.0	20	11/09/2017		< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U
	AC-SB-3	AC-SB-3-5.0	5	11/07/2017		< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U
	AC-SB-3	AC-SB-3-15.0	15	11/07/2017		< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U
	AC-SB-3	AC-SB-3-35.0	35	11/07/2017		< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U
	AC-SB-4	AC-SB-4-5.0	5	11/06/2017		< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U
	AC-SB-4	AC-SB-4-10.0	10	11/06/2017		< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U
	AC-SB-4	AC-SB-4-15.0	15	11/06/2017		< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U
	AC-SB-4	AC-SB-4-30.0	30	11/06/2017		< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U
	AC-SB-5	AC-SB-5-5.0	5	11/07/2017		< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U
	AC-SB-5	AC-SB-5-20.0	20	11/07/2017		< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U
	AC-SB-5	AC-SB-5-30.0	30	11/07/2017		< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U
	AC-SB-5	AC-SB-5-35.0	35	11/07/2017		< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U
	AC-SB-6	AC-SB-6-15.0	15	11/03/2017		< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U
	AC-SB-6	AC-SB-6-25.0	25	11/03/2017		< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U
	DP-1	DP-1-5.0	5	09/02/2017		< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U
DP-1	DP-1-15.0	15	09/05/2017	< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U		
DP-2	DP-2-5.0*	5	09/05/2017	< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U		
DP-2	DP-2-10.0	10	09/05/2017	< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U		
DP-3	DP-3-5.0	5	09/05/2017	< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U		
DP-3	DP-3-15.0	15	09/05/2017	< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U		
DP-4	DP-4-5.0	5	09/05/2017	< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U		
DP-4	DP-4-10.0	10	09/05/2017	< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U		
DP-5	DP-5-5.0	5	09/05/2017	< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U		
DP-5	DP-5-10.0	10	09/05/2017	< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U		
DP-6	DP-6-5.0	5	09/05/2017	< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U		
DP-7	DP-7-5.0**	5	09/05/2017	< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U		
DP-7	DP-7-10.0	10	09/05/2017	< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U		
DP-8	DP-8-5.0	5	09/05/2017	< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U		
DP-8	DP-8-10.0	10	09/05/2017	< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U		
DP-9	DP-9-3.0	3	09/05/2017	< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U		
DP-9	DP-9-10.0	10	09/05/2017	< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U		

Table 4. Summary of Soil Chemical Data
 Project No. 170304, Grand Street Commons Project, Seattle, Washington

Exploration Name	Sample Identification	Sample Depth (ft bgs)	Sample Date	Sample Location	Chemical Name	Volatile Organic Compounds						
						Tetrachloroethene (PCE)	Trichloroethene (TCE)	cis-1,2-Dichloroethene (DCE)	trans-1,2-Dichloroethene	Methylene Chloride	Vinyl Chloride	1,1,1-Trichloroethane
						Method A	Method A	Method B	Method B	Method A	Method B	Method A
						0.05	0.03	160	1,600	0.02	0.67	2
MTCA Cleanup Level Source						Cleanup Level Concentration (mg/kg)						
Explorations by Aspect Consulting 2017						< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U
DP-10	DP-10-5.0	5	09/05/2017	Subject Property	< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U	
DP-11	DP-11-5.0	5	09/05/2017		< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U	
DP-11	DP-11-10.0	10	09/05/2017		< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U	
DP-12	DP-12-5.0	5	09/05/2017		< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U	
DP-12	DP-12-7.5	7.5	09/05/2017		< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U	
DP-13	DP-13-5.0	5	09/05/2017		< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U	
DP-13	DP-13-10.0	10	09/05/2017		< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U	
DP-14	DP-14-3.0	3	09/06/2017		< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U	
DP-14	DP-14-10.0	10	09/06/2017		< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U	
DP-15	DP-15-3.0	3	09/06/2017		< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U	
DP-15	DP-15-15.0	15	09/06/2017		< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U	
DP-16	DP-16-3.0	3	09/06/2017		< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U	
DP-16	DP-16-10.0	10	09/06/2017		< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U	
DP-17	DP-17-3.0	3	09/06/2017		< 0.025 U	0.029	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U	
DP-17	DP-17-10.0	10	09/06/2017		< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U	
DP-18	DP-18-3.0	3	09/06/2017		< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U	
DP-18	DP-18-7.0	7	09/06/2017		< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U	
DP-19	DP-19-2.0	2	09/06/2017		< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U	
DP-20	DP-20-3.0	3	09/06/2017		< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U	
DP-21	DP-21-2.0	2	09/06/2017		< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U	
DP-22	DP-22-3.0	3	09/06/2017		< 0.025 U	< 0.02 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.05 U	< 0.05 U	
Explorations by Others between 2002 and 2013						0.00354 J	--	--	--	--	--	
AW-SB-1	SB-1-2.5	2.5	02/18/2002	Subject Property	< 0.0055 U	--	--	--	--	--	--	
AW-SB-2	SB-2-2.5	2.5	02/18/2002		< 0.0055 U	--	--	--	--	--	--	
AW-SB-3	SB-3-2.5	2.5	02/18/2002		< 0.0302 U	--	--	--	--	--	--	
AW-SB-4	SB-4-7	7	02/18/2002		--	--	--	--	--	--	--	
AW-SB-4	SB-4-12	12	02/18/2002		--	--	--	--	--	--	--	
AW-SB-5	SB-5-12	12	02/18/2002		--	--	--	--	--	--	--	
AW-SB-6	SB-6-12	12	02/18/2002		--	--	--	--	--	--	--	
AW-SB-6	SB-6-27	27	02/18/2002		--	--	--	--	--	--	--	
AW-SB-7	SB-7-2.5	2.5	02/19/2012		--	< 0.0127 U	--	--	--	--	< 0.0127 U	
AW-SB-8	SB-8-7	7	02/19/2012		--	--	--	--	--	--	--	
PC-PH-SB-6	SB6-2.5-5.0	2.5-5	09/05/2016		< 0.0010 U	< 0.0010 U	< 0.0010 U	< 0.0010 U	< 0.0050 U	< 0.0010 U	< 0.0010 U	
PC-PH-SB-6	SB6-7.5-10.0	7.5-10	09/05/2016		0.0013	< 0.00096 U	< 0.00096 U	< 0.00096 U	< 0.0048 U	< 0.00096 U	< 0.00096 U	
PC-PH-SB-6	SB6-12.5-15.0	12.5-15	09/05/2016		0.0012	< 0.00096 U	< 0.00096 U	< 0.00096 U	< 0.0048 U	< 0.00096 U	< 0.00096 U	
PC-PH-SB-6	SB6-22.5-25.0	22.5-25	9/5/2012		< 0.00093 U	< 0.00093 U	< 0.00093 U	< 0.00093 U	< 0.0046 U	< 0.00093 U	< 0.00093 U	
PC-PH-SB-6	SB6-33.0-36.0	33-36	09/05/2012		0.028	< 0.00097 U	< 0.00097 U	< 0.00097 U	< 0.0049 U	< 0.00097 U	< 0.00097 U	
PC-PH-SB-6	SB6-46.0-47.0	46-47	09/05/2012		0.0038	< 0.0010 U	< 0.0010 U	< 0.0010 U	< 0.0051 U	< 0.0010 U	< 0.0010 U	
PC-PH-SB-6	SB6-51.0-55.0	51-55	09/05/2012		0.10	< 0.00091 U	< 0.00091 U	< 0.00091 U	< 0.0045 U	< 0.00091 U	< 0.00091 U	
PC-PH-SB-6	SB6-62.5-65.0	62.5-65	09/06/2012		0.0029	< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.0055 U	< 0.0011 U	< 0.0011 U	
PC-PH-SB-6	SB6-75.0-78.0	75-78	09/06/2012		0.19	< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.0053 U	< 0.0011 U	< 0.0011 U	
PC-PH-SB-7	SB7-2.0-4.0	4-Feb	09/04/2012		< 0.00090 U	< 0.00090 U	< 0.00090 U	< 0.00090 U	< 0.0045 U	< 0.00090 U	< 0.00090 U	
PC-PH-SB-7	SB7-7.5-9.5	7.5-9.5	09/04/2012		< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.0053 U	< 0.0011 U	< 0.0011 U	
PC-PH-SB-7	SB7-13.0-17.0	13-17	09/04/2012		< 0.00096 U	< 0.00096 U	< 0.00096 U	< 0.00096 U	< 0.0048 U	< 0.00096 U	< 0.00096 U	
PC-PH-SB-7	SB7-25.0-26.5	25-26.5	09/04/2012	< 0.0010 U	< 0.0010 U	< 0.0010 U	< 0.0010 U	< 0.0050 U	< 0.0010 U	< 0.0010 U		
PC-PH-SB-7	SB7-34.0-35.0	34-35	09/04/2012	< 0.00094 U	< 0.00094 U	< 0.00094 U	< 0.00094 U	< 0.0047 U	< 0.00094 U	< 0.00094 U		
PC-PH-SB-7	SB7-42.0-45.0	42-45	09/04/2012	< 0.0012 U	< 0.0012 U	< 0.0012 U	< 0.0012 U	< 0.0062 U	< 0.0012 U	< 0.0012 U		
PC-PH-SB-7	SB7-52.5-55.0	52.5-55	09/04/2012	< 0.0012 U	< 0.0012 U	< 0.0012 U	< 0.0012 U	< 0.0058 U	< 0.0012 U	< 0.0012 U		
PC-PH-SB-7	SB7-62.5-65.0	62.5-65	09/04/2012	< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.0053 U	< 0.0011 U	< 0.0011 U		
PC-PH-SB-7	SB7-75.0-77.5	75-77.5	9/5/2012	< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.0057 U	< 0.0011 U	< 0.0011 U		
PC-PH-SB-8	SB8-0.5-6.0	0.5-6	09/10/2012	0.0030	< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.0054 U	< 0.0011 U	< 0.0011 U		
PC-PH-SB-8	SB8-6.0-10.0	6-10	09/10/2012	0.0046	< 0.0013 U	< 0.0013 U	< 0.0013 U	< 0.0065 U	< 0.0013 U	< 0.0013 U		
PC-PH-SB-8	SB8-10.0-16.5	10-16.5	09/10/2012	0.23	0.016	0.0060	< 0.0013 U	< 0.0065 U	< 0.0013 U	< 0.0013 U		
PC-PH-SB-8	SB8-20.0-26.0	20-26	09/10/2012	0.43	< 0.0010 U	< 0.0010 U	< 0.0010 U	< 0.0050 U	< 0.0010 U	< 0.0010 U		
PC-PH-SB-8	SB8-33.0-35.0	33-35	09/10/2012	0.0020	< 0.00088 U	< 0.00088 U	< 0.00088 U	< 0.0044 U	< 0.00088 U	< 0.00088 U		
PC-PH-SB-8	SB8-40.0-46.0	40-46	09/10/2012	< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.0055 U	< 0.0011 U	< 0.0011 U		
PC-PH-SB-8	SB8-50.0-55.0	50-55	09/10/2012	0.064	< 0.00082 U	< 0.00082 U	< 0.00082 U	< 0.0041 U	< 0.00082 U	< 0.00082 U		
PC-PH-SB-8	SB8-64.0-66.0	64-66	09/10/2012	< 0.00084 U	< 0.00084 U	< 0.00084 U	< 0.00084 U	< 0.0042 U	< 0.00084 U	< 0.00084 U		

Table 4. Summary of Soil Chemical Data

Project No. 170304, Grand Street Commons Project, Seattle, Washington

Chemical Name MTCA Cleanup Level Source Cleanup Level Concentration (mg/kg)					Volatile Organic Compounds						
					Tetrachloroethene (PCE)	Trichloroethene (TCE)	cis-1,2-Dichloroethene (DCE)	trans-1,2-Dichloroethene	Methylene Chloride	Vinyl Chloride	1,1,1-Trichloroethane
					Method A	Method A	Method B	Method B	Method A	Method B	Method A
					0.05	0.03	160	1,600	0.02	0.67	2
Exploration Name	Sample Identification	Sample Depth (ft bgs)	Sample Date	Sample Location							
PC-PH-SB-8	SB8-74.0-80.0	74-80	09/10/2012		< 0.00093 U	< 0.00093 U	< 0.00093 U	< 0.00093 U	< 0.0046 U	< 0.00093 U	< 0.00093 U
PC-PH-SB-9	SB9-63.5-70.0	63.5-70	09/07/2012		< 0.00087 U	< 0.00087 U	< 0.00087 U	< 0.00087 U	< 0.0043 U	< 0.00087 U	< 0.00087 U
PC-PH-SB-9	SB9-70.0-78.5	70-78.5	09/07/2012		< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.0055 U	< 0.0011 U	< 0.0011 U
PC-PH-SB-9	SB9-85.0-87.5	85-87.5	09/07/2012		< 0.0013 U	< 0.0013 U	< 0.0013 U	< 0.0013 U	< 0.0064 U	< 0.0013 U	< 0.0013 U
PC-PH-SB-9	SB9-95.0-97.5	95-97.5	09/07/2012		< 0.0012 U	< 0.0012 U	< 0.0012 U	< 0.0012 U	< 0.0058 U	< 0.0012 U	< 0.0012 U
PC-PH-SB-13	SB13-34-36	34-36	01/04/2013		< 0.0010 U	< 0.0010 U	< 0.0010 U	< 0.0010 U	< 0.0051 U	< 0.0010 U	< 0.0010 U
PC-PH-SB-13	SB13-44-46	44-46	01/04/2013		< 0.00092 U	< 0.00092 U	< 0.00092 U	< 0.00092 U	< 0.0046 U	< 0.0013 U	< 0.00092 U
PC-PH-SB-13	SB13-54-56	54-56	01/04/2013		< 0.0012 U	< 0.0012 U	< 0.0012 U	< 0.0012 U	< 0.0059 U	< 0.0017 U	< 0.0012 U
PC-PH-SB-13	SB13-64-66	64-66	01/07/2013		< 0.00099 U	< 0.00099 U	< 0.00099 U	< 0.00099 U	< 0.0049 U	< 0.00099 U	< 0.00099 U
PC-PH-SB-13	SB13-74-76	74-76	01/07/2013		< 0.0010 U	< 0.0010 U	< 0.0010 U	< 0.0010 U	< 0.0051 U	< 0.0010 U	< 0.0010 U
PC-PH-SB-13	SB13-86-88	86-88	01/07/2013		< 0.00092 U	< 0.00092 U	< 0.00092 U	< 0.00092 U	< 0.0046 U	< 0.00092 U	< 0.00092 U
PC-PH-SB-13	SB13-94-96	94-96	01/07/2013		< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.0056 U	< 0.0011 U	< 0.0011 U
PC-PH-SB-13	SB13-104-106	104-106	01/07/2013		< 0.0012 U	< 0.0012 U	< 0.0012 U	< 0.0012 U	< 0.0058 U	< 0.0012 U	< 0.0012 U
PC-PH-SB-14	SB14-34-36	34-36	12/26/2012		< 0.00083 U	< 0.00083 U	< 0.00083 U	< 0.00083 U	< 0.0042 U	< 0.00083 U	< 0.00083 U
PC-PH-SB-14	SB14-44-46	44-46	12/26/2012		< 0.0010 U	< 0.0010 U	< 0.0010 U	< 0.0010 U	< 0.0051 U	< 0.0010 U	< 0.0010 U
PC-PH-SB-14	SB14-54-56	54-56	12/27/2012		< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.0056 U	< 0.0011 U	< 0.0011 U
PC-PH-SB-14	SB14-64-66	64-66	12/27/2012		0.0082	< 0.00093 U	< 0.00093 U	< 0.00093 U	< 0.0047 U	< 0.00093 U	< 0.00093 U
PC-PH-SB-14	SB14-74-76	74-76	12/27/2012		0.0071	< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.0053 U	< 0.0011 U	< 0.0011 U
PC-PH-SB-14	SB14-84-86	84-86	12/28/2012		0.0037	< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.0055 U	< 0.0011 U	< 0.0011 U
PC-PH-SB-14	SB14-94-96	94-96	12/28/2012		0.0016	< 0.0012 U	< 0.0012 U	< 0.0012 U	< 0.0058 U	< 0.0012 U	< 0.0012 U
PC-PH-SB-14	SB14-104-106	104-106	12/28/2012		< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.0056 U	< 0.0011 U	< 0.0011 U
PC-PH-SB-15	SB15-64-66	64-66	01/02/2013		< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.0057 U	< 0.0011 U	< 0.0011 U
PC-PH-SB-15	SB15-74-76	74-76	01/02/2013		< 0.0013 U	< 0.0013 U	< 0.0013 U	< 0.0013 U	< 0.0066 U	< 0.0013 U	< 0.0013 U
PC-PH-SB-15	SB15-84-86	84-86	01/02/2013		< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.0054 U	< 0.0011 U	< 0.0011 U
PC-PH-SB-15	SB15-94-96	94-96	01/03/2013		< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.0054 U	< 0.0011 U	< 0.0011 U
PC-PH-SB-15	SB15-104-106	104-106	01/03/2013		< 0.0012 U	< 0.0012 U	< 0.0012 U	< 0.0012 U	< 0.0059 U	< 0.0012 U	< 0.0012 U
URS-B-5	B2F0080-03	5.5-8	05/30/2002		--	--	--	--	--	--	--
URS-B-9	B2F0080-24	4-8	05/30/2002		--	--	--	--	--	--	--
URS-B-11	B-11-20	20	02/20/2003		--	--	--	--	--	--	--
URS-B-12	B-12-25	25	02/20/2003		< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	< 1 U	< 0.1 U	< 0.1 U
URS-B-13	B-13-5	5	02/21/2003		--	--	--	--	--	--	--
URS-MW-5	B2F0409-02	10	06/13/2002		< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	< 1 U	< 0.1 U	< 0.1 U
URS-MW-6	B2F0409-08	10	06/13/2002		< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	< 1 U	< 0.1 U	< 0.1 U
URS-MW-8	MW-8-2.5	2.5	02/20/2003		< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	< 1 U	< 0.1 U	< 0.1 U
URS-MW-10	MW-10-7.5	7.5	02/20/2003		--	--	--	--	--	--	--
URS-MW-11	MW-11-4	4	02/21/2003		< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	< 1 U	< 0.1 U	< 0.1 U
URS-MW-13	MW-13-25	25	02/21/2003		< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	< 1 U	< 0.1 U	< 0.1 U
URS-SB-1	URS-SB-1-26	23	09/04/2012		< 0.0160 U	< 0.0240 U	< 0.0160 U	< 0.0160 U	< 0.0160 U	< 0.0160 U	< 0.0160 U
URS-SB-1	URS-SB-1-31	31	09/04/2012		< 0.0127 U	< 0.0190 U	< 0.0127 U	< 0.0127 U	< 0.0127 U	< 0.0127 U	< 0.0127 U
URS-SB-1	URS-SB-1-41	41	09/04/2012		< 0.0124 U	< 0.0186 U	< 0.0124 U	< 0.0124 U	< 0.0124 U	< 0.0124 U	< 0.0124 U
URS-SB-2	URS-SB-2-25.5	25.5	09/04/2012		< 0.0203 U	< 0.0304 U	< 0.0203 U	< 0.0203 U	< 0.0203 U	< 0.0203 U	< 0.0203 U
URS-SB-2	URS-SB-2-36	36	09/04/2012		< 0.0168 U	< 0.0253 U	< 0.0168 U	< 0.0168 U	< 0.0168 U	< 0.0168 U	< 0.0168 U
URS-SB-2	URS-SB-2-46	46	09/04/2012		< 0.0206 U	< 0.0310 U	< 0.0206 U	< 0.0206 U	< 0.0206 U	< 0.0206 U	< 0.0206 U
URS-SB-3	URS-SB-3-20.5	20.5	09/04/2012		< 0.0155 U	< 0.0233 U	< 0.0155 U	< 0.0155 U	< 0.0155 U	< 0.0155 U	< 0.0155 U
URS-SB-3	URS-SB-3-31	31	09/04/2012		< 0.0161 U	< 0.0242 U	< 0.0161 U	< 0.0161 U	< 0.0161 U	< 0.0161 U	< 0.0161 U
URS-SB-3	URS-SB-3-36	36	09/04/2012		< 0.0197 U	< 0.0295 U	< 0.0197 U	< 0.0197 U	< 0.0197 U	< 0.0197 U	< 0.0197 U
URS-SB-4	URS-SB-4-26	26	09/05/2012		< 0.0382 U	< 0.0573 U	< 0.0382 U	< 0.0382 U	< 0.0382 U	< 0.0382 U	< 0.0382 U
URS-SB-4	URS-SB-4-31	31	09/05/2012		< 0.0189 U	< 0.0284 U	< 0.0189 U	< 0.0189 U	< 0.0189 U	< 0.0189 U	< 0.0189 U
URS-SB-4	URS-SB-4-41	41	09/05/2012		< 0.0191 U	< 0.0286 U	< 0.0191 U	< 0.0191 U	< 0.0191 U	< 0.0191 U	< 0.0191 U
URS-SB-5	URS-SB-5-26	26	09/05/2012		< 0.0179 U	< 0.0269 U	< 0.0179 U	< 0.0179 U	< 0.0179 U	< 0.0179 U	< 0.0179 U
URS-SB-5	URS-SB-5-41	41	09/05/2012		< 0.0289 U	< 0.0434 U	< 0.0289 U	< 0.0289 U	< 0.0289 U	< 0.0289 U	< 0.0289 U
URS-SB-5	URS-SB-5-56.5	56.5	09/05/2012		< 0.0247 U	< 0.0370 U	< 0.0247 U	< 0.0247 U	< 0.0247 U	< 0.0247 U	< 0.0247 U
URS-SB-6	URS-SB-6-21	21	09/05/2012		< 0.0276 U	< 0.0414 U	< 0.0276 U	< 0.0276 U	< 0.0276 U	< 0.0276 U	< 0.0276 U
URS-SB-6	URS-SB-6-31	31	09/05/2012		< 0.0223 U	< 0.0335 U	< 0.0223 U	< 0.0223 U	< 0.0223 U	< 0.0223 U	< 0.0223 U
URS-SB-6	URS-SB-6-46	46	09/05/2012		< 0.0286 U	< 0.0429 U	< 0.0286 U	< 0.0286 U	< 0.0286 U	< 0.0286 U	< 0.0286 U
URS-SB-7	URS-SB-7-26	26	09/06/2012		< 0.0212 U	< 0.0317 U	< 0.0212 U	< 0.0212 U	< 0.0212 U	< 0.0212 U	< 0.0212 U
URS-SB-7	URS-SB-7-31	31	09/06/2012		< 0.0217 U	< 0.0326 U	< 0.0217 U	< 0.0217 U	< 0.0217 U	< 0.0217 U	< 0.0217 U
URS-SB-7	URS-SB-7-41	41	09/06/2012		< 0.0183 U	< 0.0275 U	< 0.0183 U	< 0.0183 U	< 0.0183 U	< 0.0183 U	< 0.0183 U

Table 4. Summary of Soil Chemical Data
 Project No. 170304, Grand Street Commons Project, Seattle, Washington

Exploration Name	Sample Identification	Sample Depth (ft bgs)	Sample Date	Sample Location	Chemical Name MTCA Cleanup Level Source Cleanup Level Concentration (mg/kg)	Volatile Organic Compounds						
						Tetrachloroethene (PCE)	Trichloroethene (TCE)	cis-1,2-Dichloroethene (DCE)	trans-1,2-Dichloroethene	Methylene Chloride	Vinyl Chloride	1,1,1-Trichloroethane
						Method A	Method A	Method B	Method B	Method A	Method B	Method A
						0.05	0.03	160	1,600	0.02	0.67	2
Explorations by Others between 2012 and 2013	URS-SB-8	URS-SB-8-21	21	09/06/2012	Subject Property	< 0.0197 U	< 0.0295 U	< 0.0197 U	< 0.0197 U	< 0.0197 U	< 0.00197 U	< 0.0197 U
	URS-SB-8	URS-SB-8-31	31	09/06/2012		< 0.0283 U	< 0.0424 U	< 0.0283 U	< 0.0283 U	< 0.0283 U	< 0.00283 U	< 0.0283 U
	URS-SB-8	URS-SB-8-41.5	41.5	09/06/2012		< 0.0271 U	< 0.0406 U	< 0.0271 U	< 0.0271 U	< 0.0271 U	< 0.00271 U	< 0.0271 U
	URS-SB-9	URS-SB-9-26	26	09/06/2012		< 0.0202 U	< 0.0303 U	< 0.0202 U	< 0.0202 U	< 0.0202 U	< 0.00202 U	< 0.0202 U
	URS-SB-9	URS-SB-9-36	36	09/06/2012		< 0.0199 U	< 0.0299 U	< 0.0199 U	< 0.0199 U	< 0.0199 U	< 0.00199 U	< 0.0199 U
	URS-SB-9	URS-SB-9-41	41	09/06/2012		< 0.0164 U	< 0.0246 U	< 0.0164 U	< 0.0164 U	< 0.0164 U	< 0.00164 U	< 0.0164 U
Explorations by Others in 2012	PC-PH-SB-1	SB1-0.25-5.0	0.25-5	09/11/2012	North-adjacent SCC/Former Penthouse Drapery property	< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.0055 U	< 0.0011 U	< 0.0011 U
	PC-PH-SB-1	SB1-6.5-10.0	6.5-10	09/11/2012		< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.0057 U	< 0.0011 U	< 0.0011 U
	PC-PH-SB-1	SB1-10.0-16.0	10-16	09/11/2012		< 0.0012 U	< 0.0012 U	< 0.0012 U	< 0.0012 U	< 0.0058 U	< 0.0012 U	< 0.0012 U
	PC-PH-SB-1	SB1-25.0-30.0	25-30	09/11/2012		< 0.00093 U	< 0.00093 U	< 0.00093 U	< 0.00093 U	< 0.0047 U	< 0.00093 U	< 0.00093 U
	PC-PH-SB-1	SB1-34.0-35.0	34-35	09/11/2012		< 0.00090 U	< 0.00090 U	< 0.00090 U	< 0.00090 U	< 0.0045 U	< 0.00090 U	< 0.00090 U
	PC-PH-SB-1	SB1-40.0-45.0	40-45	09/11/2012		< 0.00088 U	< 0.00088 U	< 0.00088 U	< 0.00088 U	< 0.0044 U	< 0.00088 U	< 0.00088 U
	PC-PH-SB-1	SB1-52.5-55.0	52.5-55	09/11/2012		< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.0053 U	< 0.0011 U	< 0.0011 U
	PC-PH-SB-1	SB1-63.5-65.0	63.5-65	09/11/2012		< 0.00077 U	< 0.00077 U	< 0.00077 U	< 0.00077 U	< 0.0039 U	< 0.00077 U	< 0.00077 U
	PC-PH-SB-1	SB1-70.0-75.0	70-75	09/12/2012		< 0.00096 U	< 0.00096 U	< 0.00096 U	< 0.00096 U	< 0.0048 U	< 0.00096 U	< 0.00096 U
	PC-PH-SB-10	SB10-0-1	0-1	12/08/2012		0.089	< 0.00094 U	< 0.00094 U	< 0.00094 U	< 0.0047 U	< 0.00094 U	< 0.00094 U
	PC-PH-SB-11	SB11-2-4	2-4	12/08/2012		0.0087	< 0.00094 U	< 0.00094 U	< 0.00094 U	< 0.0047 U	< 0.00094 U	< 0.00094 U
	PC-PH-SB-11	SB11-8-10	8-10	12/08/2012		0.024	< 0.0010 U	< 0.0010 U	< 0.0010 U	< 0.0051 U	< 0.0010 U	< 0.0010 U
	PC-PH-SB-11	SB11-10-12	10-12	12/08/2012		0.025	< 0.00092 U	< 0.00092 U	< 0.00092 U	< 0.0046 U	< 0.00092 U	< 0.00092 U
	PC-PH-SB-12	SB12-2-4	2-4	12/08/2012		0.13	< 0.00094 U	< 0.00094 U	< 0.00094 U	< 0.0047 U	< 0.00094 U	< 0.00094 U

Notes
 ft bgs = feet below existing ground surface
 mg/kg = milligrams per kilogram
 -- = Not analyzed
 * = Samples were additionally analyzed for polychlorinated
 ** = Samples were additionally analyzed for Lead and cadmium
 U = Analyte not detected above the listed reporting limit
 X = Chromatographic pattern does not match quantitation standard. However, the listed values are considered detections based on field screening evidence (moderate sheen and slight odor).
 J = Listed value is an estimate.
 NE = Not Established
 MTCA = Model Toxics Control Act
Bolded value indicates analyte detected at the listed concentration.
 Blue shading indicates analyte detected at a concentration greater than the corresponding MTCA cleanup level.

Table 4. Summary of Soil Chemical Data
 Project No. 170304, Grand Street Commons Project, Seattle, Washington

Chemical Name MTCA Cleanup Level Source Cleanup Level Concentration (mg/kg)					Volatile Organic Compounds							
					1,1-Dichloroethane	1,2-Dibromoethane (EDB)	1,2-Dichloroethane (EDC)	1,3,5-Trimethylbenzene	Carbon Tetrachloride	Methyl tert-butyl ether (MTBE)	Chloromethane	
					Method B	Method A	Method B	Method B	Method B	Method A	NE	
					16,000	0.005	11	800	14	0.1	NE	NE
Exploration Name	Sample Identification	Sample Depth (ft bgs)	Sample Date	Sample Location								
Explorations by Aspect Consulting 2017	AC-MW1	AC-MW1-3.0	3	08/28/2017	Subject Property	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.5 U
	AC-MW1	AC-MW1-10.0	10	08/28/2017		< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.5 U
	AC-MW2	AC-MW2-5.0	5	08/28/2017		< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.5 U
	AC-MW2	AC-MW2-10.0	10	08/28/2017		< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.5 U
	AC-MW3	AC-MW3-5.0	5	08/29/2017		< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.5 U
	AC-MW3	AC-MW3-15.0	15	08/29/2017		< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.5 U
	AC-MW4	AC-MW4-5.0	5	08/29/2017		< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.5 U
	AC-MW4	AC-MW4-15.0	15	08/29/2017		< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.5 U
	AC-MW5	AC-MW-5-5.0	5	11/08/2017		< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.5 U
	AC-MW5	AC-MW-5-15.0	15	11/08/2017		< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.5 U
	AC-MW5	AC-MW-5-35.0	35	11/08/2017		< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.5 U
	AC-MW6	AC-MW-6-5.0	5	11/09/2017		< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.5 U
	AC-MW6	AC-MW-6-15.0	15	11/09/2017		< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.5 U
	AC-MW6	AC-MW-6-30.0	30	11/10/2017		< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.5 U
	AC-MW6	AC-MW-7-5.0	5	11/10/2017		< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.5 U
	AC-MW7	AC-MW-7-10.0	10	11/10/2017		< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.5 U
	AC-MW7	AC-MW-7-15.0	15	11/10/2017		< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.5 U
	AC-MW9	AC-MW-9-15.0	15	11/03/2017		< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.5 U
	AC-MW9	AC-MW-9-20.0	20	11/03/2017		< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.5 U
	AC-MW10	AC-MW-10-15.0	15	11/06/2017		< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.5 U
	AC-MW10	AC-MW-10-20.0	20	11/06/2017		< 0.05 U	< 0.05 U	< 0.05 U	0.14	< 0.05 U	< 0.05 U	< 0.5 U
	AC-MW10	AC-MW-10-35.0	35	11/06/2017		< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.5 U
	AC-SB-1	AC-SB-1-5.0	5	11/08/2017		< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.5 U
	AC-SB-1	AC-SB-1-10.0	10	11/08/2017		< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.5 U
	AC-SB-1	AC-SB-1-20.0	20	11/08/2017		< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.5 U
	AC-SB-2	AC-SB-2-5.0	5	11/09/2017		< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.5 U
	AC-SB-2	AC-SB-2-10.0	10	11/09/2017		< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.5 U
	AC-SB-2	AC-SB-2-20.0	20	11/09/2017		< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.5 U
	AC-SB-3	AC-SB-3-5.0	5	11/07/2017		< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.5 U
	AC-SB-3	AC-SB-3-15.0	15	11/07/2017		< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.5 U
	AC-SB-3	AC-SB-3-35.0	35	11/07/2017		< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.5 U
	AC-SB-4	AC-SB-4-5.0	5	11/06/2017		< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.5 U
	AC-SB-4	AC-SB-4-10.0	10	11/06/2017		< 0.05 U	< 0.05 U	< 0.05 U	0.079	< 0.05 U	< 0.05 U	< 0.5 U
	AC-SB-4	AC-SB-4-15.0	15	11/06/2017		< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.5 U
	AC-SB-4	AC-SB-4-30.0	30	11/06/2017		< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.5 U
	AC-SB-5	AC-SB-5-5.0	5	11/07/2017		< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.5 U
	AC-SB-5	AC-SB-5-20.0	20	11/07/2017		< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.5 U
	AC-SB-5	AC-SB-5-30.0	30	11/07/2017		< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.5 U
	AC-SB-5	AC-SB-5-35.0	35	11/07/2017		< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.5 U
	AC-SB-6	AC-SB-6-15.0	15	11/03/2017		< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.5 U
	AC-SB-6	AC-SB-6-25.0	25	11/03/2017		< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.5 U	< 0.5 U
	DP-1	DP-1-5.0	5	09/02/2017		< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	--
	DP-1	DP-1-15.0	15	09/05/2017		< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	--
	DP-2	DP-2-5.0*	5	09/05/2017		< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	--
	DP-2	DP-2-10.0	10	09/05/2017		< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	--
DP-3	DP-3-5.0	5	09/05/2017	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	--		
DP-3	DP-3-15.0	15	09/05/2017	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	--		
DP-4	DP-4-5.0	5	09/05/2017	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	--		
DP-4	DP-4-10.0	10	09/05/2017	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	--		
DP-5	DP-5-5.0	5	09/05/2017	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	--		
DP-5	DP-5-10.0	10	09/05/2017	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.5 U		
DP-6	DP-6-5.0	5	09/05/2017	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.5 U		
DP-7	DP-7-5.0**	5	09/05/2017	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.5 U		
DP-7	DP-7-10.0	10	09/05/2017	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.5 U		
DP-8	DP-8-5.0	5	09/05/2017	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.5 U		
DP-8	DP-8-10.0	10	09/05/2017	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.5 U		
DP-9	DP-9-3.0	3	09/05/2017	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.5 U		
DP-9	DP-9-10.0	10	09/05/2017	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.5 U		

Table 4. Summary of Soil Chemical Data
 Project No. 170304, Grand Street Commons Project, Seattle, Washington

Exploration Name	Sample Identification	Sample Depth (ft bgs)	Sample Date	Sample Location	Volatile Organic Compounds								
					Chemical Name	1,1-Dichloroethane	1,2-Dibromoethane (EDB)	1,2-Dichloroethane (EDC)	1,3,5-Trimethylbenzene	Carbon Tetrachloride	Methyl tert-butyl ether (MTBE)	Chloromethane	
					MTCA Cleanup Level Source	Method B	Method A	Method B	Method B	Method B	Method A	NE	
					Cleanup Level Concentration (mg/kg)	16,000	0.005	11	800	14	0.1	NE	
Explorations by Aspect Consulting 2017	DP-10	DP-10-5.0	5	09/05/2017		< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.5 U
	DP-11	DP-11-5.0	5	09/05/2017		< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.5 U
	DP-11	DP-11-10.0	10	09/05/2017		< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.5 U
	DP-12	DP-12-5.0	5	09/05/2017		< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.5 U
	DP-12	DP-12-7.5	7.5	09/05/2017		< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.5 U
	DP-13	DP-13-5.0	5	09/05/2017		< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.5 U
	DP-13	DP-13-10.0	10	09/05/2017		< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.5 U
	DP-14	DP-14-3.0	3	09/06/2017		< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.5 U
	DP-14	DP-14-10.0	10	09/06/2017		< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.5 U
	DP-15	DP-15-3.0	3	09/06/2017		< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.5 U
	DP-15	DP-15-15.0	15	09/06/2017		< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.5 U
	DP-16	DP-16-3.0	3	09/06/2017		< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.5 U
	DP-16	DP-16-10.0	10	09/06/2017		< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.5 U
	DP-17	DP-17-3.0	3	09/06/2017		< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.5 U
	DP-17	DP-17-10.0	10	09/06/2017		< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.5 U
	DP-18	DP-18-3.0	3	09/06/2017		< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.5 U
	DP-18	DP-18-7.0	7	09/06/2017		< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.5 U
	DP-19	DP-19-2.0	2	09/06/2017		< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.5 U
	DP-20	DP-20-3.0	3	09/06/2017		< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.5 U
	DP-21	DP-21-2.0	2	09/06/2017		< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.5 U
	DP-22	DP-22-3.0	3	09/06/2017		< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.5 U
	Explorations by Others between 2002 and 2013	AW-SB-1	SB-1-2.5	2.5	02/18/2002		--	--	--	--	--	--	--
AW-SB-2		SB-2-2.5	2.5	02/18/2002		--	--	--	--	--	--	--	< 0.5 U
AW-SB-3		SB-3-2.5	2.5	02/18/2002		--	--	--	--	--	--	--	< 0.5 U
AW-SB-4		SB-4-7	7	02/18/2002		--	--	--	--	--	--	--	< 0.5 U
AW-SB-4		SB-4-12	12	02/18/2002		--	--	--	--	--	--	--	< 0.5 U
AW-SB-5		SB-5-12	12	02/18/2002		--	--	--	--	--	--	--	< 0.5 U
AW-SB-6		SB-6-12	12	02/18/2002		--	--	--	--	--	--	--	< 0.5 U
AW-SB-6		SB-6-27	27	02/18/2002		--	--	--	--	--	--	--	< 0.5 U
AW-SB-7		SB-7-2.5	2.5	02/19/2012		< 0.0127 U	--	--	--	--	--	--	< 0.5 U
AW-SB-8		SB-8-7	7	02/19/2012		--	--	--	--	--	--	--	< 0.5 U
PC-PH-SB-6		SB6-2.5-5.0	2.5-5	09/05/2016		< 0.0010 U	< 0.0010 U	< 0.0010 U	--	< 0.0010 U	--	--	< 0.0050 U
PC-PH-SB-6		SB6-7.5-10.0	7.5-10	09/05/2016		< 0.00096 U	< 0.00096 U	< 0.00096 U	--	< 0.00096 U	--	--	< 0.0048 U
PC-PH-SB-6		SB6-12.5-15.0	12.5-15	09/05/2016		< 0.00096 U	< 0.00096 U	< 0.00096 U	--	< 0.00096 U	--	--	< 0.0048 U
PC-PH-SB-6		SB6-22.5-25.0	22.5-25	9/5/2012		< 0.00093 U	< 0.00093 U	< 0.00093 U	--	< 0.00093 U	< 0.0046 U	--	--
PC-PH-SB-6		SB6-33.0-36.0	33-36	09/05/2012		< 0.00097 U	< 0.00097 U	< 0.00097 U	--	< 0.00097 U	< 0.0049 U	--	--
PC-PH-SB-6		SB6-46.0-47.0	46-47	09/05/2012		< 0.0010 U	< 0.0010 U	< 0.0010 U	--	< 0.0010 U	< 0.0051 U	--	--
PC-PH-SB-6		SB6-51.0-55.0	51-55	09/05/2012		< 0.00091 U	< 0.00091 U	< 0.00091 U	--	< 0.00091 U	< 0.0045 U	--	--
PC-PH-SB-6		SB6-62.5-65.0	62.5-65	09/06/2012		< 0.0011 U	< 0.0011 U	< 0.0011 U	--	< 0.0011 U	< 0.0055 U	--	--
PC-PH-SB-6		SB6-75.0-78.0	75-78	09/06/2012		< 0.0011 U	< 0.0011 U	< 0.0011 U	--	< 0.0011 U	< 0.0053 U	--	--
PC-PH-SB-7		SB7-2.0-4.0	4-Feb	09/04/2012		< 0.00090 U	< 0.00090 U	< 0.00090 U	--	< 0.00090 U	--	--	< 0.0045 U
PC-PH-SB-7		SB7-7.5-9.5	7.5-9.5	09/04/2012		< 0.0011 U	< 0.0011 U	< 0.0011 U	--	< 0.0011 U	--	--	< 0.0053 U
PC-PH-SB-7		SB7-13.0-17.0	13-17	09/04/2012		< 0.00096 U	< 0.00096 U	< 0.00096 U	--	< 0.00096 U	--	--	< 0.0048 U
PC-PH-SB-7		SB7-25.0-26.5	25-26.5	09/04/2012		< 0.0010 U	< 0.0010 U	< 0.0010 U	--	< 0.0010 U	< 0.0050 U	--	--
PC-PH-SB-7		SB7-34.0-35.0	34-35	09/04/2012		< 0.00094 U	< 0.00094 U	< 0.00094 U	--	< 0.00094 U	< 0.0047 U	--	--
PC-PH-SB-7		SB7-42.0-45.0	42-45	09/04/2012		< 0.0012 U	< 0.0012 U	< 0.0012 U	--	< 0.0012 U	< 0.0062 U	--	--
PC-PH-SB-7		SB7-52.5-55.0	52.5-55	09/04/2012		< 0.0012 U	< 0.0012 U	< 0.0012 U	--	< 0.0012 U	< 0.0058 U	--	--
PC-PH-SB-7		SB7-62.5-65.0	62.5-65	09/04/2012		< 0.0011 U	< 0.0011 U	< 0.0011 U	--	< 0.0011 U	< 0.0053 U	--	--
PC-PH-SB-7		SB7-75.0-77.5	75-77.5	9/5/2012		< 0.0011 U	< 0.0011 U	< 0.0011 U	--	< 0.0011 U	< 0.0057 U	--	--
PC-PH-SB-8		SB8-0.5-6.0	0.5-6	09/10/2012		< 0.0011 U	< 0.0011 U	< 0.0011 U	--	< 0.0011 U	--	--	< 0.0054 U
PC-PH-SB-8		SB8-6.0-10.0	6-10	09/10/2012		< 0.0013 U	< 0.0013 U	< 0.0013 U	--	< 0.0013 U	--	--	< 0.0065 U
PC-PH-SB-8		SB8-10.0-16.5	10-16.5	09/10/2012		< 0.0013 U	< 0.0013 U	< 0.0013 U	--	< 0.0013 U	--	--	< 0.0065 U
PC-PH-SB-8		SB8-20.0-26.0	20-26	09/10/2012		< 0.0010 U	< 0.0010 U	< 0.0010 U	--	< 0.0010 U	--	--	< 0.0050 U
PC-PH-SB-8	SB8-33.0-35.0	33-35	09/10/2012		< 0.00088 U	< 0.00088 U	< 0.00088 U	--	< 0.00088 U	< 0.0044 U	--	--	
PC-PH-SB-8	SB8-40.0-46.0	40-46	09/10/2012		< 0.0011 U	< 0.0011 U	< 0.0011 U	--	< 0.0011 U	< 0.0055 U	--	--	
PC-PH-SB-8	SB8-50.0-55.0	50-55	09/10/2012		< 0.00082 U	< 0.00082 U	< 0.00082 U	--	< 0.00082 U	< 0.0041 U	--	--	
PC-PH-SB-8	SB8-64.0-66.0	64-66	09/10/2012		< 0.00084 U	< 0.00084 U	< 0.00084 U	--	< 0.00084 U	< 0.0042 U	--	--	

Table 4. Summary of Soil Chemical Data
 Project No. 170304, Grand Street Commons Project, Seattle, Washington

Chemical Name MTCA Cleanup Level Source Cleanup Level Concentration (mg/kg)					Volatile Organic Compounds						
					1,1-Dichloroethane	1,2-Dibromoethane (EDB)	1,2-Dichloroethane (EDC)	1,3,5-Trimethylbenzene	Carbon Tetrachloride	Methyl tert-butyl ether (MTBE)	Chloromethane
					Method B	Method A	Method B	Method B	Method B	Method A	NE
Exploration Name	Sample Identification	Sample Depth (ft bgs)	Sample Date	Sample Location	16,000	0.005	11	800	14	0.1	NE
PC-PH-SB-8	SB8-74.0-80.0	74-80	09/10/2012		< 0.00093 U	< 0.00093 U	< 0.00093 U	--	< 0.00093 U	< 0.0046 U	--
PC-PH-SB-9	SB9-63.5-70.0	63.5-70	09/07/2012		< 0.00087 U	< 0.00087 U	< 0.00087 U	--	< 0.00087 U	< 0.0043 U	--
PC-PH-SB-9	SB9-70.0-78.5	70-78.5	09/07/2012		< 0.0011 U	< 0.0011 U	< 0.0011 U	--	< 0.0011 U	< 0.0055 U	--
PC-PH-SB-9	SB9-85.0-87.5	85-87.5	09/07/2012		< 0.0013 U	< 0.0013 U	< 0.0013 U	--	< 0.0013 U	< 0.0064 U	--
PC-PH-SB-9	SB9-95.0-97.5	95-97.5	09/07/2012		< 0.0012 U	< 0.0012 U	< 0.0012 U	--	< 0.0012 U	< 0.0058 U	--
PC-PH-SB-13	SB13-34-36	34-36	01/04/2013		< 0.0010 U	< 0.0010 U	< 0.0010 U	--	< 0.0010 U	< 0.0068 U	--
PC-PH-SB-13	SB13-44-46	44-46	01/04/2013		< 0.00092 U	< 0.00092 U	< 0.00092 U	--	< 0.00092 U	< 0.0061 U	--
PC-PH-SB-13	SB13-54-56	54-56	01/04/2013		< 0.0012 U	< 0.0012 U	< 0.0012 U	--	< 0.0012 U	< 0.0079 U	--
PC-PH-SB-13	SB13-64-66	64-66	01/07/2013		< 0.00099 U	< 0.00099 U	< 0.00099 U	--	< 0.00099 U	< 0.0049 U	--
PC-PH-SB-13	SB13-74-76	74-76	01/07/2013		< 0.0010 U	< 0.0010 U	< 0.0010 U	--	< 0.0010 U	< 0.0051 U	--
PC-PH-SB-13	SB13-86-88	86-88	01/07/2013		< 0.00092 U	< 0.00092 U	< 0.00092 U	--	< 0.00092 U	< 0.0046 U	--
PC-PH-SB-13	SB13-94-96	94-96	01/07/2013		< 0.0011 U	< 0.0011 U	< 0.0011 U	--	< 0.0011 U	< 0.0056 U	--
PC-PH-SB-13	SB13-104-106	104-106	01/07/2013		< 0.0012 U	< 0.0012 U	< 0.0012 U	--	< 0.0012 U	< 0.0058 U	--
PC-PH-SB-14	SB14-34-36	34-36	12/26/2012		< 0.00083 U	< 0.00083 U	< 0.00083 U	--	< 0.00083 U	< 0.0042 U	--
PC-PH-SB-14	SB14-44-46	44-46	12/26/2012		< 0.0010 U	< 0.0010 U	< 0.0010 U	--	< 0.0010 U	< 0.0051 U	--
PC-PH-SB-14	SB14-54-56	54-56	12/27/2012		< 0.0011 U	< 0.0011 U	< 0.0011 U	--	< 0.0011 U	< 0.0056 U	--
PC-PH-SB-14	SB14-64-66	64-66	12/27/2012		< 0.00093 U	< 0.00093 U	< 0.00093 U	--	< 0.00093 U	< 0.0047 U	--
PC-PH-SB-14	SB14-74-76	74-76	12/27/2012		< 0.0011 U	< 0.0011 U	< 0.0011 U	--	< 0.0011 U	< 0.0053 U	--
PC-PH-SB-14	SB14-84-86	84-86	12/28/2012		< 0.0011 U	< 0.0011 U	< 0.0011 U	--	< 0.0011 U	< 0.0055 U	--
PC-PH-SB-14	SB14-94-96	94-96	12/28/2012		< 0.0012 U	< 0.0012 U	0.0026	--	< 0.0012 U	< 0.0058 U	--
PC-PH-SB-14	SB14-104-106	104-106	12/28/2012		< 0.0011 U	< 0.0011 U	< 0.0011 U	--	< 0.0011 U	< 0.0056 U	--
PC-PH-SB-15	SB15-64-66	64-66	01/02/2013		< 0.0011 U	< 0.0011 U	< 0.0011 U	--	< 0.0011 U	< 0.0057 U	--
PC-PH-SB-15	SB15-74-76	74-76	01/02/2013		< 0.0013 U	< 0.0013 U	< 0.0013 U	--	< 0.0013 U	< 0.0066 U	--
PC-PH-SB-15	SB15-84-86	84-86	01/02/2013		< 0.0011 U	< 0.0011 U	< 0.0011 U	--	< 0.0011 U	< 0.0054 U	--
PC-PH-SB-15	SB15-94-96	94-96	01/03/2013		< 0.0011 U	< 0.0011 U	< 0.0011 U	--	< 0.0011 U	< 0.0054 U	--
PC-PH-SB-15	SB15-104-106	104-106	01/03/2013		< 0.0012 U	< 0.0012 U	< 0.0012 U	--	< 0.0012 U	< 0.0059 U	--
URS-B-5	B2F0080-03	5.5-8	05/30/2002		--	--	--	--	--	--	--
URS-B-9	B2F0080-24	4-8	05/30/2002		--	--	--	--	--	--	--
URS-B-11	B-11-20	20	02/20/2003		--	--	--	--	--	--	--
URS-B-12	B-12-25	25	02/20/2003		< 0.1 U	< 0.1 U	< 0.1 U	12.6	< 0.1 U	< 0.5 U	--
URS-B-13	B-13-5	5	02/21/2003		--	--	--	--	--	--	--
URS-MW-5	B2F0409-02	10	06/13/2002		< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	--	< 0.5 U
URS-MW-6	B2F0409-08	10	06/13/2002		< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	--	< 0.5 U
URS-MW-8	MW-8-2.5	2.5	02/20/2003		< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	--	< 0.5 U
URS-MW-10	MW-10-7.5	7.5	02/20/2003		--	--	--	--	--	--	--
URS-MW-11	MW-11-4	4	02/21/2003		< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	--	< 0.5 U
URS-MW-13	MW-13-25	25	02/21/2003		< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.5 U	--
URS-SB-1	URS-SB-1-26	23	09/04/2012		< 0.0160 U	< 0.00399 U	< 0.0240 U	8.42	< 0.0160 U	0.0503 J	< 0.0399 U
URS-SB-1	URS-SB-1-31	31	09/04/2012		< 0.0127 U	< 0.00317 U	< 0.0190 U	0.242	< 0.0127 U	0.0506 J	< 0.0317 U
URS-SB-1	URS-SB-1-41	41	09/04/2012		< 0.0124 U	< 0.00309 U	< 0.0186 U	0.112	< 0.0124 U	< 0.0371 U	< 0.0309 U
URS-SB-2	URS-SB-2-25.5	25.5	09/04/2012		< 0.0203 U	< 0.00507 U	< 0.0304 U	< 0.0203 U	< 0.0203 U	< 0.0609 U	< 0.0507 U
URS-SB-2	URS-SB-2-36	36	09/04/2012		< 0.0168 U	< 0.00421 U	< 0.0253 U	< 0.0168 U	< 0.0168 U	< 0.0505 U	< 0.0421 U
URS-SB-2	URS-SB-2-46	46	09/04/2012		< 0.0206 U	< 0.00516 U	< 0.0310 U	< 0.0206 U	< 0.0206 U	< 0.0619 U	< 0.0516 U
URS-SB-3	URS-SB-3-20.5	20.5	09/04/2012		< 0.0155 U	< 0.00389 U	< 0.0233 U	0.0509	< 0.0155 U	< 0.0466 U	< 0.0389 U
URS-SB-3	URS-SB-3-31	31	09/04/2012		< 0.0161 U	< 0.00403 U	< 0.0242 U	0.0834	< 0.0161 U	< 0.0483 U	< 0.0403 U
URS-SB-3	URS-SB-3-36	36	09/04/2012		< 0.0197 U	< 0.00492 U	< 0.0295 U	< 0.0197 U	< 0.0197 U	< 0.0590 U	< 0.0492 U
URS-SB-4	URS-SB-4-26	26	09/05/2012		< 0.0382 U	< 0.00956 U	< 0.0573 U	0.156	< 0.0382 U	< 0.115 U	< 0.0956 U
URS-SB-4	URS-SB-4-31	31	09/05/2012		< 0.0189 U	< 0.00473 U	< 0.0284 U	0.0416	< 0.0189 U	< 0.0567 U	< 0.0473 U
URS-SB-4	URS-SB-4-41	41	09/05/2012		< 0.0191 U	< 0.00476 U	< 0.0286 U	< 0.0191 U	< 0.0191 U	< 0.0572 U	< 0.0476 U
URS-SB-5	URS-SB-5-26	26	09/05/2012		< 0.0179 U	< 0.00449 U	< 0.0269 U	< 0.0179 U	< 0.0179 U	< 0.0538 U	< 0.0449 U
URS-SB-5	URS-SB-5-41	41	09/05/2012		< 0.0289 U	< 0.00723 U	< 0.0434 U	< 0.0289 U	< 0.0289 U	< 0.0868 U	< 0.0723 U
URS-SB-5	URS-SB-5-56.5	56.5	09/05/2012		< 0.0247 U	< 0.00617 U	< 0.0370 U	< 0.0247 U	< 0.0247 U	< 0.0740 U	< 0.0617 U
URS-SB-6	URS-SB-6-21	21	09/05/2012		< 0.0276 U	< 0.00689 U	< 0.0414 U	< 0.0276 U	< 0.0276 U	< 0.0827 U	< 0.0689 U
URS-SB-6	URS-SB-6-31	31	09/05/2012		< 0.0223 U	< 0.00558 U	< 0.0335 U	< 0.0223 U	< 0.0223 U	< 0.0670 U	< 0.0558 U
URS-SB-6	URS-SB-6-46	46	09/05/2012		< 0.0286 U	< 0.00716 U	< 0.0429 U	< 0.0286 U	< 0.0286 U	< 0.0859 U	< 0.0716 U
URS-SB-7	URS-SB-7-26	26	09/06/2012		< 0.0212 U	< 0.00529 U	< 0.0317 U	< 0.0212 U	< 0.0212 U	< 0.0635 U	< 0.0529 U
URS-SB-7	URS-SB-7-31	31	09/06/2012		< 0.0217 U	< 0.00544 U	< 0.0326 U	< 0.0217 U	< 0.0217 U	< 0.0652 U	< 0.0544 U
URS-SB-7	URS-SB-7-41	41	09/06/2012		< 0.0183 U	< 0.00458 U	< 0.0275 U	< 0.0183 U	< 0.0183 U	< 0.0550 U	< 0.0458 U

Table 4. Summary of Soil Chemical Data

Project No. 170304, Grand Street Commons Project, Seattle, Washington

	Exploration Name	Sample Identification	Sample Depth (ft bgs)	Sample Date	Sample Location	Volatile Organic Compounds							
						Chemical Name	1,1-Dichloroethane	1,2-Dibromoethane (EDB)	1,2-Dichloroethane (EDC)	1,3,5-Trimethylbenzene	Carbon Tetrachloride	Methyl tert-butyl ether (MTBE)	Chloromethane
						MTCA Cleanup Level Source	Method B	Method A	Method B	Method B	Method B	Method A	NE
						16,000	0.005	11	800	14	0.1	NE	
Explorations by Others between 2012 and 2013	URS-SB-8	URS-SB-8-21	21	09/06/2012	Subject Property	< 0.0197 U	< 0.00491 U	< 0.0295 U	< 0.0197 U	< 0.0197 U	< 0.0590 U	< 0.0491 U	
	URS-SB-8	URS-SB-8-31	31	09/06/2012	Subject Property	< 0.0283 U	< 0.00707 U	< 0.0424 U	< 0.0283 U	< 0.0283 U	< 0.0848 U	< 0.0707 U	
	URS-SB-8	URS-SB-8-41.5	41.5	09/06/2012	Subject Property	< 0.0271 U	< 0.00677 U	< 0.0406 U	< 0.0271 U	< 0.0271 U	< 0.0812 U	< 0.0677 U	
	URS-SB-9	URS-SB-9-26	26	09/06/2012	Subject Property	< 0.0202 U	< 0.00504 U	< 0.0303 U	< 0.0202 U	< 0.0202 U	< 0.0605 U	< 0.0504 U	
	URS-SB-9	URS-SB-9-36	36	09/06/2012	Subject Property	< 0.0199 U	< 0.00498 U	< 0.0299 U	< 0.0199 U	< 0.0199 U	< 0.0598 U	< 0.0498 U	
	URS-SB-9	URS-SB-9-41	41	09/06/2012	Subject Property	< 0.0164 U	< 0.00410 U	< 0.0246 U	< 0.0164 U	< 0.0164 U	< 0.0492 U	< 0.0410 U	
Explorations by Others in 2012	PC-PH-SB-1	SB1-0.25-5.0	0.25-5	09/11/2012	North-adjacent SCC/Former Penthouse Drapery property	< 0.0011 U	< 0.0011 U	< 0.0011 U	--	< 0.0011 U	--	< 0.0055 U	
	PC-PH-SB-1	SB1-6.5-10.0	6.5-10	09/11/2012		< 0.0011 U	< 0.0011 U	< 0.0011 U	--	< 0.0011 U	--	< 0.0057 U	
	PC-PH-SB-1	SB1-10.0-16.0	10-16	09/11/2012		< 0.0012 U	< 0.0012 U	< 0.0012 U	--	< 0.0012 U	--	< 0.0058 U	
	PC-PH-SB-1	SB1-25.0-30.0	25-30	09/11/2012		< 0.00093 U	< 0.00093 U	< 0.00093 U	--	< 0.00093 U	< 0.0047 U	--	
	PC-PH-SB-1	SB1-34.0-35.0	34-35	09/11/2012		< 0.00090 U	< 0.00090 U	< 0.00090 U	--	< 0.00090 U	< 0.0045 U	--	
	PC-PH-SB-1	SB1-40.0-45.0	40-45	09/11/2012		< 0.00088 U	< 0.00088 U	< 0.00088 U	--	< 0.00088 U	< 0.0044 U	--	
	PC-PH-SB-1	SB1-52.5-55.0	52.5-55	09/11/2012		< 0.0011 U	< 0.0011 U	< 0.0011 U	--	< 0.0011 U	< 0.0053 U	--	
	PC-PH-SB-1	SB1-63.5-65.0	63.5-65	09/11/2012		< 0.00077 U	< 0.00077 U	< 0.00077 U	--	< 0.00077 U	< 0.0039 U	--	
	PC-PH-SB-1	SB1-70.0-75.0	70-75	09/12/2012		< 0.00096 U	< 0.00096 U	< 0.00096 U	--	< 0.00096 U	< 0.0048 U	--	
	PC-PH-SB-10	SB10-0-1	0-1	12/08/2012		< 0.00094 U	< 0.00094 U	< 0.00094 U	--	< 0.00094 U	--	< 0.0047 U	
	PC-PH-SB-11	SB11-2-4	2-4	12/08/2012		< 0.00094 U	< 0.00094 U	< 0.00094 U	--	< 0.00094 U	--	< 0.0047 U	
	PC-PH-SB-11	SB11-8-10	8-10	12/08/2012		< 0.0010 U	< 0.0010 U	< 0.0010 U	--	< 0.0010 U	--	< 0.0051 U	
	PC-PH-SB-11	SB11-10-12	10-12	12/08/2012		< 0.00092 U	< 0.00092 U	< 0.00092 U	--	< 0.00092 U	--	< 0.0046 U	
PC-PH-SB-12	SB12-2-4	2-4	12/08/2012	< 0.00094 U	< 0.00094 U	< 0.00094 U	--	< 0.00094 U	--	< 0.0047 U			

Notes

ft bgs = feet below existing ground surface

mg/kg = milligrams per kilogram

-- = Not analyzed

* = Samples were additionally analyzed for polychlorinated

** = Samples were additionally analyzed for Lead and cadmium

U = Analyte not detected above the listed reporting limit

X = Chromatographic pattern does not match quantitation standard. However, the listed values are considered detections based on field screening evidence (moderate sheen and slight odor).

J = Listed value is an estimate.

NE = Not Established

MTCA = Model Toxics Control Act

Bolded value indicates analyte detected at the listed concentration.

Blue shading indicates analyte detected at a concentration greater than the corresponding MTCA cleanup level.

Table 4. Summary of Soil Chemical Data

Project No. 170304, Grand Street Commons Project, Seattle, Washington

Exploration Name	Sample Identification	Sample Depth (ft bgs)	Sample Date	Sample Location	Volatile Organic Compounds					Semivolatile Organic Compounds		Metals			
					Chemical Name	p-Isopropyltoluene	n-Propylbenzene	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	1,4-Dioxane	Hexachlorobutadiene	Arsenic	Barium	Cadmium
					MTCA Cleanup Level Source	NE	Method B	NE	NE	NE	Method B	Method B	Method A	Method B	Method A
					Cleanup Level Concentration (mg/kg)	NE	8,000	NE	NE	NE	10	13	20	16,000	2
AC-MW1	AC-MW1-3.0	3	08/28/2017		< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	< 0.05 U	< 0.25 U	--	--	--	
AC-MW1	AC-MW1-10.0	10	08/28/2017		< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	< 0.05 U	< 0.25 U	--	--	--	
AC-MW2	AC-MW2-5.0	5	08/28/2017		< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	< 0.05 U	< 0.25 U	--	--	--	
AC-MW2	AC-MW2-10.0	10	08/28/2017		< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	< 0.05 U	< 0.25 U	--	--	--	
AC-MW3	AC-MW3-5.0	5	08/29/2017		< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	< 0.1 U	< 0.25 U	2.21	38	< 1 U	
AC-MW3	AC-MW3-15.0	15	08/29/2017		< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	< 0.1 U	< 0.25 U	--	--	--	
AC-MW4	AC-MW4-5.0	5	08/29/2017		< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	< 0.1 U	< 0.25 U	2.36	44.9	< 1 U	
AC-MW4	AC-MW4-15.0	15	08/29/2017		< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	< 0.1 U	< 0.25 U	--	--	--	
AC-MW5	AC-MW-5-5.0	5	11/08/2017		< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	< 0.1 U	< 0.25 U	--	--	--	
AC-MW5	AC-MW-5-15.0	15	11/08/2017		< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	< 0.1 U	< 0.25 U	--	--	--	
AC-MW5	AC-MW-5-35.0	35	11/08/2017		< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	< 0.1 U	< 0.25 U	--	--	--	
AC-MW6	AC-MW-6-5.0	5	11/09/2017		< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	< 0.1 U	< 0.25 U	--	--	--	
AC-MW6	AC-MW-6-15.0	15	11/09/2017		< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	< 0.1 U	< 0.25 U	--	--	--	
AC-MW6	AC-MW-6-30.0	30	11/10/2017		< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	< 0.1 U	< 0.25 U	--	--	--	
AC-MW7	AC-MW-7-5.0	5	11/10/2017		< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	< 0.1 U	< 0.25 U	--	--	--	
AC-MW7	AC-MW-7-10.0	10	11/10/2017		< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	< 0.1 U	< 0.25 U	--	--	--	
AC-MW7	AC-MW-7-15.0	15	11/10/2017		< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	< 0.1 U	< 0.25 U	--	--	--	
AC-MW9	AC-MW-9-15.0	15	11/03/2017		< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	< 0.1 U	< 0.25 U	--	--	--	
AC-MW9	AC-MW-9-20.0	20	11/03/2017		< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	< 0.1 U	< 0.25 U	--	--	--	
AC-MW10	AC-MW-10-15.0	15	11/06/2017		< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	< 0.1 U	< 0.25 U	--	--	--	
AC-MW10	AC-MW-10-20.0	20	11/06/2017		< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	< 0.1 U	< 0.25 U	--	--	--	
AC-MW10	AC-MW-10-35.0	35	11/06/2017		< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	< 0.1 U	< 0.25 U	--	--	--	
AC-SB-1	AC-SB-1-5.0	5	11/08/2017		< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	< 0.1 U	< 0.25 U	--	--	--	
AC-SB-1	AC-SB-1-10.0	10	11/08/2017		< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	< 0.1 U	< 0.25 U	--	--	--	
AC-SB-1	AC-SB-1-20.0	20	11/08/2017		< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	< 0.1 U	< 0.25 U	--	--	--	
AC-SB-2	AC-SB-2-5.0	5	11/09/2017		< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	< 0.1 U	< 0.25 U	--	--	--	
AC-SB-2	AC-SB-2-10.0	10	11/09/2017		< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	< 0.1 U	< 0.25 U	--	--	--	
AC-SB-2	AC-SB-2-20.0	20	11/09/2017		< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	< 0.1 U	< 0.25 U	--	--	--	
AC-SB-3	AC-SB-3-5.0	5	11/07/2017		< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	< 0.1 U	< 0.25 U	--	--	--	
AC-SB-3	AC-SB-3-15.0	15	11/07/2017		< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	< 0.1 U	< 0.25 U	--	--	--	
AC-SB-3	AC-SB-3-35.0	35	11/07/2017		< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	< 0.1 U	< 0.25 U	--	--	--	
AC-SB-4	AC-SB-4-5.0	5	11/06/2017		< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	< 0.1 U	< 0.25 U	--	--	--	
AC-SB-4	AC-SB-4-10.0	10	11/06/2017		0.065	< 0.05 U	--	< 0.05 U	< 0.05 U	< 0.1 U	< 0.25 U	--	--	--	
AC-SB-4	AC-SB-4-15.0	15	11/06/2017		< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	< 0.1 U	< 0.25 U	--	--	--	
AC-SB-4	AC-SB-4-30.0	30	11/06/2017		< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	< 0.1 U	< 0.25 U	--	--	--	
AC-SB-5	AC-SB-5-5.0	5	11/07/2017		< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	< 0.1 U	< 0.25 U	--	--	--	
AC-SB-5	AC-SB-5-20.0	20	11/07/2017		< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	< 0.1 U	< 0.25 U	--	--	--	
AC-SB-5	AC-SB-5-30.0	30	11/07/2017		< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	< 0.1 U	< 0.25 U	--	--	--	
AC-SB-5	AC-SB-5-35.0	35	11/07/2017		< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	< 0.1 U	< 0.25 U	--	--	--	
AC-SB-6	AC-SB-6-15.0	15	11/03/2017		< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	< 0.1 U	< 0.25 U	--	--	--	
AC-SB-6	AC-SB-6-25.0	25	11/03/2017		< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	< 0.1 U	< 0.25 U	--	--	--	
DP-1	DP-1-5.0	5	09/02/2017		--	< 0.05 U	--	--	--	< 0.1 U	< 0.25 U	5.84	78.8	< 1 U	
DP-1	DP-1-15.0	15	09/05/2017		--	< 0.05 U	--	--	--	< 0.1 U	< 0.25 U	--	--	--	
DP-2	DP-2-5.0*	5	09/05/2017		--	< 0.05 U	--	--	--	< 0.1 U	< 0.25 U	2.69	68.6	< 1 U	
DP-2	DP-2-10.0	10	09/05/2017		--	< 0.05 U	--	--	--	< 0.1 U	< 0.25 U	--	--	--	
DP-3	DP-3-5.0	5	09/05/2017		--	< 0.05 U	--	--	--	< 0.1 U	< 0.25 U	--	--	--	
DP-3	DP-3-15.0	15	09/05/2017		--	< 0.05 U	--	--	--	< 0.1 U	< 0.25 U	--	--	--	
DP-4	DP-4-5.0	5	09/05/2017		--	< 0.05 U	--	--	--	< 0.1 U	< 0.25 U	--	--	--	
DP-4	DP-4-10.0	10	09/05/2017		--	< 0.05 U	--	--	--	< 0.1 U	< 0.25 U	--	--	--	
DP-5	DP-5-5.0	5	09/05/2017		--	< 0.05 U	--	--	--	< 0.1 U	< 0.25 U	--	--	--	
DP-5	DP-5-10.0	10	09/05/2017		< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	< 0.1 U	< 0.25 U	--	--	--	
DP-6	DP-6-5.0	5	09/05/2017		< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	< 0.1 U	< 0.25 U	--	--	--	
DP-7	DP-7-5.0**	5	09/05/2017		< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	< 0.1 U	< 0.25 U	7.17	165	16.9	
DP-7	DP-7-10.0	10	09/05/2017		< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	< 0.1 U	< 0.25 U	--	--	< 1 U	
DP-8	DP-8-5.0	5	09/05/2017		< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	< 0.1 U	< 0.25 U	--	--	--	
DP-8	DP-8-10.0	10	09/05/2017		< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	< 0.1 U	< 0.25 U	--	--	--	
DP-9	DP-9-3.0	3	09/05/2017		< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	< 0.1 U	< 0.25 U	--	--	--	
DP-9	DP-9-10.0	10	09/05/2017		< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	< 0.1 U	< 0.25 U	--	--	--	

Table 4. Summary of Soil Chemical Data
 Project No. 170304, Grand Street Commons Project, Seattle, Washington

Exploration Name	Sample Identification	Sample Depth (ft bgs)	Sample Date	Sample Location	Chemical Name	Volatile Organic Compounds					Semivolatile Organic Compounds		Metals			
						p-Isopropyltoluene	n-Propylbenzene	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	1,4-Dioxane	Hexachlorobutadiene	Arsenic	Barium	Cadmium	
						NE	Method B	NE	NE	NE	Method B	Method B	Method A	Method B	Method A	
						NE	8,000	NE	NE	NE	10	13	20	16,000	2	
Explorations by Aspect Consulting 2017	DP-10	DP-10-5.0	5	09/05/2017		< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	< 0.1 U	< 0.25 U	1.95	30	< 1 U	
	DP-11	DP-11-5.0	5	09/05/2017		< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	< 0.1 U	< 0.25 U	7.5	104	< 1 U	
	DP-11	DP-11-10.0	10	09/05/2017		< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	< 0.1 U	< 0.25 U	--	--	--	
	DP-12	DP-12-5.0	5	09/05/2017		< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	< 0.1 U	< 0.25 U	--	--	--	
	DP-12	DP-12-7.5	7.5	09/05/2017		< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	< 0.1 U	< 0.25 U	--	--	--	
	DP-13	DP-13-5.0	5	09/05/2017		< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	< 0.1 U	< 0.25 U	--	--	--	
	DP-13	DP-13-10.0	10	09/05/2017		< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	< 0.1 U	< 0.25 U	--	--	--	
	DP-14	DP-14-3.0	3	09/06/2017		< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	< 0.1 U	< 0.25 U	--	--	--	
	DP-14	DP-14-10.0	10	09/06/2017		< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	< 0.1 U	< 0.25 U	--	--	--	
	DP-15	DP-15-3.0	3	09/06/2017		< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	< 0.1 U	< 0.25 U	--	--	--	
	DP-15	DP-15-15.0	15	09/06/2017		< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	< 0.1 U	< 0.25 U	--	--	--	
	DP-16	DP-16-3.0	3	09/06/2017		< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	< 0.1 U	< 0.25 U	--	--	--	
	DP-16	DP-16-10.0	10	09/06/2017		< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	< 0.1 U	< 0.25 U	--	--	--	
	DP-17	DP-17-3.0	3	09/06/2017		< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	< 0.1 U	< 0.25 U	--	--	--	
	DP-17	DP-17-10.0	10	09/06/2017		< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	< 0.1 U	< 0.25 U	--	--	--	
	DP-18	DP-18-3.0	3	09/06/2017		< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	< 0.1 U	< 0.25 U	--	--	--	
	DP-18	DP-18-7.0	7	09/06/2017		< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	< 0.1 U	< 0.25 U	--	--	--	
	DP-19	DP-19-2.0	2	09/06/2017		< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	< 0.1 U	< 0.25 U	--	--	--	
	DP-20	DP-20-3.0	3	09/06/2017		< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	< 0.1 U	< 0.25 U	--	--	--	
	DP-21	DP-21-2.0	2	09/06/2017		< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	< 0.1 U	< 0.25 U	--	--	--	
	DP-22	DP-22-3.0	3	09/06/2017		< 0.05 U	< 0.05 U	--	< 0.05 U	< 0.05 U	< 0.1 U	< 0.25 U	--	--	--	
	Explorations by Others between 2002 and 2013	AW-SB-1	SB-1-2.5	2.5	02/18/2002	Subject Property	< 0.05 U	--	--	< 0.05 U	< 0.05 U	--	--	4.39	14.6	< 0.324 U
AW-SB-2		SB-2-2.5	2.5	02/18/2002	< 0.05 U		--	--	< 0.05 U	< 0.05 U	--	--	1.89	50.7	< 0.276 U	
AW-SB-3		SB-3-2.5	2.5	02/18/2002	< 0.05 U		--	--	< 0.05 U	< 0.05 U	--	--	2.65	50.3	< 0.274 U	
AW-SB-4		SB-4-7	7	02/18/2002	< 0.05 U		--	--	< 0.05 U	< 0.05 U	--	--	1.75	54.3	< 0.299 U	
AW-SB-4		SB-4-12	12	02/18/2002	< 0.05 U		--	--	< 0.05 U	< 0.05 U	--	--	5.79	147	< 0.335 U	
AW-SB-5		SB-5-12	12	02/18/2002	< 0.05 U		--	--	< 0.05 U	< 0.05 U	--	--	2.73	54.2	< 0.273 U	
AW-SB-6		SB-6-12	12	02/18/2002	< 0.05 U		--	--	< 0.05 U	< 0.05 U	--	--	2.07	36.1	< 0.268 U	
AW-SB-6		SB-6-27	27	02/18/2002	--		--	--	--	--	--	--	2.54	69.6	< 0.301 U	
AW-SB-7		SB-7-2.5	2.5	02/19/2012	< 0.05 U		--	--	< 0.05 U	< 0.05 U	--	--	4.74	128	0.394	
AW-SB-8		SB-8-7	7	02/19/2012	< 0.05 U		--	--	< 0.05 U	< 0.05 U	--	--	2.59	105	< 0.343 U	
PC-PH-SB-6		SB6-2.5-5.0	2.5-5	09/05/2016	--		--	--	--	--	--	--	< 0.0050 U	--	--	--
PC-PH-SB-6		SB6-7.5-10.0	7.5-10	09/05/2016	--		--	--	--	--	--	--	< 0.0048 U	--	--	--
PC-PH-SB-6		SB6-12.5-15.0	12.5-15	09/05/2016	--		--	--	--	--	--	--	< 0.0048 U	--	--	--
PC-PH-SB-6		SB6-22.5-25.0	22.5-25	9/5/2012	--		--	--	--	--	--	--	< 0.0046 U	--	--	--
PC-PH-SB-6		SB6-33.0-36.0	33-36	09/05/2012	--		--	--	--	--	--	--	< 0.0049 U	--	--	--
PC-PH-SB-6		SB6-46.0-47.0	46-47	09/05/2012	--		--	--	--	--	--	--	< 0.0051 U	--	--	--
PC-PH-SB-6		SB6-51.0-55.0	51-55	09/05/2012	--		--	--	--	--	--	--	< 0.0045 U	--	--	--
PC-PH-SB-6		SB6-62.5-65.0	62.5-65	09/06/2012	--		--	--	--	--	--	--	< 0.0055 U	--	--	--
PC-PH-SB-6		SB6-75.0-78.0	75-78	09/06/2012	--		--	--	--	--	--	--	< 0.0053 U	--	--	--
PC-PH-SB-7		SB7-2.0-4.0	4-Feb	09/04/2012	--		--	--	--	--	--	--	< 0.0045 U	--	--	--
PC-PH-SB-7		SB7-7.5-9.5	7.5-9.5	09/04/2012	--		--	--	--	--	--	--	< 0.0053 U	--	--	--
PC-PH-SB-7		SB7-13.0-17.0	13-17	09/04/2012	--		--	--	--	--	--	--	< 0.0048 U	--	--	--
PC-PH-SB-7		SB7-25.0-26.5	25-26.5	09/04/2012	--		--	--	--	--	--	--	< 0.0050 U	--	--	--
PC-PH-SB-7		SB7-34.0-35.0	34-35	09/04/2012	--		--	--	--	--	--	--	< 0.0047 U	--	--	--
PC-PH-SB-7		SB7-42.0-45.0	42-45	09/04/2012	--		--	--	--	--	--	--	< 0.0062 U	--	--	--
PC-PH-SB-7		SB7-52.5-55.0	52.5-55	09/04/2012	--		--	--	--	--	--	--	< 0.0058 U	--	--	--
PC-PH-SB-7		SB7-62.5-65.0	62.5-65	09/04/2012	--		--	--	--	--	--	--	< 0.0053 U	--	--	--
PC-PH-SB-7		SB7-75.0-77.5	75-77.5	9/5/2012	--		--	--	--	--	--	--	< 0.0057 U	--	--	--
PC-PH-SB-8		SB8-0.5-6.0	0.5-6	09/10/2012	--		--	--	--	--	--	--	< 0.0054 U	--	--	--
PC-PH-SB-8		SB8-6.0-10.0	6-10	09/10/2012	--		--	--	--	--	--	--	< 0.0065 U	--	--	--
PC-PH-SB-8		SB8-10.0-16.5	10-16.5	09/10/2012	--		--	--	--	--	--	--	< 0.0065 U	--	--	--
PC-PH-SB-8		SB8-20.0-26.0	20-26	09/10/2012	--		--	--	--	--	--	--	< 0.0050 U	--	--	--
PC-PH-SB-8		SB8-33.0-35.0	33-35	09/10/2012	--		--	--	--	--	--	--	< 0.0044 U	--	--	--
PC-PH-SB-8		SB8-40.0-46.0	40-46	09/10/2012	--		--	--	--	--	--	--	< 0.0055 U	--	--	--
PC-PH-SB-8	SB8-50.0-55.0	50-55	09/10/2012	--	--	--	--	--	--	--	< 0.0041 U	--	--	--		
PC-PH-SB-8	SB8-64.0-66.0	64-66	09/10/2012	--	--	--	--	--	--	--	< 0.0042 U	--	--	--		

Table 4. Summary of Soil Chemical Data
 Project No. 170304, Grand Street Commons Project, Seattle, Washington

Chemical Name MTCA Cleanup Level Source Cleanup Level Concentration (mg/kg)					Volatile Organic Compounds					Semivolatile Organic Compounds		Metals			
					p-Isopropyltoluene	n-Propylbenzene	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	1,4-Dioxane	Hexachlorobutadiene	Arsenic	Barium	Cadmium	
					NE	Method B	NE	NE	NE	Method B	Method B	Method A	Method B	Method A	
					NE	8,000	NE	NE	NE	10	13	20	16,000	2	
Exploration Name	Sample Identification	Sample Depth (ft bgs)	Sample Date	Sample Location											
Explorations by Others between 2002 and 2013	PC-PH-SB-8	SB8-74.0-80.0	74-80	09/10/2012	Subject Property	--	--	--	--	--	< 0.0046 U	--	--	--	
	PC-PH-SB-9	SB9-63.5-70.0	63.5-70	09/07/2012		--	--	--	--	--	--	< 0.0043 U	--	--	--
	PC-PH-SB-9	SB9-70.0-78.5	70-78.5	09/07/2012		--	--	--	--	--	--	< 0.0055 U	--	--	--
	PC-PH-SB-9	SB9-85.0-87.5	85-87.5	09/07/2012		--	--	--	--	--	--	< 0.0064 U	--	--	--
	PC-PH-SB-9	SB9-95.0-97.5	95-97.5	09/07/2012		--	--	--	--	--	--	< 0.0058 U	--	--	--
	PC-PH-SB-13	SB13-34-36	34-36	01/04/2013		--	--	--	--	--	--	< 0.0051 U	--	--	--
	PC-PH-SB-13	SB13-44-46	44-46	01/04/2013		--	--	--	--	--	--	< 0.0046 U	--	--	--
	PC-PH-SB-13	SB13-54-56	54-56	01/04/2013		--	--	--	--	--	--	< 0.0059 U	--	--	--
	PC-PH-SB-13	SB13-64-66	64-66	01/07/2013		--	--	--	--	--	--	< 0.0049 U	--	--	--
	PC-PH-SB-13	SB13-74-76	74-76	01/07/2013		--	--	--	--	--	--	< 0.0051 U	--	--	--
	PC-PH-SB-13	SB13-86-88	86-88	01/07/2013		--	--	--	--	--	--	< 0.0046 U	--	--	--
	PC-PH-SB-13	SB13-94-96	94-96	01/07/2013		--	--	--	--	--	--	< 0.0056 U	--	--	--
	PC-PH-SB-13	SB13-104-106	104-106	01/07/2013		--	--	--	--	--	--	< 0.0058 U	--	--	--
	PC-PH-SB-14	SB14-34-36	34-36	12/26/2012		--	--	--	--	--	--	< 0.0042 U	--	--	--
	PC-PH-SB-14	SB14-44-46	44-46	12/26/2012		--	--	--	--	--	--	< 0.0051 U	--	--	--
	PC-PH-SB-14	SB14-54-56	54-56	12/27/2012		--	--	--	--	--	--	< 0.0056 U	--	--	--
	PC-PH-SB-14	SB14-64-66	64-66	12/27/2012		--	--	--	--	--	--	< 0.0047 U	--	--	--
	PC-PH-SB-14	SB14-74-76	74-76	12/27/2012		--	--	--	--	--	--	< 0.0053 U	--	--	--
	PC-PH-SB-14	SB14-84-86	84-86	12/28/2012		--	--	--	--	--	--	< 0.0055 U	--	--	--
	PC-PH-SB-14	SB14-94-96	94-96	12/28/2012		--	--	--	--	--	--	< 0.0058 U	--	--	--
	PC-PH-SB-14	SB14-104-106	104-106	12/28/2012		--	--	--	--	--	--	< 0.0056 U	--	--	--
	PC-PH-SB-15	SB15-64-66	64-66	01/02/2013		--	--	--	--	--	--	< 0.0057 U	--	--	--
	PC-PH-SB-15	SB15-74-76	74-76	01/02/2013		--	--	--	--	--	--	< 0.0066 U	--	--	--
	PC-PH-SB-15	SB15-84-86	84-86	01/02/2013		--	--	--	--	--	--	< 0.0054 U	--	--	--
	PC-PH-SB-15	SB15-94-96	94-96	01/03/2013		--	--	--	--	--	--	< 0.0054 U	--	--	--
	PC-PH-SB-15	SB15-104-106	104-106	01/03/2013		--	--	--	--	--	--	< 0.0059 U	--	--	--
	URS-B-5	B2F0080-03	5.5-8	05/30/2002		--	--	--	--	--	--	--	--	--	--
	URS-B-9	B2F0080-24	4-8	05/30/2002		--	--	--	--	--	--	--	--	--	--
	URS-B-11	B-11-20	20	02/20/2003		--	--	--	--	--	--	--	--	--	--
	URS-B-12	B-12-25	25	02/20/2003		2.18	4.93	4.64	1.13	< 0.1 U	--	< 0.1 U	--	--	--
	URS-B-13	B-13-5	5	02/21/2003		--	--	--	--	--	--	--	--	--	--
	URS-MW-5	B2F0409-02	10	06/13/2002		< 0.1 U	< 0.1 U	--	--	--	--	< 0.1 U	--	--	--
	URS-MW-6	B2F0409-08	10	06/13/2002		< 0.1 U	< 0.1 U	--	--	--	--	< 0.1 U	--	--	--
	URS-MW-8	MW-8-2.5	2.5	02/20/2003		< 0.1 U	< 0.1 U	--	--	--	--	< 0.1 U	--	--	--
	URS-MW-10	MW-10-7.5	7.5	02/20/2003		--	--	--	--	--	--	--	--	--	--
	URS-MW-11	MW-11-4	4	02/21/2003		< 0.1 U	< 0.1 U	--	--	--	--	< 0.1 U	--	--	--
	URS-MW-13	MW-13-25	25	02/21/2003		< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	--	< 0.1 U	--	--	--
	URS-SB-1	URS-SB-1-26	23	09/04/2012		3.93	7.83	< 0.0160 U	4.80	0.334	--	< 0.0798 U	--	--	--
	URS-SB-1	URS-SB-1-31	31	09/04/2012		0.0231	0.112	< 0.0127 U	0.0320	0.112	--	< 0.0633 U	--	--	--
	URS-SB-1	URS-SB-1-41	41	09/04/2012		0.0148	0.0529	< 0.0124 U	0.0238	< 0.0124 U	--	< 0.0618 U	--	--	--
	URS-SB-2	URS-SB-2-25.5	25.5	09/04/2012		< 0.0203 U	< 0.0203 U	< 0.0203 U	< 0.0203 U	< 0.0203 U	--	< 0.101 U	--	--	--
	URS-SB-2	URS-SB-2-36	36	09/04/2012		< 0.0168 U	< 0.0168 U	< 0.0168 U	< 0.0168 U	< 0.0168 U	--	< 0.0842 U	--	--	--
	URS-SB-2	URS-SB-2-46	46	09/04/2012		< 0.0206 U	< 0.0206 U	< 0.0206 U	< 0.0206 U	< 0.0206 U	--	< 0.103 U	--	--	--
	URS-SB-3	URS-SB-3-20.5	20.5	09/04/2012		< 0.0155 U	< 0.0155 U	< 0.0155 U	< 0.0155 U	< 0.0155 U	--	< 0.0777 U	--	--	--
	URS-SB-3	URS-SB-3-31	31	09/04/2012		< 0.0161 U	0.0471	< 0.0161 U	< 0.0161 U	< 0.0161 U	--	< 0.0806 U	--	--	--
URS-SB-3	URS-SB-3-36	36	09/04/2012	< 0.0197 U	< 0.0197 U	< 0.0197 U	< 0.0197 U	< 0.0197 U	--	< 0.0984 U	--	--	--		
URS-SB-4	URS-SB-4-26	26	09/05/2012	< 0.0382 U	0.0745	< 0.0382 U	< 0.0382 U	< 0.0382 U	--	< 0.191 U	--	--	--		
URS-SB-4	URS-SB-4-31	31	09/05/2012	< 0.0189 U	< 0.0189 U	< 0.0189 U	< 0.0189 U	< 0.0189 U	--	< 0.0945 U	--	--	--		
URS-SB-4	URS-SB-4-41	41	09/05/2012	< 0.0191 U	< 0.0191 U	< 0.0191 U	< 0.0191 U	< 0.0191 U	--	< 0.0953 U	--	--	--		
URS-SB-5	URS-SB-5-26	26	09/05/2012	< 0.0179 U	< 0.0179 U	< 0.0179 U	< 0.0179 U	< 0.0179 U	--	< 0.0897 U	--	--	--		
URS-SB-5	URS-SB-5-41	41	09/05/2012	< 0.0289 U	< 0.0289 U	< 0.0289 U	< 0.0289 U	< 0.0289 U	--	< 0.145 U	--	--	--		
URS-SB-5	URS-SB-5-56.5	56.5	09/05/2012	< 0.0247 U	< 0.0247 U	< 0.0247 U	< 0.0247 U	< 0.0247 U	--	< 0.123 U	--	--	--		
URS-SB-6	URS-SB-6-21	21	09/05/2012	< 0.0276 U	< 0.0276 U	< 0.0276 U	< 0.0276 U	< 0.0276 U	--	< 0.138 U	--	--	--		
URS-SB-6	URS-SB-6-31	31	09/05/2012	< 0.0223 U	< 0.0223 U	< 0.0223 U	< 0.0223 U	< 0.0223 U	--	< 0.112 U	--	--	--		
URS-SB-6	URS-SB-6-46	46	09/05/2012	< 0.0286 U	< 0.0286 U	< 0.0286 U	< 0.0286 U	< 0.0286 U	--	< 0.143 U	--	--	--		
URS-SB-7	URS-SB-7-26	26	09/06/2012	< 0.0212 U	< 0.0212 U	< 0.0212 U	< 0.0212 U	< 0.0212 U	--	< 0.106 U	--	--	--		
URS-SB-7	URS-SB-7-31	31	09/06/2012	< 0.0217 U	< 0.0217 U	< 0.0217 U	< 0.0217 U	< 0.0217 U	--	< 0.109 U	--	--	--		
URS-SB-7	URS-SB-7-41	41	09/06/2012	< 0.0183 U	< 0.0183 U	< 0.0183 U	< 0.0183 U	< 0.0183 U	--	< 0.0917 U	--	--	--		

Table 4. Summary of Soil Chemical Data

Project No. 170304, Grand Street Commons Project, Seattle, Washington

Exploration Name	Sample Identification	Sample Depth (ft bgs)	Sample Date	Sample Location	Chemical Name	Volatile Organic Compounds					Semivolatile Organic Compounds		Metals			
						p-Isopropyltoluene	n-Propylbenzene	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	1,4-Dioxane	Hexachlorobutadiene	Arsenic	Barium	Cadmium	
						NE	Method B	NE	NE	NE	Method B	Method B	Method A	Method B	Method A	
						NE	8,000	NE	NE	NE	10	13	20	16,000	2	
Explorations by Others between 2012 and 2013	URS-SB-8	URS-SB-8-21	21	09/06/2012	Subject Property	< 0.0197 U	< 0.0197 U	< 0.0197 U	< 0.0197 U	< 0.0197 U	--	< 0.0983 U	--	--	--	
	URS-SB-8	URS-SB-8-31	31	09/06/2012		< 0.0283 U	< 0.0283 U	< 0.0283 U	< 0.0283 U	< 0.0283 U	--	< 0.141 U	--	--	--	
	URS-SB-8	URS-SB-8-41.5	41.5	09/06/2012		< 0.0271 U	< 0.0271 U	< 0.0271 U	< 0.0271 U	< 0.0271 U	--	< 0.135 U	--	--	--	
	URS-SB-9	URS-SB-9-26	26	09/06/2012		< 0.0202 U	< 0.0202 U	< 0.0202 U	< 0.0202 U	< 0.0202 U	--	< 0.101 U	--	--	--	
	URS-SB-9	URS-SB-9-36	36	09/06/2012		< 0.0199 U	< 0.0199 U	< 0.0199 U	< 0.0199 U	< 0.0199 U	--	< 0.0997 U	--	--	--	
	URS-SB-9	URS-SB-9-41	41	09/06/2012		< 0.0164 U	< 0.0164 U	< 0.0164 U	< 0.0164 U	< 0.0164 U	--	< 0.0820 U	--	--	--	
Explorations by Others in 2012	PC-PH-SB-1	SB1-0.25-5.0	0.25-5	09/11/2012	North-adjacent SCC/Former Penthouse Drapery property	--	--	--	--	--	--	< 0.0055 U	--	--	--	
	PC-PH-SB-1	SB1-6.5-10.0	6.5-10	09/11/2012		--	--	--	--	--	--	--	< 0.0057 U	--	--	--
	PC-PH-SB-1	SB1-10.0-16.0	10-16	09/11/2012		--	--	--	--	--	--	--	< 0.0058 U	--	--	--
	PC-PH-SB-1	SB1-25.0-30.0	25-30	09/11/2012		--	--	--	--	--	--	--	< 0.0047 U	--	--	--
	PC-PH-SB-1	SB1-34.0-35.0	34-35	09/11/2012		--	--	--	--	--	--	--	< 0.0045 U	--	--	--
	PC-PH-SB-1	SB1-40.0-45.0	40-45	09/11/2012		--	--	--	--	--	--	--	< 0.0044 U	--	--	--
	PC-PH-SB-1	SB1-52.5-55.0	52.5-55	09/11/2012		--	--	--	--	--	--	--	< 0.0053 U	--	--	--
	PC-PH-SB-1	SB1-63.5-65.0	63.5-65	09/11/2012		--	--	--	--	--	--	--	< 0.0039 U	--	--	--
	PC-PH-SB-1	SB1-70.0-75.0	70-75	09/12/2012		--	--	--	--	--	--	--	< 0.0048 U	--	--	--
	PC-PH-SB-10	SB10-0-1	0-1	12/08/2012		--	--	< 0.1 U	< 0.1 U	< 0.1 U	--	--	< 0.0047 U	--	--	--
	PC-PH-SB-11	SB11-2-4	2-4	12/08/2012		--	--	< 0.1 U	< 0.1 U	< 0.1 U	--	--	< 0.0047 U	--	--	--
	PC-PH-SB-11	SB11-8-10	8-10	12/08/2012		--	--	< 0.1 U	< 0.1 U	< 0.1 U	--	--	< 0.0051 U	--	--	--
	PC-PH-SB-11	SB11-10-12	10-12	12/08/2012		--	--	--	--	--	--	--	< 0.0046 U	--	--	--
	PC-PH-SB-12	SB12-2-4	2-4	12/08/2012		--	--	< 0.1 U	< 0.1 U	< 0.1 U	--	--	< 0.0047 U	--	--	--

Notes

ft bgs = feet below existing ground surface

mg/kg = milligrams per kilogram

-- = Not analyzed

* = Samples were additionally analyzed for polychlorinated

** = Samples were additionally analyzed for Lead and cadmium

U = Analyte not detected above the listed reporting limit

X = Chromatographic pattern does not match quantitation standard. However, the listed values are considered detections based on field screening evidence (moderate sheen and slight odor).

J = Listed value is an estimate.

NE = Not Established

MTCA = Model Toxics Control Act

Bolded value indicates analyte detected at the listed concentration.

Blue shading indicates analyte detected at a concentration greater than the corresponding MTCA cleanup level.

Table 4. Summary of Soil Chemical Data
 Project No. 170304, Grand Street Commons Project, Seattle, Washington

Exploration Name	Sample Identification	Sample Depth (ft bgs)	Sample Date	Sample Location	Metals					Polycyclic Aromatic Hydrocarbons					
					Chemical Name	Chromium	Lead	Mercury	Selenium	Silver	2-Methylnaphthalene	Acenaphthene	Anthracene	Benz(a)anthracene	
					MTCA Cleanup Level Source Cleanup Level Concentration (mg/kg)	Method A 2,000	Method A 250	Method A 2	Method B 400	Method B 400	Method B 320	Method B 4,800	Method B 24,000	Method B 1.4	
AC-MW1	AC-MW1-3.0	3	08/28/2017	Subject Property	--	--	--	--	--	--	--	--	--	--	
AC-MW1	AC-MW1-10.0	10	08/28/2017		--	--	--	--	--	--	--	--	--	--	--
AC-MW2	AC-MW2-5.0	5	08/28/2017		--	--	--	--	--	--	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U
AC-MW2	AC-MW2-10.0	10	08/28/2017		--	--	--	--	--	--	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U
AC-MW3	AC-MW3-5.0	5	08/29/2017		22.2	1.89	< 1 U	< 1 U	< 1 U	--	--	--	--	--	--
AC-MW3	AC-MW3-15.0	15	08/29/2017		--	--	--	--	--	--	--	--	--	--	--
AC-MW4	AC-MW4-5.0	5	08/29/2017		9.71	2.4	< 1 U	< 1 U	< 1 U	--	--	--	--	--	--
AC-MW4	AC-MW4-15.0	15	08/29/2017		--	--	--	--	--	--	--	--	--	--	--
AC-MW5	AC-MW-5-5.0	5	11/08/2017		--	--	--	--	--	--	--	--	--	--	--
AC-MW5	AC-MW-5-15.0	15	11/08/2017		--	--	--	--	--	--	--	--	--	--	--
AC-MW5	AC-MW-5-35.0	35	11/08/2017		--	--	--	--	--	--	--	--	--	--	--
AC-MW6	AC-MW-6-5.0	5	11/09/2017		--	--	--	--	--	--	--	--	--	--	--
AC-MW6	AC-MW-6-15.0	15	11/09/2017		--	--	--	--	--	--	--	--	--	--	--
AC-MW6	AC-MW-6-30.0	30	11/10/2017		--	--	--	--	--	--	--	--	--	--	--
AC-MW7	AC-MW-7-5.0	5	11/10/2017		--	--	--	--	--	--	--	--	--	--	--
AC-MW7	AC-MW-7-10.0	10	11/10/2017		--	--	--	--	--	--	--	--	--	--	--
AC-MW7	AC-MW-7-15.0	15	11/10/2017		--	--	--	--	--	--	--	--	--	--	--
AC-MW9	AC-MW-9-15.0	15	11/03/2017		--	--	--	--	--	--	--	--	--	--	--
AC-MW9	AC-MW-9-20.0	20	11/03/2017		--	--	--	--	--	--	--	--	--	--	--
AC-MW10	AC-MW-10-15.0	15	11/06/2017		--	--	--	--	--	--	--	--	--	--	--
AC-MW10	AC-MW-10-20.0	20	11/06/2017		--	--	--	--	--	--	--	--	--	--	--
AC-MW10	AC-MW-10-35.0	35	11/06/2017		--	--	--	--	--	--	--	--	--	--	--
AC-SB-1	AC-SB-1-5.0	5	11/08/2017		--	--	--	--	--	--	--	--	--	--	--
AC-SB-1	AC-SB-1-10.0	10	11/08/2017		--	--	--	--	--	--	--	--	--	--	--
AC-SB-1	AC-SB-1-20.0	20	11/08/2017		--	--	--	--	--	--	--	--	--	--	--
AC-SB-2	AC-SB-2-5.0	5	11/09/2017		--	--	--	--	--	--	--	--	--	--	--
AC-SB-2	AC-SB-2-10.0	10	11/09/2017		--	--	--	--	--	--	--	--	--	--	--
AC-SB-2	AC-SB-2-20.0	20	11/09/2017		--	--	--	--	--	--	--	--	--	--	--
AC-SB-3	AC-SB-3-5.0	5	11/07/2017		--	--	--	--	--	--	--	--	--	--	--
AC-SB-3	AC-SB-3-15.0	15	11/07/2017		--	--	--	--	--	--	--	--	--	--	--
AC-SB-3	AC-SB-3-35.0	35	11/07/2017		--	--	--	--	--	--	--	--	--	--	--
AC-SB-4	AC-SB-4-5.0	5	11/06/2017		--	--	--	--	--	--	--	--	--	--	--
AC-SB-4	AC-SB-4-10.0	10	11/06/2017		--	--	--	--	--	--	--	--	--	--	--
AC-SB-4	AC-SB-4-15.0	15	11/06/2017		--	--	--	--	--	--	--	--	--	--	--
AC-SB-4	AC-SB-4-30.0	30	11/06/2017		--	--	--	--	--	--	--	--	--	--	--
AC-SB-5	AC-SB-5-5.0	5	11/07/2017	--	--	--	--	--	--	--	--	--	--	--	
AC-SB-5	AC-SB-5-20.0	20	11/07/2017	--	--	--	--	--	--	--	--	--	--	--	
AC-SB-5	AC-SB-5-30.0	30	11/07/2017	--	--	--	--	--	--	--	--	--	--	--	
AC-SB-5	AC-SB-5-35.0	35	11/07/2017	--	--	--	--	--	--	--	--	--	--	--	
AC-SB-6	AC-SB-6-15.0	15	11/03/2017	--	--	--	--	--	--	--	--	--	--	--	
AC-SB-6	AC-SB-6-25.0	25	11/03/2017	--	--	--	--	--	--	--	--	--	--	--	
DP-1	DP-1-5.0	5	09/02/2017	18.4	20.5	< 1 U	< 5 UJ	< 1 UJ	--	--	--	--	--	--	
DP-1	DP-1-15.0	15	09/05/2017	--	--	--	--	--	--	--	--	--	--	--	
DP-2	DP-2-5.0*	5	09/05/2017	18.5	7.08	< 1 U	< 5 UJ	< 1 UJ	--	--	--	--	--	--	
DP-2	DP-2-10.0	10	09/05/2017	--	--	--	--	--	--	--	--	--	--	--	
DP-3	DP-3-5.0	5	09/05/2017	--	--	--	--	--	--	--	--	--	--	--	
DP-3	DP-3-15.0	15	09/05/2017	--	--	--	--	--	--	--	--	--	--	--	
DP-4	DP-4-5.0	5	09/05/2017	--	--	--	--	--	--	--	--	--	--	--	
DP-4	DP-4-10.0	10	09/05/2017	--	--	--	--	--	--	--	--	--	--	--	
DP-5	DP-5-5.0	5	09/05/2017	--	--	--	--	--	--	--	--	--	--	--	
DP-5	DP-5-10.0	10	09/05/2017	--	--	--	--	--	--	--	--	--	--	--	
DP-6	DP-6-5.0	5	09/05/2017	--	--	--	--	--	--	--	--	--	--	--	
DP-7	DP-7-5.0**	5	09/05/2017	36.4	310	< 1 U	< 5 UJ	< 1 UJ	--	--	--	--	--	--	
DP-7	DP-7-10.0	10	09/05/2017	--	--	--	--	--	--	--	--	--	--	--	
DP-8	DP-8-5.0	5	09/05/2017	--	--	--	--	--	--	--	--	--	--	--	
DP-8	DP-8-10.0	10	09/05/2017	--	--	--	--	--	--	--	--	--	--	--	
DP-9	DP-9-3.0	3	09/05/2017	--	--	--	--	--	--	--	--	--	--	--	
DP-9	DP-9-10.0	10	09/05/2017	--	--	--	--	--	--	--	--	--	--	--	

Table 4. Summary of Soil Chemical Data
 Project No. 170304, Grand Street Commons Project, Seattle, Washington

Exploration Name	Sample Identification	Sample Depth (ft bgs)	Sample Date	Sample Location	Chemical Name	Metals					Polycyclic Aromatic Hydrocarbons			
						Chromium	Lead	Mercury	Selenium	Silver	2-Methylnaphthalene	Acenaphthene	Anthracene	Benz(a)anthracene
						Method A	Method A	Method A	Method B	Method B	Method B	Method B	Method B	Method B
						MTCA Cleanup Level Source					2,000	250	2	400
					Cleanup Level Concentration (mg/kg)									
Explorations by Aspect Consulting 2017	DP-10	DP-10-5.0	5	09/05/2017		16.1	1.46	< 1 U	< 5 UJ	< 1 UJ	--	--	--	--
	DP-11	DP-11-5.0	5	09/05/2017		25.9	43.5	< 1 U	< 5 UJ	< 1 UJ	--	--	--	--
	DP-11	DP-11-10.0	10	09/05/2017		--	--	--	--	--	--	--	--	--
	DP-12	DP-12-5.0	5	09/05/2017		--	--	--	--	--	--	--	--	--
	DP-12	DP-12-7.5	7.5	09/05/2017		--	--	--	--	--	--	--	--	--
	DP-13	DP-13-5.0	5	09/05/2017		--	--	--	--	--	--	--	--	--
	DP-13	DP-13-10.0	10	09/05/2017		--	--	--	--	--	--	--	--	--
	DP-14	DP-14-3.0	3	09/06/2017		--	--	--	--	--	--	--	--	--
	DP-14	DP-14-10.0	10	09/06/2017		--	--	--	--	--	--	--	--	--
	DP-15	DP-15-3.0	3	09/06/2017		--	--	--	--	--	--	--	--	--
	DP-15	DP-15-15.0	15	09/06/2017		--	--	--	--	--	--	--	--	--
	DP-16	DP-16-3.0	3	09/06/2017		--	--	--	--	--	--	--	--	--
	DP-16	DP-16-10.0	10	09/06/2017		--	--	--	--	--	--	--	--	--
	DP-17	DP-17-3.0	3	09/06/2017		--	--	--	--	--	--	< 0.01 U	< 0.01 U	< 0.01 U
	DP-17	DP-17-10.0	10	09/06/2017		--	--	--	--	--	--	--	--	--
	DP-18	DP-18-3.0	3	09/06/2017		--	--	--	--	--	--	--	--	--
	DP-18	DP-18-7.0	7	09/06/2017		--	--	--	--	--	--	--	--	--
	DP-19	DP-19-2.0	2	09/06/2017		--	--	--	--	--	--	< 0.01 U	< 0.01 U	< 0.01 U
	DP-20	DP-20-3.0	3	09/06/2017		--	--	--	--	--	--	--	--	--
	DP-21	DP-21-2.0	2	09/06/2017		--	--	--	--	--	--	--	--	--
	DP-22	DP-22-3.0	3	09/06/2017		--	--	--	--	--	--	--	--	--
	Explorations by Others between 2002 and 2013	AW-SB-1	SB-1-2.5	2.5	02/18/2002	Subject Property	66.6	8.18	0.031	< 2.69 U	< 0.647 U	< 0.12 U	< 0.12 U	< 0.12 U
AW-SB-2		SB-2-2.5	2.5	02/18/2002	25.7		2.21	0.017	< 2.21 U	< 0.552 U	< 0.108 U	< 0.108 U	< 0.108 U	--
AW-SB-3		SB-3-2.5	2.5	02/18/2002	27.8		2.25	0.023	< 2.19 U	< 0.548 U	< 0.102 U	< 0.102 U	< 0.102 U	--
AW-SB-4		SB-4-7	7	02/18/2002	26.3		1.89	0.017	< 2.39 U	< 0.598 U	24.7	1.15	1.01	--
AW-SB-4		SB-4-12	12	02/18/2002	71.2		6.65	0.069	< 2.68 U	< 0.67 U	< 0.124 U	--	--	--
AW-SB-5		SB-5-12	12	02/18/2002	26.1		2.08	0.022	< 2.18 U	< 0.546 U	< 0.11 U	--	--	--
AW-SB-6		SB-6-12	12	02/18/2002	21.5		1.64	< 0.013 U	< 2.14 U	< 0.535 U	< 0.104 U	--	--	--
AW-SB-6		SB-6-27	27	02/18/2002	40.1		3.38	0.029	< 2.41 U	< 0.602 U	--	--	--	--
AW-SB-7		SB-7-2.5	2.5	02/19/2012	43.6		36.5	0.075	< 2.54 U	< 0.635 U	< 0.121 U	--	--	--
AW-SB-8		SB-8-7	7	02/19/2012	40.6		11.7	0.051	< 2.75 U	< 0.687 U	--	--	--	--
PC-PH-SB-6		SB6-2.5-5.0	2.5-5	09/05/2016	--		--	--	--	--	--	--	--	--
PC-PH-SB-6		SB6-7.5-10.0	7.5-10	09/05/2016	--		--	--	--	--	--	--	--	--
PC-PH-SB-6		SB6-12.5-15.0	12.5-15	09/05/2016	--		--	--	--	--	--	--	--	--
PC-PH-SB-6		SB6-22.5-25.0	22.5-25	9/5/2012	--		--	--	--	--	--	--	--	--
PC-PH-SB-6		SB6-33.0-36.0	33-36	09/05/2012	--		--	--	--	--	--	--	--	--
PC-PH-SB-6		SB6-46.0-47.0	46-47	09/05/2012	--		--	--	--	--	--	--	--	--
PC-PH-SB-6		SB6-51.0-55.0	51-55	09/05/2012	--		--	--	--	--	--	--	--	--
PC-PH-SB-6		SB6-62.5-65.0	62.5-65	09/06/2012	--		--	--	--	--	--	--	--	--
PC-PH-SB-6		SB6-75.0-78.0	75-78	09/06/2012	--		--	--	--	--	--	--	--	--
PC-PH-SB-7		SB7-2.0-4.0	4-Feb	09/04/2012	--		--	--	--	--	--	--	--	--
PC-PH-SB-7		SB7-7.5-9.5	7.5-9.5	09/04/2012	--		--	--	--	--	--	--	--	--
PC-PH-SB-7		SB7-13.0-17.0	13-17	09/04/2012	--		--	--	--	--	--	--	--	--
PC-PH-SB-7		SB7-25.0-26.5	25-26.5	09/04/2012	--		--	--	--	--	--	--	--	--
PC-PH-SB-7		SB7-34.0-35.0	34-35	09/04/2012	--		--	--	--	--	--	--	--	--
PC-PH-SB-7		SB7-42.0-45.0	42-45	09/04/2012	--		--	--	--	--	--	--	--	--
PC-PH-SB-7		SB7-52.5-55.0	52.5-55	09/04/2012	--		--	--	--	--	--	--	--	--
PC-PH-SB-7		SB7-62.5-65.0	62.5-65	09/04/2012	--		--	--	--	--	--	--	--	--
PC-PH-SB-7		SB7-75.0-77.5	75-77.5	9/5/2012	--		--	--	--	--	--	--	--	--
PC-PH-SB-8		SB8-0.5-6.0	0.5-6	09/10/2012	--		--	--	--	--	--	--	--	--
PC-PH-SB-8		SB8-6.0-10.0	6-10	09/10/2012	--		--	--	--	--	--	--	--	--
PC-PH-SB-8		SB8-10.0-16.5	10-16.5	09/10/2012	--		--	--	--	--	--	--	--	--
PC-PH-SB-8		SB8-20.0-26.0	20-26	09/10/2012	--		--	--	--	--	--	--	--	--
PC-PH-SB-8	SB8-33.0-35.0	33-35	09/10/2012	--	--	--	--	--	--	--	--	--		
PC-PH-SB-8	SB8-40.0-46.0	40-46	09/10/2012	--	--	--	--	--	--	--	--	--		
PC-PH-SB-8	SB8-50.0-55.0	50-55	09/10/2012	--	--	--	--	--	--	--	--	--		
PC-PH-SB-8	SB8-64.0-66.0	64-66	09/10/2012	--	--	--	--	--	--	--	--	--		

Table 4. Summary of Soil Chemical Data

Project No. 170304, Grand Street Commons Project, Seattle, Washington

Exploration Name	Sample Identification	Sample Depth (ft bgs)	Sample Date	Sample Location	Metals					Polycyclic Aromatic Hydrocarbons					
					Chemical Name	Chromium	Lead	Mercury	Selenium	Silver	2-Methylnaphthalene	Acenaphthene	Anthracene	Benz(a)anthracene	
					MTCA Cleanup Level Source	Method A	Method A	Method A	Method B	Method B	Method B	Method B	Method B	Method B	
					Cleanup Level Concentration (mg/kg)	2,000	250	2	400	400	320	4,800	24,000	1.4	
PC-PH-SB-8	SB8-74.0-80.0	74-80	09/10/2012	Subject Property	--	--	--	--	--	--	--	--	--	--	
PC-PH-SB-9	SB9-63.5-70.0	63.5-70	09/07/2012		--	--	--	--	--	--	--	--	--	--	--
PC-PH-SB-9	SB9-70.0-78.5	70-78.5	09/07/2012		--	--	--	--	--	--	--	--	--	--	--
PC-PH-SB-9	SB9-85.0-87.5	85-87.5	09/07/2012		--	--	--	--	--	--	--	--	--	--	--
PC-PH-SB-9	SB9-95.0-97.5	95-97.5	09/07/2012		--	--	--	--	--	--	--	--	--	--	--
PC-PH-SB-13	SB13-34-36	34-36	01/04/2013		--	--	--	--	--	--	--	--	--	--	--
PC-PH-SB-13	SB13-44-46	44-46	01/04/2013		--	--	--	--	--	--	--	--	--	--	--
PC-PH-SB-13	SB13-54-56	54-56	01/04/2013		--	--	--	--	--	--	--	--	--	--	--
PC-PH-SB-13	SB13-64-66	64-66	01/07/2013		--	--	--	--	--	--	--	--	--	--	--
PC-PH-SB-13	SB13-74-76	74-76	01/07/2013		--	--	--	--	--	--	--	--	--	--	--
PC-PH-SB-13	SB13-86-88	86-88	01/07/2013		--	--	--	--	--	--	--	--	--	--	--
PC-PH-SB-13	SB13-94-96	94-96	01/07/2013		--	--	--	--	--	--	--	--	--	--	--
PC-PH-SB-13	SB13-104-106	104-106	01/07/2013		--	--	--	--	--	--	--	--	--	--	--
PC-PH-SB-14	SB14-34-36	34-36	12/26/2012		--	--	--	--	--	--	--	--	--	--	--
PC-PH-SB-14	SB14-44-46	44-46	12/26/2012		--	--	--	--	--	--	--	--	--	--	--
PC-PH-SB-14	SB14-54-56	54-56	12/27/2012		--	--	--	--	--	--	--	--	--	--	--
PC-PH-SB-14	SB14-64-66	64-66	12/27/2012		--	--	--	--	--	--	--	--	--	--	--
PC-PH-SB-14	SB14-74-76	74-76	12/27/2012		--	--	--	--	--	--	--	--	--	--	--
PC-PH-SB-14	SB14-84-86	84-86	12/28/2012		--	--	--	--	--	--	--	--	--	--	--
PC-PH-SB-14	SB14-94-96	94-96	12/28/2012		--	--	--	--	--	--	--	--	--	--	--
PC-PH-SB-14	SB14-104-106	104-106	12/28/2012		--	--	--	--	--	--	--	--	--	--	--
PC-PH-SB-15	SB15-64-66	64-66	01/02/2013		--	--	--	--	--	--	--	--	--	--	--
PC-PH-SB-15	SB15-74-76	74-76	01/02/2013		--	--	--	--	--	--	--	--	--	--	--
PC-PH-SB-15	SB15-84-86	84-86	01/02/2013		--	--	--	--	--	--	--	--	--	--	--
PC-PH-SB-15	SB15-94-96	94-96	01/03/2013		--	--	--	--	--	--	--	--	--	--	--
PC-PH-SB-15	SB15-104-106	104-106	01/03/2013		--	--	--	--	--	--	--	--	--	--	--
URS-B-5	B2F0080-03	5.5-8	05/30/2002		--	--	--	--	--	--	--	--	--	--	--
URS-B-9	B2F0080-24	4-8	05/30/2002		--	--	--	--	--	--	--	--	--	--	--
URS-B-11	B-11-20	20	02/20/2003		--	--	--	--	--	--	--	--	--	--	--
URS-B-12	B-12-25	25	02/20/2003		--	--	--	--	--	--	--	--	--	--	--
URS-B-13	B-13-5	5	02/21/2003		--	--	--	--	--	--	--	--	--	--	--
URS-MW-5	B2F0409-02	10	06/13/2002		--	--	--	--	--	--	--	--	--	--	--
URS-MW-6	B2F0409-08	10	06/13/2002		--	--	--	--	--	--	--	--	--	--	--
URS-MW-8	MW-8-2.5	2.5	02/20/2003		--	--	--	--	--	--	--	--	--	--	--
URS-MW-10	MW-10-7.5	7.5	02/20/2003		--	--	--	--	--	--	--	--	--	--	--
URS-MW-11	MW-11-4	4	02/21/2003		--	--	--	--	--	--	--	--	--	--	--
URS-MW-13	MW-13-25	25	02/21/2003		--	--	--	--	--	--	--	--	--	--	--
URS-SB-1	URS-SB-1-26	23	09/04/2012		--	2.94	--	--	--	--	--	--	--	--	--
URS-SB-1	URS-SB-1-31	31	09/04/2012		--	1.31	--	--	--	--	--	--	--	--	--
URS-SB-1	URS-SB-1-41	41	09/04/2012		--	1.88	--	--	--	--	--	--	--	--	--
URS-SB-2	URS-SB-2-25.5	25.5	09/04/2012		--	1.15	--	--	--	--	--	--	--	--	--
URS-SB-2	URS-SB-2-36	36	09/04/2012		--	1.65	--	--	--	--	--	--	--	--	--
URS-SB-2	URS-SB-2-46	46	09/04/2012		--	1.95	--	--	--	--	--	--	--	--	--
URS-SB-3	URS-SB-3-20.5	20.5	09/04/2012		--	1.53	--	--	--	--	--	--	--	--	--
URS-SB-3	URS-SB-3-31	31	09/04/2012		--	1.28	--	--	--	--	--	--	--	--	--
URS-SB-3	URS-SB-3-36	36	09/04/2012	--	1.93	--	--	--	--	--	--	--	--	--	
URS-SB-4	URS-SB-4-26	26	09/05/2012	--	1.51	--	--	--	--	--	--	--	--	--	
URS-SB-4	URS-SB-4-31	31	09/05/2012	--	1.78	--	--	--	--	--	--	--	--	--	
URS-SB-4	URS-SB-4-41	41	09/05/2012	--	1.57	--	--	--	--	--	--	--	--	--	
URS-SB-5	URS-SB-5-26	26	09/05/2012	--	2.14	--	--	--	--	--	--	--	--	--	
URS-SB-5	URS-SB-5-41	41	09/05/2012	--	2.57	--	--	--	--	--	--	--	--	--	
URS-SB-5	URS-SB-5-56.5	56.5	09/05/2012	--	3.54	--	--	--	--	--	--	--	--	--	
URS-SB-6	URS-SB-6-21	21	09/05/2012	--	3.57	--	--	--	--	--	--	--	--	--	
URS-SB-6	URS-SB-6-31	31	09/05/2012	--	1.42	--	--	--	--	--	--	--	--	--	
URS-SB-6	URS-SB-6-46	46	09/05/2012	--	1.75	--	--	--	--	--	--	--	--	--	
URS-SB-7	URS-SB-7-26	26	09/06/2012	--	1.95	--	--	--	--	--	--	--	--	--	
URS-SB-7	URS-SB-7-31	31	09/06/2012	--	2.71	--	--	--	--	--	--	--	--	--	
URS-SB-7	URS-SB-7-41	41	09/06/2012	--	2.89	--	--	--	--	--	--	--	--	--	

Table 4. Summary of Soil Chemical Data

Project No. 170304, Grand Street Commons Project, Seattle, Washington

	Chemical Name	Metals					Polycyclic Aromatic Hydrocarbons					
		Chromium	Lead	Mercury	Selenium	Silver	2-Methylnaphthalene	Acenaphthene	Anthracene	Benz(a)anthracene		
		Method A	Method A	Method A	Method B	Method B	Method B	Method B	Method B	Method B		
MTCA Cleanup Level Source		2,000	250	2	400	400	320	4,800	24,000	1.4		
Cleanup Level Concentration (mg/kg)		2,000	250	2	400	400	320	4,800	24,000	1.4		
Exploration Name	Sample Identification	Sample Depth (ft bgs)	Sample Date	Sample Location								
Explorations by Others between 2012 and 2013	URS-SB-8	URS-SB-8-21	21	09/06/2012	Subject Property	--	1.46	--	--	--	--	--
	URS-SB-8	URS-SB-8-31	31	09/06/2012		--	2.6	--	--	--	--	--
	URS-SB-8	URS-SB-8-41.5	41.5	09/06/2012		--	1.26	--	--	--	--	--
	URS-SB-9	URS-SB-9-26	26	09/06/2012		--	1.94	--	--	--	--	--
	URS-SB-9	URS-SB-9-36	36	09/06/2012		--	2.48	--	--	--	--	--
	URS-SB-9	URS-SB-9-41	41	09/06/2012		--	2.17	--	--	--	--	--
Explorations by Others in 2012	PC-PH-SB-1	SB1-0.25-5.0	0.25-5	09/11/2012	North-adjacent SCC/Former Penthouse Drapery property	--	--	--	--	--	--	--
	PC-PH-SB-1	SB1-6.5-10.0	6.5-10	09/11/2012		--	--	--	--	--	--	--
	PC-PH-SB-1	SB1-10.0-16.0	10-16	09/11/2012		--	--	--	--	--	--	--
	PC-PH-SB-1	SB1-25.0-30.0	25-30	09/11/2012		--	--	--	--	--	--	--
	PC-PH-SB-1	SB1-34.0-35.0	34-35	09/11/2012		--	--	--	--	--	--	--
	PC-PH-SB-1	SB1-40.0-45.0	40-45	09/11/2012		--	--	--	--	--	--	--
	PC-PH-SB-1	SB1-52.5-55.0	52.5-55	09/11/2012		--	--	--	--	--	--	--
	PC-PH-SB-1	SB1-63.5-65.0	63.5-65	09/11/2012		--	--	--	--	--	--	--
	PC-PH-SB-1	SB1-70.0-75.0	70-75	09/12/2012		--	--	--	--	--	--	--
	PC-PH-SB-10	SB10-0-1	0-1	12/08/2012		--	--	--	--	--	--	--
	PC-PH-SB-11	SB11-2-4	2-4	12/08/2012		--	--	--	--	--	--	--
	PC-PH-SB-11	SB11-8-10	8-10	12/08/2012		--	--	--	--	--	--	--
	PC-PH-SB-11	SB11-10-12	10-12	12/08/2012		--	--	--	--	--	--	--
	PC-PH-SB-12	SB12-2-4	2-4	12/08/2012		--	--	--	--	--	--	--

Notes

ft bgs = feet below existing ground surface

mg/kg = milligrams per kilogram

-- = Not analyzed

* = Samples were additionally analyzed for polychlorinated

** = Samples were additionally analyzed for Lead and cadmium

U = Analyte not detected above the listed reporting limit

X = Chromatographic pattern does not match quantitation standard. However, the listed values are considered detections based on field screening evidence (moderate sheen and slight odor).

J = Listed value is an estimate.

NE = Not Established

MTCA = Model Toxics Control Act

Bolded value indicates analyte detected at the listed concentration.

Blue shading indicates analyte detected at a concentration greater than the corresponding MTCA cleanup level.

Table 4. Summary of Soil Chemical Data

Project No. 170304, Grand Street Commons Project, Seattle, Washington

Chemical Name MTCA Cleanup Level Source Cleanup Level Concentration (mg/kg)					Polycyclic Aromatic Hydrocarbons									
					Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenzo(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	
					Method A	Method B	NE	Method B	Method B	Method B	Method B	Method B	Method B	
Cleanup Level Concentration (mg/kg)					0.1	1.4	NE	14	140	0.14	3,200	3,200	1.4	
Exploration Name	Sample Identification	Sample Depth (ft bgs)	Sample Date	Sample Location										
Explorations by Aspect Consulting 2017	AC-MW1	AC-MW1-3.0	3	08/28/2017	Subject Property	--	--	--	--	--	--	--	--	
	AC-MW1	AC-MW1-10.0	10	08/28/2017		--	--	--	--	--	--	--	--	--
	AC-MW2	AC-MW2-5.0	5	08/28/2017		< 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
	AC-MW2	AC-MW2-10.0	10	08/28/2017		< 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
	AC-MW3	AC-MW3-5.0	5	08/29/2017		--	--	--	--	--	--	--	--	--
	AC-MW3	AC-MW3-15.0	15	08/29/2017		--	--	--	--	--	--	--	--	--
	AC-MW4	AC-MW4-5.0	5	08/29/2017		--	--	--	--	--	--	--	--	--
	AC-MW4	AC-MW4-15.0	15	08/29/2017		--	--	--	--	--	--	--	--	--
	AC-MW5	AC-MW-5-5.0	5	11/08/2017		--	--	--	--	--	--	--	--	--
	AC-MW5	AC-MW-5-15.0	15	11/08/2017		--	--	--	--	--	--	--	--	--
	AC-MW5	AC-MW-5-35.0	35	11/08/2017		--	--	--	--	--	--	--	--	--
	AC-MW6	AC-MW-6-5.0	5	11/09/2017		--	--	--	--	--	--	--	--	--
	AC-MW6	AC-MW-6-15.0	15	11/09/2017		--	--	--	--	--	--	--	--	--
	AC-MW6	AC-MW-6-30.0	30	11/10/2017		--	--	--	--	--	--	--	--	--
	AC-MW7	AC-MW-7-5.0	5	11/10/2017		--	--	--	--	--	--	--	--	--
	AC-MW7	AC-MW-7-10.0	10	11/10/2017		--	--	--	--	--	--	--	--	--
	AC-MW7	AC-MW-7-15.0	15	11/10/2017		--	--	--	--	--	--	--	--	--
	AC-MW9	AC-MW-9-15.0	15	11/03/2017		--	--	--	--	--	--	--	--	--
	AC-MW9	AC-MW-9-20.0	20	11/03/2017		--	--	--	--	--	--	--	--	--
	AC-MW10	AC-MW-10-15.0	15	11/06/2017		--	--	--	--	--	--	--	--	--
	AC-MW10	AC-MW-10-20.0	20	11/06/2017		--	--	--	--	--	--	--	--	--
	AC-MW10	AC-MW-10-35.0	35	11/06/2017		--	--	--	--	--	--	--	--	--
	AC-SB-1	AC-SB-1-5.0	5	11/08/2017		--	--	--	--	--	--	--	--	--
	AC-SB-1	AC-SB-1-10.0	10	11/08/2017		--	--	--	--	--	--	--	--	--
	AC-SB-1	AC-SB-1-20.0	20	11/08/2017		--	--	--	--	--	--	--	--	--
	AC-SB-2	AC-SB-2-5.0	5	11/09/2017		--	--	--	--	--	--	--	--	--
	AC-SB-2	AC-SB-2-10.0	10	11/09/2017		--	--	--	--	--	--	--	--	--
	AC-SB-2	AC-SB-2-20.0	20	11/09/2017		--	--	--	--	--	--	--	--	--
	AC-SB-3	AC-SB-3-5.0	5	11/07/2017		--	--	--	--	--	--	--	--	--
	AC-SB-3	AC-SB-3-15.0	15	11/07/2017		--	--	--	--	--	--	--	--	--
	AC-SB-3	AC-SB-3-35.0	35	11/07/2017		--	--	--	--	--	--	--	--	--
	AC-SB-4	AC-SB-4-5.0	5	11/06/2017		--	--	--	--	--	--	--	--	--
	AC-SB-4	AC-SB-4-10.0	10	11/06/2017		--	--	--	--	--	--	--	--	--
	AC-SB-4	AC-SB-4-15.0	15	11/06/2017		--	--	--	--	--	--	--	--	--
	AC-SB-4	AC-SB-4-30.0	30	11/06/2017		--	--	--	--	--	--	--	--	--
	AC-SB-5	AC-SB-5-5.0	5	11/07/2017		--	--	--	--	--	--	--	--	--
	AC-SB-5	AC-SB-5-20.0	20	11/07/2017		--	--	--	--	--	--	--	--	--
	AC-SB-5	AC-SB-5-30.0	30	11/07/2017		--	--	--	--	--	--	--	--	--
	AC-SB-5	AC-SB-5-35.0	35	11/07/2017		--	--	--	--	--	--	--	--	--
	AC-SB-6	AC-SB-6-15.0	15	11/03/2017		--	--	--	--	--	--	--	--	--
	AC-SB-6	AC-SB-6-25.0	25	11/03/2017		--	--	--	--	--	--	--	--	--
	DP-1	DP-1-5.0	5	09/02/2017		--	--	--	--	--	--	--	--	--
DP-1	DP-1-15.0	15	09/05/2017	--	--	--	--	--	--	--	--	--		
DP-2	DP-2-5.0*	5	09/05/2017	--	--	--	--	--	--	--	--	--		
DP-2	DP-2-10.0	10	09/05/2017	--	--	--	--	--	--	--	--	--		
DP-3	DP-3-5.0	5	09/05/2017	--	--	--	--	--	--	--	--	--		
DP-3	DP-3-15.0	15	09/05/2017	--	--	--	--	--	--	--	--	--		
DP-4	DP-4-5.0	5	09/05/2017	--	--	--	--	--	--	--	--	--		
DP-4	DP-4-10.0	10	09/05/2017	--	--	--	--	--	--	--	--	--		
DP-5	DP-5-5.0	5	09/05/2017	--	--	--	--	--	--	--	--	--		
DP-5	DP-5-10.0	10	09/05/2017	--	--	--	--	--	--	--	--	--		
DP-6	DP-6-5.0	5	09/05/2017	--	--	--	--	--	--	--	--	--		
DP-7	DP-7-5.0**	5	09/05/2017	--	--	--	--	--	--	--	--	--		
DP-7	DP-7-10.0	10	09/05/2017	--	--	--	--	--	--	--	--	--		
DP-8	DP-8-5.0	5	09/05/2017	--	--	--	--	--	--	--	--	--		
DP-8	DP-8-10.0	10	09/05/2017	--	--	--	--	--	--	--	--	--		
DP-9	DP-9-3.0	3	09/05/2017	--	--	--	--	--	--	--	--	--		
DP-9	DP-9-10.0	10	09/05/2017	--	--	--	--	--	--	--	--	--		

Table 4. Summary of Soil Chemical Data
 Project No. 170304, Grand Street Commons Project, Seattle, Washington

Chemical Name MTCA Cleanup Level Source Cleanup Level Concentration (mg/kg)					Polycyclic Aromatic Hydrocarbons									
					Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenzo(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	
					Method A	Method B	NE	Method B	Method B	Method B	Method B	Method B	Method B	
					0.1	1.4	NE	14	140	0.14	3,200	3,200	1.4	
Exploration Name	Sample Identification	Sample Depth (ft bgs)	Sample Date	Sample Location										
Explorations by Aspect Consulting 2017	DP-10	DP-10-5.0	5	09/05/2017	Subject Property	--	--	--	--	--	--	--	--	--
	DP-11	DP-11-5.0	5	09/05/2017		--	--	--	--	--	--	--	--	--
	DP-11	DP-11-10.0	10	09/05/2017		--	--	--	--	--	--	--	--	--
	DP-12	DP-12-5.0	5	09/05/2017		--	--	--	--	--	--	--	--	--
	DP-12	DP-12-7.5	7.5	09/05/2017		--	--	--	--	--	--	--	--	--
	DP-13	DP-13-5.0	5	09/05/2017		--	--	--	--	--	--	--	--	--
	DP-13	DP-13-10.0	10	09/05/2017		--	--	--	--	--	--	--	--	--
	DP-14	DP-14-3.0	3	09/06/2017		--	--	--	--	--	--	--	--	--
	DP-14	DP-14-10.0	10	09/06/2017		--	--	--	--	--	--	--	--	--
	DP-15	DP-15-3.0	3	09/06/2017		--	--	--	--	--	--	--	--	--
	DP-15	DP-15-15.0	15	09/06/2017		--	--	--	--	--	--	--	--	--
	DP-16	DP-16-3.0	3	09/06/2017		--	--	--	--	--	--	--	--	--
	DP-16	DP-16-10.0	10	09/06/2017		--	--	--	--	--	--	--	--	--
	DP-17	DP-17-3.0	3	09/06/2017		0.013	0.017	0.011	< 0.01 U	0.015	< 0.01 U	0.027	< 0.01 U	0.01
	DP-17	DP-17-10.0	10	09/06/2017		--	--	--	--	--	--	--	--	--
	DP-18	DP-18-3.0	3	09/06/2017		--	--	--	--	--	--	--	--	--
	DP-18	DP-18-7.0	7	09/06/2017		--	--	--	--	--	--	--	--	--
	DP-19	DP-19-2.0	2	09/06/2017		< 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
	DP-20	DP-20-3.0	3	09/06/2017		--	--	--	--	--	--	--	--	--
	DP-21	DP-21-2.0	2	09/06/2017		--	--	--	--	--	--	--	--	--
	DP-22	DP-22-3.0	3	09/06/2017		--	--	--	--	--	--	--	--	--
	Explorations by Others between 2002 and 2013	AW-SB-1	SB-1-2.5	2.5		02/18/2002	--	--	--	--	--	--	--	< 0.12 U
AW-SB-2		SB-2-2.5	2.5	02/18/2002	--	--	--	--	--	--	--	< 0.108 U	--	
AW-SB-3		SB-3-2.5	2.5	02/18/2002	--	--	--	--	--	--	--	< 0.102 U	--	
AW-SB-4		SB-4-7	7	02/18/2002	--	--	--	--	--	--	--	2.65	--	
AW-SB-4		SB-4-12	12	02/18/2002	--	--	--	--	--	--	--	--	--	
AW-SB-5		SB-5-12	12	02/18/2002	--	--	--	--	--	--	--	--	--	
AW-SB-6		SB-6-12	12	02/18/2002	--	--	--	--	--	--	--	--	--	
AW-SB-6		SB-6-27	27	02/18/2002	--	--	--	--	--	--	--	--	--	
AW-SB-7		SB-7-2.5	2.5	02/19/2012	--	--	--	--	--	--	--	--	--	
AW-SB-8		SB-8-7	7	02/19/2012	--	--	--	--	--	--	--	--	--	
PC-PH-SB-6		SB6-2.5-5.0	2.5-5	09/05/2016	--	--	--	--	--	--	--	--	--	
PC-PH-SB-6		SB6-7.5-10.0	7.5-10	09/05/2016	--	--	--	--	--	--	--	--	--	
PC-PH-SB-6		SB6-12.5-15.0	12.5-15	09/05/2016	--	--	--	--	--	--	--	--	--	
PC-PH-SB-6		SB6-22.5-25.0	22.5-25	9/5/2012	--	--	--	--	--	--	--	--	--	
PC-PH-SB-6		SB6-33.0-36.0	33-36	09/05/2012	--	--	--	--	--	--	--	--	--	
PC-PH-SB-6		SB6-46.0-47.0	46-47	09/05/2012	--	--	--	--	--	--	--	--	--	
PC-PH-SB-6		SB6-51.0-55.0	51-55	09/05/2012	--	--	--	--	--	--	--	--	--	
PC-PH-SB-6		SB6-62.5-65.0	62.5-65	09/06/2012	--	--	--	--	--	--	--	--	--	
PC-PH-SB-6		SB6-75.0-78.0	75-78	09/06/2012	--	--	--	--	--	--	--	--	--	
PC-PH-SB-7		SB7-2.0-4.0	4-Feb	09/04/2012	--	--	--	--	--	--	--	--	--	
PC-PH-SB-7		SB7-7.5-9.5	7.5-9.5	09/04/2012	--	--	--	--	--	--	--	--	--	
PC-PH-SB-7		SB7-13.0-17.0	13-17	09/04/2012	--	--	--	--	--	--	--	--	--	
PC-PH-SB-7		SB7-25.0-26.5	25-26.5	09/04/2012	--	--	--	--	--	--	--	--	--	
PC-PH-SB-7		SB7-34.0-35.0	34-35	09/04/2012	--	--	--	--	--	--	--	--	--	
PC-PH-SB-7		SB7-42.0-45.0	42-45	09/04/2012	--	--	--	--	--	--	--	--	--	
PC-PH-SB-7		SB7-52.5-55.0	52.5-55	09/04/2012	--	--	--	--	--	--	--	--	--	
PC-PH-SB-7		SB7-62.5-65.0	62.5-65	09/04/2012	--	--	--	--	--	--	--	--	--	
PC-PH-SB-7		SB7-75.0-77.5	75-77.5	9/5/2012	--	--	--	--	--	--	--	--	--	
PC-PH-SB-8		SB8-0.5-6.0	0.5-6	09/10/2012	--	--	--	--	--	--	--	--	--	
PC-PH-SB-8		SB8-6.0-10.0	6-10	09/10/2012	--	--	--	--	--	--	--	--	--	
PC-PH-SB-8		SB8-10.0-16.5	10-16.5	09/10/2012	--	--	--	--	--	--	--	--	--	
PC-PH-SB-8		SB8-20.0-26.0	20-26	09/10/2012	--	--	--	--	--	--	--	--	--	
PC-PH-SB-8	SB8-33.0-35.0	33-35	09/10/2012	--	--	--	--	--	--	--	--	--		
PC-PH-SB-8	SB8-40.0-46.0	40-46	09/10/2012	--	--	--	--	--	--	--	--	--		
PC-PH-SB-8	SB8-50.0-55.0	50-55	09/10/2012	--	--	--	--	--	--	--	--	--		
PC-PH-SB-8	SB8-64.0-66.0	64-66	09/10/2012	--	--	--	--	--	--	--	--	--		

Table 4. Summary of Soil Chemical Data
 Project No. 170304, Grand Street Commons Project, Seattle, Washington

Chemical Name MTCA Cleanup Level Source Cleanup Level Concentration (mg/kg)					Polycyclic Aromatic Hydrocarbons										
					Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenzo(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene		
					Method A	Method B	NE	Method B	Method B	Method B	Method B	Method B	Method B		
Cleanup Level Concentration (mg/kg)					0.1	1.4	NE	14	140	0.14	3,200	3,200	1.4		
Exploration Name	Sample Identification	Sample Depth (ft bgs)	Sample Date	Sample Location											
Explorations by Others between 2002 and 2013	PC-PH-SB-8	SB8-74.0-80.0	74-80	09/10/2012	Subject Property	--	--	--	--	--	--	--	--	--	
	PC-PH-SB-9	SB9-63.5-70.0	63.5-70	09/07/2012		--	--	--	--	--	--	--	--	--	--
	PC-PH-SB-9	SB9-70.0-78.5	70-78.5	09/07/2012		--	--	--	--	--	--	--	--	--	--
	PC-PH-SB-9	SB9-85.0-87.5	85-87.5	09/07/2012		--	--	--	--	--	--	--	--	--	--
	PC-PH-SB-9	SB9-95.0-97.5	95-97.5	09/07/2012		--	--	--	--	--	--	--	--	--	--
	PC-PH-SB-13	SB13-34-36	34-36	01/04/2013		--	--	--	--	--	--	--	--	--	--
	PC-PH-SB-13	SB13-44-46	44-46	01/04/2013		--	--	--	--	--	--	--	--	--	--
	PC-PH-SB-13	SB13-54-56	54-56	01/04/2013		--	--	--	--	--	--	--	--	--	--
	PC-PH-SB-13	SB13-64-66	64-66	01/07/2013		--	--	--	--	--	--	--	--	--	--
	PC-PH-SB-13	SB13-74-76	74-76	01/07/2013		--	--	--	--	--	--	--	--	--	--
	PC-PH-SB-13	SB13-86-88	86-88	01/07/2013		--	--	--	--	--	--	--	--	--	--
	PC-PH-SB-13	SB13-94-96	94-96	01/07/2013		--	--	--	--	--	--	--	--	--	--
	PC-PH-SB-13	SB13-104-106	104-106	01/07/2013		--	--	--	--	--	--	--	--	--	--
	PC-PH-SB-14	SB14-34-36	34-36	12/26/2012		--	--	--	--	--	--	--	--	--	--
	PC-PH-SB-14	SB14-44-46	44-46	12/26/2012		--	--	--	--	--	--	--	--	--	--
	PC-PH-SB-14	SB14-54-56	54-56	12/27/2012		--	--	--	--	--	--	--	--	--	--
	PC-PH-SB-14	SB14-64-66	64-66	12/27/2012		--	--	--	--	--	--	--	--	--	--
	PC-PH-SB-14	SB14-74-76	74-76	12/27/2012		--	--	--	--	--	--	--	--	--	--
	PC-PH-SB-14	SB14-84-86	84-86	12/28/2012		--	--	--	--	--	--	--	--	--	--
	PC-PH-SB-14	SB14-94-96	94-96	12/28/2012		--	--	--	--	--	--	--	--	--	--
	PC-PH-SB-14	SB14-104-106	104-106	12/28/2012		--	--	--	--	--	--	--	--	--	--
	PC-PH-SB-15	SB15-64-66	64-66	01/02/2013		--	--	--	--	--	--	--	--	--	--
	PC-PH-SB-15	SB15-74-76	74-76	01/02/2013		--	--	--	--	--	--	--	--	--	--
	PC-PH-SB-15	SB15-84-86	84-86	01/02/2013		--	--	--	--	--	--	--	--	--	--
	PC-PH-SB-15	SB15-94-96	94-96	01/03/2013		--	--	--	--	--	--	--	--	--	--
	PC-PH-SB-15	SB15-104-106	104-106	01/03/2013		--	--	--	--	--	--	--	--	--	--
	URS-B-5	B2F0080-03	5.5-8	05/30/2002		--	--	--	--	--	--	--	--	--	--
	URS-B-9	B2F0080-24	4-8	05/30/2002		--	--	--	--	--	--	--	--	--	--
	URS-B-11	B-11-20	20	02/20/2003		--	--	--	--	--	--	--	--	--	--
	URS-B-12	B-12-25	25	02/20/2003		--	--	--	--	--	--	--	--	--	--
	URS-B-13	B-13-5	5	02/21/2003		--	--	--	--	--	--	--	--	--	--
	URS-MW-5	B2F0409-02	10	06/13/2002		--	--	--	--	--	--	--	--	--	--
	URS-MW-6	B2F0409-08	10	06/13/2002		--	--	--	--	--	--	--	--	--	--
	URS-MW-8	MW-8-2.5	2.5	02/20/2003		--	--	--	--	--	--	--	--	--	--
	URS-MW-10	MW-10-7.5	7.5	02/20/2003		--	--	--	--	--	--	--	--	--	--
	URS-MW-11	MW-11-4	4	02/21/2003		--	--	--	--	--	--	--	--	--	--
	URS-MW-13	MW-13-25	25	02/21/2003		--	--	--	--	--	--	--	--	--	--
	URS-SB-1	URS-SB-1-26	23	09/04/2012		--	--	--	--	--	--	--	--	--	--
	URS-SB-1	URS-SB-1-31	31	09/04/2012		--	--	--	--	--	--	--	--	--	--
	URS-SB-1	URS-SB-1-41	41	09/04/2012		--	--	--	--	--	--	--	--	--	--
	URS-SB-2	URS-SB-2-25.5	25.5	09/04/2012		--	--	--	--	--	--	--	--	--	--
	URS-SB-2	URS-SB-2-36	36	09/04/2012		--	--	--	--	--	--	--	--	--	--
	URS-SB-2	URS-SB-2-46	46	09/04/2012		--	--	--	--	--	--	--	--	--	--
	URS-SB-3	URS-SB-3-20.5	20.5	09/04/2012		--	--	--	--	--	--	--	--	--	--
	URS-SB-3	URS-SB-3-31	31	09/04/2012		--	--	--	--	--	--	--	--	--	--
	URS-SB-3	URS-SB-3-36	36	09/04/2012		--	--	--	--	--	--	--	--	--	--
	URS-SB-4	URS-SB-4-26	26	09/05/2012		--	--	--	--	--	--	--	--	--	--
	URS-SB-4	URS-SB-4-31	31	09/05/2012		--	--	--	--	--	--	--	--	--	--
	URS-SB-4	URS-SB-4-41	41	09/05/2012		--	--	--	--	--	--	--	--	--	--
	URS-SB-5	URS-SB-5-26	26	09/05/2012		--	--	--	--	--	--	--	--	--	--
URS-SB-5	URS-SB-5-41	41	09/05/2012	--	--	--	--	--	--	--	--	--	--		
URS-SB-5	URS-SB-5-56.5	56.5	09/05/2012	--	--	--	--	--	--	--	--	--	--		
URS-SB-6	URS-SB-6-21	21	09/05/2012	--	--	--	--	--	--	--	--	--	--		
URS-SB-6	URS-SB-6-31	31	09/05/2012	--	--	--	--	--	--	--	--	--	--		
URS-SB-6	URS-SB-6-46	46	09/05/2012	--	--	--	--	--	--	--	--	--	--		
URS-SB-7	URS-SB-7-26	26	09/06/2012	--	--	--	--	--	--	--	--	--	--		
URS-SB-7	URS-SB-7-31	31	09/06/2012	--	--	--	--	--	--	--	--	--	--		
URS-SB-7	URS-SB-7-41	41	09/06/2012	--	--	--	--	--	--	--	--	--	--		

Table 4. Summary of Soil Chemical Data

Project No. 170304, Grand Street Commons Project, Seattle, Washington

Exploration Name	Sample Identification	Sample Depth (ft bgs)	Sample Date	Sample Location	Chemical Name	Polycyclic Aromatic Hydrocarbons									
						Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenzo(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	
						Method A	Method B	NE	Method B	Method B	Method B	Method B	Method B	Method B	
						0.1	1.4	NE	14	140	0.14	3,200	3,200	1.4	
Explorations by Others between 2012 and 2013	URS-SB-8	URS-SB-8-21	21	09/06/2012	Subject Property	--	--	--	--	--	--	--	--	--	
	URS-SB-8	URS-SB-8-31	31	09/06/2012		--	--	--	--	--	--	--	--	--	--
	URS-SB-8	URS-SB-8-41.5	41.5	09/06/2012		--	--	--	--	--	--	--	--	--	--
	URS-SB-9	URS-SB-9-26	26	09/06/2012		--	--	--	--	--	--	--	--	--	--
	URS-SB-9	URS-SB-9-36	36	09/06/2012		--	--	--	--	--	--	--	--	--	--
	URS-SB-9	URS-SB-9-41	41	09/06/2012		--	--	--	--	--	--	--	--	--	--
Explorations by Others in 2012	PC-PH-SB-1	SB1-0.25-5.0	0.25-5	09/11/2012	North-adjacent SCC/Former Penthouse Drapery property	--	--	--	--	--	--	--	--	--	
	PC-PH-SB-1	SB1-6.5-10.0	6.5-10	09/11/2012		--	--	--	--	--	--	--	--	--	--
	PC-PH-SB-1	SB1-10.0-16.0	10-16	09/11/2012		--	--	--	--	--	--	--	--	--	--
	PC-PH-SB-1	SB1-25.0-30.0	25-30	09/11/2012		--	--	--	--	--	--	--	--	--	--
	PC-PH-SB-1	SB1-34.0-35.0	34-35	09/11/2012		--	--	--	--	--	--	--	--	--	--
	PC-PH-SB-1	SB1-40.0-45.0	40-45	09/11/2012		--	--	--	--	--	--	--	--	--	--
	PC-PH-SB-1	SB1-52.5-55.0	52.5-55	09/11/2012		--	--	--	--	--	--	--	--	--	--
	PC-PH-SB-1	SB1-63.5-65.0	63.5-65	09/11/2012		--	--	--	--	--	--	--	--	--	--
	PC-PH-SB-1	SB1-70.0-75.0	70-75	09/12/2012		--	--	--	--	--	--	--	--	--	--
	PC-PH-SB-10	SB10-0-1	0-1	12/08/2012		--	--	--	--	--	--	--	--	--	--
	PC-PH-SB-11	SB11-2-4	2-4	12/08/2012		--	--	--	--	--	--	--	--	--	--
	PC-PH-SB-11	SB11-8-10	8-10	12/08/2012		--	--	--	--	--	--	--	--	--	--
	PC-PH-SB-11	SB11-10-12	10-12	12/08/2012		--	--	--	--	--	--	--	--	--	--
	PC-PH-SB-12	SB12-2-4	2-4	12/08/2012		--	--	--	--	--	--	--	--	--	--

Notes

ft bgs = feet below existing ground surface

mg/kg = milligrams per kilogram

-- = Not analyzed

* = Samples were additionally analyzed for polychlorinated

** = Samples were additionally analyzed for Lead and cadmium

U = Analyte not detected above the listed reporting limit

X = Chromatographic pattern does not match quantitation standard. However, the listed values are considered detections based on field screening evidence (moderate sheen and slight odor).

J = Listed value is an estimate.

NE = Not Established

MTCA = Model Toxics Control Act

Bolded value indicates analyte detected at the listed concentration.

Blue shading indicates analyte detected at a concentration greater than the corresponding MTCA cleanup level.

Table 4. Summary of Soil Chemical Data

Project No. 170304, Grand Street Commons Project, Seattle, Washington

Exploration Name	Sample Identification	Sample Depth (ft bgs)	Sample Date	Sample Location	Polycyclic Aromatic Hydrocarbons			
					Chemical Name	Naphthalene (8260)	Phenanthrene	Pyrene
					MTCA Cleanup Level Source	Method A	NE	Method B
					Cleanup Level Concentration (mg/kg)	5	NE	2,400
AC-MW1	AC-MW1-3.0	3	08/28/2017	Subject Property	< 0.05 U	--	--	
AC-MW1	AC-MW1-10.0	10	08/28/2017		< 0.05 U	--	--	
AC-MW2	AC-MW2-5.0	5	08/28/2017		< 0.05 U	< 0.01 U	< 0.01 U	
AC-MW2	AC-MW2-10.0	10	08/28/2017		< 0.05 U	< 0.01 U	< 0.01 U	
AC-MW3	AC-MW3-5.0	5	08/29/2017		< 0.05 U	--	--	
AC-MW3	AC-MW3-15.0	15	08/29/2017		< 0.05 U	--	--	
AC-MW4	AC-MW4-5.0	5	08/29/2017		< 0.05 U	--	--	
AC-MW4	AC-MW4-15.0	15	08/29/2017		< 0.05 U	--	--	
AC-MW5	AC-MW-5-5.0	5	11/08/2017		< 0.05 U	--	--	
AC-MW5	AC-MW-5-15.0	15	11/08/2017		< 0.05 U	--	--	
AC-MW5	AC-MW-5-35.0	35	11/08/2017		--	--	--	
AC-MW6	AC-MW-6-5.0	5	11/09/2017		< 0.05 U	--	--	
AC-MW6	AC-MW-6-15.0	15	11/09/2017		< 0.05 U	--	--	
AC-MW6	AC-MW-6-30.0	30	11/10/2017		--	--	--	
AC-MW7	AC-MW-7-5.0	5	11/10/2017		< 0.05 U	--	--	
AC-MW7	AC-MW-7-10.0	10	11/10/2017		< 0.05 U	--	--	
AC-MW7	AC-MW-7-15.0	15	11/10/2017		< 0.05 U	--	--	
AC-MW9	AC-MW-9-15.0	15	11/03/2017		< 0.05 U	--	--	
AC-MW9	AC-MW-9-20.0	20	11/03/2017		< 0.05 U	--	--	
AC-MW10	AC-MW-10-15.0	15	11/06/2017		< 0.05 U	--	--	
AC-MW10	AC-MW-10-20.0	20	11/06/2017		< 0.05 U	--	--	
AC-MW10	AC-MW-10-35.0	35	11/06/2017		--	--	--	
AC-SB-1	AC-SB-1-5.0	5	11/08/2017		< 0.05 U	--	--	
AC-SB-1	AC-SB-1-10.0	10	11/08/2017		< 0.05 U	--	--	
AC-SB-1	AC-SB-1-20.0	20	11/08/2017		< 0.05 U	--	--	
AC-SB-2	AC-SB-2-5.0	5	11/09/2017		< 0.05 U	--	--	
AC-SB-2	AC-SB-2-10.0	10	11/09/2017		< 0.05 U	--	--	
AC-SB-2	AC-SB-2-20.0	20	11/09/2017		< 0.05 U	--	--	
AC-SB-3	AC-SB-3-5.0	5	11/07/2017		< 0.05 U	--	--	
AC-SB-3	AC-SB-3-15.0	15	11/07/2017		< 0.05 U	--	--	
AC-SB-3	AC-SB-3-35.0	35	11/07/2017		--	--	--	
AC-SB-4	AC-SB-4-5.0	5	11/06/2017		< 0.05 U	--	--	
AC-SB-4	AC-SB-4-10.0	10	11/06/2017		0.32	--	--	
AC-SB-4	AC-SB-4-15.0	15	11/06/2017		< 0.05 U	--	--	
AC-SB-4	AC-SB-4-30.0	30	11/06/2017		--	--	--	
AC-SB-5	AC-SB-5-5.0	5	11/07/2017		< 0.05 U	--	--	
AC-SB-5	AC-SB-5-20.0	20	11/07/2017		< 0.05 U	--	--	
AC-SB-5	AC-SB-5-30.0	30	11/07/2017		--	--	--	
AC-SB-5	AC-SB-5-35.0	35	11/07/2017		--	--	--	
AC-SB-6	AC-SB-6-15.0	15	11/03/2017		< 0.05 U	--	--	
AC-SB-6	AC-SB-6-25.0	25	11/03/2017	--	--	--		
DP-1	DP-1-5.0	5	09/02/2017	< 0.05 U	--	--		
DP-1	DP-1-15.0	15	09/05/2017	< 0.05 U	--	--		
DP-2	DP-2-5.0*	5	09/05/2017	< 0.05 U	--	--		
DP-2	DP-2-10.0	10	09/05/2017	< 0.05 U	--	--		
DP-3	DP-3-5.0	5	09/05/2017	< 0.05 U	--	--		
DP-3	DP-3-15.0	15	09/05/2017	< 0.05 U	--	--		
DP-4	DP-4-5.0	5	09/05/2017	< 0.05 U	--	--		
DP-4	DP-4-10.0	10	09/05/2017	< 0.05 U	--	--		
DP-5	DP-5-5.0	5	09/05/2017	< 0.05 U	--	--		
DP-5	DP-5-10.0	10	09/05/2017	< 0.05 U	--	--		
DP-6	DP-6-5.0	5	09/05/2017	< 0.05 U	--	--		
DP-7	DP-7-5.0**	5	09/05/2017	< 0.05 U	--	--		
DP-7	DP-7-10.0	10	09/05/2017	< 0.05 U	--	--		
DP-8	DP-8-5.0	5	09/05/2017	< 0.05 U	--	--		
DP-8	DP-8-10.0	10	09/05/2017	< 0.05 U	--	--		
DP-9	DP-9-3.0	3	09/05/2017	< 0.05 U	--	--		
DP-9	DP-9-10.0	10	09/05/2017	< 0.05 U	--	--		

Table 4. Summary of Soil Chemical Data

Project No. 170304, Grand Street Commons Project, Seattle, Washington

					Polycyclic Aromatic Hydrocarbons		
Chemical Name					Naphthalene (8260)	Phenanthrene	Pyrene
MTCAL Cleanup Level Source					Method A	NE	Method B
Cleanup Level Concentration (mg/kg)					5	NE	2,400
Exploration Name	Sample Identification	Sample Depth (ft bgs)	Sample Date	Sample Location			
Explorations by Aspect Consulting 2017	DP-10	DP-10-5.0	5	09/05/2017	< 0.05 U	--	--
	DP-11	DP-11-5.0	5	09/05/2017	< 0.05 U	--	--
	DP-11	DP-11-10.0	10	09/05/2017	< 0.05 U	--	--
	DP-12	DP-12-5.0	5	09/05/2017	< 0.05 U	--	--
	DP-12	DP-12-7.5	7.5	09/05/2017	< 0.05 U	--	--
	DP-13	DP-13-5.0	5	09/05/2017	< 0.05 U	--	--
	DP-13	DP-13-10.0	10	09/05/2017	< 0.05 U	--	--
	DP-14	DP-14-3.0	3	09/06/2017	0.061	--	--
	DP-14	DP-14-10.0	10	09/06/2017	< 0.05 U	--	--
	DP-15	DP-15-3.0	3	09/06/2017	0.13	--	--
	DP-15	DP-15-15.0	15	09/06/2017	< 0.05 U	--	--
	DP-16	DP-16-3.0	3	09/06/2017	< 0.05 U	--	--
	DP-16	DP-16-10.0	10	09/06/2017	< 0.05 U	--	--
	DP-17	DP-17-3.0	3	09/06/2017	< 0.05 U	0.011	0.023
	DP-17	DP-17-10.0	10	09/06/2017	< 0.05 U	--	--
	DP-18	DP-18-3.0	3	09/06/2017	< 0.05 U	--	--
	DP-18	DP-18-7.0	7	09/06/2017	< 0.05 U	--	--
	DP-19	DP-19-2.0	2	09/06/2017	< 0.05 U	< 0.01 U	< 0.01 U
	DP-20	DP-20-3.0	3	09/06/2017	< 0.05 U	--	--
	DP-21	DP-21-2.0	2	09/06/2017	< 0.05 U	--	--
	DP-22	DP-22-3.0	3	09/06/2017	< 0.05 U	--	--
	Explorations by Others between 2002 and 2013	AW-SB-1	SB-1-2.5	2.5	02/18/2002	--	< 0.12 U
AW-SB-2		SB-2-2.5	2.5	02/18/2002	--	< 0.108 U	< 0.108 U
AW-SB-3		SB-3-2.5	2.5	02/18/2002	--	< 0.102 U	< 0.102 U
AW-SB-4		SB-4-7	7	02/18/2002	--	6.43	0.622
AW-SB-4		SB-4-12	12	02/18/2002	--	--	--
AW-SB-5		SB-5-12	12	02/18/2002	--	--	--
AW-SB-6		SB-6-12	12	02/18/2002	--	--	--
AW-SB-6		SB-6-27	27	02/18/2002	--	--	--
AW-SB-7		SB-7-2.5	2.5	02/19/2012	--	--	--
AW-SB-8		SB-8-7	7	02/19/2012	--	--	--
PC-PH-SB-6		SB6-2.5-5.0	2.5-5	09/05/2016	--	--	--
PC-PH-SB-6		SB6-7.5-10.0	7.5-10	09/05/2016	--	--	--
PC-PH-SB-6		SB6-12.5-15.0	12.5-15	09/05/2016	--	--	--
PC-PH-SB-6		SB6-22.5-25.0	22.5-25	9/5/2012	--	--	--
PC-PH-SB-6		SB6-33.0-36.0	33-36	09/05/2012	--	--	--
PC-PH-SB-6		SB6-46.0-47.0	46-47	09/05/2012	--	--	--
PC-PH-SB-6		SB6-51.0-55.0	51-55	09/05/2012	--	--	--
PC-PH-SB-6		SB6-62.5-65.0	62.5-65	09/06/2012	--	--	--
PC-PH-SB-6		SB6-75.0-78.0	75-78	09/06/2012	--	--	--
PC-PH-SB-7		SB7-2.0-4.0	4-Feb	09/04/2012	--	--	--
PC-PH-SB-7		SB7-7.5-9.5	7.5-9.5	09/04/2012	--	--	--
PC-PH-SB-7		SB7-13.0-17.0	13-17	09/04/2012	--	--	--
PC-PH-SB-7		SB7-25.0-26.5	25-26.5	09/04/2012	--	--	--
PC-PH-SB-7		SB7-34.0-35.0	34-35	09/04/2012	--	--	--
PC-PH-SB-7		SB7-42.0-45.0	42-45	09/04/2012	--	--	--
PC-PH-SB-7		SB7-52.5-55.0	52.5-55	09/04/2012	--	--	--
PC-PH-SB-7		SB7-62.5-65.0	62.5-65	09/04/2012	--	--	--
PC-PH-SB-7		SB7-75.0-77.5	75-77.5	9/5/2012	--	--	--
PC-PH-SB-8		SB8-0.5-6.0	0.5-6	09/10/2012	--	--	--
PC-PH-SB-8		SB8-6.0-10.0	6-10	09/10/2012	--	--	--
PC-PH-SB-8		SB8-10.0-16.5	10-16.5	09/10/2012	--	--	--
PC-PH-SB-8		SB8-20.0-26.0	20-26	09/10/2012	--	--	--
PC-PH-SB-8		SB8-33.0-35.0	33-35	09/10/2012	--	--	--
PC-PH-SB-8		SB8-40.0-46.0	40-46	09/10/2012	--	--	--
PC-PH-SB-8	SB8-50.0-55.0	50-55	09/10/2012	--	--	--	
PC-PH-SB-8	SB8-64.0-66.0	64-66	09/10/2012	--	--	--	

Subject Property

Table 4. Summary of Soil Chemical Data
 Project No. 170304, Grand Street Commons Project, Seattle, Washington

Exploration Name	Sample Identification	Sample Depth (ft bgs)	Sample Date	Sample Location	Polycyclic Aromatic Hydrocarbons			
					Chemical Name	Naphthalene (8260)	Phenanthrene	Pyrene
					MTCA Cleanup Level Source	Method A	NE	Method B
					Cleanup Level Concentration (mg/kg)	5	NE	2,400
PC-PH-SB-8	SB8-74.0-80.0	74-80	09/10/2012	Subject Property	--	--	--	
PC-PH-SB-9	SB9-63.5-70.0	63.5-70	09/07/2012		--	--	--	
PC-PH-SB-9	SB9-70.0-78.5	70-78.5	09/07/2012		--	--	--	
PC-PH-SB-9	SB9-85.0-87.5	85-87.5	09/07/2012		--	--	--	
PC-PH-SB-9	SB9-95.0-97.5	95-97.5	09/07/2012		--	--	--	
PC-PH-SB-13	SB13-34-36	34-36	01/04/2013		--	--	--	
PC-PH-SB-13	SB13-44-46	44-46	01/04/2013		--	--	--	
PC-PH-SB-13	SB13-54-56	54-56	01/04/2013		--	--	--	
PC-PH-SB-13	SB13-64-66	64-66	01/07/2013		--	--	--	
PC-PH-SB-13	SB13-74-76	74-76	01/07/2013		--	--	--	
PC-PH-SB-13	SB13-86-88	86-88	01/07/2013		--	--	--	
PC-PH-SB-13	SB13-94-96	94-96	01/07/2013		--	--	--	
PC-PH-SB-13	SB13-104-106	104-106	01/07/2013		--	--	--	
PC-PH-SB-14	SB14-34-36	34-36	12/26/2012		--	--	--	
PC-PH-SB-14	SB14-44-46	44-46	12/26/2012		--	--	--	
PC-PH-SB-14	SB14-54-56	54-56	12/27/2012		--	--	--	
PC-PH-SB-14	SB14-64-66	64-66	12/27/2012		--	--	--	
PC-PH-SB-14	SB14-74-76	74-76	12/27/2012		--	--	--	
PC-PH-SB-14	SB14-84-86	84-86	12/28/2012		--	--	--	
PC-PH-SB-14	SB14-94-96	94-96	12/28/2012		--	--	--	
PC-PH-SB-14	SB14-104-106	104-106	12/28/2012		--	--	--	
PC-PH-SB-15	SB15-64-66	64-66	01/02/2013		--	--	--	
PC-PH-SB-15	SB15-74-76	74-76	01/02/2013		--	--	--	
PC-PH-SB-15	SB15-84-86	84-86	01/02/2013		--	--	--	
PC-PH-SB-15	SB15-94-96	94-96	01/03/2013		--	--	--	
PC-PH-SB-15	SB15-104-106	104-106	01/03/2013		--	--	--	
URS-B-5	B2F0080-03	5.5-8	05/30/2002		--	--	--	
URS-B-9	B2F0080-24	4-8	05/30/2002		--	--	--	
URS-B-11	B-11-20	20	02/20/2003		--	--	--	
URS-B-12	B-12-25	25	02/20/2003		--	--	--	
URS-B-13	B-13-5	5	02/21/2003		--	--	--	
URS-MW-5	B2F0409-02	10	06/13/2002		< 0.1 U	--	--	
URS-MW-6	B2F0409-08	10	06/13/2002		< 0.1 U	--	--	
URS-MW-8	MW-8-2.5	2.5	02/20/2003		< 0.1 U	--	--	
URS-MW-10	MW-10-7.5	7.5	02/20/2003		--	--	--	
URS-MW-11	MW-11-4	4	02/21/2003		< 0.1 U	--	--	
URS-MW-13	MW-13-25	25	02/21/2003		--	--	--	
URS-SB-1	URS-SB-1-26	23	09/04/2012		--	--	--	
URS-SB-1	URS-SB-1-31	31	09/04/2012		--	--	--	
URS-SB-1	URS-SB-1-41	41	09/04/2012		--	--	--	
URS-SB-2	URS-SB-2-25.5	25.5	09/04/2012		--	--	--	
URS-SB-2	URS-SB-2-36	36	09/04/2012		--	--	--	
URS-SB-2	URS-SB-2-46	46	09/04/2012		--	--	--	
URS-SB-3	URS-SB-3-20.5	20.5	09/04/2012		--	--	--	
URS-SB-3	URS-SB-3-31	31	09/04/2012		--	--	--	
URS-SB-3	URS-SB-3-36	36	09/04/2012		--	--	--	
URS-SB-4	URS-SB-4-26	26	09/05/2012		--	--	--	
URS-SB-4	URS-SB-4-31	31	09/05/2012		--	--	--	
URS-SB-4	URS-SB-4-41	41	09/05/2012		--	--	--	
URS-SB-5	URS-SB-5-26	26	09/05/2012		--	--	--	
URS-SB-5	URS-SB-5-41	41	09/05/2012	--	--	--		
URS-SB-5	URS-SB-5-56.5	56.5	09/05/2012	--	--	--		
URS-SB-6	URS-SB-6-21	21	09/05/2012	--	--	--		
URS-SB-6	URS-SB-6-31	31	09/05/2012	--	--	--		
URS-SB-6	URS-SB-6-46	46	09/05/2012	--	--	--		
URS-SB-7	URS-SB-7-26	26	09/06/2012	--	--	--		
URS-SB-7	URS-SB-7-31	31	09/06/2012	--	--	--		
URS-SB-7	URS-SB-7-41	41	09/06/2012	--	--	--		

Table 4. Summary of Soil Chemical Data

Project No. 170304, Grand Street Commons Project, Seattle, Washington

	Exploration Name	Sample Identification	Sample Depth (ft bgs)	Sample Date	Sample Location	Polycyclic Aromatic Hydrocarbons			
						Chemical Name	Naphthalene (8260)	Phenanthrene	Pyrene
						MTCA Cleanup Level Source	Method A	NE	Method B
						Cleanup Level Concentration (mg/kg)	5	NE	2,400
Explorations by Others between 2012 and 2013	URS-SB-8	URS-SB-8-21	21	09/06/2012	Subject Property	--	--	--	
	URS-SB-8	URS-SB-8-31	31	09/06/2012		--	--	--	
	URS-SB-8	URS-SB-8-41.5	41.5	09/06/2012		--	--	--	
	URS-SB-9	URS-SB-9-26	26	09/06/2012		--	--	--	
	URS-SB-9	URS-SB-9-36	36	09/06/2012		--	--	--	
	URS-SB-9	URS-SB-9-41	41	09/06/2012		--	--	--	
Explorations by Others in 2012	PC-PH-SB-1	SB1-0.25-5.0	0.25-5	09/11/2012	North-adjacent SCC/Former Penthouse Drapery property	--	--	--	
	PC-PH-SB-1	SB1-6.5-10.0	6.5-10	09/11/2012		--	--	--	
	PC-PH-SB-1	SB1-10.0-16.0	10-16	09/11/2012		--	--	--	
	PC-PH-SB-1	SB1-25.0-30.0	25-30	09/11/2012		--	--	--	
	PC-PH-SB-1	SB1-34.0-35.0	34-35	09/11/2012		--	--	--	
	PC-PH-SB-1	SB1-40.0-45.0	40-45	09/11/2012		--	--	--	
	PC-PH-SB-1	SB1-52.5-55.0	52.5-55	09/11/2012		--	--	--	
	PC-PH-SB-1	SB1-63.5-65.0	63.5-65	09/11/2012		--	--	--	
	PC-PH-SB-1	SB1-70.0-75.0	70-75	09/12/2012		--	--	--	
	PC-PH-SB-10	SB10-0-1	0-1	12/08/2012		--	--	--	
	PC-PH-SB-11	SB11-2-4	2-4	12/08/2012		--	--	--	
	PC-PH-SB-11	SB11-8-10	8-10	12/08/2012		--	--	--	
PC-PH-SB-11	SB11-10-12	10-12	12/08/2012	--	--	--			
PC-PH-SB-12	SB12-2-4	2-4	12/08/2012	--	--	--			

Notes

ft bgs = feet below existing ground surface

mg/kg = milligrams per kilogram

-- = Not analyzed

* = Samples were additionally analyzed for polychlorinated

** = Samples were additionally analyzed for Lead and cadmium

U = Analyte not detected above the listed reporting limit

X = Chromatographic pattern does not match quantitation standard. However, the listed values are considered detections based on field screening evidence (moderate sheen and slight odor).

J = Listed value is an estimate.

NE = Not Established

MTCA = Model Toxics Control Act

Bolded value indicates analyte detected at the listed concentration.

Blue shading indicates analyte detected at a concentration greater than the corresponding MTCA cleanup level.

Table 5. Summary of Groundwater Chemical Data

Project No. 170304, Grand Street Commons Project, Seattle, Washington

Chemical Name			Total Petroleum Hydrocarbons			Petroleum Distillates			Volatile Organic Compounds				
			Gasoline-Range Organics	Diesel-Range Organics	Motor Oil-Range Organics	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene	1,1,1-Trichloroethane	1,1-Dichloroethane	1,2-Dibromoethane (EDB)
MTCA Cleanup Level Source			Method_A	Method_A	Method_A	Method_A	Method_A	Method_A	Method_A	Method_A	Method_B	Method_A	
Cleanup Level Concentration (ug/L)			800*	500	500	5	1,000	700	1,000	160	200	7.68	0.01
Exploration Name	Sample Identification	Sample Date											
Monitoring Wells Installed and Sampled by Aspect in 2017.	AC-MW-1	AC-MW1	09/01/2017	< 100 U	< 50 U	< 250 U	< 0.35 U	< 1 U	< 1 U	< 2 U	< 1 U	< 1 U	< 1 U
	AC-MW-2	AC-MW2	09/01/2017	< 100 U	220 X	310 X	< 0.35 U	< 1 U	< 1 U	< 2 U	< 1 U	< 1 U	< 1 U
	AC-MW-3	AC-MW3	09/01/2017	< 100 U	< 50 U	< 250 U	< 0.35 U	< 1 U	< 1 U	< 2 U	< 1 U	< 1 U	< 1 U
	AC-MW-4	AC-MW4	09/02/2017	< 100 U	100 X	< 250 U	< 0.35 U	< 1 U	< 1 U	< 2 U	< 1 U	18	9.6
	AC-MW-4	AC-MW-4-111517	11/15/2017	--	--	--	< 0.35 U	< 1 U	< 1 U	< 2 U	< 1 U	12	6.5
	AC-MW-5	AC-MW-5-111517	11/15/2017	--	--	--	< 0.35 U	< 1 U	< 1 U	< 2 U	< 1 U	2.1	1
	AC-MW-6	AC-MW-6-111517	11/15/2017	< 100 U	< 50 U	< 250 U	< 0.35 U	< 1 U	< 1 U	< 2 U	< 1 U	3.5	< 1 U
	AC-MW-7	AC-MW-7-111517	11/15/2017	< 100 U	< 50 U	< 250 U	< 0.35 U	< 1 U	< 1 U	< 2 U	< 1 U	1	< 1 U
	AC-MW-9	AC-MW-9-111517	11/15/2017	--	--	--	< 0.35 U	< 1 U	< 1 U	< 2 U	< 1 U	< 1 U	< 1 U
	AC-MW-10	AC-MW-10-111517	11/15/2017	32,000	2,800 X	< 250 U	460	370	190	4,200	130	< 1 U	< 1 U
Monitoring Wells Installed by Others Between 2002 and 2013, and Were Reconditioned and Sampled by Aspect in 2017	PC-MW-30S		09/02/2017	< 100 U	< 50 U	< 250 U	< 0.35 U	< 1 U	< 1 U	< 2 U	< 1 U	< 1 U	< 1 U
	URS-MW-2		09/01/2017	< 100 U	< 50 U	< 250 U	< 0.35 U	< 1 U	< 1 U	< 2 U	< 1 U	< 1 U	< 1 U
	URS-MW-3		09/01/2017	< 100 U	240 X	320 X	< 0.35 U	< 1 U	< 1 U	< 2 U	< 1 U	< 1 U	< 1 U
	URS-MW-12		09/02/2017	< 100 U	910	< 250 U	< 0.35 U	< 1 U	< 1 U	< 2 U	< 1 U	< 1 U	< 1 U
	URS-MW-13		09/01/2017	< 100 U	< 50 U	< 250 U	< 0.35 U	< 1 U	< 1 U	< 2 U	< 1 U	< 1 U	< 1 U
	URS-MW-16		09/01/2017	< 100 U	220 X	< 250 U	< 0.35 U	< 1 U	< 1 U	< 2 U	< 1 U	< 1 U	< 1 U
	URS-MW-27S		09/01/2017	< 100 U	< 50 U	< 250 U	< 0.35 U	< 1 U	< 1 U	< 2 U	< 1 U	< 1 U	< 1 U
	URS-MW-28I		09/01/2017	< 100 U	78 X	< 250 U	< 0.35 U	< 1 U	< 1 U	< 2 U	< 1 U	< 1 U	< 1 U
Monitoring Wells Installed by Others Between 2004 and 2013. Subsequently, the Wells Were Decommissioned for ERH Remedy Implementation.	URS-MW-14		08/07/2012	--	--	--	--	--	--	--	< 50 U	< 50 U	< 50 U
	URS-MW-18		07/24/2012	--	--	--	--	--	--	--	< 0.40 U	< 0.40 U	< 0.40 U
	URS-MW-29		08/07/2012	--	--	--	--	--	--	--	< 60 U	< 60 U	< 60 U
	URS-SCC1		08/07/2012	--	--	--	--	--	--	--	< 0.20 U	< 0.20 U	< 0.20 U
	URS-SCC2		08/07/2012	--	--	--	--	--	--	--	< 30 U	< 30 U	< 30 U
	URS-MW-21D		08/07/2012	--	--	--	--	--	--	--	< 0.20 U	0.27	< 0.20 U
	URS-MW-21S		08/07/2012	--	--	--	--	--	--	--	< 0.20 U	< 0.20 U	< 0.20 U

Notes:

ug/L = micrograms per liter

-- = Not analyzed

* Gasoline MTCA cleanup level when benzene is present.

MTCA - Model Toxics Control Act

Bold indicates chemical detected at the listed concentration.

Shading indicates chemical detected at a concentration greater than the applicable MTCA cleanup level.

X - Resulting chromatographic pattern does not match the standard quantitation for diesel fuel likely due to presence of polar organics.

Historical analytical data was obtained from the report titled "Draft for Ecology Review Remedial Investigation-Feasibility Study Report" dated July 25, 2014, that was prepared by other consultants.

Table 5. Summary of Groundwater Chemical Data

Project No. 170304, Grand Street Commons Project, Seattle, Washington

Chemical Name			Volatile Organic Compounds									
			1,2-Dichloroethane (EDC)	Carbon Tetrachloride	cis-1,2-Dichloroethene (DCE)	Methyl tert-butyl ether (MTBE)	Methylene Chloride	Tetrachloroethene (PCE)	trans-1,2-Dichloroethene	Trichloroethene (TCE)	Vinyl Chloride	
MTCA Cleanup Level Source			Method_A	Method_B	Method_B	Method_A	Method_A	Method_A	Method_B	Method_A	Method_A	
Cleanup Level Concentration (ug/L)			5	0.625	16	20	5	5	160	5	0.2	
Exploration Name	Sample Identification	Sample Date										
Monitoring Wells Installed and Sampled by Aspect in 2017.	AC-MW-1	AC-MW1	09/01/2017	< 1 U	< 1 U	< 1 U	< 1 U	< 5 U	< 1 U	< 1 U	< 1 U	< 0.2 U
	AC-MW-2	AC-MW2	09/01/2017	< 1 U	< 1 U	< 1 U	< 1 U	< 5 U	< 1 U	< 1 U	< 1 U	< 0.2 U
	AC-MW-3	AC-MW3	09/01/2017	< 1 U	< 1 U	< 1 U	< 1 U	< 5 U	< 1 U	< 1 U	< 1 U	< 0.2 U
	AC-MW-4	AC-MW4	09/02/2017	< 1 U	< 1 U	< 1 U	< 1 U	< 5 U	< 1 U	< 1 U	< 1 U	< 0.2 U
	AC-MW-4	AC-MW-4-111517	11/15/2017	< 1 U	< 1 U	< 1 U	< 1 U	< 5 U	< 1 U	< 1 U	< 1 U	< 0.2 U
	AC-MW-5	AC-MW-5-111517	11/15/2017	< 1 U	< 1 U	< 1 U	< 1 U	< 5 U	< 1 U	< 1 U	2.3	< 0.2 U
	AC-MW-6	AC-MW-6-111517	11/15/2017	< 1 U	< 1 U	< 1 U	< 1 U	< 5 U	< 1 U	< 1 U	< 1 U	< 0.2 U
	AC-MW-7	AC-MW-7-111517	11/15/2017	< 1 U	< 1 U	< 1 U	< 1 U	< 5 U	< 1 U	< 1 U	< 1 U	< 0.2 U
	AC-MW-9	AC-MW-9-111517	11/15/2017	< 1 U	< 1 U	< 1 U	< 1 U	< 5 U	< 1 U	< 1 U	< 1 U	< 0.2 U
	AC-MW-10	AC-MW-10-111517	11/15/2017	< 1 U	< 1 U	< 1 U	< 1 U	< 5 U	< 1 U	< 1 U	< 1 U	< 0.2 U
Monitoring Wells Installed by Others Between 2002 and 2013, and Were Reconditioned and Sampled by Aspect in 2017	PC-MW-30S		09/02/2017	< 1 U	< 1 U	< 1 U	< 1 U	< 5 U	< 1 U	< 1 U	< 1 U	< 0.2 U
	URS-MW-2		09/01/2017	< 1 U	< 1 U	1.5	< 1 U	< 5 U	2.2	< 1 U	< 1 U	< 0.2 U
	URS-MW-3		09/01/2017	< 1 U	< 1 U	< 1 U	< 1 U	< 5 U	< 1 U	< 1 U	< 1 U	< 0.2 U
	URS-MW-12		09/02/2017	< 1 U	< 1 U	< 1 U	< 1 U	< 5 U	< 1 U	< 1 U	< 1 U	< 0.2 U
	URS-MW-13		09/01/2017	< 1 U	< 1 U	< 1 U	< 1 U	< 5 U	< 1 U	< 1 U	< 1 U	< 0.2 U
	URS-MW-16		09/01/2017	< 1 U	< 1 U	< 1 U	< 1 U	< 5 U	< 1 U	< 1 U	< 1 U	< 0.2 U
	URS-MW-27S		09/01/2017	< 1 U	< 1 U	< 1 U	< 1 U	< 5 U	11	< 1 U	< 1 U	< 0.2 U
URS-MW-28I		09/01/2017	< 1 U	< 1 U	< 1 U	< 1 U	< 5 U	< 1 U	< 1 U	< 1 U	< 0.2 U	
Monitoring Wells Installed by Others Between 2004 and 2013. Subsequently, the Wells Were Decommissioned for ERH Remedy Implementation.	URS-MW-14		08/07/2012	< 50 U	< 50 U	< 50 U	--	< 250 U	7,900	< 50 U	< 50 U	< 50 U
	URS-MW-18		07/24/2012	< 0.40 U	< 0.40 U	< 0.40 U	--	< 2.0 U	89	< 0.40 U	< 0.40 U	< 0.40 U
	URS-MW-29		08/07/2012	< 60 U	< 60 U	< 60 U	--	< 300 U	12,000	< 60 U	< 60 U	< 60 U
	URS-SCC1		08/07/2012	< 0.20 U	< 0.20 U	< 0.20 U	--	< 1.0 U	27	< 0.20 U	< 0.20 U	< 0.20 U
	URS-SCC2		08/07/2012	< 30 U	< 30 U	< 30 U	--	< 150 U	5,900	< 30 U	< 30 U	< 30 U
	URS-MW-21D		08/07/2012	< 0.20 U	< 0.20 U	< 0.20 U	--	< 1.0 U	< 1.0 U	< 0.20 U	< 0.20 U	< 0.20 U
	URS-MW-21S		08/07/2012	< 0.20 U	< 0.20 U	< 0.20 U	--	< 1.0 U	7.8	< 0.20 U	< 0.20 U	< 0.20 U

Notes:

ug/L = micrograms per liter

-- = Not analyzed

* Gasoline MTCA cleanup level when benzene is present.

MTCA - Model Toxics Control Act

Bold indicates chemical detected at the listed concentration.

Shading indicates chemical detected at a concentration greater than the applicable MTCA cleanup level.

X - Resulting chromatographic pattern does not match the standard quantitation for diesel fuel likely due to presence of polar organics.

Historical analytical data was obtained from the report titled "Draft for Ecology Review Remedial Investigation-Feasibility Study Report" dated July 25, 2014, that was prepared by other consultants.

Table 5. Summary of Groundwater Chemical Data

Project No. 170304, Grand Street Commons Project, Seattle, Washington

Chemical Name			SVOCs	Metals								
			1,4-Dioxane	Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver	
MTCA Cleanup Level Source			Method_B	Method_A	Method_B	Method_A	Method_A	Method_A	Method_A	Method_B	Method_B	
Cleanup Level Concentration (ug/L)			0.438	5	3,200	5	50	15	2	80	80	
Exploration Name	Sample Identification	Sample Date										
Monitoring Wells Installed and Sampled by Aspect in 2017.	AC-MW-1	AC-MW1	09/01/2017	< 0.4 U	< 1 U	18	< 1 U	1.42	< 1 U	< 1 U	< 1 U	< 1 U
	AC-MW-2	AC-MW2	09/01/2017	< 0.4 U	1.19	29	< 1 U	< 1 U	< 1 U	< 1 U	2.95	< 1 U
	AC-MW-3	AC-MW3	09/01/2017	< 0.4 U	2.21	42.2	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
	AC-MW-4	AC-MW4	09/02/2017	4	1.27	46.5	< 1 U	< 1 U	< 1 U	< 1 U	1.15	< 1 U
	AC-MW-4	AC-MW-4-111517	11/15/2017	0.48	--	--	--	--	--	--	--	--
	AC-MW-5	AC-MW-5-111517	11/15/2017	< 0.4 U	--	--	--	--	--	--	--	--
	AC-MW-6	AC-MW-6-111517	11/15/2017	< 0.4 U	--	--	--	--	--	--	--	--
	AC-MW-7	AC-MW-7-111517	11/15/2017	< 0.4 U	--	--	--	--	--	--	--	--
	AC-MW-9	AC-MW-9-111517	11/15/2017	< 0.4 U	1.81	21.6	< 1 U	3.5	< 1 U	< 1 U	< 1 U	< 1 U
	AC-MW-10	AC-MW-10-111517	11/15/2017	< 0.4 U	5.52	50.4	< 1 U	1.02	5.81	< 1 U	< 1 U	< 1 U
Monitoring Wells Installed by Others Between 2002 and 2013, and Were Reconditioned and Sampled by Aspect in 2017	PC-MW-30S		09/02/2017	< 0.4 U	--	--	--	--	--	--	--	--
	URS-MW-2		09/01/2017	< 0.4 U	--	--	--	--	--	--	--	--
	URS-MW-3		09/01/2017	< 0.4 U	--	--	--	--	--	--	--	--
	URS-MW-12		09/02/2017	< 0.4 U	--	--	--	--	--	--	--	--
	URS-MW-13		09/01/2017	< 0.4 U	--	--	--	--	--	--	--	--
	URS-MW-16		09/01/2017	< 0.4 U	--	--	--	--	--	--	--	--
	URS-MW-27S		09/01/2017	< 0.4 U	--	--	--	--	--	--	--	--
	URS-MW-28I		09/01/2017	0.69	--	--	--	--	--	--	--	--
Monitoring Wells Installed by Others Between 2004 and 2013. Subsequently, the Wells Were Decommissioned for ERH Remedy Implementation.	URS-MW-14		08/07/2012	--	--	--	--	--	--	--	--	--
	URS-MW-18		07/24/2012	< 0.40 U	--	--	--	--	--	--	--	--
	URS-MW-29		08/07/2012	--	--	--	--	--	--	--	--	--
	URS-SCC1		08/07/2012	--	--	--	--	--	--	--	--	--
	URS-SCC2		08/07/2012	--	--	--	--	--	--	--	--	--
	URS-MW-21D		08/07/2012	--	--	--	--	--	--	--	--	--
	URS-MW-21S		08/07/2012	--	--	--	--	--	--	--	--	--

Notes:

ug/L = micrograms per liter

-- = Not analyzed

* Gasoline MTCA cleanup level when benzene is present.

MTCA - Model Toxics Control Act

Bold indicates chemical detected at the listed concentration.

Shading indicates chemical detected at a concentration greater than the applicable MTCA cleanup level.

polar organics.

Historical analytical data was obtained from the report titled "Draft for Ecology Review Remedial Investigation-Feasibility Study Report" dated July 25, 2014, that was prepared by other consultants.

Table 6. Summary of Soil Gas Chemical Data

Project No. 170304, Grand Street Commons Project, Seattle, Washington

Exploration Name		SG-1	SG-2	SG-3	SG-4	SG-5	SG-6	SG-7	SG-8
Sample Identification		SG-1-102717	SG-2-102717	SG-3-102717	SG-4-102717	SG-5-102717	SG-6-102717	SG-7-102717	SG-8-102717
Sample Depth		5 ft bgs	5 ft bgs	5 ft bgs	5 ft bgs	5 ft bgs	5 ft bgs	5 ft bgs	5 ft bgs
Sample Date		10/27/2017	10/27/2017	10/27/2017	10/27/2017	10/27/2017	10/27/2017	10/27/2017	10/27/2017
Sample Location		Subject Property - East Block				Subject Property - West Block			
MTCA Subslab Soil Gas Screening Level_Method B Residential (ug/m ³)									
Chemical Name									
Petroleum Distillates									
Benzene	10.7	12	40	65	46	31	36	52	57
Toluene	76200	15	37	130	19	44	59	50	44
Ethylbenzene	15200	440	15	27	4.3	5.3	120	50	18
m,p-Xylenes	1520	2000	46	64	8.4	13	470	150	61
o-Xylene	1520	500	16	25	4	4.8	130	53	18
Volatile Organic Compounds									
Tetrachloroethene (PCE)	321	2	83	20	6.9	< 1.7 U	< 1.7 U	19	6.9
Trichloroethene (TCE)	12.3	< 1.3 U	61	1.6	< 1.3 U	< 1.3 U	< 1.3 U	2	330
cis-1,2-Dichloroethene (DCE)	NE	< 0.99 U	< 0.99 U	< 0.99 U	< 0.99 U	< 0.99 U	< 0.99 U	< 0.99 U	< 0.99 U
trans-1,2-Dichloroethene	NE	< 0.99 U	< 0.99 U	< 0.99 U	< 0.99 U	< 0.99 U	< 0.99 U	< 0.99 U	< 0.99 U
Vinyl Chloride	9.33	< 0.64 U	3.7	5.1	9.6	1	1	4.3	2.7
1,1,1-Trichloroethane	76200	< 1.4 U	1400	430	2.9	< 1.4 U	2.6	47	160
1,1,2-Trichloroethane	5.21	< 1.4 U	< 1.4 U	< 1.4 U	< 1.4 U	< 1.4 U	< 1.4 U	< 1.4 U	1.9
1,1-Dichloroethane	52.1	< 1 U	7.6	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
1,1-Dichloroethene	3050	< 0.99 U	< 0.99 U	< 0.99 U	< 0.99 U	< 0.99 U	< 0.99 U	< 0.99 U	3.9
1,2-Dichloroethane (EDC)	3.21	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Chloroethane	NE	< 0.66 U	1.4	< 0.66 U	3.5	< 0.66 U	< 0.66 U	1.1	2.8
Others									
Naphthalene	2.45	5.3 J	2.2 J	< 1.3 U	1.5 J	< 1.3 U	3.3 J	10 J	3.1 J
1,4-Dioxane	NE	< 0.9 U	< 0.9 U	< 0.9 U	< 0.9 U	< 0.9 U	< 0.9 U	< 0.9 U	< 0.9 U

Notes:

ft bgs = feet below existing ground surface

ug/m³ = micrograms per cubic meter

U = Analyte not detected above the listed reporting limit

J = Listed value is an estimate

NE = Not Established

MTCA = Model Toxics Control Act

Bolded value indicates analyte detected at the listed concentration

Blue shading indicates analyte detected at a concentration greater than the corresponding MTCA screening level.

FIGURES



SUBJECT PROPERTY

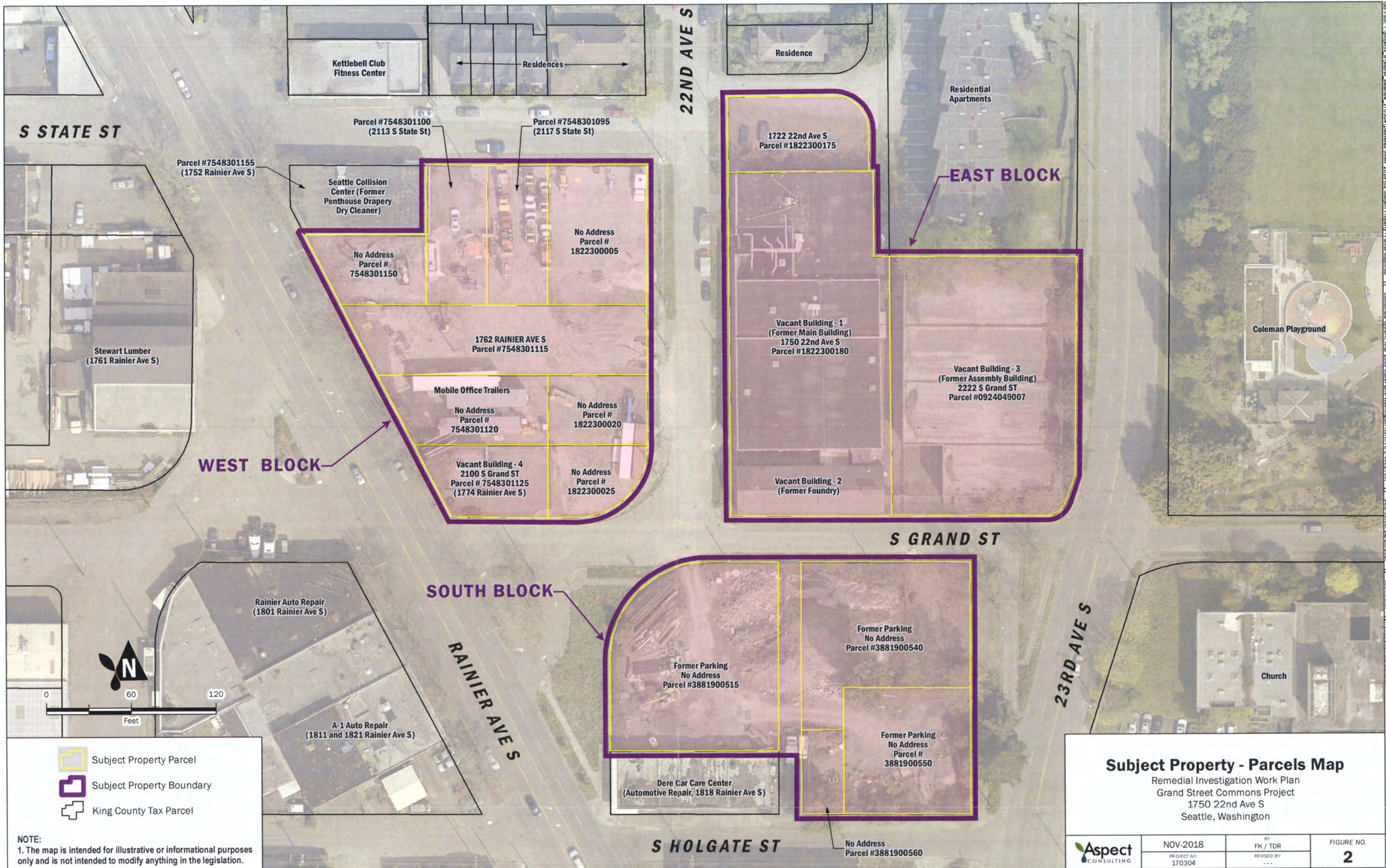
SUBJECT PROPERTY

Lake Washington

Subject Property Map
 Remedial Investigation Work Plan
 Grand Street Commons Project
 1750 22nd Ave S
 Seattle, Washington

	NOV-2018	BY FK / TDR	FIGURE NO. 1
	PROJECT NO 170304	REVISED BY —	

GIS Path: I:\Projects & WIPs\Bishaw_170304\Delivered\RWMP_2018\01 Subject Property Map.mxd | Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet | Date Saved: 11/6/2018 | User: tudman | Print Date: 11/6/2018



S STATE ST

22ND AVE S

S GRAND ST

S HOLGATE ST

RAINIER AVE S

23RD AVE S

Parcel #7548301155
(1752 Rainier Ave S)

Parcel #7548301100
(2113 S State St)

Parcel #7548301095
(2117 S State St)

1722 22nd Ave S
Parcel #1822300175

Seattle Collision Center (Former
Penthouse Drapery
Dry Cleaner)

No Address
Parcel #
7548301150

No Address
Parcel #
1822300005

1762 RAINIER AVE S
Parcel #7548301115

Vacant Building - 1
(Former Main Building)
1750 22nd Ave S
Parcel #1822300180

Vacant Building - 3
(Former Assembly Building)
2222 S Grand ST
Parcel #0924049007

Mobile Office Trailers

No Address
Parcel #
7548301120

No Address
Parcel #
1822300020

Vacant Building - 4
2100 S Grand ST
Parcel # 7548301125
(1774 Rainier Ave S)

No Address
Parcel #
1822300025

Vacant Building - 2
(Former Foundry)

WEST BLOCK

EAST BLOCK

SOUTH BLOCK

Rainier Auto Repair
(1801 Rainier Ave S)

Former Parking
No Address
Parcel #3881900515

Former Parking
No Address
Parcel #3881900540

Former Parking
No Address
Parcel #
3881900550




A-1 Auto Repair
(1811 and 1821 Rainier Ave S)

Dere Car Care Center
(Automotive Repair, 1818 Rainier Ave S)

No Address
Parcel #3881900560

Coleman Playground

Church

-  Subject Property Parcel
-  Subject Property Boundary
-  King County Tax Parcel

NOTE:
1. The map is intended for illustrative or informational purposes only and is not intended to modify anything in the legislation.

Subject Property - Parcels Map

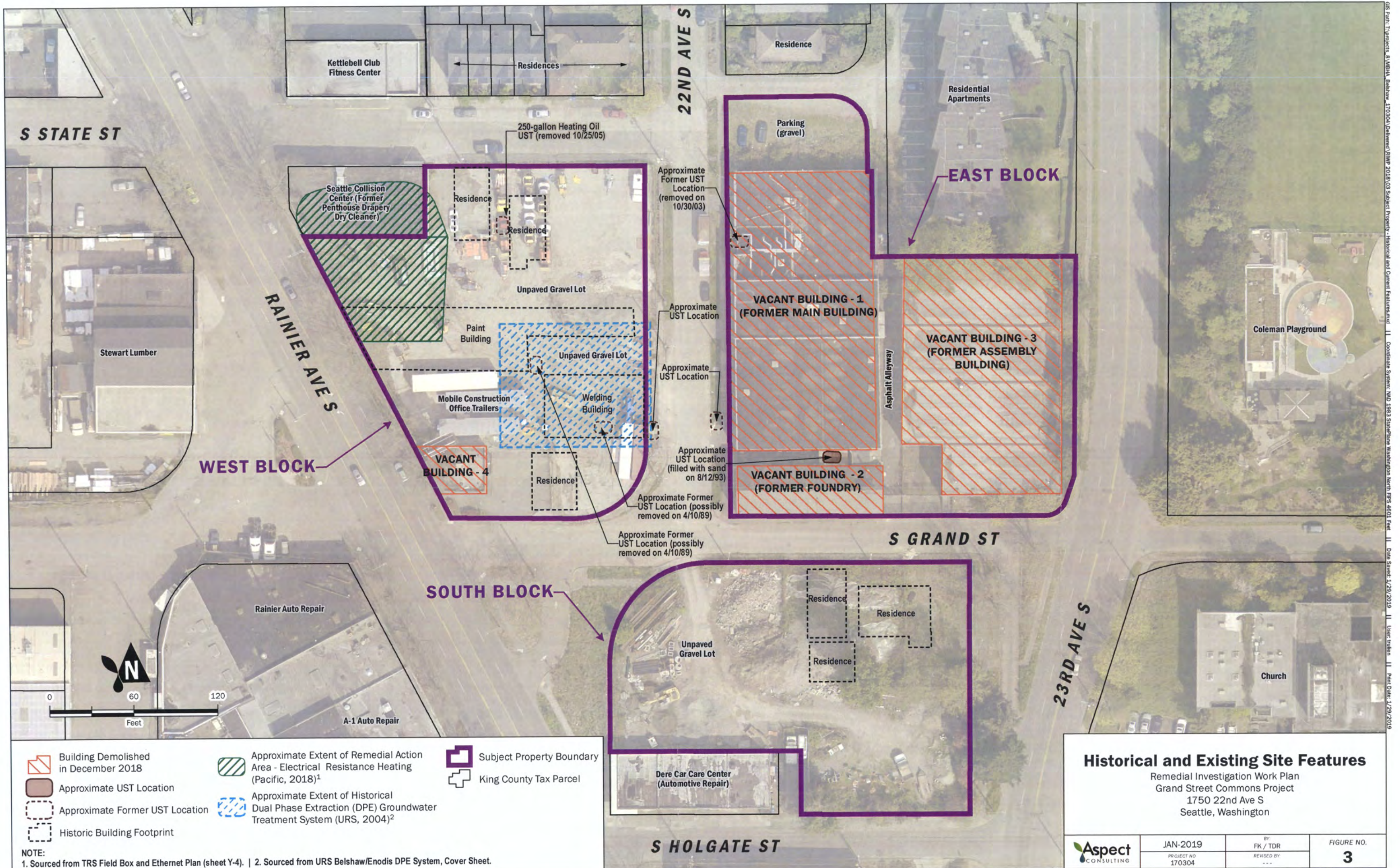
Remedial Investigation Work Plan
Grand Street Commons Project
1750 22nd Ave S
Seattle, Washington



NOV-2018
PROJECT NO
170304

BY
FK / TDR
REVISED BY

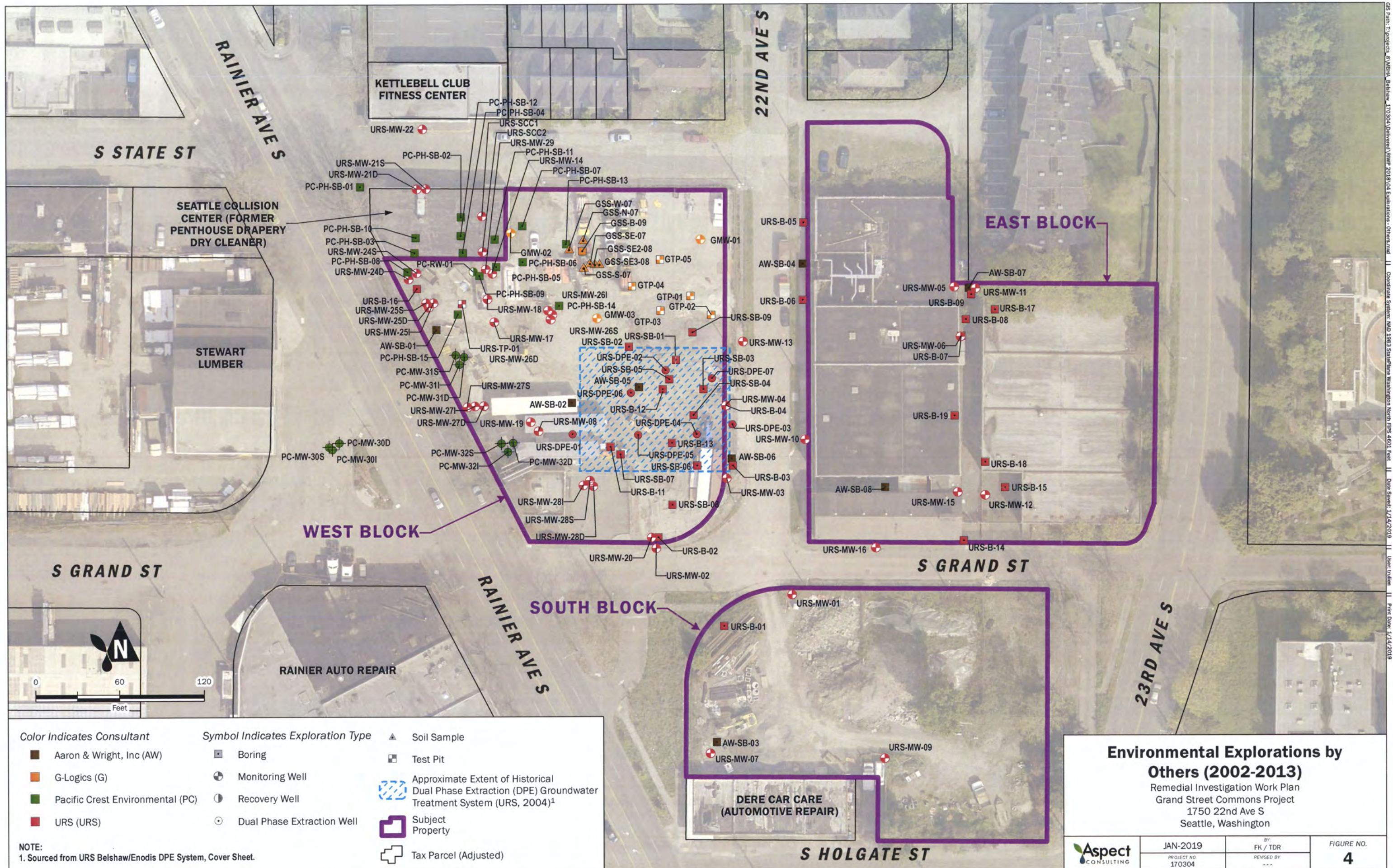
FIGURE NO.
2



- Building Demolished in December 2018
- Approximate Extent of Remedial Action Area - Electrical Resistance Heating (Pacific, 2018)¹
- Subject Property Boundary
- Approximate UST Location
- Approximate Extent of Historical Dual Phase Extraction (DPE) Groundwater Treatment System (URS, 2004)²
- Approximate Former UST Location
- Historic Building Footprint
- King County Tax Parcel

NOTE:
 1. Sourced from TRS Field Box and Ethernet Plan (sheet Y-4). | 2. Sourced from URS Belshaw/Enodis DPE System, Cover Sheet.

Historical and Existing Site Features		
Remedial Investigation Work Plan Grand Street Commons Project 1750 22nd Ave S Seattle, Washington		
 Aspect CONSULTING	JAN-2019 <small>PROJECT NO 170304</small>	BY FK / TDR REVISED BY ---
		FIGURE NO. 3



Color Indicates Consultant

- Aaron & Wright, Inc (AW)
- G-Logics (G)
- Pacific Crest Environmental (PC)
- URS (URS)

Symbol Indicates Exploration Type

- Boring
- Monitoring Well
- Recovery Well
- Dual Phase Extraction Well

▲ Soil Sample

- Test Pit
- Approximate Extent of Historical Dual Phase Extraction (DPE) Groundwater Treatment System (URS, 2004)¹
- Subject Property
- Tax Parcel (Adjusted)

NOTE:
1. Sourced from URS Belshaw/Enodis DPE System, Cover Sheet.

Environmental Explorations by Others (2002-2013)

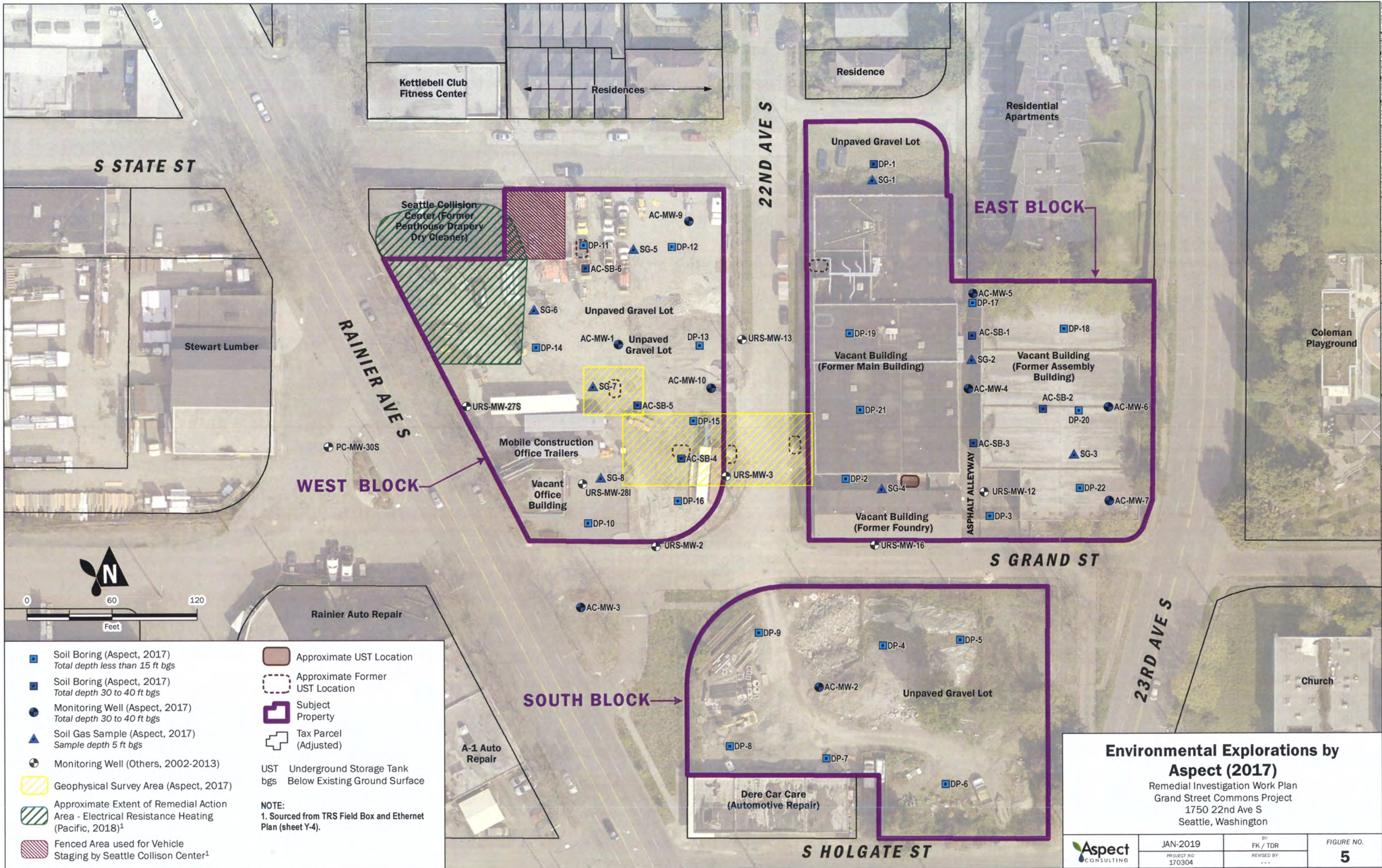
Remedial Investigation Work Plan
Grand Street Commons Project
1750 22nd Ave S
Seattle, Washington



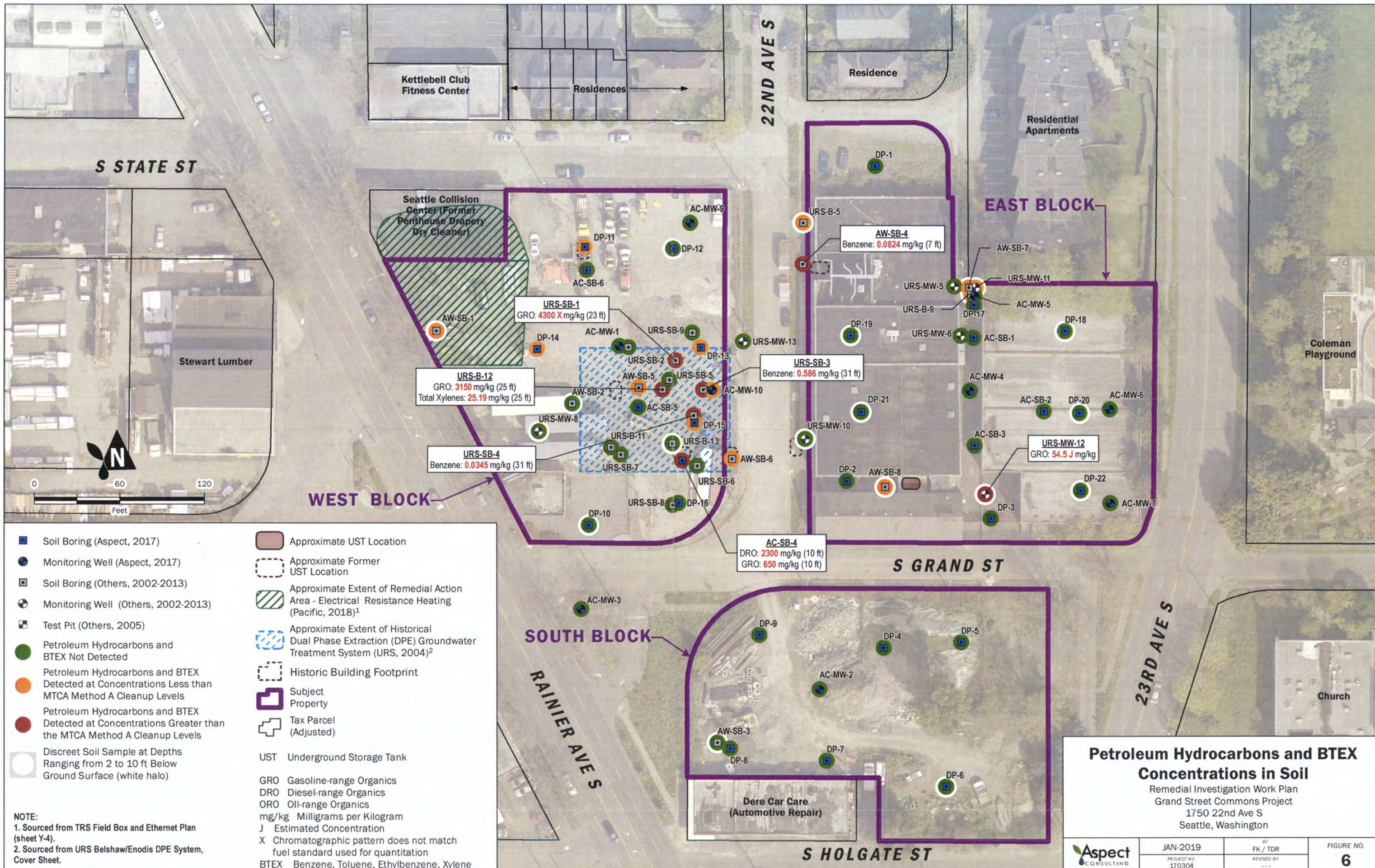
JAN-2019
PROJECT NO.
170304

BY:
FK / TDR
REVISED BY:

FIGURE NO.
4



Environmental Explorations by Aspect (2017) Remedial Investigation Work Plan Grand Street Commons Project 1750 22nd Ave S Seattle, Washington		
	JAN-2019 <small>PROJECT NO</small> 170304	BY FK / TDR <small>REVISED BY</small> ...
		<small>FIGURE NO.</small> 5

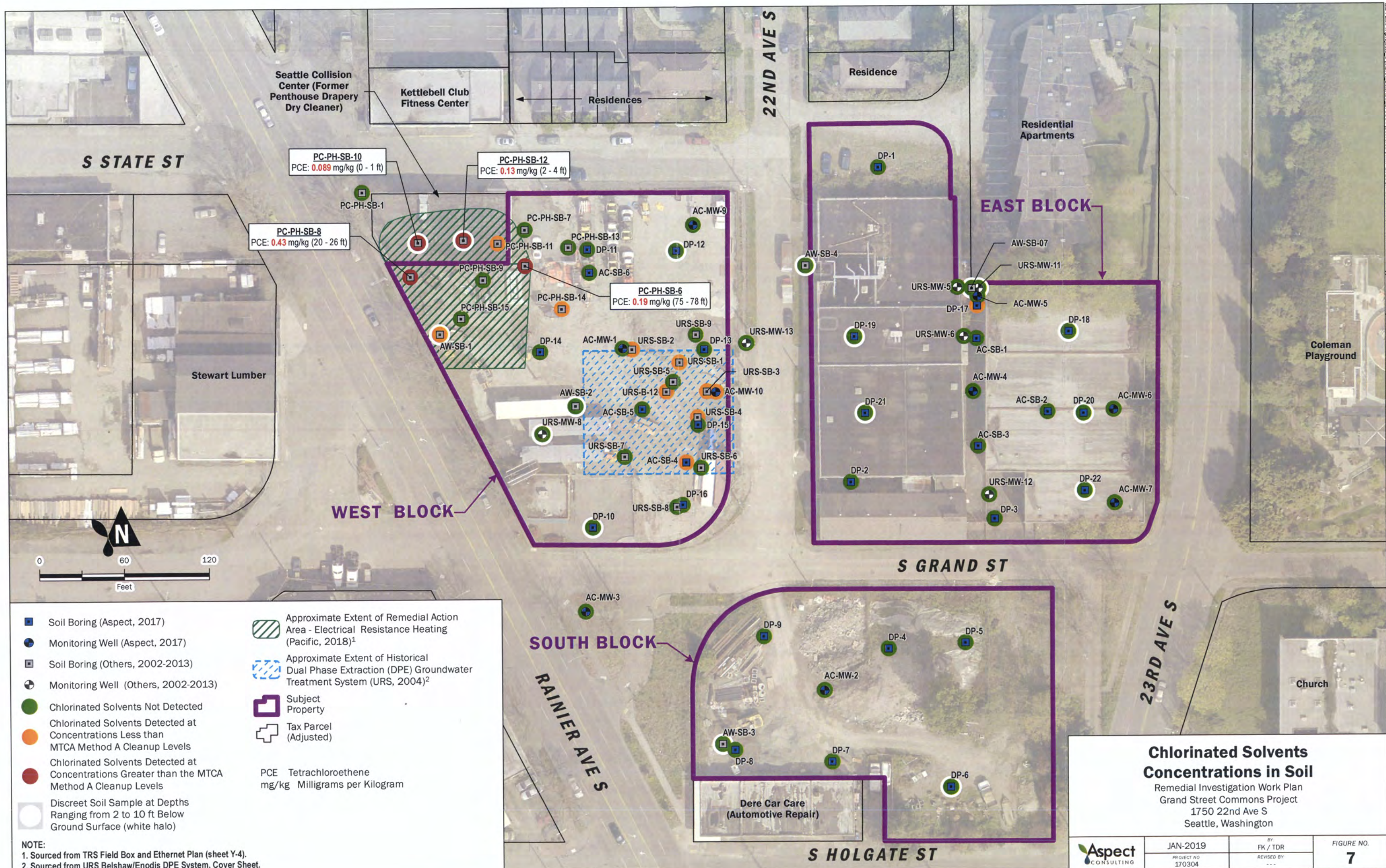


- Soil Boring (Aspect, 2017)
- Monitoring Well (Aspect, 2017)
- Soil Boring (Others, 2002-2013)
- Monitoring Well (Others, 2002-2013)
- Test Pit (Others, 2005)
- Petroleum Hydrocarbons and BTEX Not Detected
- Petroleum Hydrocarbons and BTEX Detected at Concentrations Less than MTCA Method A Cleanup Levels
- Petroleum Hydrocarbons and BTEX Detected at Concentrations Greater than the MTCA Method A Cleanup Levels
- Discreet Soil Sample at Depths Ranging from 2 to 10 ft Below Ground Surface (white halo)
- Approximate UST Location
- Approximate Former UST Location
- Approximate Extent of Remedial Action Area - Electrical Resistance Heating (Pacific, 2018)¹
- Approximate Extent of Historical Dual Phase Extraction (DPE) Groundwater Treatment System (URS, 2004)²
- Historic Building Footprint
- Subject Property
- Tax Parcel (Adjusted)
- UST Underground Storage Tank
- GRO Gasoline-range Organics
- DRO Diesel-range Organics
- ORO Oil-range Organics
- mg/kg Milligrams per Kilogram
- J Estimated Concentration
- X Chromatographic pattern does not match fuel standard used for quantitation
- BTEX Benzene, Toluene, Ethylbenzene, Xylene

NOTE:
 1. Sourced from TRS Field Box and Ethernet Plan (sheet Y-4).
 2. Sourced from URS Belshaw/Enodis DPE System, Cover Sheet.

Petroleum Hydrocarbons and BTEX Concentrations in Soil
 Remedial Investigation Work Plan
 Grand Street Commons Project
 1750 22nd Ave S
 Seattle, Washington

	JAN-2019	BY FK / TDR	FIGURE NO. 6
	PROJECT NO. 170304	REVISED BY ---	



- Soil Boring (Aspect, 2017)
- Monitoring Well (Aspect, 2017)
- Soil Boring (Others, 2002-2013)
- Monitoring Well (Others, 2002-2013)
- Chlorinated Solvents Not Detected
- Chlorinated Solvents Detected at Concentrations Less than MTCA Method A Cleanup Levels
- Chlorinated Solvents Detected at Concentrations Greater than the MTCA Method A Cleanup Levels
- Discreet Soil Sample at Depths Ranging from 2 to 10 ft Below Ground Surface (white halo)

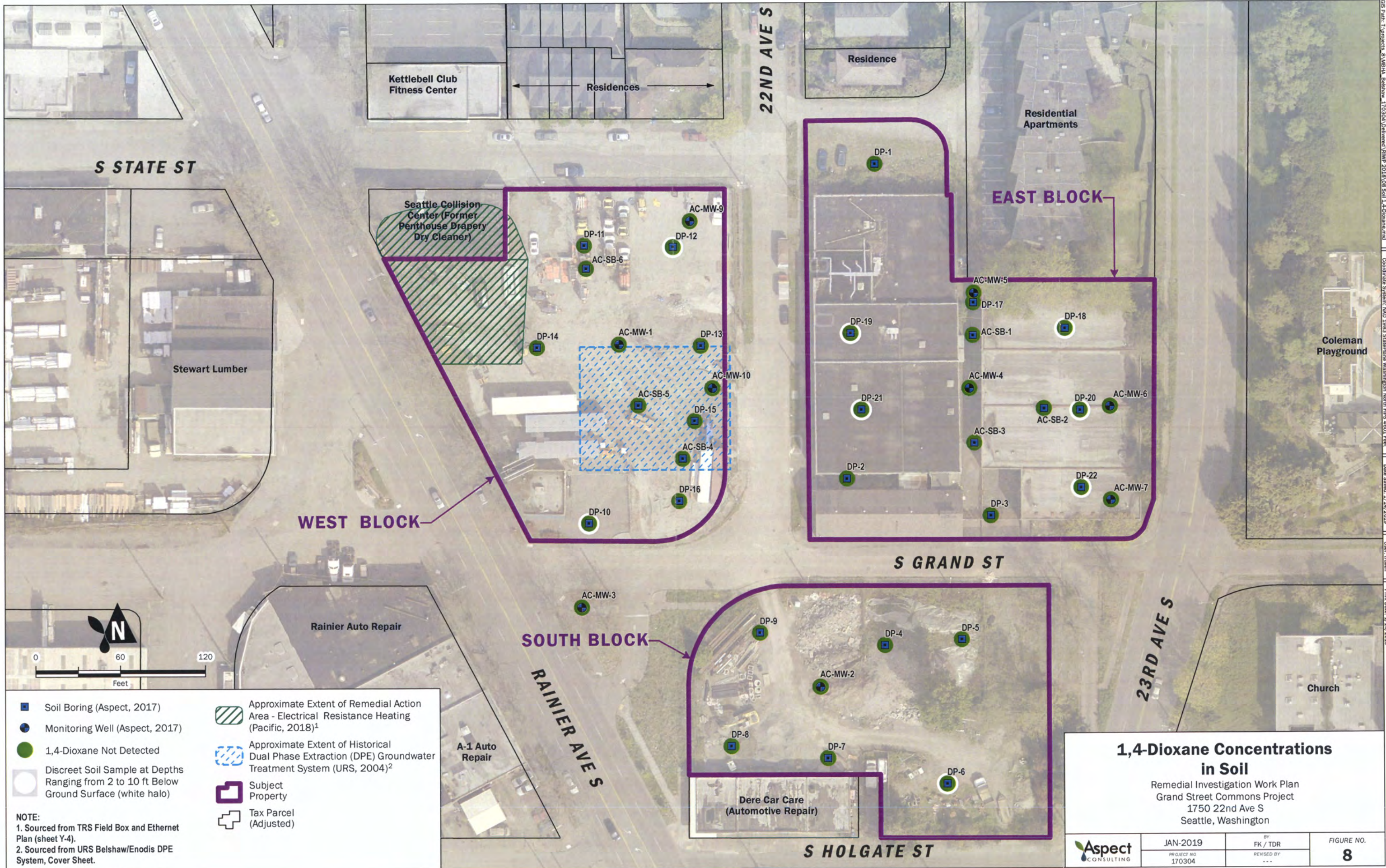
- Approximate Extent of Remedial Action Area - Electrical Resistance Heating (Pacific, 2018)¹
 - Approximate Extent of Historical Dual Phase Extraction (DPE) Groundwater Treatment System (URS, 2004)²
 - Subject Property
 - Tax Parcel (Adjusted)
- PCE Tetrachloroethene
mg/kg Milligrams per Kilogram

NOTE:
 1. Sourced from TRS Field Box and Ethernet Plan (sheet Y-4).
 2. Sourced from URS Belshaw/Enodis DPE System, Cover Sheet.

Chlorinated Solvents Concentrations in Soil

Remedial Investigation Work Plan
 Grand Street Commons Project
 1750 22nd Ave S
 Seattle, Washington

	JAN-2019	BY FK / TDR	FIGURE NO. 7
	PROJECT NO 170304	REVISED BY ---	



- Soil Boring (Aspect, 2017)
- Monitoring Well (Aspect, 2017)
- 1,4-Dioxane Not Detected
- Discreet Soil Sample at Depths Ranging from 2 to 10 ft Below Ground Surface (white halo)

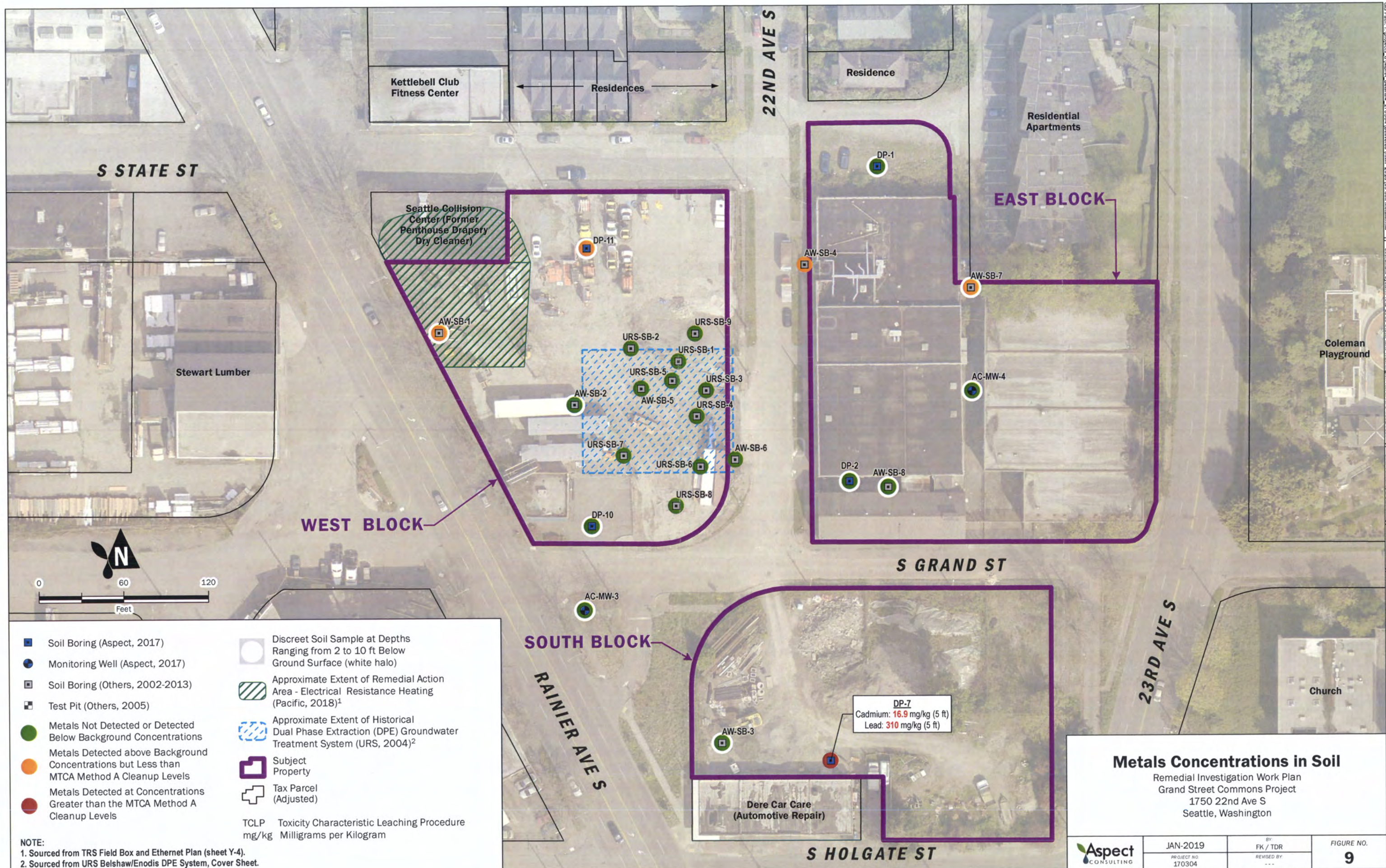
- Approximate Extent of Remedial Action Area - Electrical Resistance Heating (Pacific, 2018)¹
- Approximate Extent of Historical Dual Phase Extraction (DPE) Groundwater Treatment System (URS, 2004)²
- Subject Property
- Tax Parcel (Adjusted)

NOTE:
 1. Sourced from TRS Field Box and Ethernet Plan (sheet Y-4).
 2. Sourced from URS Belshaw/Enodis DPE System, Cover Sheet.

1,4-Dioxane Concentrations in Soil

Remedial Investigation Work Plan
 Grand Street Commons Project
 1750 22nd Ave S
 Seattle, Washington

	JAN-2019	BY FK / TDR	FIGURE NO. 8
	PROJECT NO 170304	REVISED BY ---	



GIS Path: J:\projects_8\MBWA_Belshaw_170304\Delivered\RWMP_2019\09 Soil Metals.mxd | Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet | Date Shared: 1/14/2019 | User: tullen | Print Date: 1/14/2019

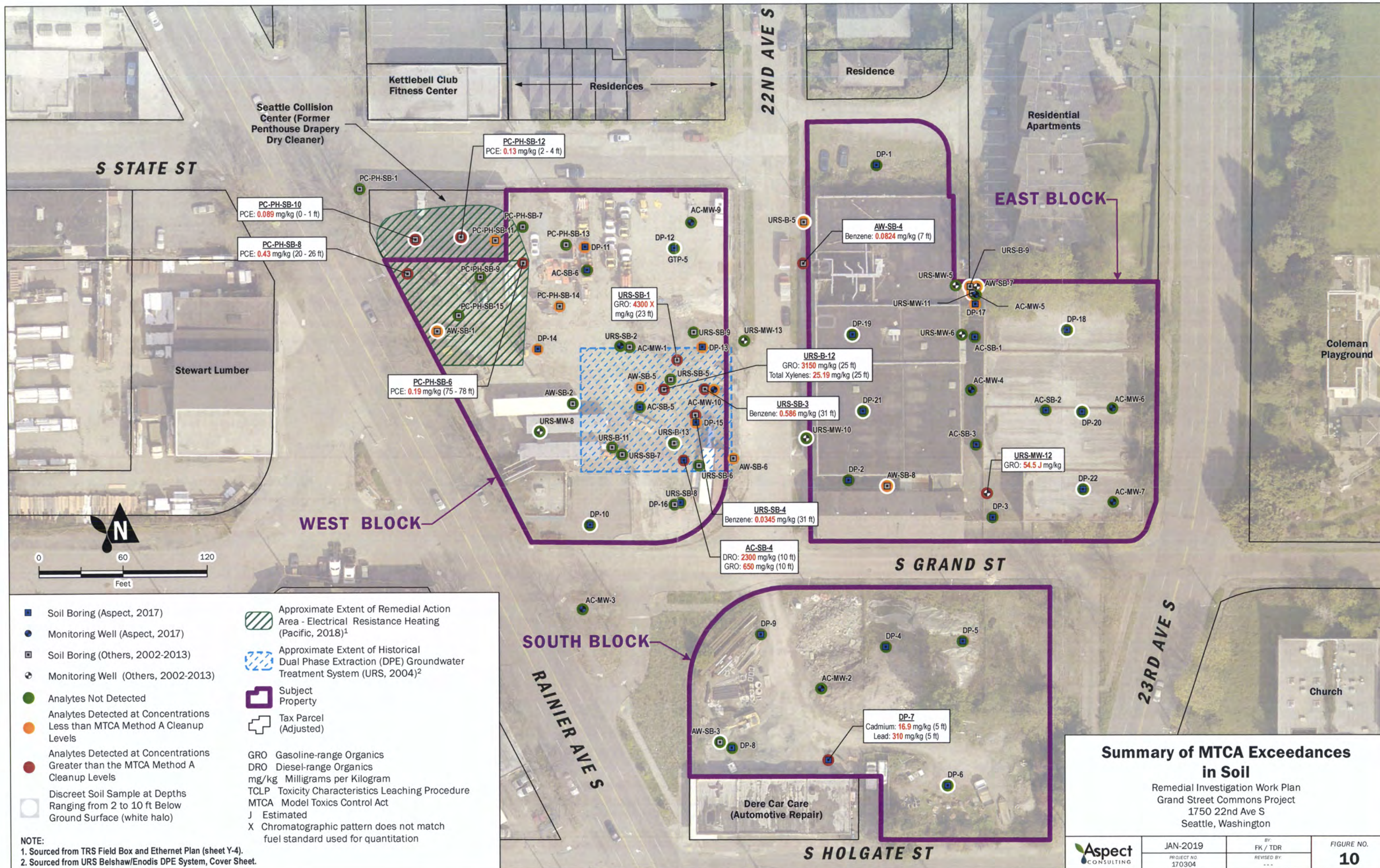
- Soil Boring (Aspect, 2017)
- Monitoring Well (Aspect, 2017)
- Soil Boring (Others, 2002-2013)
- Test Pit (Others, 2005)
- Metals Not Detected or Detected Below Background Concentrations
- Metals Detected above Background Concentrations but Less than MTCA Method A Cleanup Levels
- Metals Detected at Concentrations Greater than the MTCA Method A Cleanup Levels
- Discreet Soil Sample at Depths Ranging from 2 to 10 ft Below Ground Surface (white halo)
- Approximate Extent of Remedial Action Area - Electrical Resistance Heating (Pacific, 2018)¹
- Approximate Extent of Historical Dual Phase Extraction (DPE) Groundwater Treatment System (URS, 2004)²
- Subject Property
- Tax Parcel (Adjusted)
- TCLP Toxicity Characteristic Leaching Procedure
mg/kg Milligrams per Kilogram

NOTE:
 1. Sourced from TRS Field Box and Ethernet Plan (sheet Y-4).
 2. Sourced from URS Belshaw/Enodis DPE System, Cover Sheet.

Metals Concentrations in Soil

Remedial Investigation Work Plan
 Grand Street Commons Project
 1750 22nd Ave S
 Seattle, Washington

	JAN-2019	BY FK / TDR	FIGURE NO. 9
	PROJECT NO. 170304	REVISED BY ---	

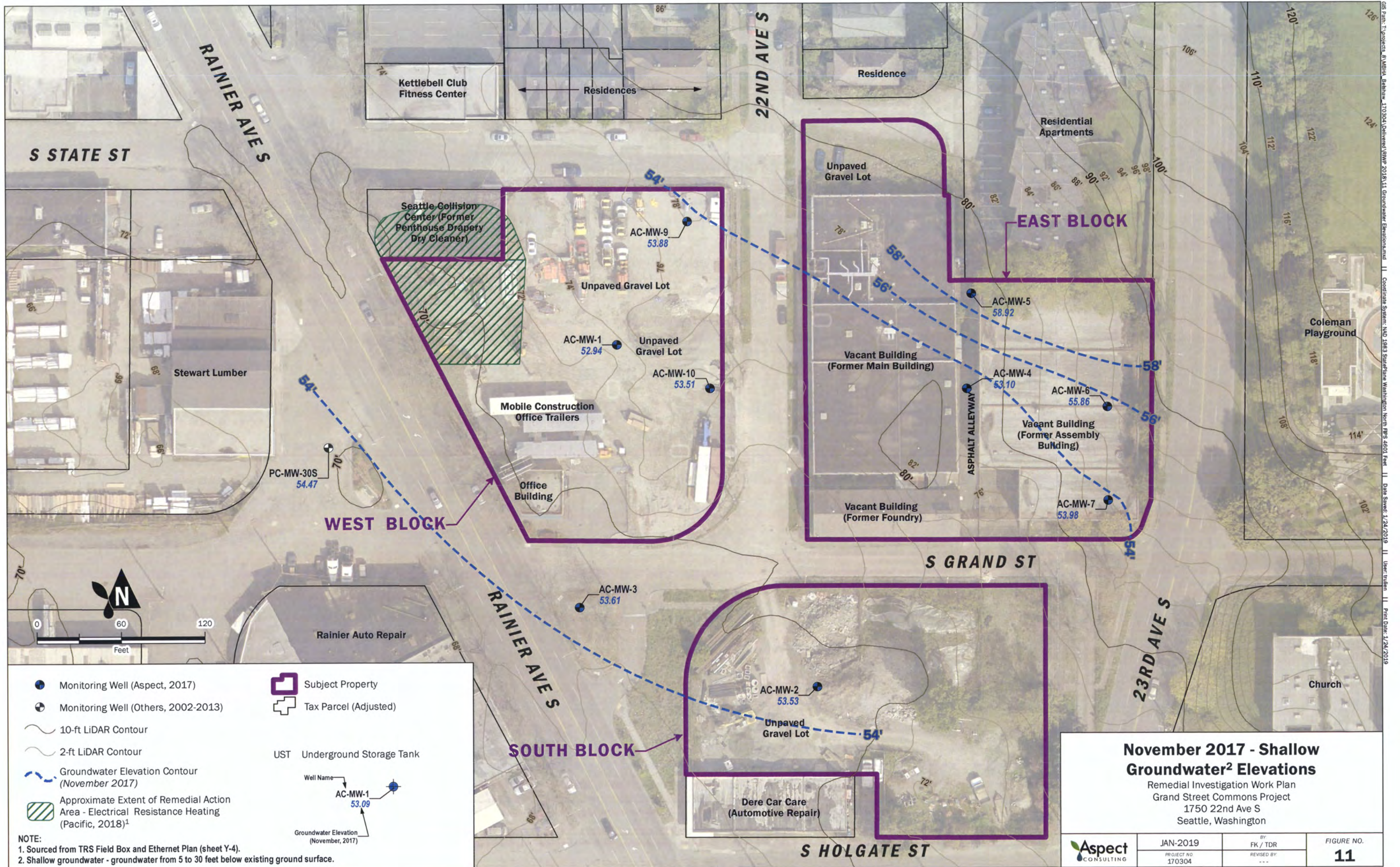


- Soil Boring (Aspect, 2017)
- Monitoring Well (Aspect, 2017)
- Soil Boring (Others, 2002-2013)
- Monitoring Well (Others, 2002-2013)
- Analytes Not Detected
- Analytes Detected at Concentrations Less than MTCA Method A Cleanup Levels
- Analytes Detected at Concentrations Greater than the MTCA Method A Cleanup Levels
- Discreet Soil Sample at Depths Ranging from 2 to 10 ft Below Ground Surface (white halo)

- ▨ Approximate Extent of Remedial Action Area - Electrical Resistance Heating (Pacific, 2018)¹
- ▨ Approximate Extent of Historical Dual Phase Extraction (DPE) Groundwater Treatment System (URS, 2004)²
- Subject Property
- Tax Parcel (Adjusted)
- GRO Gasoline-range Organics
- DRO Diesel-range Organics
- mg/kg Milligrams per Kilogram
- TCLP Toxicity Characteristics Leaching Procedure
- MTCA Model Toxics Control Act
- J Estimated
- X Chromatographic pattern does not match fuel standard used for quantitation

NOTE:
 1. Sourced from TRS Field Box and Ethernet Plan (sheet Y-4).
 2. Sourced from URS Belshaw/Enodis DPE System, Cover Sheet.

Summary of MTCA Exceedances in Soil		
Remedial Investigation Work Plan Grand Street Commons Project 1750 22nd Ave S Seattle, Washington		
Aspect CONSULTING	JAN-2019 PROJECT NO. 170304	BY: FK / TDR REVISED BY: ---
		FIGURE NO. 10



● Monitoring Well (Aspect, 2017)
 ○ Monitoring Well (Others, 2002-2013)
 ~ 10-ft LiDAR Contour
 ~ 2-ft LiDAR Contour
 - - - Groundwater Elevation Contour (November 2017)
 [Hatched Box] Approximate Extent of Remedial Action Area - Electrical Resistance Heating (Pacific, 2018)¹

[Purple Outline] Subject Property
 [White Outline] Tax Parcel (Adjusted)

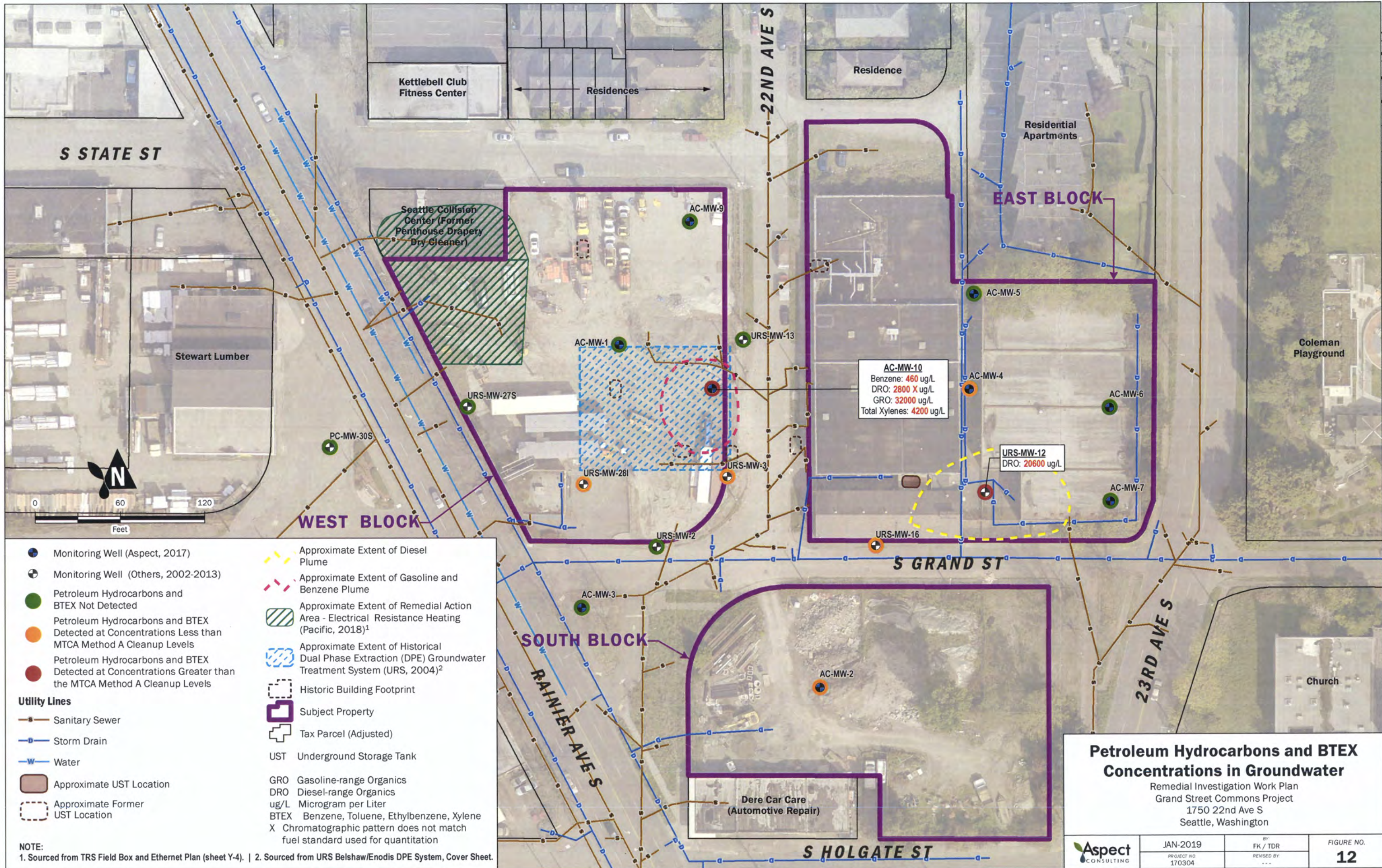
UST Underground Storage Tank

Well Name
 AC-MW-1
 53.09
 Groundwater Elevation (November, 2017)

NOTE:
 1. Sourced from TRS Field Box and Ethernet Plan (sheet Y-4).
 2. Shallow groundwater - groundwater from 5 to 30 feet below existing ground surface.

November 2017 - Shallow Groundwater² Elevations
 Remedial Investigation Work Plan
 Grand Street Commons Project
 1750 22nd Ave S
 Seattle, Washington

Aspect <small>CONSULTING</small>	JAN-2019 <small>PROJECT NO.</small> 170304	BY FK / TDR REVISIONS ---
		<small>FIGURE NO.</small> 11

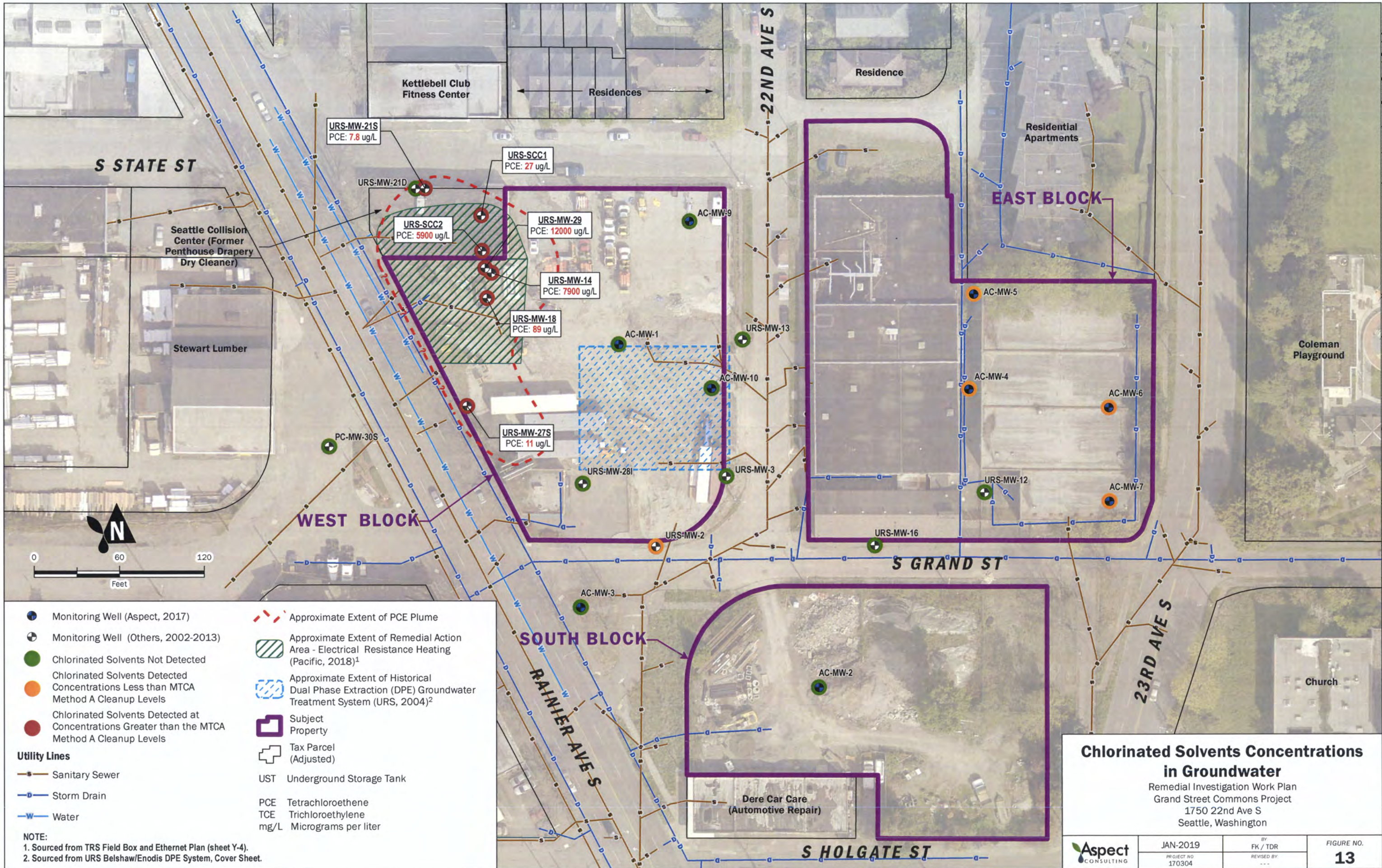


Petroleum Hydrocarbons and BTEX Concentrations in Groundwater

Remedial Investigation Work Plan
Grand Street Commons Project
1750 22nd Ave S
Seattle, Washington

	JAN-2019	BY FK / TDR	FIGURE NO. 12
	PROJECT NO 170304	REVISED BY ---	

- Monitoring Well (Aspect, 2017)
 - Monitoring Well (Others, 2002-2013)
 - Petroleum Hydrocarbons and BTEX Not Detected
 - Petroleum Hydrocarbons and BTEX Detected at Concentrations Less than MTCA Method A Cleanup Levels
 - Petroleum Hydrocarbons and BTEX Detected at Concentrations Greater than the MTCA Method A Cleanup Levels
- Utility Lines**
- Sanitary Sewer
 - Storm Drain
 - Water
 - Approximate UST Location
 - Approximate Former UST Location
- Approximate Extent of Diesel Plume
 - Approximate Extent of Gasoline and Benzene Plume
 - Approximate Extent of Remedial Action Area - Electrical Resistance Heating (Pacific, 2018)¹
 - Approximate Extent of Historical Dual Phase Extraction (DPE) Groundwater Treatment System (URS, 2004)²
 - Historic Building Footprint
 - Subject Property
 - Tax Parcel (Adjusted)
 - UST Underground Storage Tank
- GRO Gasoline-range Organics
DRO Diesel-range Organics
ug/L Microgram per Liter
BTEX Benzene, Toluene, Ethylbenzene, Xylene
X Chromatographic pattern does not match fuel standard used for quantitation
- NOTE:**
1. Sourced from TRS Field Box and Ethernet Plan (sheet Y-4). | 2. Sourced from URS Belshaw/Enodis DPE System, Cover Sheet.

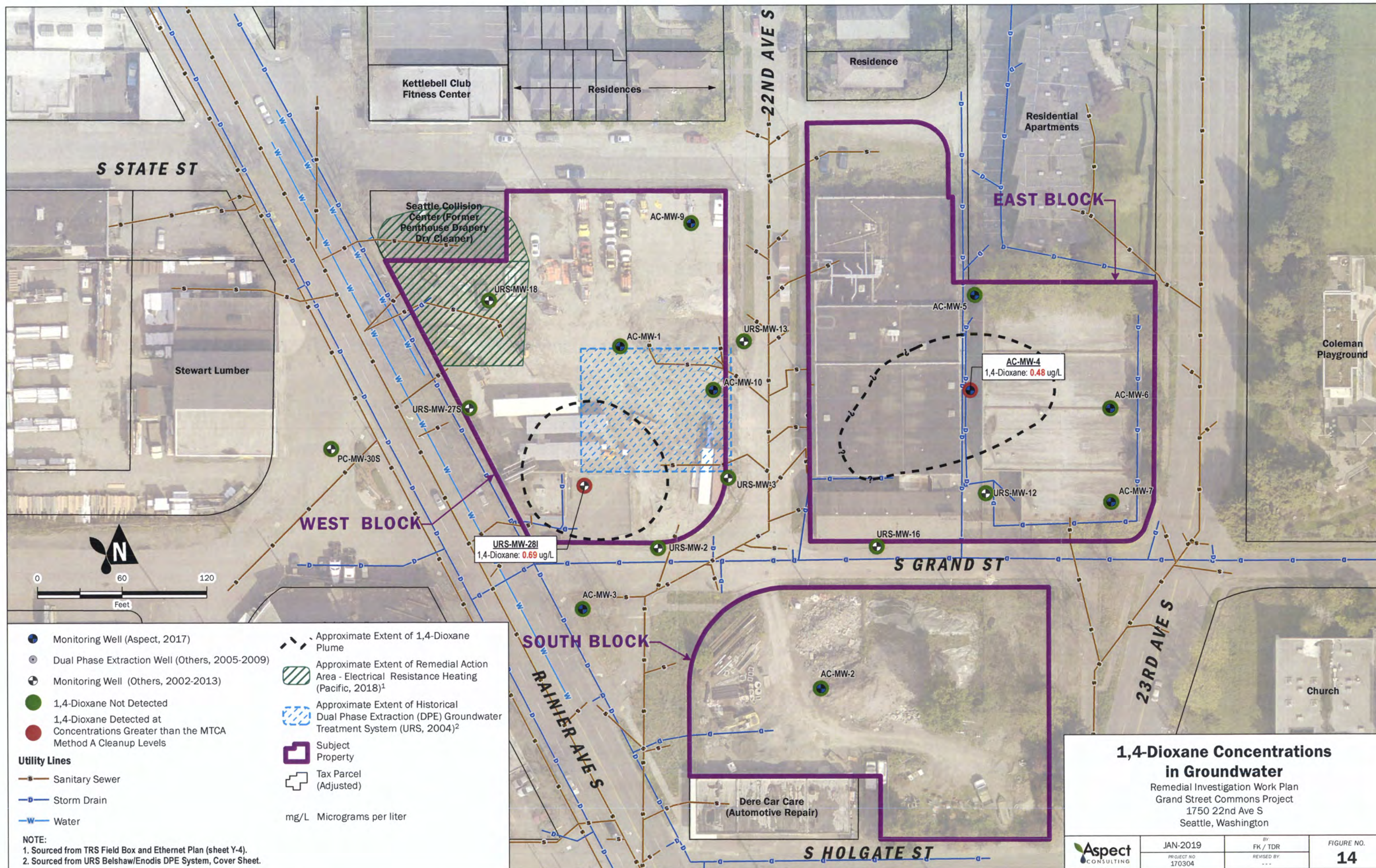


- Monitoring Well (Aspect, 2017)
 - Monitoring Well (Others, 2002-2013)
 - Chlorinated Solvents Not Detected
 - Chlorinated Solvents Detected Concentrations Less than MTCA Method A Cleanup Levels
 - Chlorinated Solvents Detected at Concentrations Greater than the MTCA Method A Cleanup Levels
- Utility Lines**
- Sanitary Sewer
 - Storm Drain
 - W Water
- Approximate Extent of PCE Plume
 - Approximate Extent of Remedial Action Area - Electrical Resistance Heating (Pacific, 2018)¹
 - Approximate Extent of Historical Dual Phase Extraction (DPE) Groundwater Treatment System (URS, 2004)²
 - Subject Property
 - Tax Parcel (Adjusted)
 - UST Underground Storage Tank
 - PCE Tetrachloroethene
 - TCE Trichloroethylene
 - mg/L Micrograms per liter

NOTE:
 1. Sourced from TRS Field Box and Ethernet Plan (sheet Y-4).
 2. Sourced from URS Belshaw/Enodis DPE System, Cover Sheet.

Chlorinated Solvents Concentrations in Groundwater
 Remedial Investigation Work Plan
 Grand Street Commons Project
 1750 22nd Ave S
 Seattle, Washington

	JAN-2019	BY FK / TDR	FIGURE NO. 13
	PROJECT NO 170304	REVISED BY ---	



- Monitoring Well (Aspect, 2017)
 - Dual Phase Extraction Well (Others, 2005-2009)
 - Monitoring Well (Others, 2002-2013)
 - 1,4-Dioxane Not Detected
 - 1,4-Dioxane Detected at Concentrations Greater than the MTCA Method A Cleanup Levels
- Utility Lines**
- Sanitary Sewer
 - Storm Drain
 - W Water

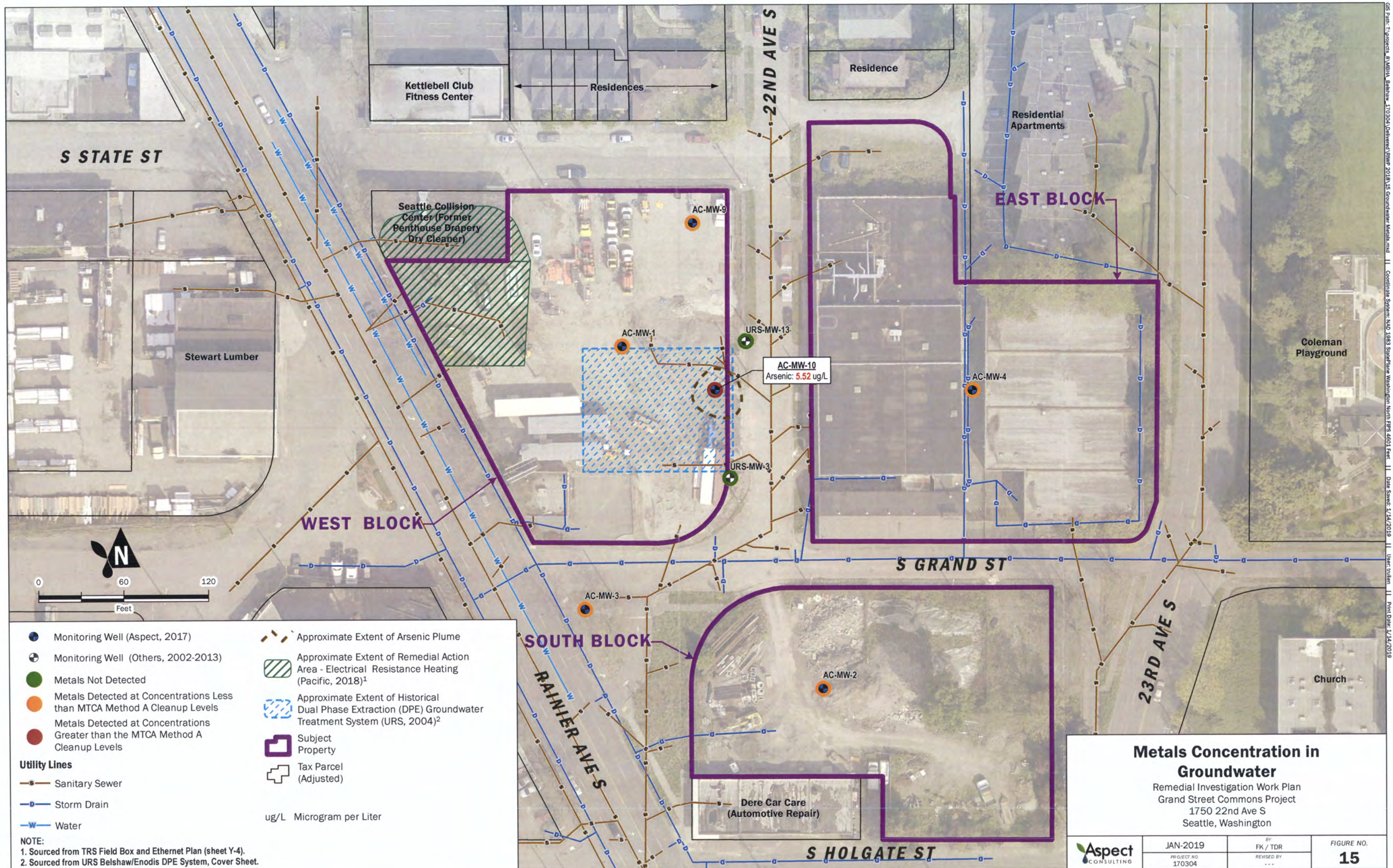
- Approximate Extent of 1,4-Dioxane Plume
 - Approximate Extent of Remedial Action Area - Electrical Resistance Heating (Pacific, 2018)¹
 - Approximate Extent of Historical Dual Phase Extraction (DPE) Groundwater Treatment System (URS, 2004)²
 - Subject Property
 - Tax Parcel (Adjusted)
- mg/L Micrograms per liter

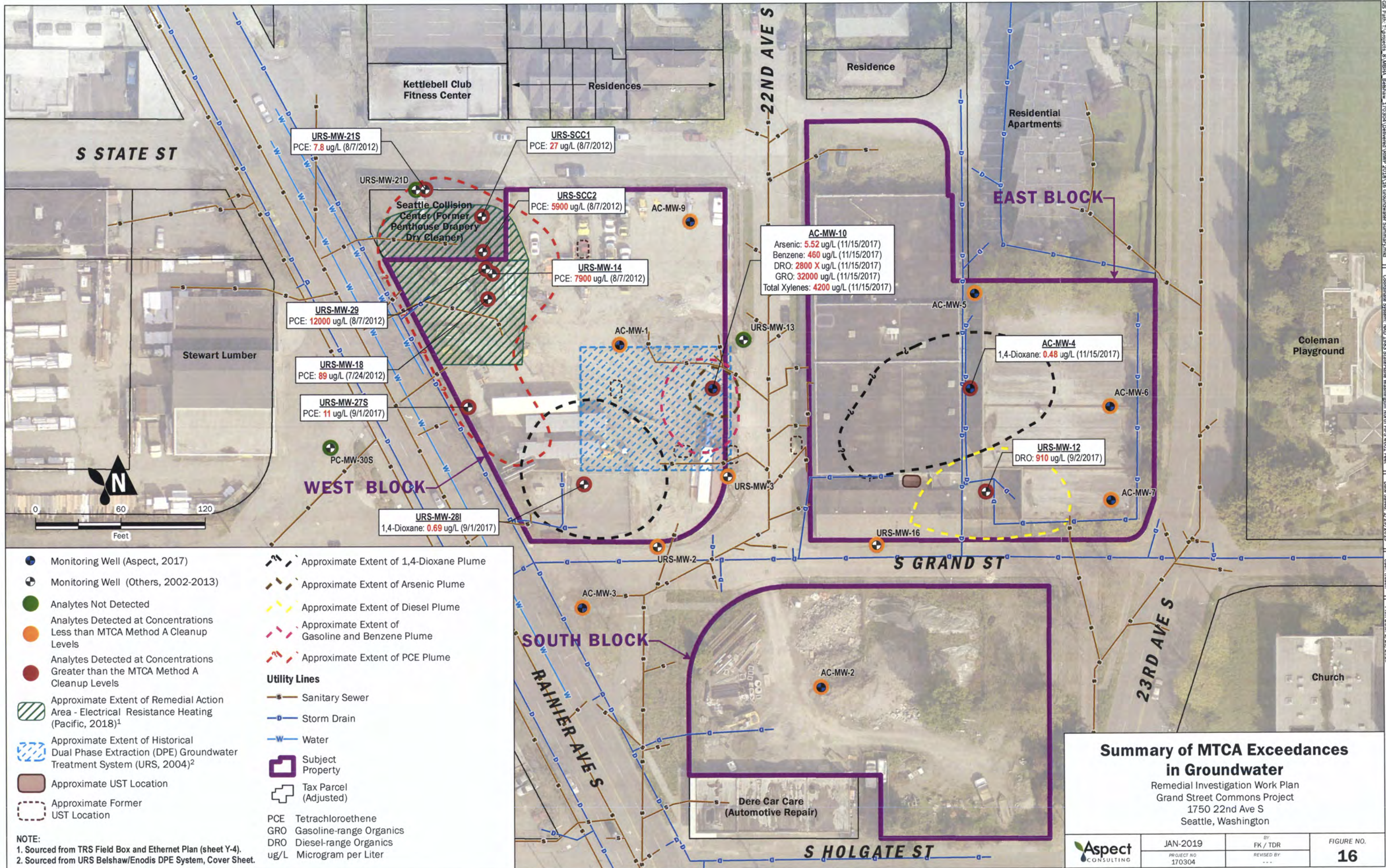
NOTE:
 1. Sourced from TRS Field Box and Ethernet Plan (sheet Y-4).
 2. Sourced from URS Belshaw/Enodis DPE System, Cover Sheet.

1,4-Dioxane Concentrations in Groundwater

Remedial Investigation Work Plan
 Grand Street Commons Project
 1750 22nd Ave S
 Seattle, Washington

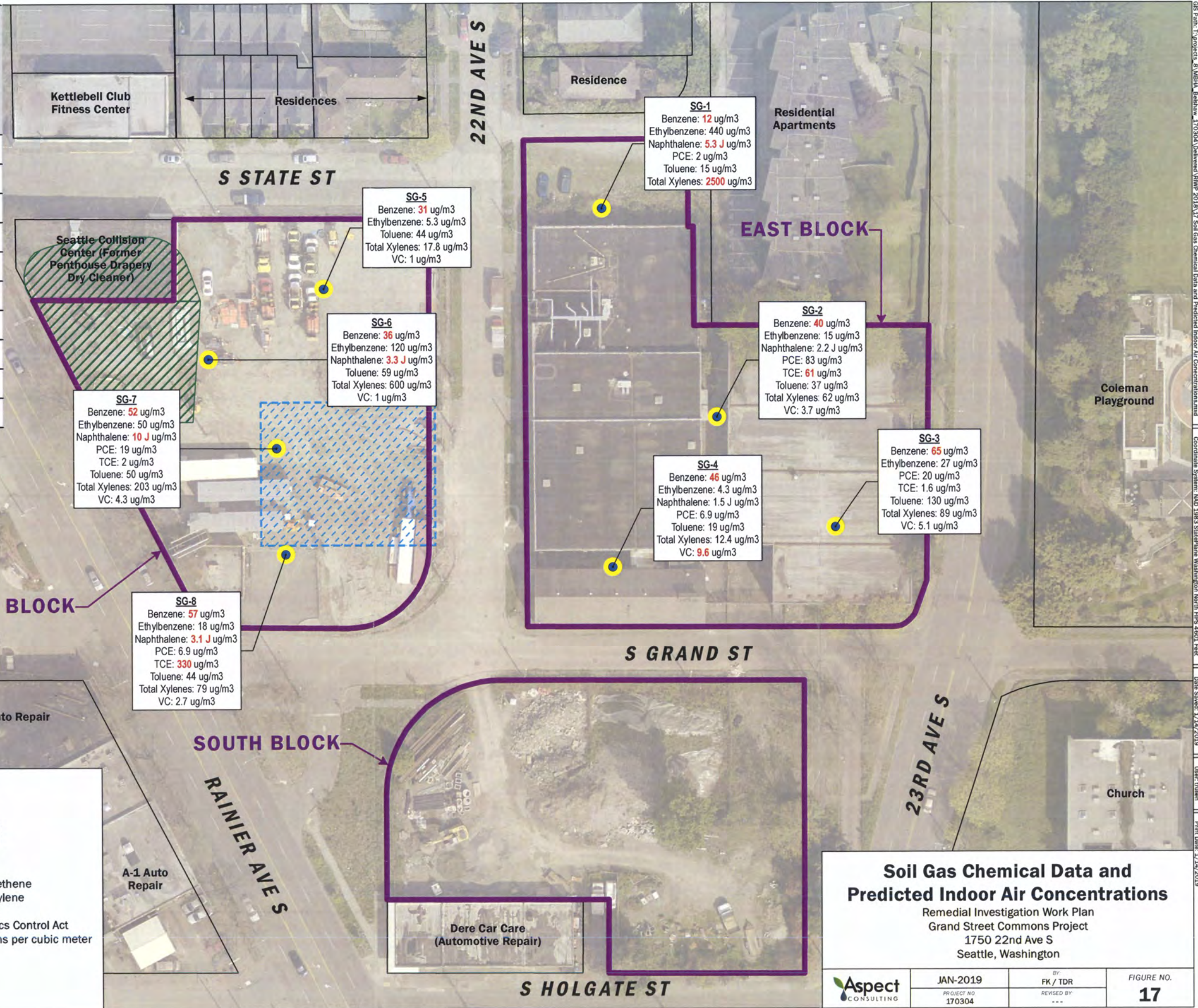
	JAN-2019	BY FK / TDR	FIGURE NO. 14
	PROJECT NO 170304	REVISED BY ---	





NOTE:
 1. Sourced from TRS Field Box and Ethernet Plan (sheet Y-4).
 2. Sourced from URS Belshaw/Enodis DPE System, Cover Sheet.

Location	Soil Gas Sample ID	Chemical Name	Highest Predicted Concentration of Contaminant in Indoor Air - J&E Model ($\mu\text{g}/\text{m}^3$)	MTCA Method B Indoor Air Cleanup Level of Contaminant ($\mu\text{g}/\text{m}^3$)
East Block	SG-1	<i>m</i> -Xylenes	0.1218	45.7
	SG-1	Naphthalene	0.000662	0.0735
	SG-2	Trichloroethylene	0.0204	0.37
	SG-3	Benzene	0.00406	0.321
West Block	SG-4	Vinyl Chloride	0.000611	0.28
	SG-6	<i>m,p</i> -Xylenes	0.1364	45.7
	SG-7	Vinyl Chloride	0.000691	0.28
	SG-7	Naphthalene	0.000595	0.0735
	SG-8	Benzene	0.00458	0.321
	SG-8	Trichloroethylene	0.0229	0.37



SG-7
 Benzene: 52 ug/m3
 Ethylbenzene: 50 ug/m3
 Naphthalene: 10 J ug/m3
 PCE: 19 ug/m3
 TCE: 2 ug/m3
 Toluene: 50 ug/m3
 Total Xylenes: 203 ug/m3
 VC: 4.3 ug/m3

SG-6
 Benzene: 36 ug/m3
 Ethylbenzene: 120 ug/m3
 Naphthalene: 3.3 J ug/m3
 Toluene: 59 ug/m3
 Total Xylenes: 600 ug/m3
 VC: 1 ug/m3

SG-5
 Benzene: 31 ug/m3
 Ethylbenzene: 5.3 ug/m3
 Toluene: 44 ug/m3
 Total Xylenes: 17.8 ug/m3
 VC: 1 ug/m3

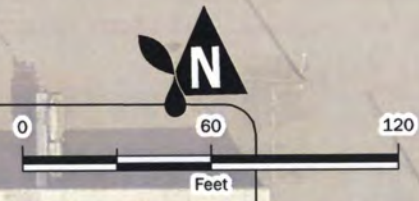
SG-1
 Benzene: 12 ug/m3
 Ethylbenzene: 440 ug/m3
 Naphthalene: 5.3 J ug/m3
 PCE: 2 ug/m3
 Toluene: 15 ug/m3
 Total Xylenes: 2500 ug/m3

SG-2
 Benzene: 40 ug/m3
 Ethylbenzene: 15 ug/m3
 Naphthalene: 2.2 J ug/m3
 PCE: 83 ug/m3
 TCE: 61 ug/m3
 Toluene: 37 ug/m3
 Total Xylenes: 62 ug/m3
 VC: 3.7 ug/m3

SG-4
 Benzene: 46 ug/m3
 Ethylbenzene: 4.3 ug/m3
 Naphthalene: 1.5 J ug/m3
 PCE: 6.9 ug/m3
 Toluene: 19 ug/m3
 Total Xylenes: 12.4 ug/m3
 VC: 9.6 ug/m3

SG-3
 Benzene: 65 ug/m3
 Ethylbenzene: 27 ug/m3
 PCE: 20 ug/m3
 TCE: 1.6 ug/m3
 Toluene: 130 ug/m3
 Total Xylenes: 89 ug/m3
 VC: 5.1 ug/m3

SG-8
 Benzene: 57 ug/m3
 Ethylbenzene: 18 ug/m3
 Naphthalene: 3.1 J ug/m3
 PCE: 6.9 ug/m3
 TCE: 330 ug/m3
 Toluene: 44 ug/m3
 Total Xylenes: 79 ug/m3
 VC: 2.7 ug/m3



- Soil Gas Sample (Aspect, 2018)
- Analytes Detected at a Concentration Greater than the MTCA Method B Sub-slab Soil Gas Screening Level.
- Approximate Extent of Remedial Action Area - Electrical Resistance Heating (Pacific, 2018)¹
- Approximate Extent of Historical Dual Phase Extraction (DPE) Groundwater Treatment System (URS, 2004)²

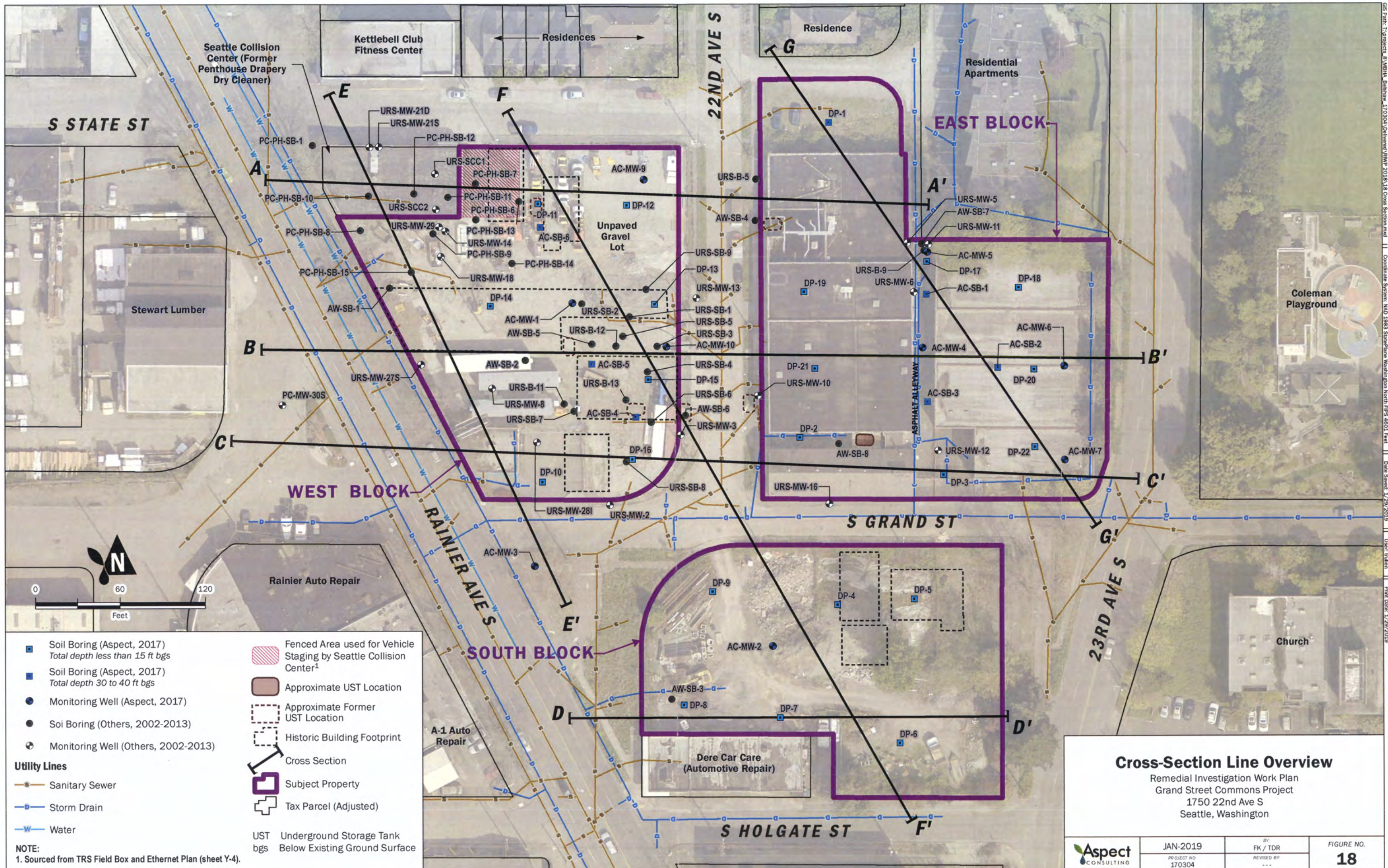
- Subject Property
- Tax Parcel (Adjusted)

- PCE Tetrachloroethene
- TCE Trichloroethylene
- VC Vinyl chloride
- MTCA Model Toxics Control Act
- ug/m³ Micrograms per cubic meter

NOTE:
 1. Sourced from TRS Field Box and Ethernet Plan (sheet Y-4).
 2. Sourced from URS Belshaw/Enodis DPE System, Cover Sheet.

Soil Gas Chemical Data and Predicted Indoor Air Concentrations
 Remedial Investigation Work Plan
 Grand Street Commons Project
 1750 22nd Ave S
 Seattle, Washington

Aspect CONSULTING	JAN-2019	BY FK / TDR	FIGURE NO. 17
	PROJECT NO 170304	REVISED BY ---	



- Soil Boring (Aspect, 2017)
Total depth less than 15 ft bgs
- Soil Boring (Aspect, 2017)
Total depth 30 to 40 ft bgs
- Monitoring Well (Aspect, 2017)
- Soil Boring (Others, 2002-2013)
- Monitoring Well (Others, 2002-2013)

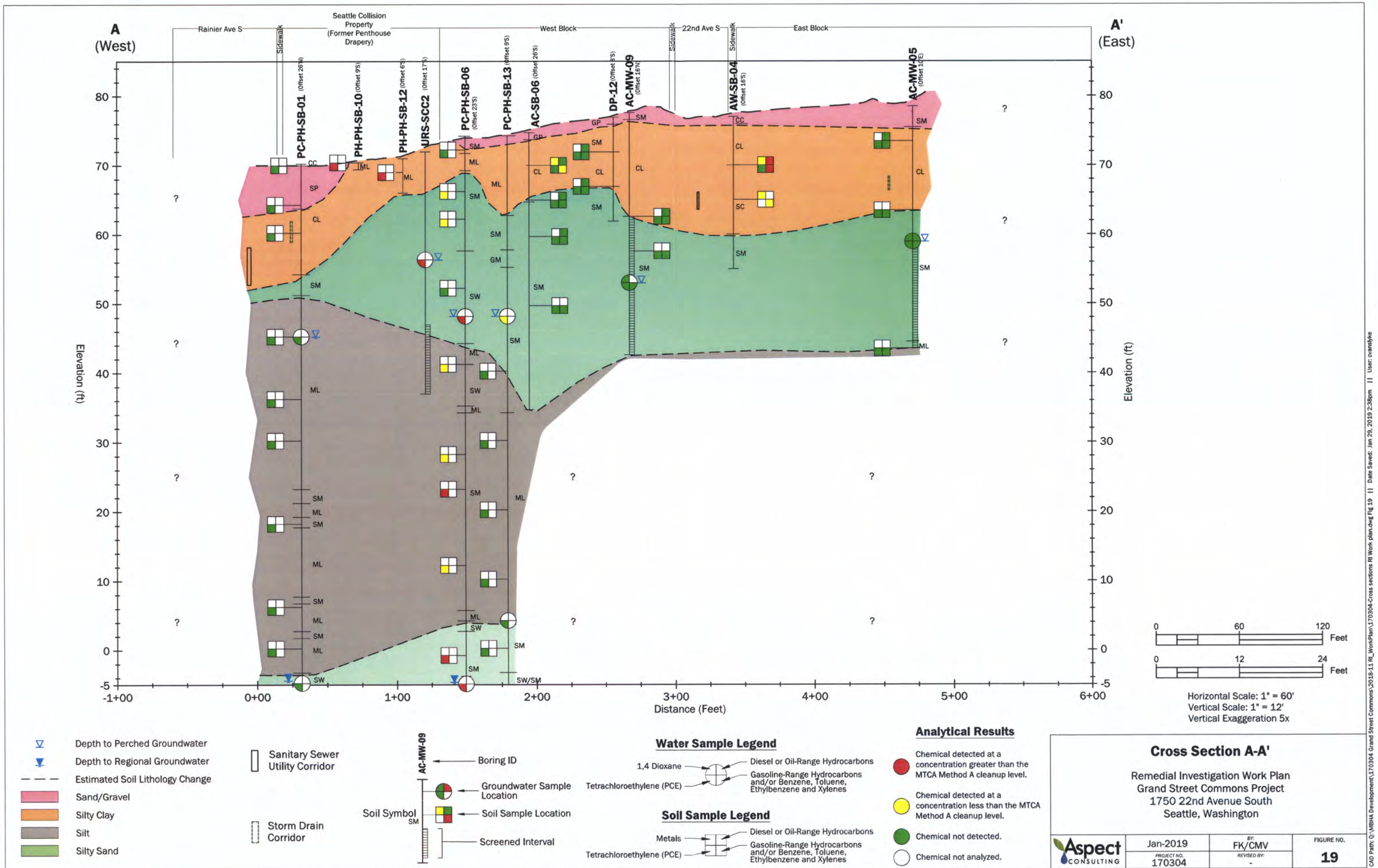
- Utility Lines**
- Sanitary Sewer
 - Storm Drain
 - Water

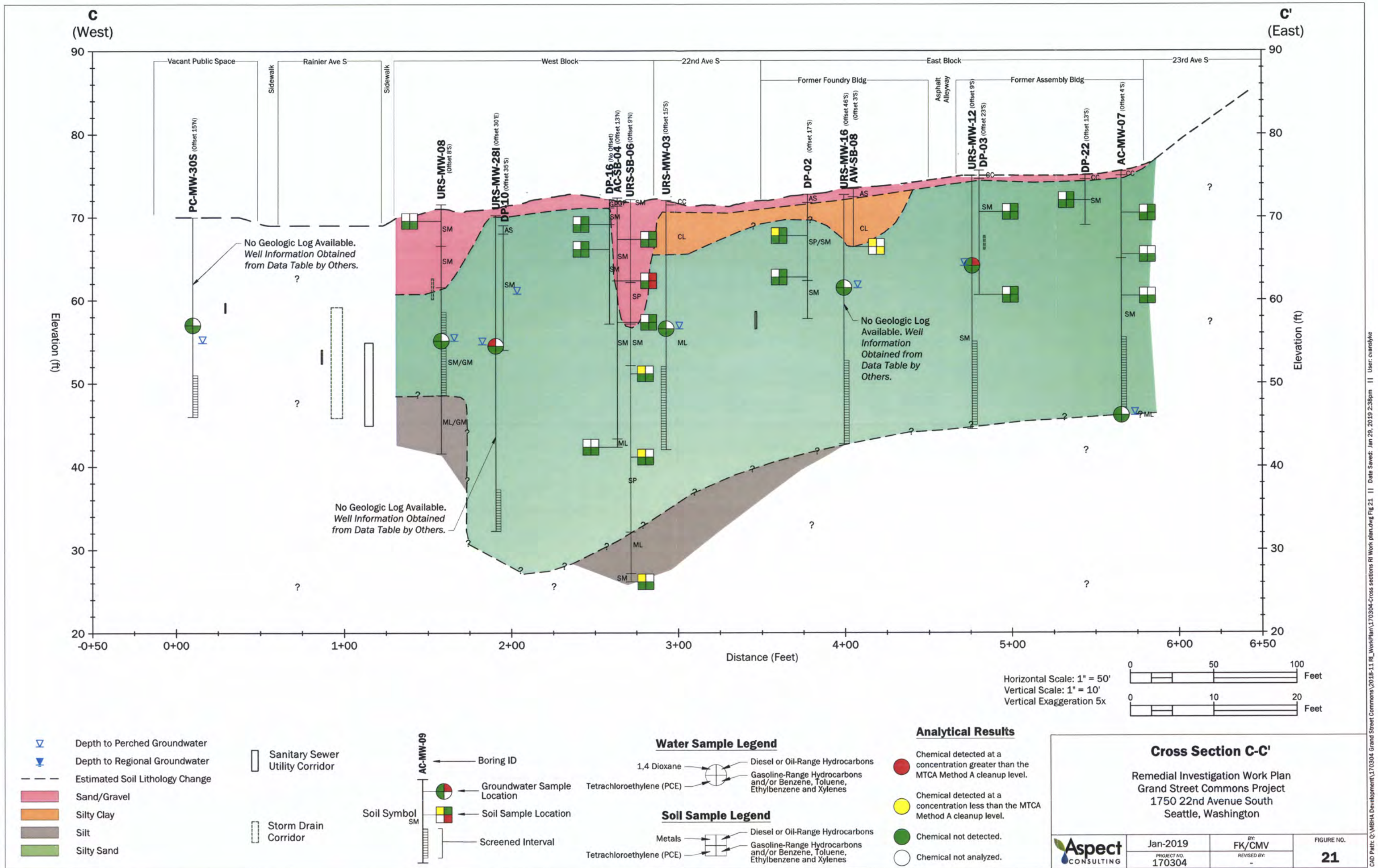
- ▨ Fenced Area used for Vehicle Staging by Seattle Collision Center¹
 - Approximate UST Location
 - ▭ Approximate Former UST Location
 - ▭ Historic Building Footprint
 - ↔ Cross Section
 - ▭ Subject Property
 - ▭ Tax Parcel (Adjusted)
- UST Underground Storage Tank
bgs Below Existing Ground Surface

NOTE:
1. Sourced from TRS Field Box and Ethernet Plan (sheet Y-4).

Cross-Section Line Overview
Remedial Investigation Work Plan
Grand Street Commons Project
1750 22nd Ave S
Seattle, Washington

	JAN-2019	BY: FK / TDR	FIGURE NO. 18
	PROJECT NO 170304	REVISED BY: ---	

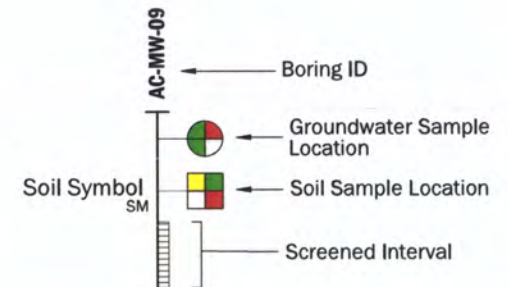




Horizontal Scale: 1" = 50'
 Vertical Scale: 1" = 10'
 Vertical Exaggeration 5x

- Depth to Perched Groundwater
- Depth to Regional Groundwater
- Estimated Soil Lithology Change
- Sand/Gravel
- Silty Clay
- Silt
- Silty Sand

- Sanitary Sewer Utility Corridor
- Storm Drain Corridor



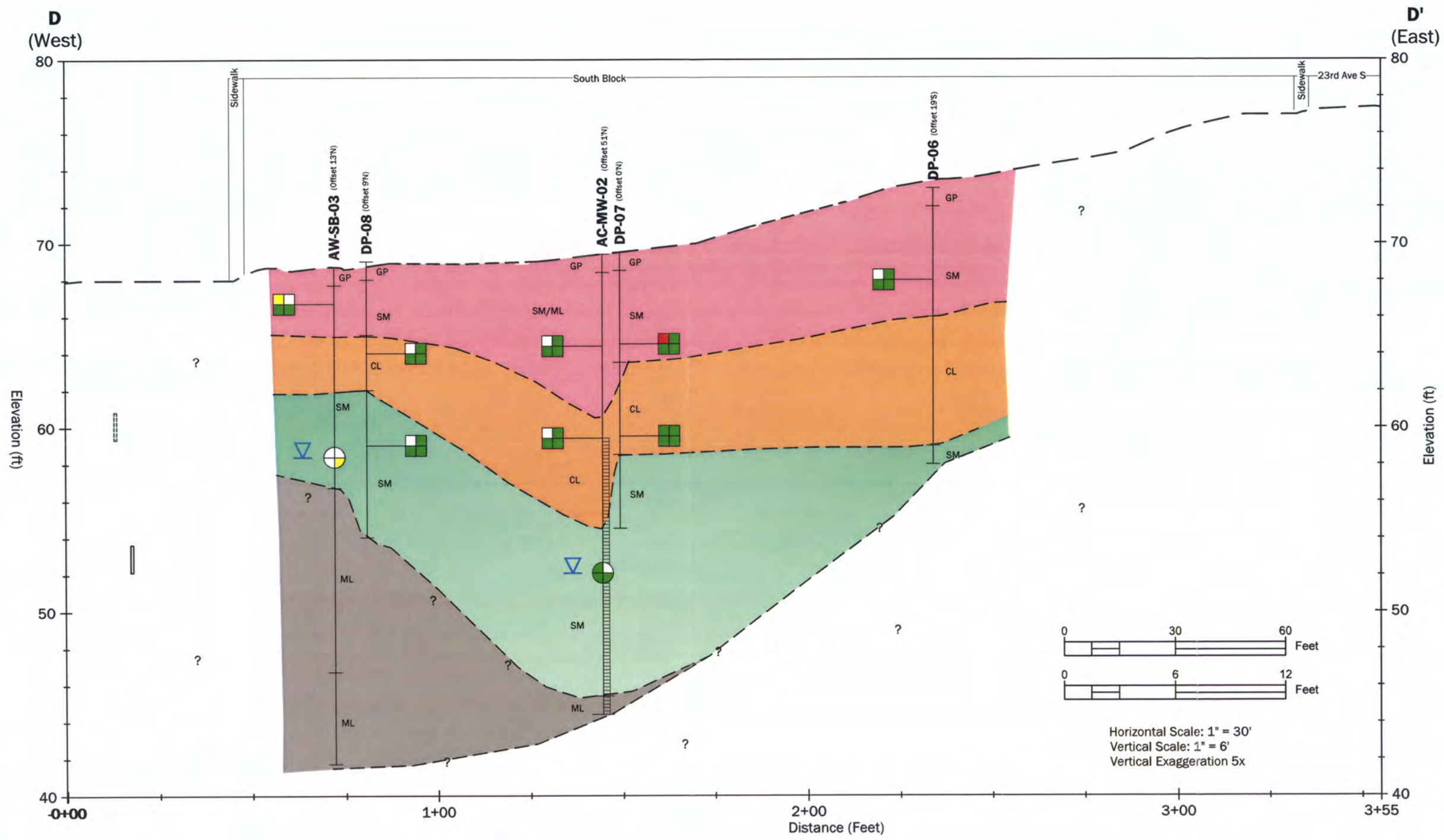
- Water Sample Legend**
- Diesel or Oil-Range Hydrocarbons
 - Gasoline-Range Hydrocarbons and/or Benzene, Toluene, Ethylbenzene and Xylenes
 - Tetrachloroethylene (PCE)
- Soil Sample Legend**
- Diesel or Oil-Range Hydrocarbons
 - Gasoline-Range Hydrocarbons and/or Benzene, Toluene, Ethylbenzene and Xylenes
 - Tetrachloroethylene (PCE)
 - Metals

- Analytical Results**
- Chemical detected at a concentration greater than the MTCA Method A cleanup level.
 - Chemical detected at a concentration less than the MTCA Method A cleanup level.
 - Chemical not detected.
 - Chemical not analyzed.

Cross Section C-C'

Remedial Investigation Work Plan
 Grand Street Commons Project
 1750 22nd Avenue South
 Seattle, Washington

	Jan-2019	BY: FK/CMV	FIGURE NO. 21
	PROJECT NO. 170304	REVISED BY: -	



- Depth to Perched Groundwater
- Depth to Regional Groundwater
- Estimated Soil Lithology Change
- Sand/Gravel
- Silty Clay
- Silty Sand
- Silt
- Sanitary Sewer Utility Corridor
- Storm Drain Corridor

- Boring ID
- Groundwater Sample Location
- Soil Sample Location
- Screened Interval

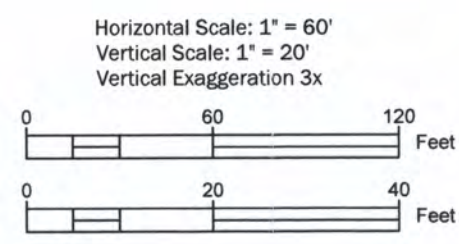
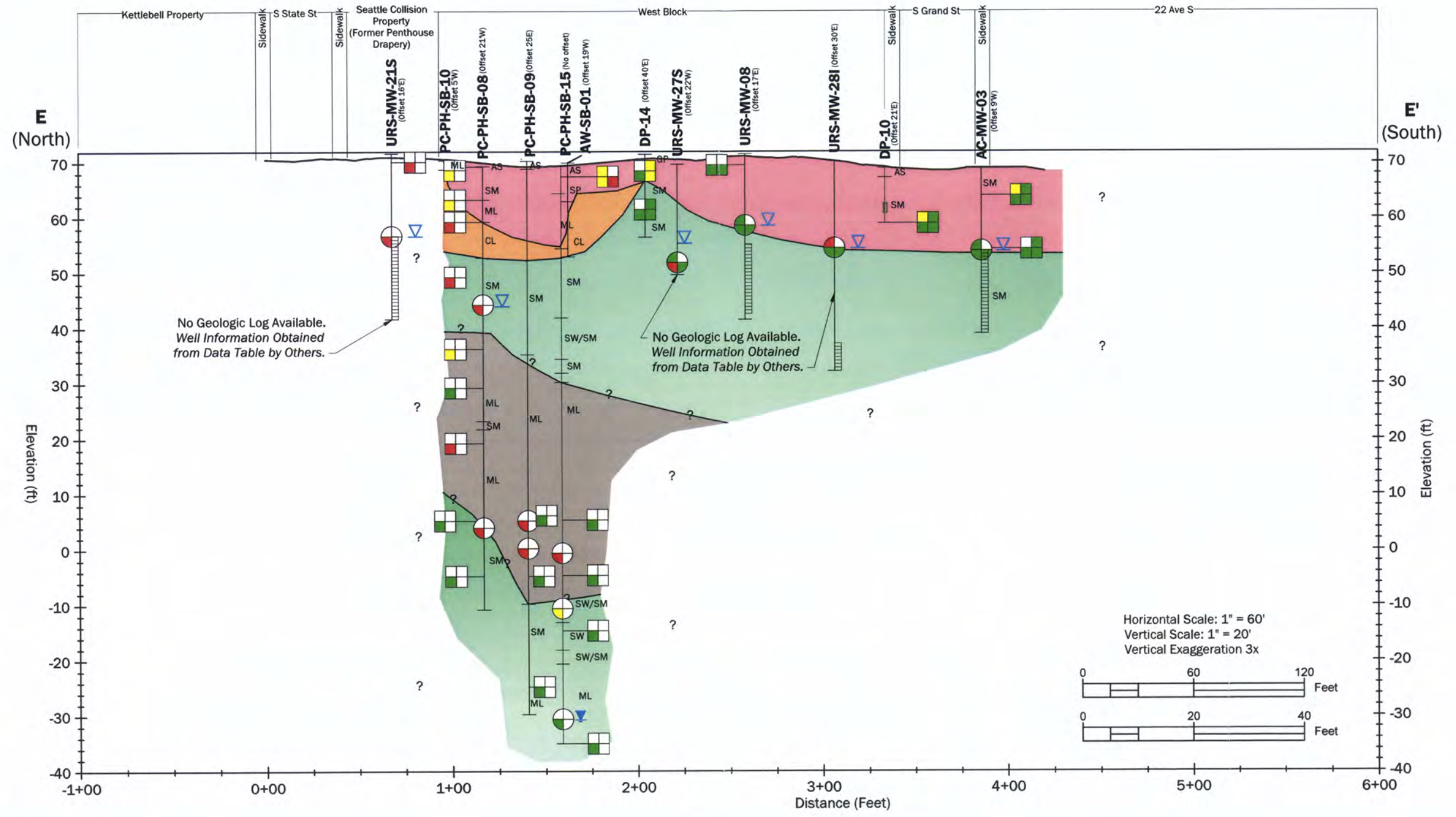
- Water Sample Legend**
- 1,4 Dioxane
 - Tetrachloroethylene (PCE)
 - Diesel or Oil-Range Hydrocarbons
 - Gasoline-Range Hydrocarbons and/or Benzene, Toluene, Ethylbenzene and Xylenes
- Soil Sample Legend**
- Metals
 - Tetrachloroethylene (PCE)
 - Diesel or Oil-Range Hydrocarbons
 - Gasoline-Range Hydrocarbons and/or Benzene, Toluene, Ethylbenzene and Xylenes

- Analytical Results**
- Chemical detected at a concentration greater than the MTCA Method A cleanup level.
 - Chemical detected at a concentration less than the MTCA Method A cleanup level.
 - Chemical not detected.
 - Chemical not analyzed.

Cross Section D-D'

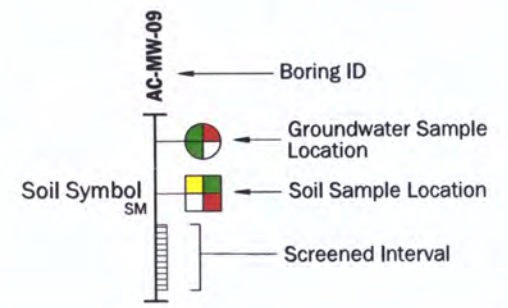
Remedial Investigation Work Plan
Grand Street Commons Project
1750 22nd Avenue South
Seattle, Washington

	Jan-2019	BY: FK/CMV	FIGURE NO. 22
	PROJECT NO. 170304	REVISED BY: -	



- Depth to Perched Groundwater
- Depth to Regional Groundwater
- Estimated Soil Lithology Change
- Sand/Gravel
- Silty Clay
- Silt
- Silty Sand

- Sanitary Sewer Utility Corridor
- Storm Drain Corridor



Water Sample Legend

- 1,4 Dioxane
- Tetrachloroethylene (PCE)
- Diesel or Oil-Range Hydrocarbons
- Gasoline-Range Hydrocarbons and/or Benzene, Toluene, Ethylbenzene and Xylenes

Soil Sample Legend

- Metals
- Tetrachloroethylene (PCE)
- Diesel or Oil-Range Hydrocarbons
- Gasoline-Range Hydrocarbons and/or Benzene, Toluene, Ethylbenzene and Xylenes

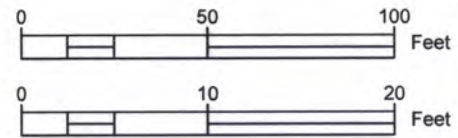
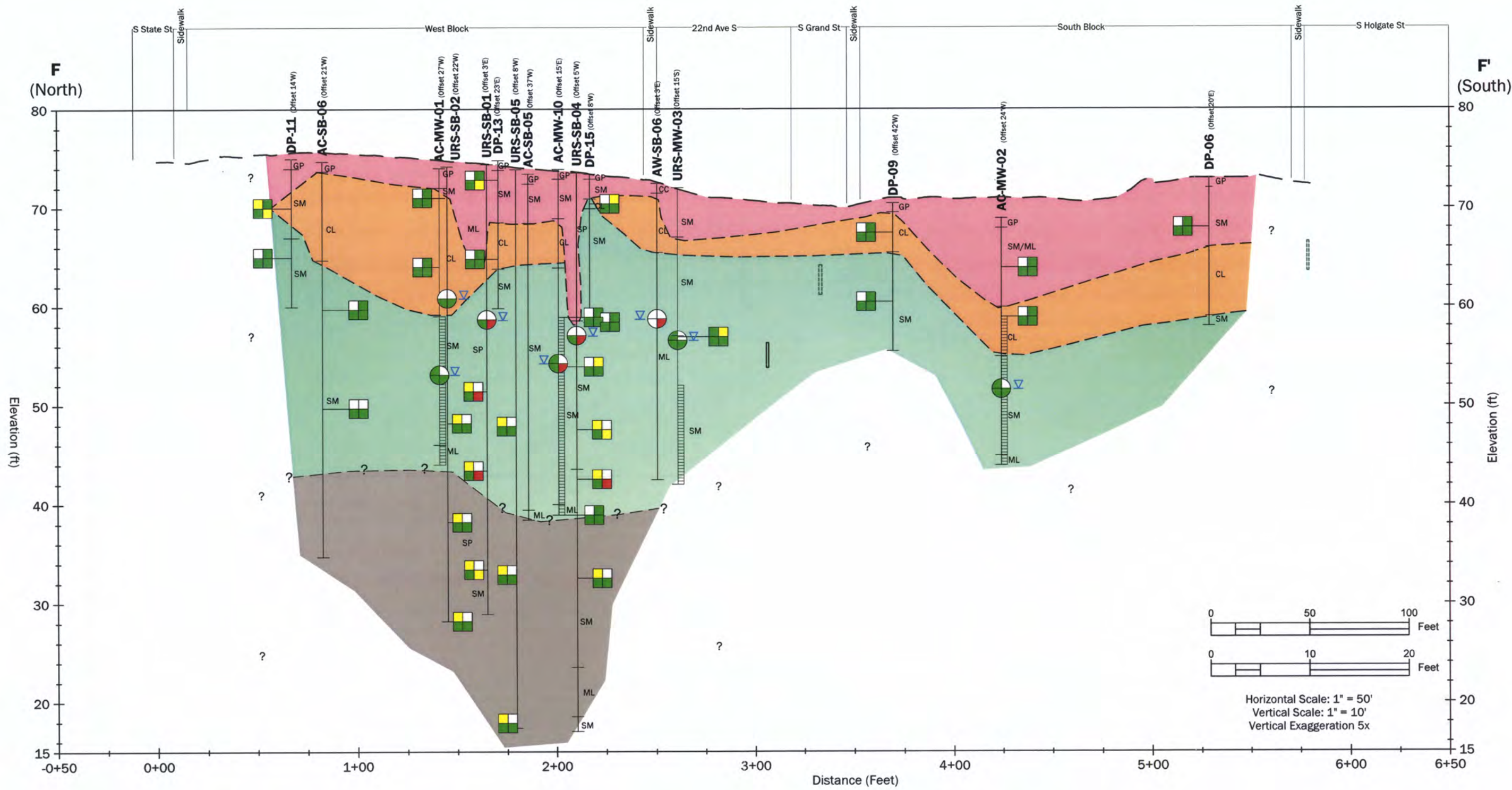
Analytical Results

- Chemical detected at a concentration greater than the MTCA Method A cleanup level.
- Chemical detected at a concentration less than the MTCA Method A cleanup level.
- Chemical not detected.
- Chemical not analyzed.

Cross Section E-E'

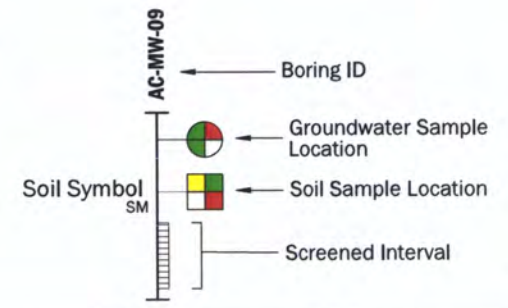
Remedial Investigation Work Plan
 Grand Street Commons Project
 1750 22nd Avenue South
 Seattle, Washington

	Jan-2019	BY: FK/CMV	FIGURE NO. 23
	PROJECT NO. 170304	REVISED BY: -	



- Depth to Perched Groundwater
- Depth to Regional Groundwater
- Estimated Soil Lithology Change
- Sand/Gravel
- Silty Clay
- Silt
- Silty Sand

- Sanitary Sewer Utility Corridor
- Storm Drain Corridor



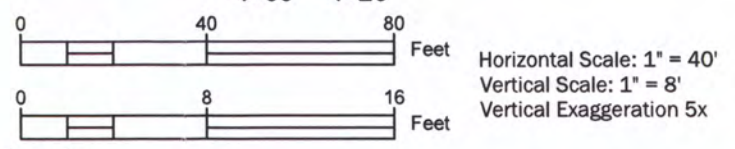
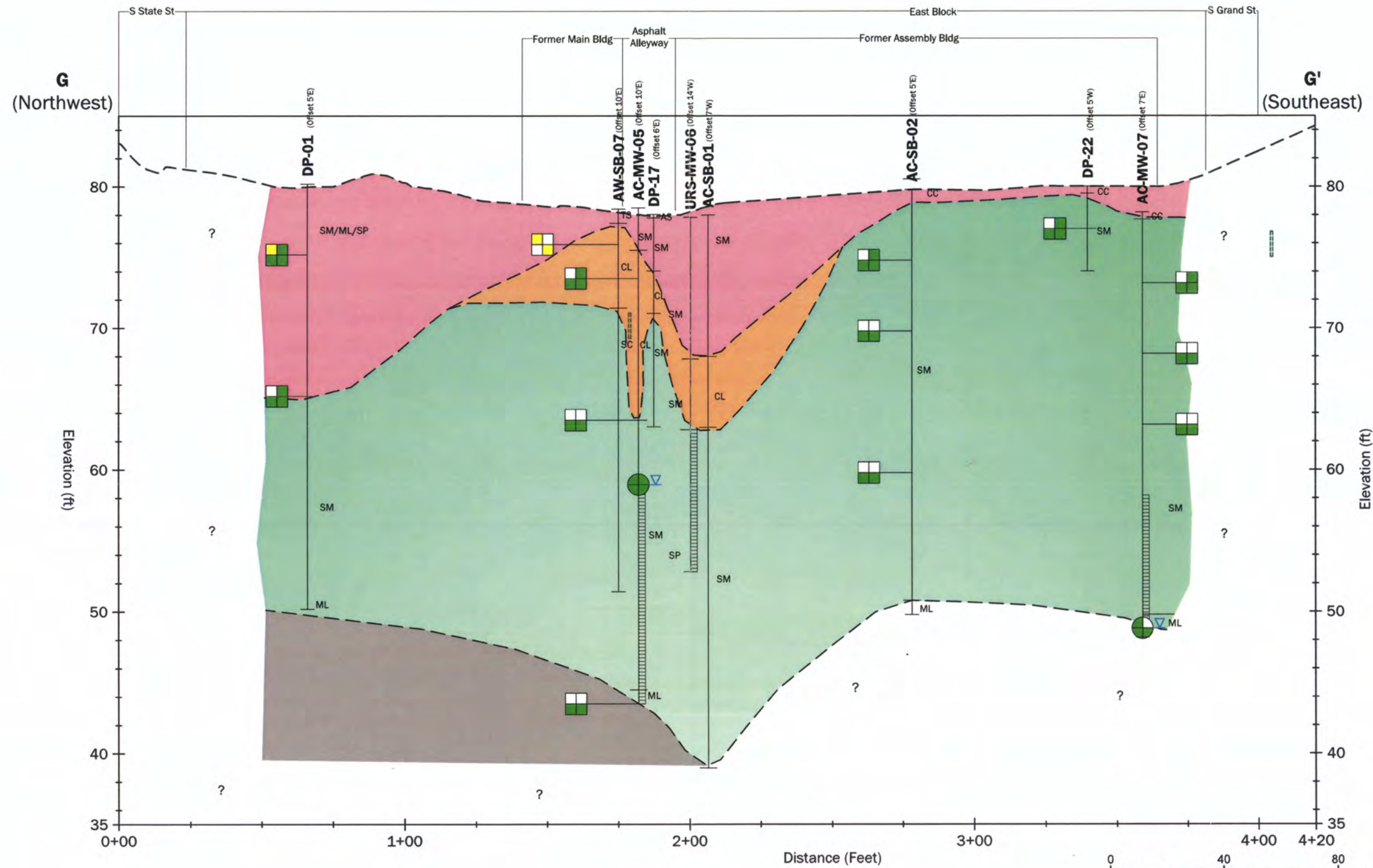
- Water Sample Legend**
- Diesel or Oil-Range Hydrocarbons
 - Gasoline-Range Hydrocarbons and/or Benzene, Toluene, Ethylbenzene and Xylenes
 - 1,4 Dioxane
 - Tetrachloroethylene (PCE)
- Soil Sample Legend**
- Diesel or Oil-Range Hydrocarbons
 - Gasoline-Range Hydrocarbons and/or Benzene, Toluene, Ethylbenzene and Xylenes
 - Metals
 - Tetrachloroethylene (PCE)

- Analytical Results**
- Chemical detected at a concentration greater than the MTCA Method A cleanup level.
 - Chemical detected at a concentration less than the MTCA Method A cleanup level.
 - Chemical not detected.
 - Chemical not analyzed.

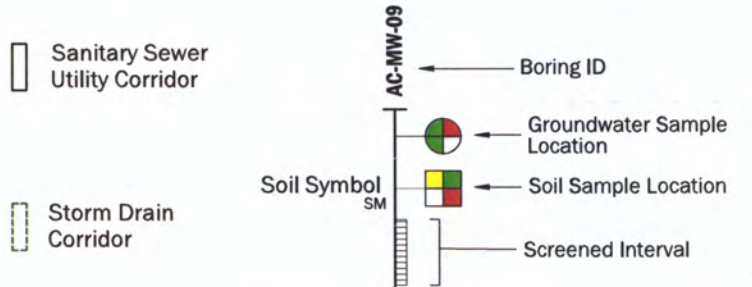
Cross Section F-F'

Remedial Investigation Work Plan
Grand Street Commons Project
1750 22nd Avenue South
Seattle, Washington

	Jan-2019	BY: FK/CMV	FIGURE NO. 24
	PROJECT NO. 170304	REVISED BY: -	



- Depth to Perched Groundwater
- Depth to Regional Groundwater
- Estimated Soil Lithology Change
- Sand/Gravel
- Silty Clay
- Silt
- Silty Sand
- Sanitary Sewer Utility Corridor
- Storm Drain Corridor



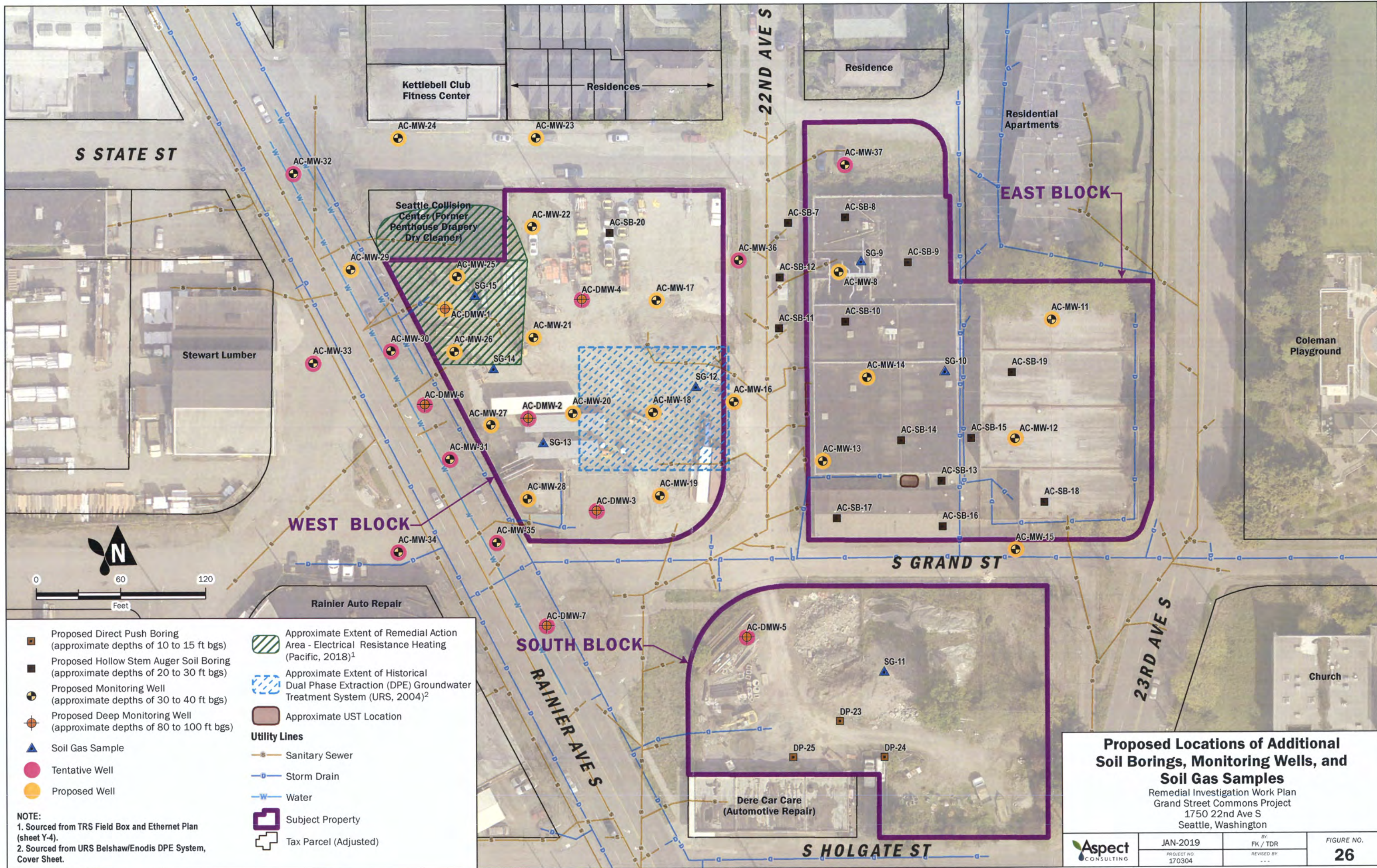
- Water Sample Legend**
- 1,4 Dioxane
 - Tetrachloroethylene (PCE)
 - Diesel or Oil-Range Hydrocarbons
 - Gasoline-Range Hydrocarbons and/or Benzene, Toluene, Ethylbenzene and Xylenes
- Soil Sample Legend**
- Metals
 - Tetrachloroethylene (PCE)
 - Diesel or Oil-Range Hydrocarbons
 - Gasoline-Range Hydrocarbons and/or Benzene, Toluene, Ethylbenzene and Xylenes

- Analytical Results**
- Chemical detected at a concentration greater than the MTCA Method A cleanup level.
 - Chemical detected at a concentration less than the MTCA Method A cleanup level.
 - Chemical not detected.
 - Chemical not analyzed.

Cross Section G-G'

Remedial Investigation Work Plan
Grand Street Commons Project
1750 22nd Avenue South
Seattle, Washington

	Jan-2019	BY: FK/CMV	FIGURE NO. 25
	PROJECT NO. 170304	REVISED BY: -	



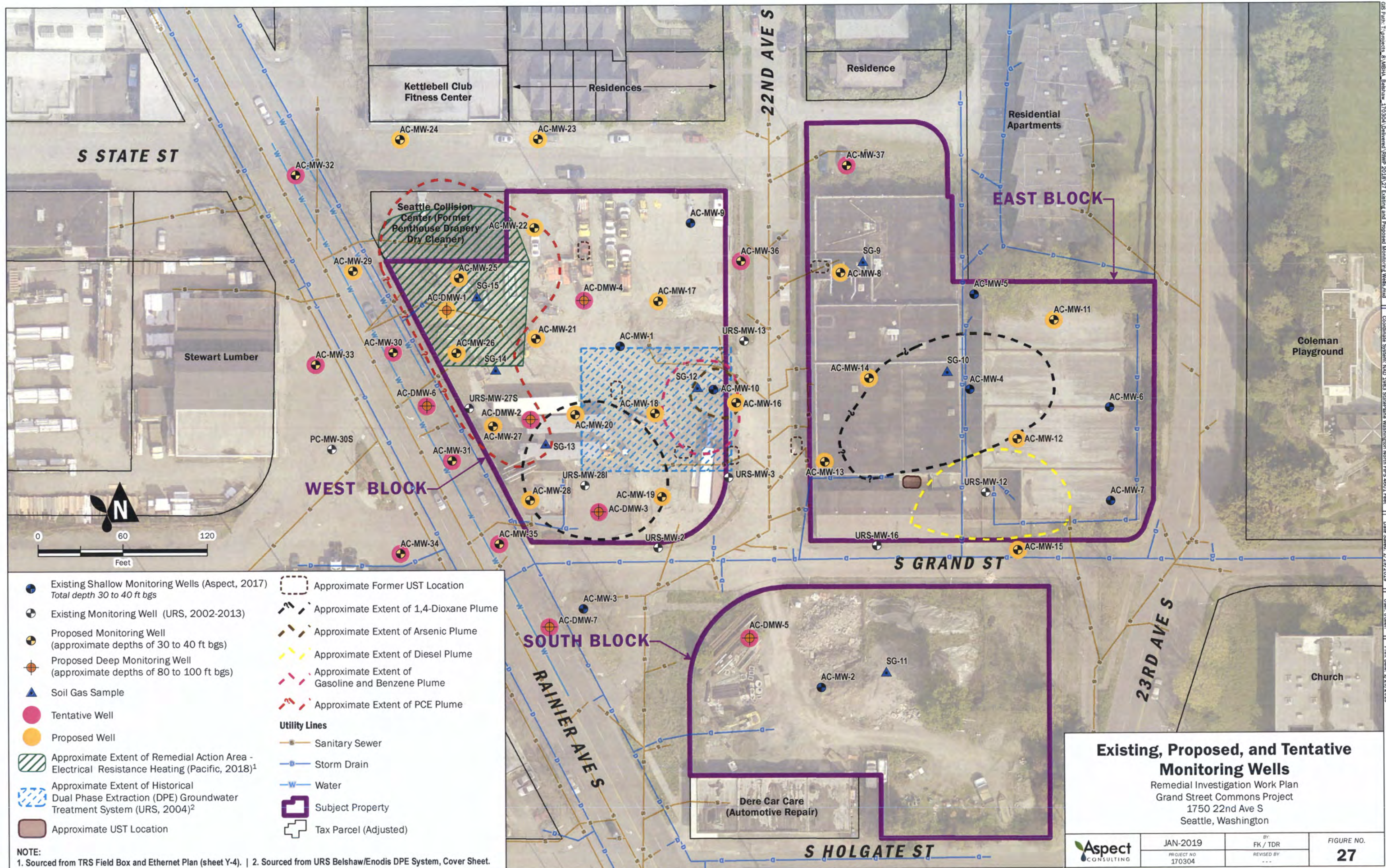
**Proposed Locations of Additional
 Soil Borings, Monitoring Wells, and
 Soil Gas Samples**
 Remedial Investigation Work Plan
 Grand Street Commons Project
 1750 22nd Ave S
 Seattle, Washington

	JAN-2019	BY FK / TDR	FIGURE NO. 26
	PROJECT NO. 170304	REVISED BY ---	

- NOTE:**
- Sourced from TRS Field Box and Ethernet Plan (sheet Y-4).
 - Sourced from URS Belshaw/Enodis DPE System, Cover Sheet.
- Proposed Direct Push Boring (approximate depths of 10 to 15 ft bgs)
 - Proposed Hollow Stem Auger Soil Boring (approximate depths of 20 to 30 ft bgs)
 - Proposed Monitoring Well (approximate depths of 30 to 40 ft bgs)
 - Proposed Deep Monitoring Well (approximate depths of 80 to 100 ft bgs)
 - Tentative Well
 - Proposed Well
- Utility Lines**
- Sanitary Sewer
 - Storm Drain
 - Water
- Other Symbols:**
- Approximate Extent of Remedial Action Area - Electrical Resistance Heating (Pacific, 2018)¹
 - Approximate Extent of Historical Dual Phase Extraction (DPE) Groundwater Treatment System (URS, 2004)²
 - Approximate UST Location
 - Soil Gas Sample
 - Subject Property
 - Tax Parcel (Adjusted)

Basemap Layer Credits || Pictometry International Corp.

916 Path: T:\Projects_8\MMH_Belshaw_170304\Delivered\RWMP 2018_26 Final Explorations.mxd | Coordinate System: NAD 1983 StatePlane Washington North FIPS 4804 Feet | Date Shared: 3/30/2019 | User: tturner | Print Name: 1/29/2019



- Existing Shallow Monitoring Wells (Aspect, 2017)
Total depth 30 to 40 ft bgs
- Existing Monitoring Well (URS, 2002-2013)
- Proposed Monitoring Well
(approximate depths of 30 to 40 ft bgs)
- Proposed Deep Monitoring Well
(approximate depths of 80 to 100 ft bgs)
- Soil Gas Sample
- Tentative Well
- Proposed Well
- Approximate Extent of Remedial Action Area -
Electrical Resistance Heating (Pacific, 2018)¹
- Approximate Extent of Historical
Dual Phase Extraction (DPE) Groundwater
Treatment System (URS, 2004)²
- Approximate UST Location
- Approximate Former UST Location
- Approximate Extent of 1,4-Dioxane Plume
- Approximate Extent of Arsenic Plume
- Approximate Extent of Diesel Plume
- Approximate Extent of
Gasoline and Benzene Plume
- Approximate Extent of PCE Plume
- Utility Lines**
- Sanitary Sewer
- Storm Drain
- Water
- Subject Property
- Tax Parcel (Adjusted)

NOTE:
 1. Sourced from TRS Field Box and Ethernet Plan (sheet Y-4). | 2. Sourced from URS Belshaw/Enodis DPE System, Cover Sheet.

**Existing, Proposed, and Tentative
Monitoring Wells**
 Remedial Investigation Work Plan
 Grand Street Commons Project
 1750 22nd Ave S
 Seattle, Washington

	JAN-2019	BY: FK / TDR	FIGURE NO. 27
	PROJECT NO. 170304	REVISED BY: ---	

APPENDIX A

Available Boring Logs from Previous Investigations

8B-3

SOIL LOG			
Depth (feet)	PID (ppm)	Sample	DESCRIPTION
1			0'-1.0', gravel, crushed rock
2	0	X	2.0'-7.0', SM-Silty Sand, grey with ferrous oxide mottles, non-plastic silt 15%, fine to medium grain sand 85%, rare coarse grain sands, massive, dense, damp, no odor, no staining, blow count 3/20/16, 2.5' soil sample sent to lab for analysis
3			
4			
5			
6			
7	0	X	7.0'-12.0', SM-Silty Sand, grey with ferrous oxide mottles, non-plastic silt 15%, fine to medium grain sand 80%, rare coarse grain sands, fine gravels 5% disseminated, massive, dense, damp, no odor, no staining, blow count 3/15/32
8			
9			
10			
11			
12	0	X	12.0'-17.0', ML-Clayey Silt, greyish brown, slightly plastic, silt to 80%, clay to fine sand 20%, massive to hint of bedding, hard, damp, no odor, no staining, blow count 11/24/37
13			
14			
15			
16			
17	0	X	17.0'-22.0', ML-Sandy Silt, grey, fine sand to 25%, silt 75%, non-plastic to slightly plastic, massive, hard, damp, no odor, no staining, blow count 10/56/50
18			
19			
20			
21			
22	0	X	22.0'-27.0', SC-Clayey Sand, grey, fine to coarse sand 70-80%, clay 20-30%, low plasticity, massive, rare coarse sand grains, very dense, became saturated at 23.0', no odor, no staining, blow count 25/35/25
23			
24			
25			
26			
27	0	X	27.0', SC-Clayey Sand, grey, fine to coarse sand 70-80%, clay 20-30%, low plasticity, massive, rare coarse sand grains, very dense, saturated, slight sweet odor, no staining, blow count 12/21/35, groundwater sample obtained from 27' and sent to lab for analysis

GW 23'

BELSHAW BROTHERS, INC.
SEATTLE WASHINGTON

SB-3

AARON & WRIGHT PROJECT 020101DD.DG
FEBRUARY 18, 2002

SOIL LOG SB-4

Depth (feet)	PID (ppm)	Sample	DESCRIPTION
1			0-1.0', Concrete, base rock
2	0	X	2.0'-7.0', CH-Silty Clay, dark grey, highly plastic, soft, damp, no odor, no staining, blow count 1/1/4, 7.0' soil sample sent to lab for analysis
3			
4			
5			
6			
7	15	X	7.0'-12.0', SC-Clayey Sand, dark grey, slightly plastic, clay 15%, fine sand 85%, massive, damp, strong petroleum odor, some staining grey green, blow count 6/10/10, 12.0' soil sample sent to lab for analysis
8			
9			
10			
11			
12	27	X	12.0'-17.0', SC-Clayey Sand, dark grey, slightly plastic, clay 30%, fine sand 70%, massive, damp, strong petroleum odor, grey green staining, blow count 7/16/22
13			
14			
15			
16			
17	5	X	17.0'-22.0', SM-Silty Sand, grey, non-plastic, fine sand to 85%, silt 15%, weak crush strength, very dense, damp, slight odor, no staining, blow count 25/61/50
18			
19			
20			
21			
22			
23			auger refusal

BELSHAW BROTHERS, INC.
SEATTLE WASHINGTON

SB-5

AARON & WRIGHT PROJECT 020101DD.DG
FEBRUARY 18, 2002

SOIL LOG SB-6			
Depth (feet)	PID (ppm)	Sample	DESCRIPTION
1	0	X	0'-1.0', concrete, base rock, no odor, no stain
2	0	X	2.0'-7.0', CL-Silty Clay, olive brown, low plasticity, laminated, stiff, damp, no odor, no staining, blow count 2/16/10
3			
4			
5			
6			
7	0	X	7.0'-12.0', ML-Clayey Silt, grey, low plasticity, fine sand 10%, possible weathered basalt, hard, damp, no odor, no staining, blow count 12/21/50
8			
9			
10			
11			
12	10	X	12.0'-17.0', ML-Clayey Silt, grey, low plasticity, fine sand 10%, possible weathered basalt, hard, damp, weak petroleum odor, no staining, blow count 25/50/52, 12.0' soil sample sent to lab for analysis
13			
14			
15			
17	63	X	17.0'-22.0', ML-Clayey Silt with sand, highly weathered bedrock, strong petroleum odor, massive, hard, damp, some staining, blow count 35/50/52
18			
19			
20			
21			
22	89	X	22.0'-27.0', ML-Clayey Silt with sand, highly weathered bedrock, strong petroleum odor, massive, hard, damp, grey-green staining, blow count 50/17/1, becomes saturated at 26', auger refusal at 27', 27' soil sample sent to lab for analysis, groundwater sample obtained and sent to lab from this depth.
23			
24			

8w-22

BELSHAW BROTHERS, INC. SEATTLE WASHINGTON	SB-8	AARON & WRIGHT PROJECT 020101DD.DG	FEBRUARY 19, 2002

APPENDIX 5
LABORATORY RESULTS

LOG OF BORING SB-1

(Page 1 of 4)

Date/Time Started : 9-11-12 / 1050
 Date/Time Completed : 9-12-12 / 1045
 Total Boring Depth (bgs) : 80'
 Depth to Water ATD (bgs) : ~16'
 Elevation (ft) : NA
 Drilling Method : Sonic
 Sampler Type : Sonic Core



Site Name: Former Penthouse Drapery
 Client: Forsberg and Umlauf
 Project #: 105-003

Depth In Feet	Samples	RG Sample	Water Level	Description	USCS	Graphic	% Recovery	PID (ppm)	Lab No.
0				0.0-0.25 Concrete/crushed rock.					
1				0.25-5.0 Gravelly SAND, minor silt (45% fine to coarse sand, 40% fine to coarse gravel, 15% silt), brown, slightly moist, no odor.	GM			0.4	SB1-0.25-5.0@1100
2									
3									
4									
5				5.0-6.5 SAND, minor silt, trace gravel (80% fine to coarse sand, 15% silt, 5% fine to coarse gravel), brown/grey, moist, no odor.	SW			0.8	
6									
7				6.5-16.0 CLAY, minor silt (80% clay, 15% silt), brown/grey, moist, no odor.	CL			0.6	SB1-6.5-10.0@1115
8									
9									
10									
11									
12									
13									
14									
15									
16				16.0-19.0 Silty SAND, minor silt, minor gravel (70% fine to coarse sand, 15% silt, 15% fine to coarse gravel), brown/grey, wet, no odor.	SM				
17									
18									
19				19.0-20.0 SILT, minor sand, minor gravel, trace clay (65% silt, 15% fine sand, 15% fine to coarse gravel, 5% clay), brown/grey, moist, no odor.	ML				
20				20.0-30.0 SILT, minor sand, trace gravel (80% silt, 15% fine to medium sand, 5% fine to coarse gravel), brown, moist, no odor.	ML				
21									
22									

05-07-2013 \\PACIFIC-8E\8EAF\public\Project Files\105-003 Penthouse Drapery\Boring Logs\SB-01.bo

Drilling Company : Cascade Drilling
 Drilling Foreman : Andy Flagan
 Equipment : Sonic CRS-17-C Track Mounted rig
 Backfill Material : Bentonite
 Pacific Crest Rep. : April Wiebenga

LOG OF BORING SB-1

(Page 1 of 4)

LOG OF BORING SB-1

(Page 2 of 4)

Date/Time Started : 9-11-12 / 1050
 Date/Time Completed : 9-12-12 / 1045
 Total Boring Depth (bgs) : 80'
 Depth to Water ATD (bgs) : ~16'
 Elevation (ft) : NA
 Drilling Method : Sonic
 Sampler Type : Sonic Core



Site Name: Former Penthouse Drapery
 Client: Forsberg and Umlauf
 Project #: 105-003

Depth In Feet	Samples	RG Sample	Water Level	Description	USCS	Graphic	% Recovery	PID (ppm)	Lab No.
22									
23									
24									
25									SB1-25.0-RG@12.05
26					ML				
27									
28								1.3	SB1-25.0-30.0@1200
29									
30				30.0-31.5 Silty SAND, minor gravel (50% fine to medium sand, 25% silt, 25% fine to coarse gravel), brown/grey, wet, no odor.	SM			1.8	
31									
32				31.5-34.0 SILT with gravel, minor sand (55% silt, 30% fine to coarse gravel, 15% fine to coarse sand), brown/grey, moist, no odor.	ML			0.6	SB1-31.0-35.0@1320
33									
34				34.0-35.0 SILT, minor gravel, minor sand (85% silt, 10% fine to coarse gravel, 5% fine to medium sand), grey, slightly moist, no odor.	ML				
35				35.0-37.5 SAND with gravel, minor silt (60% fine to coarse sand, 30% fine to coarse gravel, 10% silt), brown/grey, wet, no odor.	SW				
36									
37									
38				37.5-40.0 SILT, minor gravel, trace sand (80% silt, 15% fine to coarse gravel, 5% fine sand), grey, moist grading to slightly moist, no odor.	ML				
39									
40				40.0-45.0 SILT, minor gravel, minor sand (75% silt, 15% fine to coarse gravel, 10% fine sand), grey, moist, no odor.	ML			7.0	SB1-40.0-45.0@1430
41									
42									
43									
44									

05-07-2013 \\PACIFIC-8E185AF\public\Project Files\105 Forsberg\105 Penthouse Drapery\Boring Logs\SB-01.bo

Drilling Company : Cascade Drilling
 Drilling Foreman : Andy Flagan
 Equipment : Sonic CRS-17-C Track Mounted rig
 Backfill Material : Bentonite
 Pacific Crest Rep. : April Wiebenga

LOG OF BORING SB-1

(Page 2 of 4)

LOG OF BORING SB-1

(Page 3 of 4)

Date/Time Started : 9-11-12 / 1050
 Date/Time Completed : 9-12-12 / 1045
 Total Boring Depth (bgs) : 80'
 Depth to Water ATD (bgs) : ~16'
 Elevation (ft) : NA
 Drilling Method : Sonic
 Sampler Type : Sonic Core



Site Name: Former Penthouse Drapery
 Client: Forsberg and Umlauf
 Project #: 105-003

Depth In Feet	Samples	RG Sample	Water Level	Description	USCS	Graphic	% Recovery	PID (ppm)	Lab No.
44					ML				
45				45.0-47.0 Sandy SILT, trace gravel (60% silt, 35% fine sand, 5% fine to coarse gravel), grey/brown, moist, no odor.	ML				SB1-45.0-RG@1430
46					ML				
47				47.0-49.0 Silty SAND, trace gravel (70% fine sand, 25% silt, 5% fine to coarse gravel), brown/grey, wet, no odor.	SM				
48					SM				
49				49.0-51.0 SILT, minor sand, trace gravel (80% silt, 15% fine sand, 5% fine to coarse gravel)	ML				
50					ML				
51				51.0-52.5 Silty SAND, minor gravel (60% fine to medium sand, 30% silt, 10% fine to coarse gravel), grey, wet, no odor.	SM			1.8	
52					SM				
53				52.5-62.5 SILT, minor sand, trace gravel (85% silt, 10% fine sand, 5% fine to coarse gravel), grey, moist grading to slightly moist, no odor.					
54								4.1	SB1-52.5-55.0@1600
55									SB1-55.0-RG@1600
56									
57					ML				
58					ML				
59									
60									
61									
62									
63				62.5-63.5 Silty SAND, trace gravel (65% fine to medium sand, 30% silt, 5% fine to coarse gravel), grey, wet, no odor.	SM				
64				63.5-67.5 SILT, minor sand, trace gravel (80% silt, 15% fine sand, 5% fine to coarse gravel), grey, moist, no odor.				3.3	SB1-63.5-65.0@1645
65					ML				
66					ML				

05-07-2013 \\PACIFIC-8E\85AF\public\Project Files\105-Forsberg\105-003 Penthouse Drapery\Boring Logs\SB-01.bo

Drilling Company : Cascade Drilling
 Drilling Foreman : Andy Flagan
 Equipment : Sonic CRS-17-C Track Mounted rig
 Backfill Material : Bentonite
 Pacific Crest Rep. : April Wiebenga

LOG OF BORING SB-1

(Page 3 of 4)

LOG OF BORING SB-1

(Page 4 of 4)

Date/Time Started : 9-11-12 / 1050
 Date/Time Completed : 9-12-12 / 1045
 Total Boring Depth (bgs) : 80'
 Depth to Water ATD (bgs) : ~16'
 Elevation (ft) : NA
 Drilling Method : Sonic
 Sampler Type : Sonic Core



Site Name: Former Penthouse Drapery
 Client: Forsberg and Umlauf
 Project #: 105-003

Depth In Feet	Samples	RG Sample	Water Level	Description	USCS	Graphic	% Recovery	PID (ppm)	Lab No.
66					ML				
67									
68				67.5-68.5 Silty SAND, trace gravel (65% fine to medium sand, 30% silt, 5% fine to coarse gravel), grey, wet, no odor.	SM				
69				68.5-70.0 SILT, minor sand, trace gravel (80% silt, 15% fine to medium sand, 5% fine to coarse gravel), gray, moist, no odor.	ML				
70									
71				70.0-75.0 Sandy SILT, trace gravel (60% silt, 35% fine to medium sand, 5% fine to coarse gravel), grey, wet, no odor.					
72					ML			0.0	SB1-70.0-75.0@0850
73									
74									
75				75.0-80.0 SAND, minor silt (90% fine to medium sand, 10% silt), grey, wet, no odor.					SB1-75.0-RG@0940
76									
77					SW			1.4	SB1-75.0-80.0@0930
78									
79									
80				Bottom of boring at 80.0 feet.					
81									
82									
83									
84									
85									
86									
87									
88									

05-07-2013 \\PACIFIC-8E185AF\public\Project Files\105-003 Forsberg\105-003 Penthouse Drapery\Boring Logs\SB-01.bo

Drilling Company : Cascade Drilling
 Drilling Foreman : Andy Flagan
 Equipment : Sonic CRS-17-C Track Mounted rig
 Backfill Material : Bentonite
 Pacific Crest Rep. : April Wiebenga

LOG OF BORING SB-1

(Page 4 of 4)

LOG OF BORING SB-2

(Page 1 of 2)

Date/Time Started : 8-15-2010/09:38
 Date/Time Completed : 8-15-2010/16:15
 Total Boring Depth (bgs) : 45'
 Depth to Water ATD (bgs): 26'
 Elevation (ft) : -
 Drilling Method : Limited Access HSA
 Sampler Type : 18" Split Spoon
 Drive Hammer (lbs) : 140 lbs



Site Name: Former Penthouse Drapery

Client: Forsberg

Project #: 105-003

Depth In Feet	Samples	Description	USCS	Graphic	% Recovery	PID (ppm)	Lab ID
0		0.0 - 0.5 Concrete Slab					
	X	2.5-4.0 SILT with gravel (75% Silt, 25% fine gravel), medium brown, moist, no odor.	ML		100	17.1	
5	X	5.0-6.0 SILT (100%), medium gray, dry, no odor.	ML		100	14.5	SB2-5.0-6.0
	X	6.0-7.5 SILT (100%) grading to SAND (100% fine sand), light brown, moist, no odor.	ML/SM		30	11.3	
	X	8.5-10.0 SILT trace sand and gravel (90% Silt, 5% fine-med sand, 5% fine gravel), medium gray, dry, no odor.	ML		30	10.5	SB2-8.5-10.0
10	X	11.0-12.5 SILT trace sand and gravel (90% Silt, 5% fine sand, 5% fine gravel), medium gray, dry, no odor.	ML		50	12.4	
	X	13.5-15.0 SILT trace gravel (95% silt, 5% fine gravel), med gray, dry, no odor.	ML		40	12.1	SB2-13.5-15.0
15	X	16.0-17.5 SILT trace gravel (95% silt, 5% fine gravel), med gray, dry, dense, no odor.	ML		20	25.1	
	X	18.5-20.0 SILT trace gravel (95% silt, 5% fine gravel), med gray, dry, dense, no odor.	ML		10	21.9	SB2-18.5-20.0
20	X	21.0-22.5 SILT trace gravel (95% silt, 5% fine gravel), med gray, dry, dense, no odor.	ML		40	20.6	
	X	23.5-25.0 SILT (100%), medium gray, moist, no odor.	ML		70	4.1	SB2-23.5-25.0

Drilling Company : Cascade Drilling, Inc.
 Drilling Foreman : Curtis Aiken
 Equipment : CME W136
 Pacific Crest Rep. : Monty Busbee

LOG OF BORING SB-2

(Page 1 of 2)

05-07-2013 \\PACIFIC-8E185A\Fpublic\Project Files\105 Forsberg\105-003 Penthouse Drapery\Boring Logs\SB-02.bo

LOG OF BORING SB-2

(Page 2 of 2)

Date/Time Started : 8-15-2010/09:38
 Date/Time Completed : 8-15-2010/16:15
 Total Boring Depth (bgs) : 45'
 Depth to Water ATD (bgs): 26'
 Elevation (ft) : -
 Drilling Method : Limited Access HSA
 Sampler Type : 18" Split Spoon
 Drive Hammer (lbs) : 140 lbs



Site Name: Former Penthouse Drapery

Client: Forsberg

Project #: 105-003

Depth In Feet	Samples	Description	USCS	Graphic	% Recovery	PID (ppm)	Lab ID
25							
	X	26.0-27.5 Silty SAND to Sandy SILT (60% fine-med sand, 40% silt grading to 60% silt, 40% fine-med sand), light brown, wet, no odor.	SM		80	3.1	SB2-26.0-27.5
	X	28.5-30.0 SILT trace gravel (95% silt, 5% fine gravel), dark gray, dense, dry, no odor.	ML		70	3.0	SB2-28.5-30.0
30							
	X	31.0-32.5 Silty SAND (60% fine-med sand, 40% silt), light brown, wet, no odor.	SM		60	3.4	SB2-32-RGW
	X	33.5-35.0 Silty SAND (60% fine-med sand, 40% silt), light brown, wet, no odor.	SM		70	1.8	SB2-33.5-35.0
35							
	X	36.0-37.5 Silty SAND (60% fine-med sand, 40% silt), light brown, wet, no odor.	SM		80	2.8	
	X	38.5-40.0 SAND trace silt (95% fine to coarse sand, 5% silt), medium brown, wet, slight chemical odor.	SP		100	4.6	SB2-38.5-40.0
40							
	X	41.0-42.5 Sandy SILT (60% silt, 40% fine-med sand), light-med brown, wet to moist, no odor.	ML		70	3.1	SB2-40-RGW
	X	43.5-45.0 SILT (100%), med gray, dry, dense, no odor.	ML		10	1.7	SB2-43.5-45.0
45		Bottom of Boring.					
50							

05-07-2013 \\PACIFIC-8E185AF\public\Project Files\105-Forsberg\105-003 Penthouse Drapery\Boring Logs\SB-02.bo

Drilling Company : Cascade Drilling, Inc.
 Drilling Foreman : Curtis Aiken
 Equipment : CME W136
 Pacific Crest Rep. : Monty Busbee

LOG OF BORING SB-2

(Page 2 of 2)

LOG OF BORING SB-3

(Page 1 of 2)

Date/Time Started : 9-12-2010/08:31
 Date/Time Completed : 8-12-2010/14:00
 Total Boring Depth (bgs) : 46.5'
 Depth to Water ATD (bgs) : 25'
 Elevation (ft) : -
 Drilling Method : Limited Access HSA
 Sampler Type : 18" Split Spoon
 Drive Hammer (lbs) : 140 lbs



PACIFIC CREST ENVIRONMENTAL
 WWW.PCENV.COM 425-888-4990

Site Name: Former Penthouse Drapery

Client: Forsberg

Project #: 105-003

Depth In Feet	Samples	Description	USCS	Graphic	% Recovery	PID (ppm)	Sample ID
0		0.0 - 1.0 Concrete Slab					
5	X	5.0-6.5 SILT (100% silt), light brown, dry, no odor.	ML		70	31.2	SB3-5-6.5
15	X	15.0-16.5 SAND grading to SILT trace sand (100% fine sand to 95% silt, 5% fine sand), light gray, moist, no odor.	ML		70	33.9	SB3-15-16.5
20	X	20.0-21.5 SILT (100% silt), light gray, dry, slight odor.	ML		50	43.2	SB3-20-21.5
25							

05-07-2013 \\PACIFIC-8E185AF\public\Project Files\105-Forsberg\105-003 Penthouse Drapery\Boring Logs\SB-03.bo

Drilling Company : Cascade Drilling, Inc.
 Drilling Foreman : Curtis Aiken
 Equipment : CME W136
 Pacific Crest Rep. : Monty Busbee

LOG OF BORING SB-3

(Page 1 of 2)

LOG OF BORING SB-3

(Page 2 of 2)

Date/Time Started : 9-12-2010/08:31
 Date/Time Completed : 8-12-2010/14:00
 Total Boring Depth (bgs) : 46.5'
 Depth to Water ATD (bgs) : 25'
 Elevation (ft) : -
 Drilling Method : Limited Access HSA
 Sampler Type : 18" Split Spoon
 Drive Hammer (lbs) : 140 lbs



Site Name: Former Penthouse Drapery
 Client: Forsberg
 Project #: 105-003

Depth In Feet	Samples	Description	USCS	Graphic	% Recovery	PID (ppm)	Sample ID
25	X	25.0-26.5 Silty SAND (60% fine to medium sand, 40% silt), medium gray, moist, slight odor.	ML		20	35.5	SB3-25-26.5 SB3-25-26.5-DUP
30	X	30.0-31.5 SILT (100% silt), light gray, moist to wet, chemical odor.	ML		20	36.2	SB3-30-31.5
35	X	35.0-36.5 Silty SAND, trace gravel (70% silt, 25% fine sand, 5% fine gravel), medium gray, moist, chemical odor.	SM		30	40.1	SB3-35-36.5 SB3-35-RGW
40	X	40.0-41.5 SILT (100% silt), medium gray, wet grading to dry, no odor.	ML			46.8	SB3-40-41.5 SB3-40-RGW SB3-40-RGW-DUP
45	X	45.0-46.5 Silty SAND (60% fine sand, 40% silt), medium gray, moist to wet, no odor.	SM			29.2	SB3-45-46.5 SB3-45-RGW
		Bottom of Boring.					
50							

05-07-2013 \\PACIFIC-8E185A\Fpublic\Project Files\105-Forsberg\105-003 Penthouse Drapery\Boring Logs\SB-03.bc

Drilling Company : Cascade Drilling, Inc.
 Drilling Foreman : Curtis Aiken
 Equipment : CME W136
 Pacific Crest Rep. : Monty Busbee

LOG OF BORING SB-3

(Page 2 of 2)

LOG OF BORING SB-4

(Page 1 of 2)

Date/Time Started : 8-22-2010/08:44
 Date/Time Completed : 8-22-2010/15:00
 Total Boring Depth (bgs) : 45'
 Depth to Water ATD (bgs) : 22'
 Elevation (ft) : -
 Drilling Method : Limited Access HSA
 Sampler Type : 18" Split Spoon
 Drive Hammer (lbs) : 140 lbs



Site Name: Former Penthouse Drapery
 Client: Forsberg
 Project #: 105-003

Depth In Feet	Samples	Description	USCS	Graphic	% Recovery	PID (ppm)	Sample ID
0		0.0 - 1.0 Concrete Slab					
		2.5-4.0 SILT trace sand (95% Silt, 5% fine sand), gray-brown, dry, no odor.	ML		60	17.8	
5		5.0-6.5 SILT minor sand stringers (85% silt, 15% fine sand), medium gray, dry, no odor.	ML		90	255	SB4-5-6.5
		7.5-9.0 SILT (100%) medium gray, dry, no odor.	ML		75	398	
10		10.0-11.5 SILT trace sand and gravel (90% Silt, 5% fine sand, 5% fine gravel), medium gray, dry, slight chemical odor.	ML		60	304	SB4-10-11.5
		12.5-14.0 SILT trace sand and gravel (90% Silt, 5% fine sand, 5% fine gravel), medium gray, dry, strong odor.	ML		30	302	
15		15.0-16.5 SILT trace sand and gravel (90% Silt, 5% fine sand, 5% fine gravel), medium gray, dry, no odor.	ML		50	180	SB4-15-16.5
		17.5-19.0 SILT with sand (75% silt, 25% fine-medium sand), medium gray, moist, chemical odor.	ML		30	104	
20		20.0-21.5 SILT with sand (75% silt, 25% fine-medium sand), medium gray, moist, slight odor.	ML		30	120	SB4-20-21.5
		22.5-24.0 Silty SAND (60% fine sand, 40% silt) grading to Sandy SILT (60% silt, 40% fine sand), medium gray, wet, slight odor.	SM/ML		40	292	SB4-24-RGW
25							

05-07-2013 \\PACIFIC-8E186AF\public\Project Files\105-Forsberg\105-003 Penthouse Drapery\Boring Logs\SB-04.bo

Drilling Company : Cascade Drilling, Inc.
 Drilling Foreman : Curtis Aiken
 Equipment : CME W136
 Pacific Crest Rep. : Monty Busbee

LOG OF BORING SB-4

(Page 2 of 2)

Date/Time Started : 8-22-2010/08:44
 Date/Time Completed : 8-22-2010/15:00
 Total Boring Depth (bgs) : 45'
 Depth to Water ATD (bgs) : 22'
 Elevation (ft) : -
 Drilling Method : Limited Access HSA
 Sampler Type : 18" Split Spoon
 Drive Hammer (lbs) : 140 lbs



Site Name: Former Penthouse Drapery
 Client: Forsberg
 Project #: 105-003

05-07-2013 \\PACIFIC-8E185AF\public\Project Files\105-003 Penthouse Drapery\Boring Logs\SB-04.bo

Depth In Feet	Samples	Description	USCS	Graphic	% Recovery	PID (ppm)	Sample ID
25	X	25.0-26.5 SILT trace sand (95% silt, 5% fine sand), medium gray, dry, no odor.	ML		10	56	SB4-25-26.5
	X	27.5-29.0 SILT trace sand (95% silt, 5% fine sand), medium gray, moist, slight odor.	ML		10	410	SB4-30-RGW
30	X	30.0-30.6 Sandy SILT, trace gravel (60% silt, 35% fine sand, 5% fine gravel), medium brown, wet, chemical odor.	ML			85.5	SB4-30-31.5
	X	32.5-33.0 Sandy SILT (60% silt, 40% fine sand), medium brown, moist, chemical odor.	ML			97.5	
35	X	35.0-36.5 SAND (100% fine to coarse sand), brown, wet, chemical odor.	SW			43.3	SB4-35-36.5
	X	37.5-39.0 SAND (100% fine to medium) grading to Sandy SILT (60% silt, 40% fine sand), brown, wet, chemical odor.	SM/ML			25.2	SB4-40-RGW
40	X	40.0-41.5 Silty SAND (60% fine to medium sand, 40% silt), medium brown, wet, no odor.	SM			35.1	SB4-40-41.5
	X	42.5-43.0 SILT trace gravel (95% silt, 5% fine gravel), medium gray, moist, no odor.	ML			18.9	
45	X	45.0-46.0 SILT trace gravel (95% silt, 5% fine gravel), medium gray, dry, dense, no odor.	ML			13.8	SB4-45-46
		Bottom of Boring.					
50							

Drilling Company : Cascade Drilling, Inc.
 Drilling Foreman : Curtis Aiken
 Equipment : CME W136
 Pacific Crest Rep. : Monty Busbee

LOG OF BORING SB-4

(Page 2 of 2)

LOG OF BORING SB-5

(Page 1 of 1)

Date/Time Started : 9-30-2010 / 11:07
 Date/Time Completed : 9-30-2010 / 12:30
 Total Boring Depth (bgs) : 60 feet
 Depth to Water ATD (bgs): unknown
 Elevation (ft) : -
 Drilling Method : HSA
 Sampler Type : 18" Split Spoon
 Drive Hammer (lbs) : 140 lbs



PACIFIC CREST ENVIRONMENTAL
 WWW.PCENV.COM 425-888-4990

Site Name: Former Penthouse Drapery

Client: Forsberg

Project #: 105-003

Depth In Feet	Samples	Description	USCS	Graphic	% Recovery	PID (ppm)	Sample ID
0		0.0 - 40.0 No Sampling.					
40		40.0-40.25 Silty coarse SAND (60% sand, 40% silt), med. brown, wet, no odor	SM ML		100	31.1	SB5-40.0
45		40.25-41.5 SILT (100%), medium gray, moist, no odor.					
45		45.0-46.5 SILT (100%), medium gray, moist, slight odor.	ML		30	55.3	SB5-46.0
50		50.0-51.5 SILT (100%), medium gray, dry, slight odor.	ML			55.2	SB5-51.0
55		55.0-56.5 Sandy SILT (60% silt, 40% fine sand), medium gray, moist, no odor.	ML			50.9	SB5-56.0
60		60.0-61.5 Silty SAND (75% fine to medium sand, 25% silt), medium gray, wet, no odor.	SM			58.3	SB5-61.0
65		Bottom of boring at 60.0 feet.					

05-07-2013 \\PACIFIC-8E186AF\public\Project Files\105-003 Forsberg\105-003 Penthouse Drapery\Boring Logs\SB-05.bo

Drilling Company : Cascade Drilling, Inc.
 Drilling Foreman : Scotty
 Equipment : CME 75
 Pacific Crest Rep. : Monty Busbee

LOG OF BORING SB-5

(Page 1 of 1)

LOG OF BORING SB-6

(Page 1 of 4)

Date/Time Started : 9-5-12 / 1100
 Date/Time Completed : 9-6-12 / 1020
 Total Boring Depth (bgs) : 80'
 Depth to Water ATD (bgs): ~30
 Elevation (ft) : NA
 Drilling Method : Sonic
 Sampler Type : Sonic Core



PACIFIC CREST ENVIRONMENTAL
 WWW.PCENV.COM 425-888-4990

Site Name: Former Penthouse Drapery

Client: Forsberg and Umlauf

Project #: 105-003

05-07-2013 \\PACIFIC-8E185AF\public\Project Files\105-003 Penthouse Drapery\Boring Logs\SB-06.bo

Depth In Feet	Samples	RG Sample	Water Level	Description	USCS	Graphic	% Recovery	PID (ppm)	Lab No.
0				0.0-2.5 Silty SAND, minor gravel (55% fine to coarse sand, 30% silt, 15% fine to coarse gravel), brown to light grey, slightly moist, no odor.	SM			3.0	
1									
2									
3				2.5-5.0 SILT with sand, minor gravel (65% silt, 25% fine to medium sand, 10% fine to coarse gravel), light grey/brown, slightly moist, no odor.	ML			4.3	SB6-2.5-5.0@1115
4									
5				5.0-10.0 Silty SAND and gravel (50% fine to coarse sand, 30% fine to coarse gravel, 20% silt), light brown/grey, slightly moist, no odor.	SM			4.2	SB6-7.5-10.0@1125
6									
7									
8									
9									
10				10.0-22.5 Silty SAND and gravel, trace cobbles (50% fine to coarse sand, 30% fine to coarse gravel, 20% silt), light brown/grey, slightly moist grading to moist, no odor.				9.1	SB6-12.5-15.0@1140
11									
12									
13									
14									
15									
16					SM				
17									
18									
19									
20									
21									
22								15.9	SB6-22.5-25@1300

Drilling Company : Cascade Drilling
 Drilling Foreman : Andy Flagan
 Equipment : Sonic CRS-17-C Track Mounted rig
 Backfill Material : Bentonite
 Pacific Crest Rep. : April Wiebenga

LOG OF BORING SB-6

(Page 1 of 4)

LOG OF BORING SB-6

(Page 2 of 4)

Date/Time Started : 9-5-12 / 1100
 Date/Time Completed : 9-6-12 / 1020
 Total Boring Depth (bgs) : 80'
 Depth to Water ATD (bgs): ~30
 Elevation (ft) : NA
 Drilling Method : Sonic
 Sampler Type : Sonic Core



Site Name: Former Penthouse Drapery
 Client: Forsberg and Umlauf
 Project #: 105-003

05-07-2013 \\PACIFIC-8E\BSEA\Fpublic\Project Files\105 Forsberg\105-003 Penthouse Drapery\Boring Logs\SB-06.bo

Depth In Feet	Samples	RG Sample	Water Level	Description	USCS	Graphic	% Recovery	PID (ppm)	Lab No.
22					SM				
23				22.5-30.0 Silty SAND and gravel, trace cobbles (50% fine to coarse sand, 30% fine to coarse gravel, 20% silt), light brown/grey, slightly moist grading to dry, no odor.				9.7	
24									
25									
26					SM				
27									
28								13.1	
29									
30									
31				30.0-33.0 SAND with silt, trace gravel (65% fine to medium sand, 30% silt,, 5% fine to coarse gravel), light grey/brown, moist, no odor.	SW				
32									
33				33.0-39.0 SILT with gravel, minor silt (70% silt, 15% fine to medium sand, 15% fine to coarse gravel), grey, moist, no odor.					
34									
35								4.3	SB6-33.0-36.0@1435
36					ML			6.4	SB6-35.0-RG@1410
37									
38								9.1	
39									
40				39.0-40.0 SAND with gravel, minor silt (70% fine to coarse sand, 20% fine to coarse gravel, 10% silt), brown/grey, wet, no odor.	SW			13.7	
41				40.0-45.0 SILT, minor gravel, minor sand (75% silt, 15% fine to coarse gravel, 10% fine to medium sand), light brown/grey grading to grey, slightly moist to dry, no odor.					
42					ML				
43									
44									

Drilling Company : Cascade Drilling
 Drilling Foreman : Andy Flagan
 Equipment : Sonic CRS-17-C Track Mounted rig
 Backfill Material : Bentonite
 Pacific Crest Rep. : April Wiebenga

LOG OF BORING SB-6

(Page 2 of 4)

LOG OF BORING SB-6

(Page 3 of 4)

Date/Time Started : 9-5-12 / 1100
 Date/Time Completed : 9-6-12 / 1020
 Total Boring Depth (bgs) : 80'
 Depth to Water ATD (bgs) : ~30
 Elevation (ft) : NA
 Drilling Method : Sonic
 Sampler Type : Sonic Core



Site Name: Former Penthouse Drapery
 Client: Forsberg and Umlauf
 Project #: 105-003

Depth In Feet	Samples	RG Sample	Water Level	Description	USCS	Graphic	% Recovery	PID (ppm)	Lab No.
44									
45				45.0-46.0 GRAVEL with sand (80% fine to coarse gravel, 20% fine to coarse sand), grey/black, wet, no odor.	ML				
46				46.0-60 SILT, minor gravel, minor sand (65% silt, 15% fine to coarse gravel, 10% fine to medium sand), dark grey, moist, no odor.	GW			8.8	SB6-45.0-46.0@1510
47								5.9	SB6-46.0-47.0@1515
48								4.3	
49									
50								7.7	SB6-50.0-RG@1545
51									
52									
53					ML			7.9	SB6-51.0-55.0@1640
54									
55									
56								6.4	
57									
58									
59								12.2	
60				60.0-62.5 SILT with clay, trace sand, trace gravel (60% silt, 30% clay, 5% fine to medium sand, 5% fine to coarse gravel), brown/grey, moist, no odor.	ML			5.7	
61									
62				62.5-65.0 SILT with clay, minor sand, trace gravel (60% silt, 25% clay, 10% fine to medium sand, 5% fine to coarse gravel), brown/grey, moist, no odor.	ML			2.4	SB6-62.5-65.0@0820
63									
64									
65				65.0-68.5 SILT with clay, minor sand, trace gravel (60% silt, 25% clay, 10% fine to coarse sand, 5% fine to coarse gravel), brown/grey, moist, no odor.	ML				
66									

Drilling Company : Cascade Drilling
 Drilling Foreman : Andy Flagan
 Equipment : Sonic CRS-17-C Track Mounted rig
 Backfill Material : Bentonite
 Pacific Crest Rep. : April Wiebenga

LOG OF BORING SB-6

(Page 3 of 4)

05-07-2013 \\PACIFIC-8E185AF\public\Project Files\105 Forsberg\105-003 Penthouse Drapery\Boring Logs\SB-06.bo

LOG OF BORING SB-6

(Page 4 of 4)

Date/Time Started : 9-5-12 / 1100
 Date/Time Completed : 9-6-12 / 1020
 Total Boring Depth (bgs) : 80'
 Depth to Water ATD (bgs) : ~30
 Elevation (ft) : NA
 Drilling Method : Sonic
 Sampler Type : Sonic Core



Site Name: Former Penthouse Drapery
 Client: Forsberg and Umlauf
 Project #: 105-003

Depth In Feet	Samples	RG Sample	Water Level	Description	USCS	Graphic	% Recovery	PID (ppm)	Lab No.
66									
67					ML			5.5	
68									
69				68.5-70.0 Silty SAND, minor clay, minor gravel (45% fine to coarse sand, 35% silt, 10% clay, 10% fine to coarse gravel), brown/grey, wet, no odor.	SM			3.6	
70				70.0-71.5 Sandy SILT, minor gravel, minor clay (40% silt, 35% fine to coarse sand, 15% fine to coarse gravel, 10% clay), brown, wet, no odor.	ML			4.4	SB6-70.0-RG@0545
71									
72				71.5-75.0 SAND, minor silt, minor gravel (60% fine to coarse sand, 10% silt, 10% fine to coarse gravel), brown/grey, wet, no odor.	SW			7.1	
73									
74									
75				75.0-78.0 SAND, minor silt, minor gravel (80% fine to coarse sand, 10% silt, 10% fine to coarse gravel), brown/grey, wet, no odor.	SW			4.4	SB6-75.0-78.0@0940
76									
77									
78				78.0-80.0 SAND, minor silt, trace gravel (85% fine to medium sand, 15% silt, 5% fine to coarse gravel), brown/grey, wet, no odor.	SM			7.2	
79									
80				Bottom of boring at 80.0 feet.					SB6-80.0-RG@0945
81									
82									
83									
84									
85									
86									
87									
88									

05-07-2013 \\PACIFIC-8E\8EA\Fpublic\Project Files\105 Forsberg\105 Forsberg\Boring Logs\SB-06.bo

Drilling Company : Cascade Drilling
 Drilling Foreman : Andy Flagan
 Equipment : Sonic CRS-17-C Track Mounted rig
 Backfill Material : Bentonite
 Pacific Crest Rep. : April Wiebenga

LOG OF BORING SB-6

(Page 4 of 4)

LOG OF BORING SB-7

(Page 1 of 4)

Date/Time Started : 9-4-12 / 0930
 Date/Time Completed : 9-5-12 / 1030
 Total Boring Depth (bgs) : 80'
 Depth to Water ATD (bgs) : 30'
 Elevation (ft) : NA
 Drilling Method : Sonic
 Sampler Type : Sonic Core



PACIFIC CREST ENVIRONMENTAL
 WWW.PCENV.COM 425-888-4990

Site Name: Former Penthouse Drapery

Client: Forsberg and Umlauf

Project #: 105-003

Depth In Feet	Samples	RG Sample	Water Level	Description	USCS	Graphic	% Recovery	PID (ppm)	Lab No.
0				0.0-7.5 Silty SAND, minor gravel (55% fine to medium sand, 35% silt, 10% fine to coarse gravel), brown, no odor.				7.6	
1								11.3	SB7-2-4@0945
2									
3									
4					SM				
5									
6									
7									
8				7.5-17.0 Silty SAND with gravel/cobbles (45% fine to medium sand, 30% silt, 25% fine to coarse gravel), brown, moist, no odor.				8.4	SB7-7.5-9.5@0950
9									
10									
11								9.3	
12					SM				
13									
14									
15								18.9	SB7-13-17@1005
16									
17				17.0-20.0 SAND with gravel/cobbles (70% fine to medium sand, 25% fine to coarse gravel, 5% silt), trace silt, brown, moist, no odor.					
18					SW			15.8	
19									
20				20.0-20.5 SAND, minor gravel (85% medium to coarse sand, 15% fine to coarse gravel), brown/grey, moist, no odor.				9.4	
21					SW				
22									

05-07-2013 \\PACIFIC-8E185AF\public\Project Files\105-003 Penthouse Drapery\Boring Logs\SB-07.bo

Drilling Company : Cascade Drilling
 Drilling Foreman : Andy Flagan
 Equipment : Sonic CRS-17-C Track Mounted rig
 Backfill Material : Bentonite
 Pacific Crest Rep. : April Wiebenga

LOG OF BORING SB-7

(Page 1 of 4)

LOG OF BORING SB-7

(Page 2 of 4)

Date/Time Started : 9-4-12 / 0930
 Date/Time Completed : 9-5-12 / 1030
 Total Boring Depth (bgs) : 80'
 Depth to Water ATD (bgs): 30'
 Elevation (ft) : NA
 Drilling Method : Sonic
 Sampler Type : Sonic Core



Site Name: Former Penthouse Drapery
 Client: Forsberg and Umlauf
 Project #: 105-003

Depth In Feet	Samples	RG Sample	Water Level	Description	USCS	Graphic	% Recovery	PID (ppm)	Lab No.
22				22.5-24.0 Silty SAND, minor gravel (65% fine to coarse sand, 20% silt, 15% fine to coarse gravel), brown/grey, moist no odor.	SW				SB7-22.5-25.0@1310
23				24.0-26.5 Silty SAND, minor gravel (55% fine to medium sand, 35% silt, 10% fine to coarse gravel), grey, moist, no odor.	SM				
24									SB7-25-26.5@1315
25				26.5-30.0 Silty SAND, minor gravel (65% fine to coarse sand, 20% silt, 15% fine to coarse gravel), brown/grey, moist to wet, no odor.	SM				
26									SB7-34-35#1430
27				30.0-31.0 Silty SAND, minor gravel (55% fine to medium sand, 35% silt, 10% fine to coarse gravel), moist to wet, brown/grey, no odor.	SM				
28				31.0-32.0 SAND, minor gravel, trace silt (85% fine to coarse sand, 10% fine to coarse gravel, 5% silt), brown/grey, moist, no odor.	SW				SB7-42-45@1515
29				32.0-35.0 Silty SAND, minor gravel (55% fine to medium sand, 35% silt, 10% fine to coarse gravel), brown/grey, slightly moist, no odor.	SM				
30									SB7-42-45@1515
31				35.0-36.0 Silty SAND, minor gravel (55% fine to medium sand, 35% silt, 10% fine to coarse gravel), grey, wet, no odor.	SM				
32				36.0-37.0 SAND with gravel, minor silt (70% fine to medium sand, 20% fine to coarse gravel, 10% silt), brown/grey, wet, no odor.	SW				SB7-42-45@1515
33				37.0-40.0 Silty SAND, minor gravel (55% fine to medium sand, 35% silt, 10% fine to coarse gravel), brown/grey, wet, no odor.	SM				
34									SB7-42-45@1515
35				40.0-42.0 SILT with gravel, minor sand (65% silt, 20% fine to coarse gravel, 15% fine to medium sand), dark brown/grey, slightly moist, no odor.	ML				
36				42.0-45.0 SILT with gravel, minor sand (65% silt, 20% fine to coarse gravel, 15% fine to medium sand), dark brown/grey, slightly moist, no odor.	ML				
37									
38									
39									
40									
41									
42									
43									
44									

Drilling Company : Cascade Drilling
 Drilling Foreman : Andy Flagan
 Equipment : Sonic CRS-17-C Track Mounted rig
 Backfill Material : Bentonite
 Pacific Crest Rep. : April Wiebenga

LOG OF BORING SB-7

(Page 2 of 4)

05-07-2013 \\PACIFIC-8E185AF\public\Project Files\105 Forsberg\105 Penthouse Drapery\Boring Logs\SB-07.bo

LOG OF BORING SB-7

(Page 3 of 4)

Date/Time Started : 9-4-12 / 0930
 Date/Time Completed : 9-5-12 / 1030
 Total Boring Depth (bgs) : 80'
 Depth to Water ATD (bgs) : 30'
 Elevation (ft) : NA
 Drilling Method : Sonic
 Sampler Type : Sonic Core



Site Name: Former Penthouse Drapery
 Client: Forsberg and Umlauf
 Project #: 105-003

Depth In Feet	Samples	RG Sample	Water Level	Description	USCS	Graphic	% Recovery	PID (ppm)	Lab No.
44									
45				45.0-55.0 SILT, minor gravel, trace sand (85% silt, 10% fine to coarse gravel, 5% fine to medium sand), grey, moist, no odor.	ML				
46									
47									
48									
49									
50					ML				
51									
52									
53									
54									SB7-55-57.5@1715
55				55.0-70.0 SILT, trace sand, trace gravel (90% silt, 5% fine to medium sand, 5% fine to coarse gravel), grey, moist, no odor.					
56									
57									
58									
59									
60					ML				
61									
62									
63									
64									SB7-62.5-65@1720
65									
66									

05-07-2013 \\PACIFIC-8E185AF\public\Project Files\105 Forsberg\105-003 Penthouse Drapery\Boring Logs\SB-07.bo

Drilling Company : Cascade Drilling
 Drilling Foreman : Andy Flagan
 Equipment : Sonic CRS-17-C Track Mounted rig
 Backfill Material : Bentonite
 Pacific Crest Rep. : April Wiebenga

LOG OF BORING SB-7

(Page 3 of 4)

LOG OF BORING SB-7

(Page 4 of 4)

Date/Time Started : 9-4-12 / 0930
 Date/Time Completed : 9-5-12 / 1030
 Total Boring Depth (bgs) : 80'
 Depth to Water ATD (bgs) : 30'
 Elevation (ft) : NA
 Drilling Method : Sonic
 Sampler Type : Sonic Core



Site Name: Former Penthouse Drapery
 Client: Forsberg and Umlauf
 Project #: 105-003

Depth In Feet	Samples	RG Sample	Water Level	Description	USCS	Graphic	% Recovery	PID (ppm)	Lab No.	
66										
67										
68					ML					
69										
70										
71				70.0-72.5 Silty SAND, trace gravel (65% fine to medium sand, 30% silt, 5% fine to coarse gravel), grey, wet, no odor.	SM					
72								3.2		
73				72.5-75.0 SILT with sand, minor gravel (60% silt, 30% fine to medium sand, 10% fine to coarse gravel), grey, moist, no odor.	ML				SB7-72.5-75.0@0905	
74								3.6		
75				75.0-80.0 Silty SAND, trace gravel (60% fine to medium sand, 35% silt, 5% fine to coarse gravel), grey/brown, wet, no odor.	SM				SB7-75.0-77.5@0945	
76								4.2		
77										
78										
79								5.7	SB7-75.0-77.5	
80				Borttom of boring at 80.0 feet.						
81										
82										
83										
84										
85										
86										
87										
88										

Drilling Company : Cascade Drilling
 Drilling Foreman : Andy Flagan
 Equipment : Sonic CRS-17-C Track Mounted rig
 Backfill Material : Bentonite
 Pacific Crest Rep. : April Wiebenga

LOG OF BORING SB-7

(Page 4 of 4)

05-07-2013 \\PACIFIC-8E\85A\Public\Project Files\105 Forsberg\105-003 Penthouse Drapery\Boring Logs\SB-07.bo

LOG OF BORING SB-8

(Page 1 of 4)

Date/Time Started : 9-10-12 / 0945
 Date/Time Completed : 9-10-12 / 1730
 Total Boring Depth (bgs) : 80'
 Depth to Water ATD (bgs): 20'
 Elevation (ft) : NA
 Drilling Method : Sonic
 Sampler Type : Sonic Core



Site Name: Former Penthouse Drapery
 Client: Forsberg and Umlauf
 Project #: 105-003

Depth in Feet	Samples	RG Sample	Water Level	Description	USCS	Graphic	%Recovery	PID (ppm)	Lab No.
0				0.0-0.5 Crushed rock/asphalt	FB				
1				0.5-6.0 Silty SAND, minor gravel (50% fine to coarse sand, 35% silt, 15% fine to coarse gravel), brown, slightly moist, no odor.	SM			2.8	SB8-0.5-6.0@1000
2									
3									
4									
5									
6				6.0-10.0 SILT, minor clay, trace gravel (80% silt, 15% clay, 5% fine to coarse gravel), brown, moist, no odor.	ML			3.8	SB8-6.0-10.0@1005
7									
8									
9									
10				10.0-16.5 CLAY, minor silt, trace sand (80% clay, 15% silt, 5% fine sand), brown, moist, no odor.	CL			5.5	SB8-10.0-16.5@1020
11									
12									
13									
14									
15									
16									
17				16.5-20.0 Silty SAND, trace clay, trace gravel (55% fine to medium sand, 35% silt, 5% clay, 5% fine to coarse gravel), brown, moist, no odor.	SM			6.2	
18									
19									
20				20.0-26.0 Silty SAND (75% fine to medium sand, 25% silt), brown, wet, no odor.	SM				
21									
22									

05-07-2013 \\PACIFIC-8E185AF\public\Project Files\105-Forsberg\105-003 Penthouse Drapery\Boring Logs\SB-08.bo

Drilling Company : Cascade Drilling
 Drilling Foreman : Andy Flagan
 Equipment : Sonic CRS-17-C Track Mounted rig
 Backfill Material : Bentonite
 Pacific Crest Rep. : April Wiebenga

LOG OF BORING SB-8

(Page 1 of 4)

LOG OF BORING SB-8

(Page 2 of 4)

Date/Time Started : 9-10-12 / 0945
 Date/Time Completed : 9-10-12 / 1730
 Total Boring Depth (bgs) : 80'
 Depth to Water ATD (bgs): 20'
 Elevation (ft) : NA
 Drilling Method : Sonic
 Sampler Type : Sonic Core



PACIFIC CREST ENVIRONMENTAL
 WWW.PCENV.COM 425-888-4990

Site Name: Former Penthouse Drapery

Client: Forsberg and Umlauf

Project #: 105-003

Depth In Feet	Samples	RG Sample	Water Level	Description	USCS	Graphic	%Recovery	PID (ppm)	Lab No.
22									
23								6.5	SB8-20.0-26.0@1130
24					SM				
25								9.0	SB8-25.0-RG@1110
26				26.0-30.0 Silty SAND (65% fine to medium sand, 35% silt), brown/grey, moist, no odor.					
27									
28					SM				
29									
30				30.0-33.0 SILT, trace sand, trace gravel (90% silt, 5% fine to medium sand, 5% fine to coarse gravel) grey/brown, slightly moist, no odor.					
31					ML			3.9	
32									
33				33.0-35.0 Sandy SILT (60% silt, 40% fine sand), grey, moist, no odor.					
34					ML			7.4	SB8-33.0-35.0@1210
35				35.0-40.0 SILT, minor sand, trace gravel (85% silt, 10% fine sand, 5% fine to coarse gravel) grey, slightly moist, no odor.					SB8-35.0-RG@1220
36									
37					ML			10.4	SB8-35.0-40.0@1215
38									
39									
40				40.0-46.0 SILT, minor sand, trace gravel (85% silt, 10% fine sand, 5% fine to coarse gravel) grey, moist grading to dry, no odor.					
41					ML				
42									
43								3.5	SB8-40.0-46.0@1330
44									

05-07-2013 \\PACIFIC-8E185AF\public\Project Files\105-003 Penthouse Drapery\Boring Logs\SB-08.bo

Drilling Company : Cascade Drilling
 Drilling Foreman : Andy Flagan
 Equipment : Sonic CRS-17-C Track Mounted rig
 Backfill Material : Bentonite
 Pacific Crest Rep. : April Wiebenga

LOG OF BORING SB-8

(Page 2 of 4)

LOG OF BORING SB-8

(Page 3 of 4)

Date/Time Started : 9-10-12 / 0945
 Date/Time Completed : 9-10-12 / 1730
 Total Boring Depth (bgs) : 80'
 Depth to Water ATD (bgs) : 20'
 Elevation (ft) : NA
 Drilling Method : Sonic
 Sampler Type : Sonic Core



Site Name: Former Penthouse Drapery
 Client: Forsberg and Umlauf
 Project #: 105-003

Depth In Feet	Samples	RG Sample	Water Level	Description	USCS	Graphic	%Recovery	PID (ppm)	Lab No.
44									
45					ML			8.8	SB8-45.0-RG@1400
46				46.0-47.5 Silty SAND, minor gravel (70% fine to medium sand, 20% silt, 10% fine to coarse gravel), grey/brown, moist, no odor.	SM				
47									
48				47.5-50.0 Sandy SILT grading to SILT, minor sand, minor gravel (60% silt, 40% fine sand) to (70% silt, 15% fine to medium sand, 15% fine to coarse gravel), brown/grey, moist grading to slightly moist, no odor.	ML				
49									
50				50.0-63.0 SILT, minor sand, minor gravel (70% silt, 15% fine to medium sand, 15% fine to coarse gravel), grey/brown, slightly moist, no odor.					
51									
52								2.0	SB8-50.0-55.0@1430
53									
54									
55								1.5	SB8-55.0-RG@1500
56					ML				
57									
58									
59									
60									
61									
62									
63				63.0-64.0 Sandy SILT, trace gravel (60% silt, 35% fine sand, 5% fine to coarse gravel), grey, wet, no odor.	ML				
64									
65				64.0-66.0 Silty SAND, trace gravel (60% fine to medium sand, 35% silt, 5% gravel), grey, wet, no odor.	SM			2.0	SB8-64.0-66.0@1600 SB8-65.0-RG@1615
66									

05-07-2013 \\PACIFIC-8E\185A\Fpublic\Project Files\105 Forsberg\105-003 Penthouse Drapery\Boring Logs\SB-08.bc

Drilling Company : Cascade Drilling
 Drilling Foreman : Andy Flagan
 Equipment : Sonic CRS-17-C Track Mounted rig
 Backfill Material : Bentonite
 Pacific Crest Rep. : April Wiebenga

LOG OF BORING SB-8

(Page 3 of 4)

LOG OF BORING SB-8

(Page 4 of 4)

Date/Time Started : 9-10-12 / 0945
 Date/Time Completed : 9-10-12 / 1730
 Total Boring Depth (bgs) : 80'
 Depth to Water ATD (bgs) : 20'
 Elevation (ft) : NA
 Drilling Method : Sonic
 Sampler Type : Sonic Core



Site Name: Former Penthouse Drapery
 Client: Forsberg and Umlauf
 Project #: 105-003

Depth In Feet	Samples	RG Sample	Water Level	Description	USCS	Graphic	%Recovery	PID (ppm)	Lab No.
66				66.0-70.0 SILT, minor gravel, trace sand (80% silt, 15% fine to coarse gravel, 5% fine to coarse sand) grey, moist grading to dry, no odor.	ML				
67									
68				70.0-80.0 SILT, minor gravel, trace sand (80% silt, 15% fine to coarse gravel, 5% fine to coarse sand) grey, slightly moist, no odor.	ML				
69									
70									
71									
72									
73									
74									
75									
76									
77									
78									
79									
80				Bottom of boring at 80.0 feet.					SB8-74.0-80.0@1715
81									
82									
83									
84									
85									
86									
87									
88									

05-07-2013 \\PACIFIC-8E185AF\public\Project Files\105-Forsberg\105-003 Penthouse Drapery\Boring Logs\SB-08.bo

Drilling Company : Cascade Drilling
 Drilling Foreman : Andy Flagan
 Equipment : Sonic CRS-17-C Track Mounted rig
 Backfill Material : Bentonite
 Pacific Crest Rep. : April Wiebenga

LOG OF BORING SB-8

(Page 4 of 4)

LOG OF BORING SB-9

(Page 2 of 4)

Date/Time Started : 9-6-12 / 1045
 Date/Time Completed : 9-6-12 / 1235
 Total Boring Depth (bgs) : 100'
 Depth to Water ATD (bgs): 23'
 Elevation (ft) : NA
 Drilling Method : Sonic
 Sampler Type : Sonic Core



PACIFIC CREST ENVIRONMENTAL
 WWW.PCENV.COM 425-888-4990

Site Name: Former Penthouse Drapery

Client: Forsberg and Umlauf

Project #: 105-003

Depth In Feet	Samples	RG Sample	Water Level	Description	USCS	Graphic	%Recovery	PID (ppm)	Lab No.
26									
27				27.0-31.5 SAND with silt, trace gravel (65% fine to coarse sand, 30% silt, 5% fine to coarse gravel), brown/grey, wet, no odor.	SM				
28			SW						
29									
30									
31									
32				31.5-35.0 Silty SAND, minor gravel (75% fine to medium sand, 10% silt, 15% fine to coarse gravel), brown/grey, wet, no odor.	SM			8.0	
33									
34									
35				35.0-37.0 SILT with sand, trace gravel (65% silt, 30% fine to medium sand, 5% fine to coarse gravel) brown/grey, moist, no odor.	ML			19.4	
36									
37				37.0-50.0 SILT, trace sand, trace gravel (90% silt, 5% fine to medium sand, 5% fine to coarse gravel), dark grey, slightly moist, no odor.	ML				
38									
39									
40									
41									
42								7.1	
43									
44									
45									
46									
47									
48									
49									
50									
51				50.0-52.5 SILT with sand, trace gravel (65% silt, 30% fine sand, 5% fine to coarse gravel) dark grey, wet, no odor.	ML			4.8	
52									

05-07-2013 \\PACIFIC-8E185AF\public\Project Files\105 Forsberg\105-003 Penthouse Drapery\Boring Logs\SB-09.bo

Drilling Company : Cascade Drilling
 Drilling Foreman : Andy Flagan
 Equipment : Sonic CRS-17-C Track Mounted rig
 Backfill Material : Bentonite
 Pacific Crest Rep. : April Wiebenga

LOG OF BORING SB-9

(Page 2 of 4)

LOG OF BORING SB-9

(Page 3 of 4)

Date/Time Started : 9-6-12 / 1045
 Date/Time Completed : 9-6-12 / 1235
 Total Boring Depth (bgs) : 100'
 Depth to Water ATD (bgs) : 23'
 Elevation (ft) : NA
 Drilling Method : Sonic
 Sampler Type : Sonic Core



Site Name: Former Penthouse Drapery
 Client: Forsberg and Umlauf
 Project #: 105-003

05-07-2013 \\PACIFIC-8E185A\Fpublic\Project Files\105-003 Penthouse Drapery\Boring Logs\SB-09.bc

Depth In Feet	Samples	RG Sample	Water Level	Description	USCS	Graphic	%Recovery	PID (ppm)	Lab No.
52					ML				
53				52.5-55.0 SILT, minor sand, trace gravel (85% silt, 10% fine sand, 5% fine to coarse gravel), dark grey, slightly moist, no odor.	ML			1.0	
54									
55				55.0-60.0 SILT, trace sand, trace gravel (90% silt, 5% fine sand, 5% fine to coarse gravel), dark grey, moist, no odor.					
56									
57					ML			4.3	
58									
59									
60				60.0-63.5 SILT, minor sand (90% silt, 10% fine sand), dark grey, wet, no odor.	ML			11.8	
61									
62									
63				63.5-78.5 Silty SAND (60% fine sand, 40% silt), dark grey, wet, no odor.					
64									
65									SB9-65.0-RG@0845
66									
67								10.0	SB9-63.5-70@0930
68									
69									
70									
71					SM				
72									
73									
74								4.0	
75									SB9-75.0-RG@1020
76									
77									
78									

Drilling Company : Cascade Drilling
 Drilling Foreman : Andy Flagan
 Equipment : Sonic CRS-17-C Track Mounted rig
 Backfill Material : Bentonite
 Pacific Crest Rep. : April Wiebenga

LOG OF BORING SB-9

(Page 3 of 4)

LOG OF BORING SB-9

(Page 4 of 4)

Date/Time Started : 9-6-12 / 1045
 Date/Time Completed : 9-6-12 / 1235
 Total Boring Depth (bgs) : 100'
 Depth to Water ATD (bgs): 23'
 Elevation (ft) : NA
 Drilling Method : Sonic
 Sampler Type : Sonic Core



PACIFIC CREST ENVIRONMENTAL
 WWW.PCENV.COM 425-888-4990

Site Name: Former Penthouse Drapery

Client: Forsberg and Umlauf

Project #: 105-003

Depth In Feet	Samples	RG Sample	Water Level	Description	USCS	Graphic	%Recovery	PID (ppm)	Lab No.
78									
79				78.5-80.0 Silty SAND (80% fine to medium sand, 20% silt), brown/grey, wet, no odor.	SM				
80				80.0-100.0 Sandy SILT (60% silt, 40% fine sand), dark grey, wet, no odor.	SM			5.2	
81									
82									
83									
84									
85								5.5	SB9-85.0-87.5@11200
86									
87									
88									
89									
90					ML				
91									
92									
93									
94									
95								1.3	SB9-95.0-97.5@1605
96									
97									
98									
99									
100				Bottom of boring at 100 feet.					
101									
102									
103									
104									

05-07-2013 \\PACIFIC-8E\85A\F\Project Files\105 Forsberg\105-003 Penthouse Drapery\Boring Logs\SB-09.bo

Drilling Company : Cascade Drilling
 Drilling Foreman : Andy Flagan
 Equipment : Sonic CRS-17-C Track Mounted rig
 Backfill Material : Bentonite
 Pacific Crest Rep. : April Wiebenga

LOG OF BORING SB-9

(Page 4 of 4)

LOG OF BORING SB-10

(Page 1 of 1)

Date/Time Started : 12-8-12 / 1115
 Date/Time Completed : 12-8-12 / 1150
 Total Boring Depth (bgs) : 1'
 Depth to Water ATD (bgs): NA
 Elevation (ft) : NA
 Drilling Method : Geoprobe
 Sampler Type : 5-ft Continuous Core Sampler



Site Name: Former Penthouse Drapery
 Client: Forsberg and Umlauf
 Project #: 105-003

Depth In Feet	Samples	Description	USCS	Graphic	% Recovery	PID (ppm)	Sample ID
0	X	0.0-1.0 SILT, trace sand, trace gravel (90% silt, 5% sand, 5% fine gravel), orange/brown, slightly moist, no odor.	ML		80	0.0	SB10-0-1 @1140
1		Refusal at 1 foot.					
2							
3							
4							
5							
6							
7							
8							
9							
10							

05-07-2013 \\PACIFIC-8E185AF\public\Project Files\105-003 Penthouse Drapery\Boring Logs\SB-10.bo

Drilling Company : Holt Drilling
 Drilling Foreman : Carlos Trajillo
 Equipment : Limited access Geoprobe (106 7822DT)
 Backfill Material : Bentonite/Concrete
 Pacific Crest Rep. : April Wiebenga

LOG OF BORING SB-10

(Page 1 of 1)

LOG OF BORING SB-11

(Page 1 of 1)

Date/Time Started : 12-8-12 / 1000
 Date/Time Completed : 12-8-12 / 1030
 Total Boring Depth (bgs) : 12'
 Depth to Water ATD (bgs): NA
 Elevation (ft) : NA
 Drilling Method : Geoprobe
 Sampler Type : 5-ft Continuous Core Sampler



Site Name: Former Penthouse Drapery
 Client: Forsberg and Umlauf
 Project #: 105-003

Depth In Feet	Samples	Description	USCS	Graphic	% Recovery	PID (ppm)	Sample ID
0		0.0-5.0 SILT with sand, minor gravel (65% silt, 20% fine sand, 15% fine to coarse gravel), brown, slightly moist, no odor.					
1							
2							
3			ML		70	0.0	SB11-2-4@1005
4							
5		5.0-12.0 SILT, minor sand, minor gravel (75% silt, 15% fine sand, 10% fine to coarse gravel), brown, moist, no odor.					
6							
7							
8							
9			ML		100	0.0	SB11-8-10@1020
10							
11							
12		Refusal at 12 feet.			50	0.7	SB11-10-12@1030

05-07-2013 \\PACIFIC-8E185AF\public\Project Files\105-Forsberg\105-003 Penthouse Drapery\Boring Logs\SB-11.bo

Drilling Company : Holt Drilling
 Drilling Foreman : Carlos Trajillo
 Equipment : Limited access Geoprobe (106 7822DT)
 Backfill Material : Bentonite/Concrete
 Pacific Crest Rep. : April Wiebenga

LOG OF BORING SB-11

(Page 1 of 1)

LOG OF BORING SB-12

(Page 1 of 1)

Date/Time Started : 12-8-12 / 1050
 Date/Time Completed : 12-8-12 / 1105
 Total Boring Depth (bgs) : 5'
 Depth to Water ATD (bgs): NA
 Elevation (ft) : NA
 Drilling Method : Geoprobe
 Sampler Type : 5-ft Continuous Core Sampler



Site Name: Former Penthouse Drapery
 Client: Forsberg and Umlauf
 Project #: 105-003

Depth In Feet	Samples	Description	USCS	Graphic	% Recovery	PID (ppm)	Sample ID
0		0.0-5.0 SILT, trace sand, trace gravel (90% silt, 5% fine sand, 5% fine to coarse gravel) orange/brown, slightly moist, no odor.					
1							
2							
3			ML		50	0.0	SB12-2-4@1055 SBD-2-4@1100 (duplicate)
4							
5		Refusal at 5 feet.					
6							
7							
8							
9							
10							

05-07-2013 \\PACIFIC-8E\185AF\public\Project Files\105-Forsberg\105-003 Penthouse Drapery\Boring Logs\SB-12.bc

Drilling Company : Holt Drilling
 Drilling Foreman : Carlos Trajillo
 Equipment : Limited access Geoprobe (106 7822DT)
 Backfill Material : Bentonite/Concrete
 Pacific Crest Rep. : April Wiebenga

LOG OF BORING SB-12

(Page 1 of 1)

LOG OF BORING SB-13

(Page 1 of 5)

Date/Time Started : 1-4-13 / 1000
 Date/Time Completed : 1-8-13 / 1200
 Total Boring Depth (bgs) : 111.5'
 Depth to Water ATD (bgs): ~52.5'
 Elevation (ft) : NA
 Drilling Method : HSA
 Sampler Type : 18" Split Spoon



Site Name: Former Penthouse Drapery
 Client: Forsberg & Umlauf
 Project #: 105-003

Depth In Feet	Water Level	Sample	Description	USCS	Graphic	% Recovery	Blow Count	PID (ppm)	Sample ID
0			0.0-1.5 SILT, trace sand, trace gravel (90% silt, 5% fine to coarse sand, 5% coarse gravel), light brown, moist, organic matter, no odor.	ML		20	3/5/9	-	
1									
2									
3			2.5-4.0 Sandy SILT, trace gravel (60% silt, 35% fine to coarse sand, 5% coarse gravel), brown, moist, no odor.	ML		80	-	0.0	
4									
5									
6			5.0-6.5 Sandy SILT, minor gravel (50% silt, 40% fine to coarse sand, 10% coarse gravel), brown, dry to moist, no odor.	ML		60	8/13/16	0.0	
7									
8			7.5-9.0 Sandy SILT, minor gravel (50% silt, 40% fine to coarse sand, 10% coarse gravel), brown, dry to moist, no odor.	ML		60	5/16/23	0.0	
9									
10									
11			10.0-11.5 Sandy SILT, minor gravel (50% silt, 40% fine to coarse sand, 10% coarse gravel), brown, dry to moist, no odor.	ML		75	3/15/25	0.0	
12									
13			12.5-14.0 Silty SAND and gravel (50% fine to coarse sand, 30% silt, 20% fine to coarse gravel), brown, dry to moist, no odor.	SM		20	28/50 (for 4)	0.0	
14									
15									
16			15.0-16.5 Silty SAND and gravel (50% fine to coarse sand, 30% silt, 20% fine to coarse gravel), brown, dry to moist, no odor.	SM		33	18/50 (for 4)	0.0	
17									
18			17.5-19.0 GRAVEL with silt and sand (50% coarse gravel, 25% fine to coarse sand, 20% silt), brown, moist, no odor.	GM		10	50 (for 6)	0.0	
19									
20									
21			20.0-21.5 Silty SAND, trace gravel (60% fine to coarse sand, 35% silt, 5% coarse gravel), brown, dry to moist, no odor.	SM		80	28/50	0.0	
22									
23			22.5-24.0 Silty SAND, minor gravel (55% fine to coarse sand, 30% silt, 15% fine to coarse gravel), brown, dry to moist, no odor.	SM		40	50 (for 6)	0.0	
24									
25									

Drilling Company : Holt Drilling
 Drilling Foreman : John Bennett
 Equipment : HSA
 Backfill Material : Bentonite
 Pacific Crest Rep. : Matt DeCaro

LOG OF BORING SB-13

(Page 1 of 5)

05-07-2013 \\PACIFIC-8E\BSEA\Public\Project Files\105-Forsberg\105-003 Penthouse Drapery\Boring Logs\SB-13.bo

LOG OF BORING SB-13

(Page 2 of 5)

Date/Time Started : 1-4-13 / 1000
 Date/Time Completed : 1-8-13 / 1200
 Total Boring Depth (bgs) : 111.5'
 Depth to Water ATD (bgs): ~52.5'
 Elevation (ft) : NA
 Drilling Method : HSA
 Sampler Type : 18" Split Spoon



Site Name: Former Penthouse Drapery
 Client: Forsberg & Umlauf
 Project #: 105-003

Depth In Feet	Water Level	Sample	Description	USCS	Graphic	% Recovery	Blow Count	PID (ppm)	Sample ID
25		X	25.0-26.5 Silty SAND, trace gravel (70% fine to coarse sand, 25% silt, 5% fine to coarse gravel), brown, moist, no odor.	SM		100	8/16/21	0.0	
26									
27									
28		X	27.5-29.0 Silty SAND, trace gravel (70% fine to coarse sand, 25% silt, 5% fine to coarse gravel), brown, moist, no odor.	SM		33	50 (for 6)	0.0	
29									
30		X	30.0-31.5 Silty SAND, trace gravel (70% fine to coarse sand, 25% silt, 5% fine to coarse gravel), brown, moist, no odor.	SM		50	26/50	0.0	
31									
32									
33		X	32.5-34.0 Silty SAND, trace gravel (70% fine to coarse sand, 25% silt, 5% fine to coarse gravel), brown, moist, no odor.	SM		40	50 (for 6)	0.0	
34									
35		X	35.0-36.5 Silty SAND, trace gravel (70% fine to coarse sand, 25% silt, 5% fine to coarse gravel), brown, moist, no odor.	SM		40	50 (for 6)	0.0	SB13-34-36 @1410
36									
37									
38		X	37.5-39.0 Silty SAND, trace gravel (70% fine to coarse sand, 25% silt, 5% fine to coarse gravel), brown, moist, no odor.	SM		40	50 (for 6)	0.0	
39									
40		X	40.0-41.5 SILT, minor sand, trace gravel (80% silt, 15% fine to coarse sand, 5% fine to coarse gravel), grey/brown, dry to moist, no odor.	ML		80	26/50	0.0	
41									
42									
43		X	42.5-44.0 SILT, minor sand, trace gravel (85% silt, 10% fine to coarse sand, 5% coarse gravel), grey/brown, dry to moist, no odor.	ML		90	25/22/21	0.0	
44									
45		X	45.0-46.5 SILT, trace sand, trace gravel (90% silt, 5% fine to coarse sand, 5% fine gravel), grey, dry to moist, no odor.	ML		100	8/17/24	0.0	SB13-44-46 @1505
46									
47									
48		X	47.5-49.0 SILT, trace sand, trace gravel (90% silt, 5% fine to coarse sand, 5% fine gravel), grey, dry to moist, no odor.	ML		60	21/50	0.0	
49									
50									

05-07-2013 \\PACIFIC-8E\Public\Project Files\105-003 Penthouse Drapery\Boring Logs\SB-13.bo

Drilling Company : Holt Drilling
 Drilling Foreman : John Bennett
 Equipment : HSA
 Backfill Material : Bentonite
 Pacific Crest Rep. : Matt DeCaro

LOG OF BORING SB-13

(Page 2 of 5)

LOG OF BORING SB-13

(Page 3 of 5)

Date/Time Started : 1-4-13 / 1000
 Date/Time Completed : 1-8-13 / 1200
 Total Boring Depth (bgs) : 111.5'
 Depth to Water ATD (bgs): ~52.5'
 Elevation (ft) : NA
 Drilling Method : HSA
 Sampler Type : 18" Split Spoon



Site Name: Former Penthouse Drapery
 Client: Forsberg & Umlauf
 Project #: 105-003

05-07-2013 \\PACIFIC-8E185AF\public\Project Files\105 Forsberg\105-003 Penthouse Drapery\Boring Logs\SB-13.bo

Depth In Feet	Water Level	Sample	Description	USCS	Graphic	% Recovery	Blow Count	PID (ppm)	Sample ID
50		X	50.0-51.5 SILT, minor sand, trace gravel (80% silt, 15% fine to coarse sand, 5% fine gravel), greyish brown, moist to wet, no odor.	ML		90	32/50	0.0	
51									
52	▼								
53		X	52.5-54.0 SILT with sand, trace gravel (65% silt, 30% fine to coarse sand, 5% gravel), greyish brown, moist to wet, no odor.	ML		100	13/24/26	0.0	
54									
55		X	55.0-56.5 SILT with sand, trace gravel (65% silt, 30% fine to coarse sand, 5% gravel), greyish brown, moist to wet, no odor.	ML		-	13/15/22	0.0	SB13-54-56 @1600
56									
57									
58		X	57.5-59.0 Sandy SILT (65% silt, 35% fine to coarse sand), grey, wet, no odor.	ML		10	26/50	0.0	
59									
60		X	60.0-61.5 SILT, minor sand (90% silt, 10% fine to coarse sand), grey, moist to wet, no odor.	ML		85	13/19/17	0.0	
61									
62									
63		X	62.5-64.0 SILT, trace gravel (95% silt, 5% coarse gravel), grey, wet, no odor.	ML		75	50 (for 4)	0.0	
64									
65		X	65.0-66.5 SILT, minor sand, trace gravel (80% silt, 15% fine to coarse sand, 5% fine to coarse gravel), grey, wet, no odor.	ML		90	14/20/23	0.0	SB13-64-66 @0950
66									
67									
68		X	67.5-69.0 SILT with sand, trace gravel (65% silt, 30% fine to coarse sand, 5% coarse gravel), grey, moist to wet, no odor.	ML		95	13/20/29	0.0	
69									
70									
71		X	70.0-71.5 Silty SAND, trace gravel (55% fine to coarse sand, 40% silt, 5% fine to coarse gravel), grey, moist to wet, no odor.	SM		90	18/25/50 (for 5)	0.0	
72									
73		X	72.5-74.0 Silty SAND (85% fine to coarse sand, 15% silt), grey/brown, wet, no odor.	SM		90	31/50	0.0	SB13-74-76 @1120
74									
75									

Drilling Company : Holt Drilling
 Drilling Foreman : John Bennett
 Equipment : HSA
 Backfill Material : Bentonite
 Pacific Crest Rep. : Matt DeCaro

LOG OF BORING SB-13

(Page 3 of 5)

LOG OF BORING SB-13

(Page 4 of 5)

Date/Time Started : 1-4-13 / 1000
 Date/Time Completed : 1-8-13 / 1200
 Total Boring Depth (bgs) : 111.5'
 Depth to Water ATD (bgs): ~52.5'
 Elevation (ft) : NA
 Drilling Method : HSA
 Sampler Type : 18" Split Spoon



Site Name: Former Penthouse Drapery
 Client: Forsberg & Umlauf
 Project #: 105-003

Depth In Feet	Water Level	Sample	Description	USCS	Graphic	% Recovery	Blow Count	PID (ppm)	Sample ID
75		X	75.0-76.5 Silty SAND, trace gravel (80% fine to coarse sand, 15% silt, 5% fine to coarse gravel), grey, moist to wet, no odor.	SM		100	-	0.0	SB13-70-80RG @1245
76									
77									
78		X	77.5-79.0 Silty SAND, trace gravel (85% fine to coarse sand, 10% silt, 5% gravel), grey/brown, moist to wet, no odor.	SW/SM		60	21/31/39	0.0	
79									
80		X	80.0-81.5 Silty SAND, trace gravel (85% fine to coarse sand, 10% silt, 5% gravel), grey/brown, moist to wet, no odor.	SW/SM		95	29/37/50	0.0	
81									
82									
83		X	82.5-84.0 Silty SAND (75% fine to coarse sand, 25% silt), grey/green, wet, no odor.	SM		100	33/50	0.0	
84									
85		X	85.0-86.5 GRAVEL (100% coarse gravel).	GW		1	50 (for 6)	-	SB13-80-90RG @1400
86									
87									
88		X	87.5-89.0 Silty SAND, trace gravel (55% fine to coarse sand, 40% silt, 5% fine to coarse gravel), grey, wet, no odor.	SM		80	13/17/27	0.0	SB13-86-88 @1335
89									
90		X	90.0-91.5 Silty SAND, trace gravel (70% fine to coarse sand, 25% silt, 5% coarse gravel), grey, wet to moist, no odor.	SM		95	-	0.0	
91									
92									
93		X	92.5-94.0 Silty SAND (70% fine to coarse sand, 30% silt), grey, moist to wet, no odor.	SM		50	11/29/50 (for 3)	0.0	
94									
95		X	95.0-96.5 Silty SAND (70% fine to coarse sand, 30% silt), grey, moist to wet, no odor.	SM		60	13/35/50	0.0	SB13-94-96 @1445
96									
97									
98		X	97.5-99.0 Silty SAND (70% fine to coarse sand, 30% silt), grey, moist to wet, no odor.	SM		60	-	0.0	
99									
100									

05-07-2013 \\PACIFIC-8E185AF\public\Project Files\105-Forsberg\105-003 Penthouse Drapery\Boring Logs\SB-13.bo

Drilling Company : Holt Drilling
 Drilling Foreman : John Bennett
 Equipment : HSA
 Backfill Material : Bentonite
 Pacific Crest Rep. : Matt DeCaro

LOG OF BORING SB-13
 (Page 4 of 5)

LOG OF BORING SB-13

(Page 5 of 5)

Date/Time Started : 1-4-13 / 1000
 Date/Time Completed : 1-8-13 / 1200
 Total Boring Depth (bgs) : 111.5'
 Depth to Water ATD (bgs): ~52.5'
 Elevation (ft) : NA
 Drilling Method : HSA
 Sampler Type : 18" Split Spoon



Site Name: Former Penthouse Drapery
 Client: Forsberg & Umlauf
 Project #: 105-003

Depth In Feet	Water Level	Sample	Description	USCS	Graphic	% Recovery	Blow Count	PID (ppm)	Sample ID	
100		X	100.0-101.5 Silty SAND (70% fine to coarse sand, 30% silt), grey, moist to wet, no odor.	SM		60	17/31/36	0.0	SB13-100-110RG @1005	
101									SB13-DUP-100-110RG @1010	
102		X	102.5-104.0 Silty SAND (70% fine to coarse sand, 30% silt), grey, moist to wet, no odor.	SM		50	24/38/50 (for 2)	0.0		
103										
104		X	105.0-106.5 Silty SAND (70% fine to coarse sand, 30% silt), grey, moist to wet, no odor.	SM		80	19/50 (for 4)	0.0	SB13-104-106 @1550	
105									SB13-DUP-104-106 @1555	
106		X	107.5-109.0 Silty SAND (60% fine to coarse sand, 40% silt), grey, moist, no odor.	SM		60	16/50 (for 5)	0.0		
107										
108		X	110.0-111.5 Silty SAND (60% fine to coarse sand, 40% silt), grey, moist, no odor.	SM		75	16/35/50	0.0		
109										
110			Bottom of boring at 111.5 feet below ground surface.							
111										
112										
113										
114										
115										
116										
117										
118										
119										
120										
121										
122										
123										
124										
125										

05-07-2013 \\PACIFIC-8E185A\Fpublic\Project Files\105-Forsberg\105-003 Penthouse Drapery\Boring Logs\SB-13.bo

Drilling Company : Holt Drilling
 Drilling Foreman : John Bennett
 Equipment : HSA
 Backfill Material : Bentonite
 Pacific Crest Rep. : Matt DeCaro

LOG OF BORING SB-13

(Page 5 of 5)

LOG OF BORING SB-14

(Page 1 of 5)

Date/Time Started : 12-26-12 / 1000
 Date/Time Completed : 12-28-12 / 1630
 Total Boring Depth (bgs) : 110.0'
 Depth to Water ATD (bgs) : ~20.0'
 Elevation (ft) : NA
 Drilling Method : HSA
 Sampler Type : 18" Split Spoon



Site Name: Former Penthouse Drapery
 Client: Forsberg & Umlauf
 Project #: 105-003

Depth In Feet	Water Level	Sample	Description	USCS	Graphic	% Recovery	Blow Count	PID (ppm)	Sample ID
0			0.0-1.5 SILT, trace gravel (95% silt, 5% fine to coarse gravel), brown, moist, no odor	ML		50	1/1/4	0.0	
1									
2									
3			2.5-4.0 SAND, trace silt, trace gravel (90% fine to coarse sand, 5% silt, 5% fine to coarse gravel), brown, moist, no odor.	SW		50	-	-	
4									
5			5.0-6.5 Silty SAND, trace gravel (85% fine to coarse sand, 10% silt, 5% fine to coarse gravel), brown, moist, no odor.	SW/SM		65	3/7/10	-	
6									
7									
8			7.5-9.0 Silty SAND, trace gravel (85% fine to coarse sand, 10% silt, 5% fine to coarse gravel), brown, moist, no odor.	SW/SM		45	9/17/21	0.0	
9									
10			10.0-11.5 Silty SAND, trace gravel (60% fine to medium sand, 35% silt, 5% fine to coarse gravel), brown, moist, no odor.	SM		95	9/32/50	-	
11									
12									
13			12.5-14.0 Silty SAND, trace gravel (75% fine to coarse sand, 20% silt, 5% fine to coarse gravel), brown, moist, no odor.	SM		-	12/50 (for 5)	-	
14									
15			15.0-16.5 Silty SAND, trace gravel (75% fine to coarse sand, 20% silt, 5% fine to coarse gravel), brown, moist, no odor.	SM		-	17/50 (for 5)	-	
16									
17									
18			17.5-19.0 Silty SAND, minor gravel (70% fine to coarse sand, 20% silt, 10% fine to coarse gravel), brown, moist, no odor.	SM		75	-	0.2	
19									
20	▼		20.0-21.5 Silty SAND (85% fine to coarse sand, 15% silt), brown/grey, wet, no odor.	SM		-	19/36/50 (for 5)	-	
21									
22									
23			22.5-24.0 Silty SAND (85% fine to coarse sand, 15% silt), brown/grey, wet, no odor.	SM		-	30/50	-	
24									
25									

05-07-2013 \\PACIFIC-8E185A\Fpublic\Project Files\105-003 Penthouse Drapery\Boring_Logs\SB-14.bo

Drilling Company : Holt Drilling
 Drilling Foreman : John Bennett
 Equipment : HSA
 Backfill Material : Bentonite
 Pacific Crest Rep. : April Wiebenga

LOG OF BORING SB-14
 (Page 1 of 5)

LOG OF BORING SB-14

(Page 2 of 5)

Date/Time Started : 12-26-12 / 1000
 Date/Time Completed : 12-28-12 / 1630
 Total Boring Depth (bgs) : 110.0'
 Depth to Water ATD (bgs): ~20.0'
 Elevation (ft) : NA
 Drilling Method : HSA
 Sampler Type : 18" Split Spoon



Site Name: Former Penthouse Drapery
 Client: Forsberg & Umlauf
 Project #: 105-003

Depth In Feet	Water Level	Sample	Description	USCS	Graphic	% Recovery	Blow Count	PID (ppm)	Sample ID
25		X	25.0-26.5 SILT with sand, trace gravel (75% silt, 20% fine to medium sand, 5% fine to coarse gravel), brown, moist, no odor.	ML		100	7/43/55	-	
26									
27									
28		X	27.5-29.0 Silty SAND, trace gravel (60% fine to coarse sand, 35% silt, 5% fine gravel), brown, moist, no odor.	SM		-	7/30/50 (for 5)	0.1	
29									
30		X	30.0-31.5 Silty SAND, trace gravel (80% fine to coarse sand, 15% silt, 5% fine to coarse gravel), brown, wet, no odor.	SM		-	-	-	
31									
32									
33		X	32.5-34.0 SILT with sand, trace gravel (70% silt, 25% fine sand, 5% fine to coarse gravel), brown, wet, no odor.	ML		50	50 (for 5)	-	
34									
35		X	35.0-36.5 SILT with sand, trace gravel (70% silt, 25% fine sand, 5% fine to coarse gravel), brown, wet, no odor.	ML		-	27/50 (for 4)	-	SB14-34-36 @1335
36									
37									SB14-30-40RG @1500
38		X	37.5-39.0 SILT with sand, trace gravel (70% silt, 25% fine sand, 5% fine to coarse gravel), brown, wet, no odor.	ML		-	-	-	
39									
40		X	40.0-41.5 SILT, trace sand (95% silt, 5% sand), grey, moist, no odor.	ML		-	32/50	0.1	
41									
42									
43		X	42.5-44.0 SILT, minor sand (90% silt, 10% fine to medium sand), grey, moist, no odor.	ML		-	15/26/34	0.4	
44									
45		X	45.0-46.5 SILT, trace gravel, trace sand (90% silt, 5% fine to coarse gravel, 5% fine sand), grey, moist, no odor.	ML		40	17/50 (for 4)	-	SB14-44-46 @1600
46									
47									
48		X	47.5-49.0 SILT, minor gravel, trace sand (85% silt, 10% fine to coarse gravel, 5% fine sand), grey, wet, no odor.	ML		100	-	-	SB14-40-50RG @0915
49									
50									

Drilling Company : Holt Drilling
 Drilling Foreman : John Bennett
 Equipment : HSA
 Backfill Material : Bentonite
 Pacific Crest Rep. : April Wiebenga

LOG OF BORING SB-14

(Page 2 of 5)

05-07-2013 \\PACIFIC-8E\BSEA\Public\Project Files\105-Forsberg\105-003 Penthouse Drapery\Boring Logs\SB-14.bo

LOG OF BORING SB-14

(Page 3 of 5)

Date/Time Started : 12-26-12 / 1000
 Date/Time Completed : 12-28-12 / 1630
 Total Boring Depth (bgs) : 110.0'
 Depth to Water ATD (bgs): ~20.0'
 Elevation (ft) : NA
 Drilling Method : HSA
 Sampler Type : 18" Split Spoon



PACIFIC CREST ENVIRONMENTAL
 WWW.PCENV.COM 425-888-4990

Site Name: Former Penthouse Drapery

Client: Forsberg & Umlauf

Project #: 105-003

05-07-2013 \\PACIFIC-8E185AF\public\Project Files\105 Forsberg\105-003 Penthouse Drapery\Boring Logs\SB-14.bo

Depth In Feet	Water Level	Sample	Description	USCS	Graphic	% Recovery	Blow Count	PID (ppm)	Sample ID
50			50.0-51.5 SILT, minor gravel, trace sand (85% silt, 10% fine to coarse gravel, 5% fine sand), grey, wet, no odor.	ML		-	30/50/50	0.2	
51									
52									
53			52.5-54.0 SILT, minor sand, trace gravel (85% silt, 10% fine to medium sand, 5% fine gravel), grey, moist, no odor.	ML		60	16/19/27	-	
54									
55			55.0-56.5 SILT, minor sand, trace gravel (85% silt, 10% fine to medium sand, 5% fine gravel), grey, moist, no odor.	ML		100	-	0.2	SB14-54-56 @1050
56									
57									
58			57.5-59.0 SILT, minor sand, trace gravel (85% silt, 10% fine to medium sand, 5% fine gravel), grey, moist, no odor.	ML		100	13/14/17	-	
59									
60			60.0-61.5 SAND with gravel (80% fine to coarse sand, 20% fine to coarse gravel), brown, wet, no odor.	SP		90	12/23/20	-	
61									
62									
63			62.5-64.0 SAND with gravel, trace silt, (75% medium to coarse sand, 20% fine to coarse gravel, 5% silt), brown, wet, no odor.	SP		100	-	0.0	
64									
65			65.0-66.5 SAND, trace silt (95% fine to coarse sand, 5% silt), brown/black, wet, no odor.	SP		100	-	-	SB14-64-66 @1250
66									
67									
68			67.5-69.0 SAND, trace silt (95% fine to coarse sand, 5% silt), brown/black, wet, no odor.	SP		100	-	-	
69									
70			70.0-71.5 SAND, trace silt (95% fine to medium sand, 5% silt), brown/grey, wet, no odor.	SP		100	-	-	
71									
72									
73			72.5-74.0 Silty SAND (75% fine to medium sand, 25% silt), brown, wet, no odor.	SM		90	27/50	0.1	SB14-74-76 @1400
74									
75									

Drilling Company : Holt Drilling
 Drilling Foreman : John Bennett
 Equipment : HSA
 Backfill Material : Bentonite
 Pacific Crest Rep. : April Wiebenga

LOG OF BORING SB-14

(Page 3 of 5)

LOG OF BORING SB-14

(Page 4 of 5)

Date/Time Started : 12-26-12 / 1000
 Date/Time Completed : 12-28-12 / 1630
 Total Boring Depth (bgs) : 110.0'
 Depth to Water ATD (bgs): -20.0'
 Elevation (ft) : NA
 Drilling Method : HSA
 Sampler Type : 18" Split Spoon



Site Name: Former Penthouse Drapery
 Client: Forsberg & Umlauf
 Project #: 105-003

Depth In Feet	Water Level	Sample	Description	USCS	Graphic	% Recovery	Blow Count	PID (ppm)	Sample ID
75		X	75.0-76.5 Silty SAND (75% fine sand, 25% silt), brown, wet, no odor.	SM		-	-	-	
76									
77									SB14-70-80RG @0900
78		X	77.5-79.0 Silty SAND (75% fine sand, 25% silt), brown, wet, no odor.	SM		-	-	-	
79									
80		X	80.0-81.5 Silty SAND (75% fine sand, 25% silt), brown, wet, no odor.	SM		90	8/13/24	-	
81									
82									
83		X	82.5-84.0 Silty SAND (75% fine sand, 25% silt), brown, wet, no odor.	SM		100	10/23/31	0.0	
84									
85		X	85.0-86.5 Silty SAND (75% fine sand, 25% silt), brown, wet, no odor.	SM		0	11/50 (for 3)	-	SB14-84-86 @1015
86									
87									SB14-80-90RG @1230
88		X	87.5-89.0 Silty SAND (75% fine sand, 25% silt), brown, wet, no odor.	SM		50	-	-	
89									
90		X	90.0-91.5 Silty SAND (75% fine sand, 25% silt), brown, wet, no odor.	SM		80	12/19/28	-	
91									
92									
93		X	92.5-94.0 Silty SAND (75% fine sand, 25% silt), brown, wet, no odor.	SM		0	-	-	
94									
95		X	95.0-96.5 Silty SAND (75% fine sand, 25% silt), brown, wet, no odor.	SM		70	-	0.0	SB14-95-96 @1340
96									
97									
98		X	97.5-99.0 Silty SAND (75% fine sand, 25% silt), brown, wet, no odor.	SM		90	-	-	
99									
100									

Drilling Company : Holt Drilling
 Drilling Foreman : John Bennett
 Equipment : HSA
 Backfill Material : Bentonite
 Pacific Crest Rep. : April Wiebenga

LOG OF BORING SB-14

(Page 4 of 5)

05-07-2013 \\PACIFIC-8E185AF\public\Project Files\105-Forsberg\105-003 Penthouse Drapery\Boring Logs\SB-14.bc

LOG OF BORING SB-14

(Page 5 of 5)

Date/Time Started : 12-26-12 / 1000
 Date/Time Completed : 12-28-12 / 1630
 Total Boring Depth (bgs) : 110.0'
 Depth to Water ATD (bgs): ~20.0'
 Elevation (ft) : NA
 Drilling Method : HSA
 Sampler Type : 18" Split Spoon



PACIFIC CREST ENVIRONMENTAL
 WWW.PCENV.COM 425-888-4990

Site Name: Former Penthouse Drapery

Client: Forsberg & Umlauf

Project #: 105-003

Depth In Feet	Water Level	Sample	Description	USCS	Graphic	% Recovery	Blow Count	PID (ppm)	Sample ID	
100		X	100.0-101.5 Silty SAND (75% fine sand, 25% silt), brown, wet, no odor.	SM		90	-	0.6		
101										
102										
103		X	102.5-104.0 Silty SAND (75% fine sand, 25% silt), brown, wet, no odor.	SM		90	-	-		
104										
105		X	105.0-106.5 Silty SAND (65% fine sand, 35% silt), brown/grey, wet, no odor.	SM		100	13/29/38		SB14-104-106 @1430	
106										
107									SB14-100-110RG @1600	
108		X	107.5-109.0 Silty SAND (65% fine sand, 35% silt), brown/grey, wet, no odor.	SM		100	-	0.2		
109										
110			Bottom of boring at 110.0 feet below ground surface.							
111										
112										
113										
114										
115										
116										
117										
118										
119										
120										
121										
122										
123										
124										
125										

05-07-2013 \\PACIFIC-8E185AF\public\Project Files\105 Forsberg\105-003 Penthouse Drapery\Boring Logs\SB-14.bo

Drilling Company : Holt Drilling
 Drilling Foreman : John Bennett
 Equipment : HSA
 Backfill Material : Bentonite
 Pacific Crest Rep. : April Wiebenga

LOG OF BORING SB-14

(Page 5 of 5)

LOG OF BORING SB-15

(Page 1 of 5)

Date/Time Started : 12-31-12 / 1030
 Date/Time Completed : 1-3-13 / 1630
 Total Boring Depth (bgs) : 106.5'
 Depth to Water ATD (bgs): ~20'
 Elevation (ft) : NA
 Drilling Method : HSA
 Sampler Type : 18" Split Spoon



Site Name: Former Penthouse Drapery
 Client: Forsberg & Umlauf
 Project #: 105-003

Depth In Feet	Water Level	Sample	Description	USCS	Graphic	% Recovery	Blow Count	PID (ppm)	Sample ID
0			0.0-1.5 Clayey SILT, minor gravel (55% silt, 35% clay, 10% fine to coarse gravel), brown/orange, moist, no odor.	ML		50	2/2/5	-	
1									
2									
3			2.5-4.0 Clayey SILT, minor gravel (55% silt, 35% clay, 10% fine to coarse gravel), brown/orange, moist, no odor.	ML		25	-	-	
4									
5			5.0-6.5 Silty SAND (65% fine to medium sand, 35% silt) brown, moist, no odor.	SM		75	-	-	
6									
7									
8			7.5-9.0 Silty SAND (65% fine to medium sand, 35% silt) brown, moist, no odor.	SM		100	-	-	
9									
10			10.0-11.5 Silty SAND (65% fine to medium sand, 35% silt) brown, moist, no odor.	SM		100	-	-	
11									
12									
13			12.5-14.0 Silty SAND (65% fine to medium sand, 35% silt) brown, moist, no odor.	SM		100	-	-	
14									
15			15.0-16.5 Silty SAND, trace gravel (80% fine to coarse sand, 15% silt, 5% fine to coarse gravel), brown, moist, no odor.	SM		100	-	-	
16									
17									
18			17.5-19.0 Silty SAND, trace gravel (60% fine to coarse sand, 35% silt, 5% fine to coarse gravel), brown, moist, no odor.	SM		100	-	-	
19									
20	▼		20.0-21.5 Silty SAND, trace gravel (60% fine to coarse sand, 35% silt, 5% fine to coarse gravel), brown, wet, no odor.	SM		100	-	-	
21									
22									
23			22.5-24.0 Silty SAND, trace gravel (60% fine to coarse sand, 35% silt, 5% fine to coarse gravel), brown, wet, no odor.	SM		100	-	-	
24									
25									

Drilling Company : Holt Drilling
 Drilling Foreman : John Bennett
 Equipment : HSA
 Backfill Material : Bentonite
 Pacific Crest Rep. : April Wiebenga/Matt DeCaro

LOG OF BORING SB-15

(Page 1 of 5)

05-07-2013 \\PACIFIC-8E185AF\public\Project Files\105 Foraberg\105 Foraberg\Former Penthouse Drapery\Boring Logs\SB-15.bo

LOG OF BORING SB-15

(Page 2 of 5)

Date/Time Started : 12-31-12 / 1030
 Date/Time Completed : 1-3-13 / 1630
 Total Boring Depth (bgs) : 106.5'
 Depth to Water ATD (bgs): ~20'
 Elevation (ft) : NA
 Drilling Method : HSA
 Sampler Type : 18" Split Spoon



Site Name: Former Penthouse Drapery
 Client: Forsberg & Umlauf
 Project #: 105-003

Depth In Feet	Water Level	Sample	Description	USCS	Graphic	% Recovery	Blow Count	PID (ppm)	Sample ID
25		X	25.0-26.5 Silty SAND, trace gravel (60% fine to coarse sand, 35% silt, 5% fine to coarse gravel), brown, wet, no odor.	SM		85	-	-	
26									
27									
28		X	27.5-29.0 Silty SAND, minor gravel (65% fine to coarse sand, 25% silt, 10% fine to coarse gravel), brown, wet, no odor.	SW/SM		70	-	-	
29									
30		X	30.0-31.5 Silty SAND, minor gravel (80% fine to coarse sand, 10% silt, 10% gravel), brown, wet, no odor.	SW/SM		100	-	-	
31									
32									
33		X	32.5-34.0 Silty SAND, minor gravel (80% fine to coarse sand, 10% silt, 10% gravel), brown, wet, no odor.	SW/SM		100	-	163	
34									
35		X	35.0-36.5 Silty SAND (70% fine to coarse sand, 30% silt), brown, wet, no odor.	SM		25	-	-	
36									
37									
38		X	37.5-39.0 SILT, minor sand, trace gravel (85% silt, 10% fine to coarse sand, 5% fine to coarse gravel), grey, moist to wet, no odor.	ML		90	20 (for 5)	-	
39									
40		X	40.0-41.5 SILT, minor sand, trace gravel (85% silt, 10% fine to coarse sand, 5% fine to coarse gravel), grey, moist to wet, no odor.	ML		25	32/50 (for 5)	414	
41									
42									
43		X	42.5-44.0 SILT, minor sand, trace gravel (85% silt, 10% fine to coarse sand, 5% fine to coarse gravel), grey, moist to wet, no odor.	ML		85	31/50 (for 4)	-	
44									
45		X	45.0-46.5 SILT, minor sand, trace gravel (85% silt, 10% fine to coarse sand, 5% fine to coarse gravel), grey, moist to wet, no odor.	ML		50	12/50 (for 4)	20.3	
46									
47									
48		X	47.5-49.0 SILT, trace sand, trace gravel (90% silt, 5% fine to coarse sand, 5% fine to coarse gravel), grey, moist to wet, no odor.	ML		60	22/50 (for 4)	27.0	
49									
50									

05-07-2013 \\PACIFIC-8E185AF-public\Project Files\105-Forsberg\105-003 Penthouse Drapery\Boring Logs\SB-15.bc

Drilling Company : Holt Drilling
 Drilling Foreman : John Bennett
 Equipment : HSA
 Backfill Material : Bentonite
 Pacific Crest Rep. : April Wiebenga/Matt DeCaro

LOG OF BORING SB-15

(Page 2 of 5)

LOG OF BORING SB-15

(Page 3 of 5)

Date/Time Started : 12-31-12 / 1030
 Date/Time Completed : 1-3-13 / 1630
 Total Boring Depth (bgs) : 106.5'
 Depth to Water ATD (bgs): ~20'
 Elevation (ft) : NA
 Drilling Method : HSA
 Sampler Type : 18" Split Spoon



Site Name: Former Penthouse Drapery
 Client: Forsberg & Umlauf
 Project #: 105-003

Depth In Feet	Water Level	Sample	Description	USCS	Graphic	% Recovery	Blow Count	PID (ppm)	Sample ID
50		X	50.0-51.5 SILT, trace sand (95% silt, <5% fine sand), grey, moist to wet, no odor.	ML		20	50 (for 6)	22.0	
51									
52									
53		X	52.5-54.0 SILT, trace sand, trace gravel (90% silt, <5% fine sand, 5% fine to coarse gravel), grey, moist to wet, no odor.	ML		33	50 (for 6)	-	
54									
55									
56		X	55.0-56.5 SILT, trace sand, trace gravel (90% silt, <5% fine sand, 5% fine to coarse gravel), grey, moist to wet, no odor.	ML		33	31/50 (for 3)	9.4	
57									
58		X	57.5-59.0 SILT, trace sand, trace gravel (90% silt, <5% fine sand, 5% fine to coarse gravel), grey, moist to wet, no odor.	ML		100	-	-	
59									
60									
61		X	60.0-61.5 SILT, trace sand, trace gravel (90% silt, <5% fine sand, 5% fine to coarse gravel), grey, moist to wet, no odor.	ML		-	-	-	
62									
63		X	62.5-64.0 SILT, trace sand (95% silt, <5% fine to coarse sand), grey, moist, no odor.	ML		100	17/29/35	0.6	
64									
65									
66		X	65.0-66.5 SILT (100% silt), grey, moist, no odor.	ML		100	12/21/40	0.1	SB15-64-65 @0929
67									
68		X	67.5-69.0 SILT, trace sand (95% silt, <5% fine to coarse sand), grey, moist to wet, no odor.	ML		95	18/23/35	0.4	
69									
70									
71		X	70.0-71.5 SILT, trace sand (95% silt, 5% fine to coarse sand), grey, moist to wet, no odor.	ML		100	12/15/17	0.9	
72									
73		X	72.5-74.0 Sandy SILT (60% silt, 40% fine to coarse sand), dark grey, moist to wet, no odor.	ML		100	23/29/50	2.9	SB15-74-76 @1033
74									
75									

Drilling Company : Holt Drilling
 Drilling Foreman : John Bennett
 Equipment : HSA
 Backfill Material : Bentonite
 Pacific Crest Rep. : April Wiebenga/Matt DeCaro

LOG OF BORING SB-15

(Page 3 of 5)

05-07-2013 \\PACIFIC-8E185AF\public\Project Files\105-003 Penthouse Drapery\Boring Logs\SB-15.bo

LOG OF BORING SB-15

(Page 4 of 5)

Date/Time Started : 12-31-12 / 1030
 Date/Time Completed : 1-3-13 / 1630
 Total Boring Depth (bgs) : 106.5'
 Depth to Water ATD (bgs) : ~20'
 Elevation (ft) : NA
 Drilling Method : HSA
 Sampler Type : 18" Split Spoon



PACIFIC CREST ENVIRONMENTAL
 WWW.PCENV.COM 425-888-4990

Site Name: Former Penthouse Drapery

Client: Forsberg & Umlauf

Project #: 105-003

05-07-2013 \\PACIFIC-8E\BSEA\Public\Project Files\105-003 Penthouse Drapery\Boring Logs\SB-15.bc

Depth In Feet	Water Level	Sample	Description	USCS	Graphic	% Recovery	Blow Count	PID (ppm)	Sample ID
75		X	75.0-76.5 Sandy SILT (65% silt, 35% fine to coarse sand), dark grey, moist to wet, no odor.	ML		95	18/27/50	13.5	SB15-70-80RG @1115
76									
77									
78		X	77.5-79.0 Silty SAND (60% fine to coarse sand, 40% silt), dark grey, moist to wet, no odor.	SM		95	14/18/26	10.9	
79									
80		X	80.0-81.5 Silty SAND (90% fine to coarse sand, 10% silt), light grey to dark grey, moist, no odor.	SW/SM		70	21/33/38	14.1	
81									
82									
83		X	82.5-84.0 SAND, trace silt (>95% fine to coarse sand, <5% silt), light gray to dark grey, moist, no odor.	SW		100	8/14/20	12.2	
84									
85		X	85.0-86.5 SAND, trace silt (>95% fine to coarse sand, <5% silt), light grey to dark grey, moist, no odor.	SW		100	7/12/26	0.0	SB15-84-86 @1320
86									
87									
88		X	87.5-89.0 Silty SAND (90% fine to coarse sand, 10% silt), medium grey, moist, no odor.	SW/SM		100	10/22/33	0.0	SB15-80-90RG @1600
89									
90		X	90.0-91.5 Sandy SILT (55% silt, 45% fine to coarse sand), medium grey, moist, no odor.	ML		100	12/18/31	0.0	
91									
92									
93		X	92.5-94.0 Sandy SILT (55% silt, 45% fine to coarse sand), grey, moist, no odor.	ML		100	9/8/10	1.7	
94									
95		X	95.0-96.5 Sandy SILT (55% silt, 45% fine to coarse sand), grey, moist, no odor.	ML		100	8/12/34	0.0	SB15-94-96 @1135
96									
97									
98		X	97.5-99.0 Sandy SILT (55% silt, 45% fine to coarse sand), grey, moist, no odor.	ML		100	5/7/18	0.0	
99									
100									

Drilling Company : Holt Drilling
 Drilling Foreman : John Bennett
 Equipment : HSA
 Backfill Material : Bentonite
 Pacific Crest Rep. : April Wiebenga/Matt DeCaro

LOG OF BORING SB-15

(Page 4 of 5)

LOG OF BORING SB-15

(Page 5 of 5)

Date/Time Started : 12-31-12 / 1030
 Date/Time Completed : 1-3-13 / 1630
 Total Boring Depth (bgs) : 106.5'
 Depth to Water ATD (bgs): ~20'
 Elevation (ft) : NA
 Drilling Method : HSA
 Sampler Type : 18" Split Spoon



Site Name: Former Penthouse Drapery
 Client: Forsberg & Umlauf
 Project #: 105-003

Depth In Feet	Water Level	Sample	Description	USCS	Graphic	% Recovery	Blow Count	PID (ppm)	Sample ID	
100		X	100.0-101.5 Sandy SILT (55% silt, 45% fine to coarse sand), grey, moist to wet, no odor.	ML		75	-	0.0		
101			-----							
102										
103		X	102.5-104.0 Sandy SILT (55% silt, 45% fine to coarse sand), grey, moist to wet, no odor.	ML		100	9/17/26	0.0		
104			-----						SB15-104-106 @1420	
105										
106		X	105.0-106.5 Sandy SILT (55% silt, 45% fine to coarse sand), grey, moist to wet, no odor.	ML		-	-	-	SB-100-106.5RG @1610	
107			Bottom of boring at 106.5 feet below ground surface.							
108										
109										
110										
111										
112										
113										
114										
115										
116										
117										
118										
119										
120										
121										
122										
123										
124										
125										

05-07-2013 \\PACIFIC-8E185AF_public\Project Files\105-003 Penthouse Drapery\Boring Logs\SB-15.bo

Drilling Company : Holt Drilling
 Drilling Foreman : John Bennett
 Equipment : HSA
 Backfill Material : Bentonite
 Pacific Crest Rep. : April Wiebenga/Matt DeCaro

LOG OF BORING SB-15

(Page 5 of 5)

Project: Enodis - Belshaw Property
 Project Location: Seattle Washington
 Project Number: 33749445

Key to Log of Boring and Descriptive Terms for Soil

Unified Soil Classification System (ASTM D2487 & D2488)

Major Divisions		Symbols		Typical Descriptions
		Graph	Letter	
Coarse Grained Soils More than 50% of No. 200 Sieve Size	Gravels More than 50% of Coarse Fraction Retained in No. 4 Sieve	Clean Gravels (less than 5% fines)		GW Well-Graded Gravels, Gravel-Sand Mixtures, Little or no Fines
		Gravels with Fines (more than 5% fines)		GP Poorly-Graded Gravels, Gravel-Sand Mixtures, Little or no Fines
				GM Silty Gravels, Gravel-Sand-Silt Mixtures
				GC Clayey Gravels, Gravel-Sand-Clay Mixtures
	Sands More than 50% of Coarse Fraction Passing through No. 4 Sieve	Clean Sand (less than 5% fines)		SW Well-Graded Sands, Gravelly Sands, Little or no Fines
				SP Poorly Graded Sands, Gravelly Sands, Little or no Fines
		Sands with Fines (more than 5% fines)		SM Silty Sands, Sand-Clay Mixtures
				SC Clayey Sands, Sand-Clay Mixtures
Fine Grained Soils More than 50% of Material is Smaller than No. 200 Sieve Size	Silt and Clays Liquid Limit Less than 50%		ML Inorganic Silts and very Fine Sands, Rock Flour, Silty or Clayey Fine Sands or Clayey Silts with Slight Plasticity	
			CL Inorganic Clays of Low to Medium Plasticity, Gravelly Clays, Sandy Clays, Silty Clays, Lean Clays	
			OL Organic Silts and Organic Silty Clays of Low Plasticity	
	Silt and Clays Liquid Limit Greater than 50%		MH Inorganic Silts, Micaceous or Diatomaceous Fine Sand or Silty Soils	
			CH Inorganic Clays of High Plasticity, Fat Clays	
			OH Organic Clays of Medium to High Plasticity, Organic Silts	
Highly Organic Soils			PT Peat, Humus, Swamp Soils with High Organic Contents (see ASTM D4427-92)	

Abbreviations

SA	Sieve Analysis
M	Moisture
DD	Dry Density
AL	Atterberg Limits
HA	Hydrometer Analysis
C	Consolidation
Pc	Constant Head Permeability
Pf	Falling Head Permeability
DS	Direct Shear
TX	Triaxial
TV	Torvane Shear
LV	Laboratory Vane Shear
PP	Pocket Penetrometer
OVA	Organic Vapor Analyzer
OC	Organic Content
N	Number of hammer blows for last 12 inches sampled

Relative Density or Consistency

Coarse-Grained Soils		Fine-Grained Soils	
Relative Density	N, SPT Blows / ft	Relative Consistency	N, SPT Blows / ft
Very loose sand	0 - 4	Very soft	< 2
Loose	4 - 10	Soft	2 - 4
Medium dense	10 - 30	Medium stiff	4 - 8
Dense	30 - 50	Stiff	8 - 15
Very dense	Over 50	Very stiff	15 - 30
		Hard	Over 30

Sampler Symbols

	3" O.D. Split Spoon Sample with brass rings		3" O.D. Shelby Tube Sample
	Core		Piston Sample
	Non-standard penetration test		Grab Sample
	2" O.D. Split Spoon with 140lb Hammer and 30-inch drop (SPT)		

Minor Descriptors

Trace	0 - 5%
Slightly (clayey, silty, sandy, gravelly)	5 - 12%
Clayey, silty, sandy, gravelly	12 - 30%
Very (clayey, silty, sandy, gravelly)	30 - 50%

Moisture Content

Dry	Absence of moisture, dusty
Moist	Damp but no visible water
Wet	Visible free water, from below the water table

NOTES:

1. Descriptions and stratum lines are interpretive; field descriptions may have been modified to reflect lab test results. Descriptions on these logs apply only at the specific boring locations and at the time the borings were advanced; they are not warranted to be representative of subsurface conditions at other locations or times.
2. Dual Symbols are used to indicate borderline soil classifications

USCS4 K:\005BELSHA-1\ADDTI-1\3749445.GPJ URSSEA3.GLB URSSEA3.0.DT 4/7/03

Project: Bellshaw-Enodis
 Project Location: Seattle, King County, Washington
 Project Number: 33749445

Log of Boring MW-2 (B-2)
 Sheet 1 of 1

Date(s) Drilled	6/5/02	Logged By	DTB	Checked By	VDA
Drilling Method	HSA	Drilling Contractor	Cascade Drilling	Total Depth of Borehole	21.5 feet
Drill Rig Type	CME-55	Drill Bit Size/Type	9"	Ground Surface Elevation	
Groundwater Level	19.4	Sampling Method	D&M	Hammer Data	140#
Borehole Backfill	Location				

Elevation, feet	Downhole Depth, feet	SAMPLES			Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS AND OTHER TESTS
		Type	Number	Blows/6in.				
0						SM	Surface: sidewalk Brown, silty, fine SAND (moist) (very dense) (no apparent odor or stain)	
	5		1	50/5"	0.0			Decreasing moisture
	10		2	50/6"	0.0	SM	Brown, silty SAND with occasional sub-rounded gravel (moist) (very dense) (no apparent odor or stain)	
	15		3	50/4"	0.0		Increasing gravel (moist) (very dense) (no apparent odor or stain)	
	20		4	50/6"	0.0			
	19.4				0.0	SM/GM	Brown, silty SAND and GRAVEL (very dense) (moist) (no apparent odor or stain)	Increasing moisture
	21.5						Boring was terminated at 21.5' bgs due to refusal. Groundwater was encountered at 19.4' bgs. Boring was completed as monitoring well.	

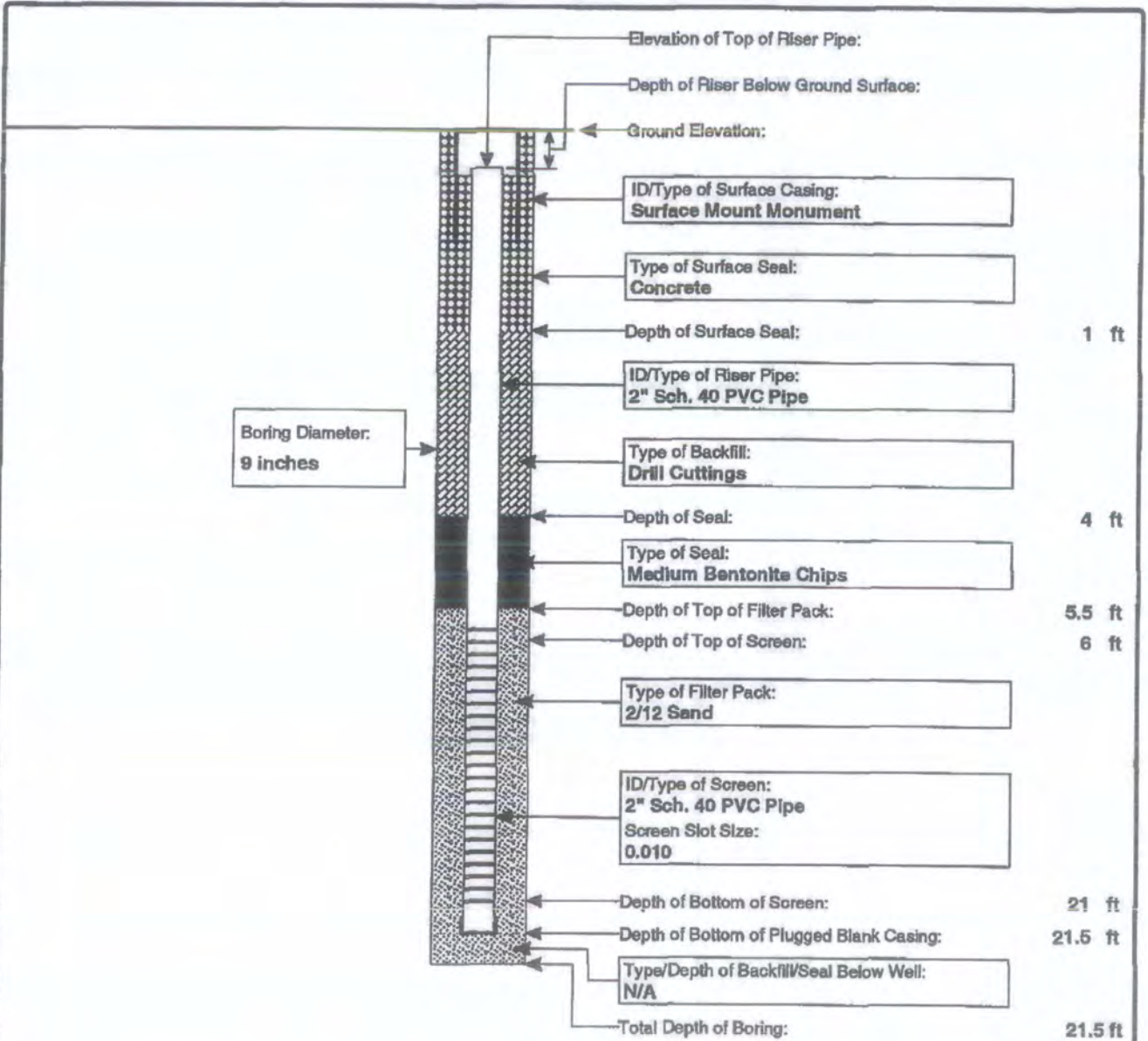
ENV IWO WELL T:\NEW\WORLD\337494-1\01000555.GPJ URSSEA3.GLB URSSEA3.GDT 10/1/02



Project: Belshaw Enodis
 Project Location: Seattle, Washington
 Project Number: 33749445

**MONITORING WELL
 CONSTRUCTION LOG
 FOR WELL MW-2 (B-2)**

Well Location	South end of Belshaw Welding Building	Date(s) Installed	6/5/02	Time	
Installed By	Cascade Drilling	Observed By	DTB	Total Depth (ft)	21.5
Method of Installation	HSA				
Screened Interval	6'-21'	Completion Zone	0'-21.5'		
Remarks					



NOTE: DIAGRAM IS NOT TO SCALE

Project: Bellshaw-Enodis Project Location: Seattle, King County, Washington Project Number: 33749445	Log of Boring B-3 Sheet 1 of 1
---	--

Date(s) Drilled	5/30/02	Logged By	DTB	Checked By	VDA
Drilling Method	Direct Push	Drilling Contractor	ESN	Total Depth of Borehole	8 feet
Drill Rig Type	StrataProbe	Drill Bit Size/Type	2" x 48" Drill Rods	Ground Surface Elevation	
Groundwater Level		Sampling Method	2" x 48" Sample Liners	Hammer Data	
Borehole Backfill		Location			

Elevation, feet	Downhole Depth, feet	SAMPLES				USCS	MATERIAL DESCRIPTION	REMARKS AND OTHER TESTS
		Type	Number	Blows/ 6in.	OVM (ppm)			
0						SM	Brown, silty, fine SAND with some fine, subrounded gravel (moist) (dense) (no apparent odor or stain)	
	1			0.0				
	5			0.0			Some iron staining (no apparent odor or stain)	
	2							
10							Boring was terminated at 8' bgs due to refusal. Groundwater was not encountered. Boring was backfilled with bentonite chips.	
15								
20								
25								
30								

ENV W/O WELL T:\NEW\ORLD\337494-1\1000555.GPJ_URSSEA2.GLB_URSSEA3.GDT 10/1/02



Project: Belishaw-Enodis
 Project Location: Seattle, King County, Washington
 Project Number: 33749445

Log of Boring MW-3 (B-3)

Sheet 1 of 1

Date(s) Drilled	6/5/02	Logged By	DTB	Checked By	VDA
Drilling Method	HSA	Drilling Contractor	Cascade Drilling	Total Depth of Borehole	30 feet
Drill Rig Type	CME-55	Drill Bit Size/Type	9"	Ground Surface Elevation	
Groundwater Level	28.9	Sampling Method	D&M	Hammer Data	140#
Borehole Backfill	Location				

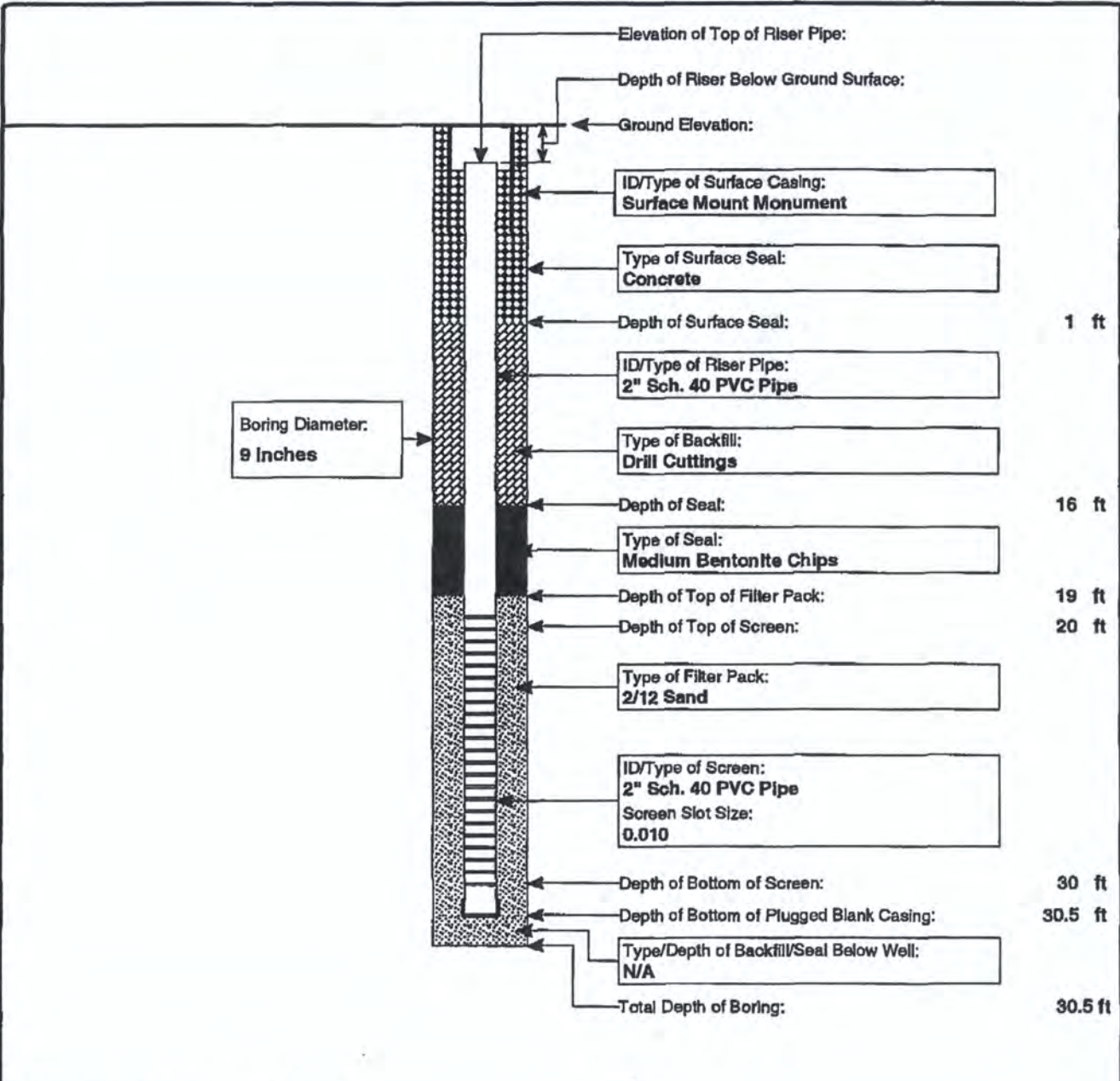
Elevation, feet	Downhole Depth, feet	SAMPLES				Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS AND OTHER TESTS
		Type	Number	Blows/ 6in.	OVM (ppm)				
0							Advanced casing to 15' bgs.	0'-8' bgs B-3 StrataProbe	
5									
10			1	50/5"					
15									
15			2	50/3"	0.0	SM	Brown, silty, fine SAND (moist) (very dense) (slight TPH odor)		
20									
20			3	50/5"	0.0		(no apparent odor or stain)	Increasing moisture	
25									
25			4	50/1"	0.0		No recovery		
30								28.9 ft	
30							Boring was completed to 30' bgs. Groundwater was encountered at 28.9' bgs. Boring was completed as monitoring well.		
35									
40									

ENV W/O WELL T:\CNEWORLD\337494-1\100656.GPJ URSSEA3.GLB URSSEA3.GDT 10/1/02

Project: Belshaw Enodis
 Project Location: Seattle, Washington
 Project Number: 33749445

**MONITORING WELL
 CONSTRUCTION LOG
 FOR WELL MW-3 (B-3)**

Well Location	East corner of Belshaw Welding Building	Date(s) Installed	6/5/02	Time	
Installed By	Cascade Drilling	Observed By	DTB	Total Depth (ft)	30.5
Method of Installation	HSA				
Screened Interval	20'-30'	Completion Zone	0'-30'		
Remarks					



NOTE: DIAGRAM IS NOT TO SCALE

WELL_CONSTR_BELOW_GROUND_T:\DNEWORLD\337494-1\BELSHAW.GPJ_URISSEAS.0LB_URISSEAS.GDT 10/1/02



Project: Bellshaw-Enodis
 Project Location: Seattle, King County, Washington
 Project Number: 33749445

Log of Boring B-4

Sheet 1 of 1

Date(s) Drilled	5/30/02	Logged By	DTB	Checked By	VDA
Drilling Method	Direct Push	Drilling Contractor	ESN	Total Depth of Borehole	13 feet
Drill Rig Type	StrataProbe	Drill Bit Size/Type	2" x 48" Drill Rods	Ground Surface Elevation	
Groundwater Level		Sampling Method	2" x 48" Sample Liners	Hammer Data	
Borehole Backfill		Location			

Elevation, feet	Downhole Depth, feet	SAMPLES				USCS	MATERIAL DESCRIPTION	REMARKS AND OTHER TESTS
		Type	Number	Blows/ 6in.	OVM (ppm)			
0						SM	Brown, silty, fine SAND, iron staining (moist) (dense) (no apparent odor or stain)	
	1			0.0				
	5			0.0			Brown grading gray, silty, fine SAND with sub-rounded some gravel (moist) (glacial till) (no apparent odor or stain)	Increasing moisture
	2			0.0				
	10			0.0				Decreasing moisture
	4			0.0			(dry)	
15							Boring was terminated at 13' bgs due to refusal. Groundwater was not encountered. Boring was backfilled with bentonite chips.	
20								
25								
30								

ENV W/O WELL T:\ONEWORLD\637494-1\10100555.OPJ_URSSEA3.GLB_URSSEA3.GDT 10/1/02

Project: Bellshaw-Enodis
 Project Location: Seattle, King County, Washington
 Project Number: 33749445

Log of Boring MW-4 (B-4)

Sheet 1 of 1

Date(s) Drilled	6/5/02	Logged By	DTB	Checked By	VDA
Drilling Method	HSA	Drilling Contractor	Cascade Drilling	Total Depth of Borehole	35 feet
Drill Rig Type	CME-55	Drill Bit Size/Type	9"	Ground Surface Elevation	
Groundwater Level	26.5	Sampling Method	D&M	Hammer Data	140#
Borehole Backfill	Location				

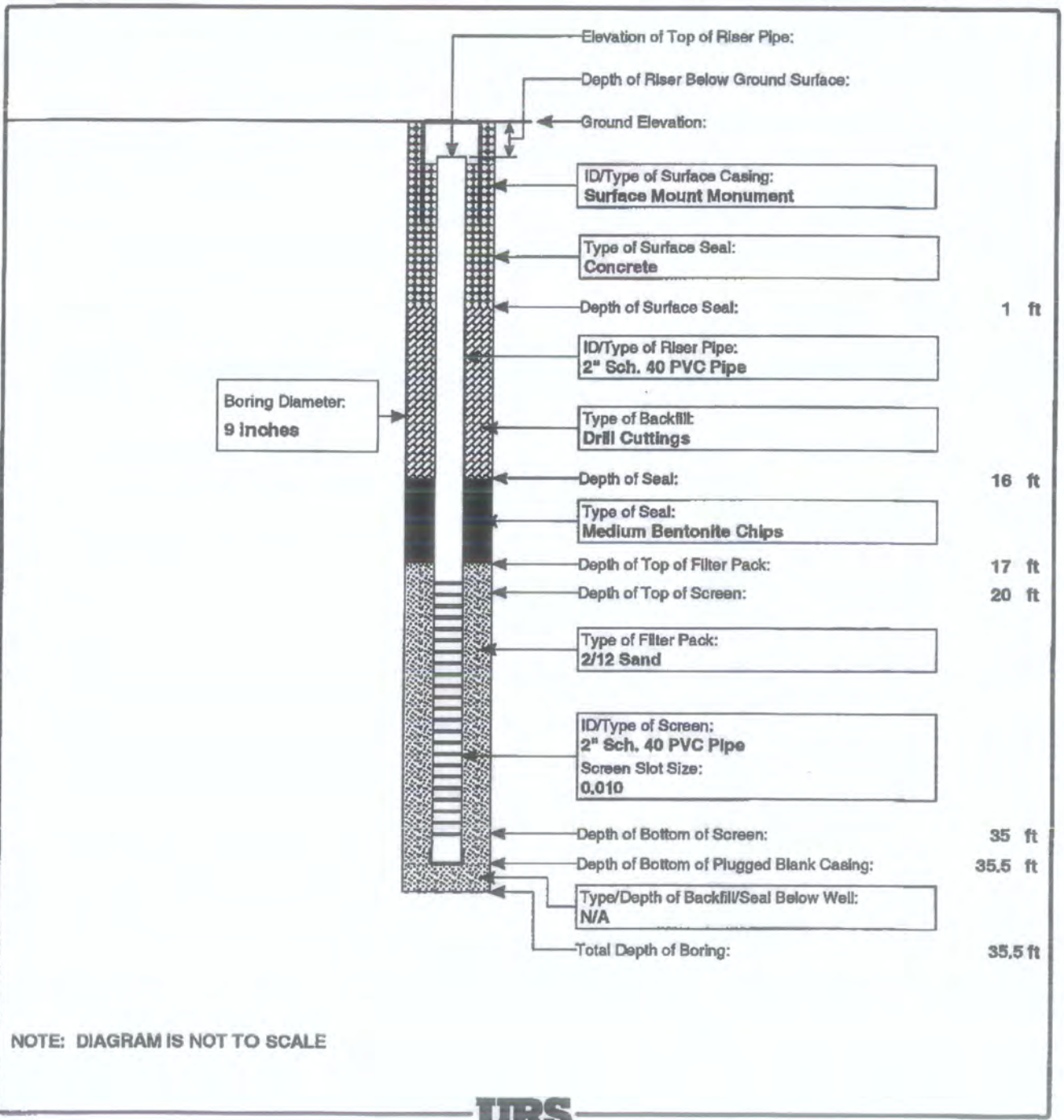
Elevation, feet	Downhole Depth, feet	SAMPLES			Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS AND OTHER TESTS
		Type	Number	Blows/ 6in.				
0						Surface: gravel area See log for B-4 to 13' bgs.	0'-13' bgs B-4 StrataProbe	
5								
	1		15	50/6"				
10								
15					SM	Gray, silty, fine to coarse SAND with subrounded, fine to coarse gravel (moist) (very dense) (fill) (no apparent odor or stain)		
	2		50/3"			(no apparent odor or stain)		
20								
	3		50/3"			(slight TPH odor)		
25							26.5 ft	
	4		50/4"		SM/SC	Olive gray, clayey, silty SAND (increasing moisture) (very dense) (no apparent odor or stain)		
30						(wet)		
	5		50/6"			(moist, decreasing moisture) (hard)		
35						Boring was completed to 35' bgs. Groundwater was encountered at 26.5' bgs. Boring was completed as monitoring well.		
40								

ENV WFO WELL T:\ONEWORLD\337494-101000555.0\FJ_URSS\EA3.0\B_URSS\EA3.0\DT_10/1/02

Project: Belshaw Enodis
 Project Location: Seattle, Washington
 Project Number: 33749445

MONITORING WELL CONSTRUCTION LOG FOR WELL MW-4 (B-4)

Well Location	Northeast corner of Belshaw Welding Building	Date(s) Installed	6/5/02	Time
Installed By	Cascade Drilling	Observed By	DTB	Total Depth (ft)
Method of Installation HSA				
Screened Interval	20'-35'	Completion Zone	0'-35'	
Remarks				



Project: Bellshaw-Enodis
 Project Location: Seattle, King County, Washington
 Project Number: 33749445

Log of Boring B-5
 Sheet 1 of 1

Date(s) Drilled	5/30/02	Logged By	DTB	Checked By	VDA
Drilling Method	Direct Push	Drilling Contractor	ESN	Total Depth of Borehole	20 feet
Drill Rig Type	StrataProbe	Drill Bit Size/Type	2" x 48" Drill Rods	Ground Surface Elevation	
Groundwater Level		Sampling Method	2" x 48" Sample Liners	Hammer Data	
Borehole Backfill		Location			

Elevation, feet	Downhole Depth, feet	SAMPLES				USCS	MATERIAL DESCRIPTION	REMARKS AND OTHER TESTS
		Type	Number	Blows/ 6in.	OVM (ppm)			
0						SP	Brown, fine to coarse SAND with trace silt (moist) (loose) (fill) (no apparent odor or stain)	
	1			0.0				
	5					SM	Gray, silty, fine to coarse SAND (moist) (medium dense) (mild TPH odor)	
	2			0.0			Brown, silty, fine SAND, trace fine, subrounded gravel with some organics, iron staining (glacial fill)	Increasing moisture from 4'-5.5'
	10							
	3			0.0				
	15					SM/SP	Gray, silty, fine SAND with sandy lenses, no fines (moist) (very dense) (mild diesel odor)	
	4			0.0				
	5			0.0			(decreasing moisture)	
	6			0.0				
	20						Boring was terminated at 20' bgs due to refusal. Groundwater was not encountered. Boring was backfilled with bentonite chips.	Refusal at 18' switched sampler advanced to 20'
	25							
	30							

ENV W/O WELL T:\ONEWORLD\337494-1\01000556\OPJ_URSSEA3.GLB_URSSEA3.GDT 10/1/02



Project: Bellshaw-Enodis
 Project Location: Seattle, King County, Washington
 Project Number: 33749445

Log of Boring B-6

Sheet 1 of 1

Date(s) Drilled	5/30/02	Logged By	DTB	Checked By	VDA
Drilling Method	Direct Push	Drilling Contractor	ESN	Total Depth of Borehole	22 feet
Drill Rig Type	StrataProbe	Drill Bit Size/Type	2" x 48" Drill Rods	Ground Surface Elevation	
Groundwater Level		Sampling Method	2" x 48" Sample Liners	Hammer Data	
Borehole Backfill		Location			

Elevation, feet	Downhole Depth, feet	SAMPLES			Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS AND OTHER TESTS
		Type	Number	Blows/ 6in.				
0						SP	Brown, fine to coarse SAND with some fines (silt) (moist) (loose) (no apparent odor or stain)	
	1			0.0				
	5			0.0		SM/ SP	Light brown, silty, fine SAND with trace fine, sub-rounded gravel (dense) (glacial till) Same as above with lenses of SAND with no fines (moist) (dense) (no apparent odor or stain) (no apparent odor or stain)	
	2			0.0				
	10			0.0				
	3			0.0				
	15			0.0				
	4			0.0				
	20			0.0				
	6			0.0				Increasing moisture in formation
							Boring was terminated at 22' bgs due to refusal. Groundwater was not encountered. Boring was backfilled with bentonite chips.	
	25							
	30							

ENV W/O WELL T:\NEWORLD\337494-1\1000655.GPJ_URSSEA3.GLB_URSSEA3.GDT 10/1/02

Project: Bellshaw-Enodis
 Project Location: Seattle, King County, Washington
 Project Number: 33749445

Log of Boring MW-5 (B-7)

Sheet 1 of 1

Date(s) Drilled	6/13/02	Logged By	DTB	Checked By	VDA
Drilling Method	HSA	Drilling Contractor	Cascade Drilling	Total Depth of Borehole	30 feet
Drill Rig Type	CME-55	Drill Bit Size/Type	9"	Ground Surface Elevation	
Groundwater Level	10	Sampling Method	D&M	Hammer Data	140#
Borehole Backfill	Location				

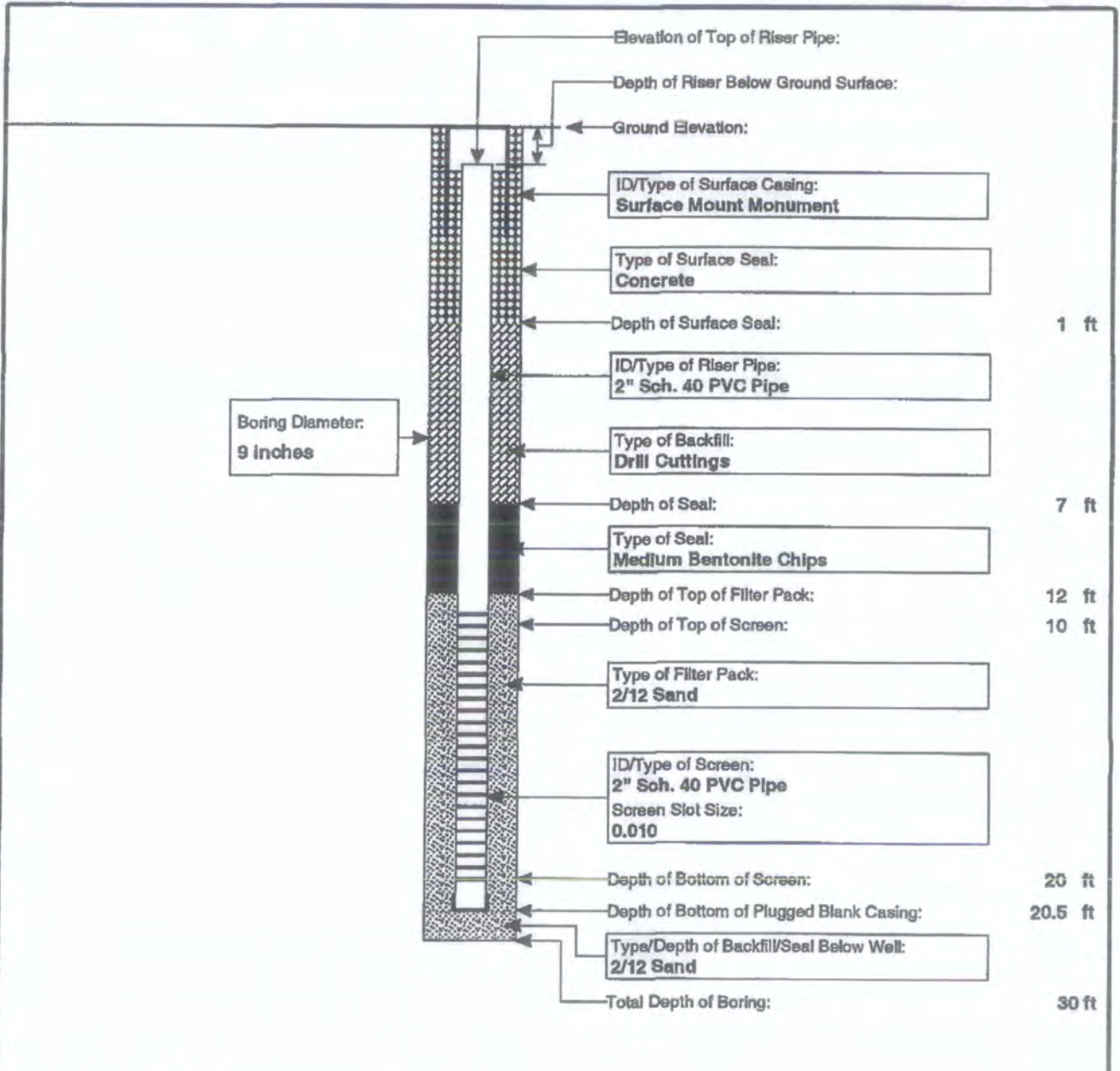
Elevation, feet	Downhole Depth, feet	SAMPLES			Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS AND OTHER TESTS
		Type	Number	Blows/ 6in.				
0								
		1	9 11 14	0.0		SM/ML	Surface: asphalt Brown, clayey SILT and fine SAND, iron staining (moist) (medium dense) (no apparent odor or stain)	
5		2	50/6"	0.0				Decreasing moisture
10						SM	Brown, silty, fine to coarse SAND (wet) (dense) (no apparent odor or stain)	10 ft ▼
		3	50/6"	0.0				
15		4	50/6"	0.0			Increasing clayey silt (decreasing moisture) (no apparent odor or stain)	
20							Decreasing silt (increasing moisture)	Increasing gravel
		5	50/6"	0.0				
25		6	50/6"	0.0			Same as above, silty, fine to coarse SAND (wet) (very dense) (no apparent odor or stain)	
30							Boring was completed to 30' bgs. Groundwater was encountered at ~10' bgs. Installed temporary well screen from 10' bgs to 20' bgs, 0.010 slot size. Boring was backfilled to 20' with 2/12 sand. Well was abandoned on 7/10/2002.	
35								
40								

ENV W/O WELL T:\1\NEWORLD\337494-1\01000555.GPJ_URSSEA2.GLB_URSSEA3.GDT_10/1/02

Project: Belshaw Enodis
 Project Location: Seattle, Washington
 Project Number: 33749445

MONITORING WELL CONSTRUCTION LOG FOR WELL MW-5 (B-7)

Well Location	Between Main Building and Assembly Building	Date(s) Installed	6/13/02	Time
Installed By	Cascade Drilling	Observed By	DTB	Total Depth (ft)
Method of Installation	HSA			
Screened Interval	10'-20'	Completion Zone	0'-20'	
Remarks				



NOTE: DIAGRAM IS NOT TO SCALE

WELL_CONSTR_BELOW_GROUND T:\ONEWORLD\337494-1\BELSHAW.GPJ_URSSSEAS.GLB_URSSSEAS.GDT 10/1/02

Project: Bellshaw-Enodis
 Project Location: Seattle, King County, Washington
 Project Number: 33749445

Log of Boring B-8

Sheet 1 of 1

Date(s) Drilled	5/30/02	Logged By	DTB	Checked By	VDA
Drilling Method	Direct Push	Drilling Contractor	ESN	Total Depth of Borehole	24 feet
Drill Rig Type	StrataProbe	Drill Bit Size/Type	2" x 48" Drill Rods	Ground Surface Elevation	
Groundwater Level		Sampling Method	2" x 48" Sample Liners	Hammer Data	
Borehole Backfill		Location			

Elevation, feet	Downhole Depth, feet	SAMPLES				USCS	MATERIAL DESCRIPTION	REMARKS AND OTHER TESTS
		Type	Number	Blows/ 6in.	OVM (ppm)			
0						SM	Brown, silty, fine to coarse SAND with some gravel (moist) (dense)	
	1			0.0				
5						SM/SP	Brown, silty, fine SAND with trace fine gravel with sandy lenses with no fines (moist) (dense) (no apparent odor or stain)	Increasing moisture
	2			0.0			(no apparent odor or stain)	
10							(decreasing moisture) (no apparent odor or stain)	Decreasing moisture
	3			0.0				
15							(decreasing moisture) (no apparent odor or stain)	
	4			0.0				
20							No recovery	
	5			0.0				
	6							
25							Boring was completed to 24' bgs. Groundwater was not encountered. Boring was backfilled with bentonite chips.	
30								

ENV W/O WELL T:\ONEWORLD\337484-1\01000555.GPJ URSSSEAS.GLB URSSSEAS.GDT 10/1/02

Project: Bellshaw-Enodis
 Project Location: Seattle, King County, Washington
 Project Number: 33749445

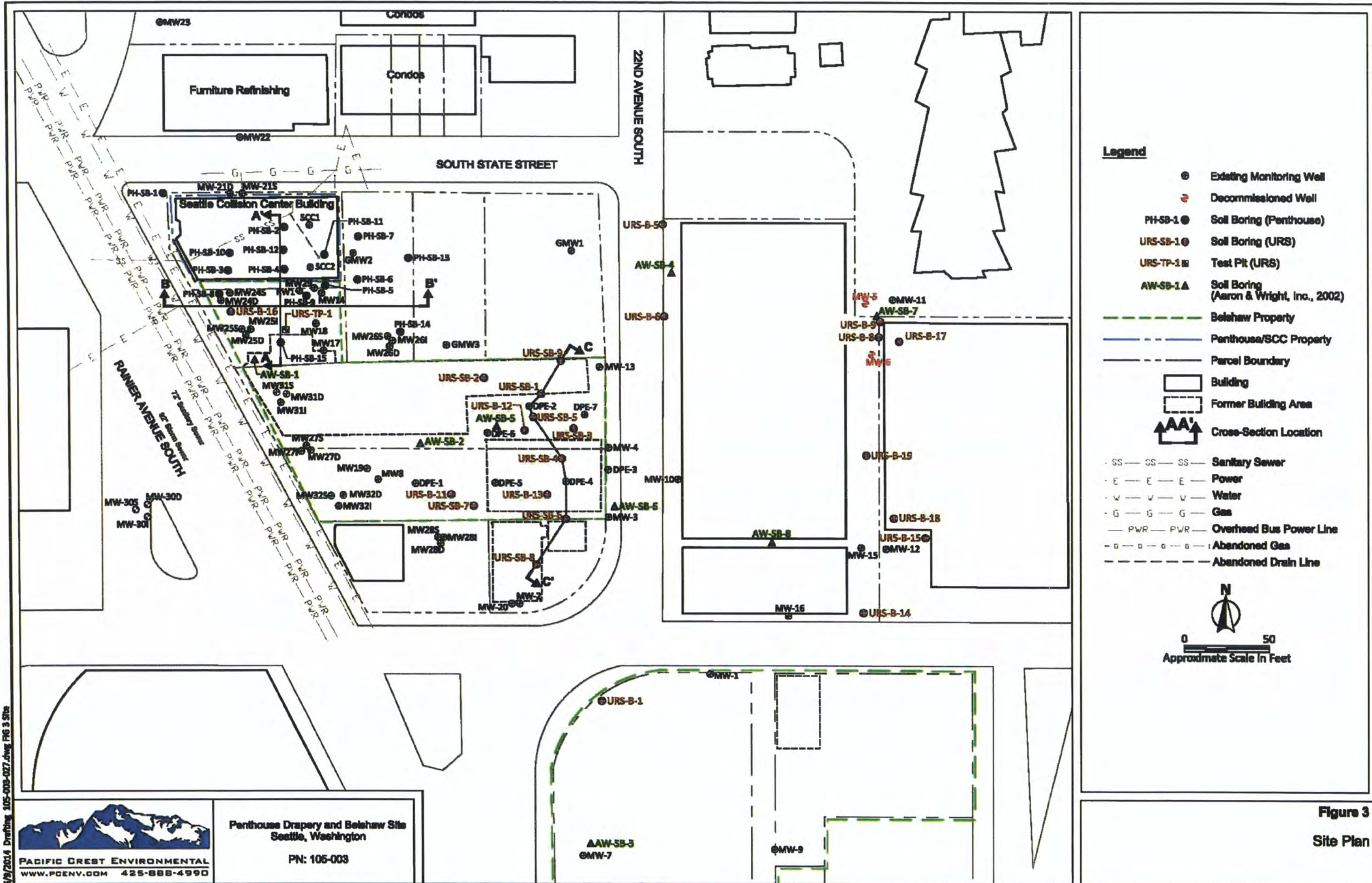
Log of Boring B-9

Sheet 1 of 1

Date(s) Drilled	5/30/02	Logged By	DTB	Checked By	VDA
Drilling Method	Direct Push	Drilling Contractor	ESN	Total Depth of Borehole	12 feet
Drill Rig Type	StrataProbe	Drill Bit Size/Type	2" x 48" Drill Rods	Ground Surface Elevation	
Groundwater Level	9	Sampling Method	2" x 48" Sample Liners	Hammer Data	
Borehole Backfill	Location				

Elevation, feet	Downhole Depth, feet	SAMPLES				Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS AND OTHER TESTS
		Type	Number	Blows/ 6in.	OVM (ppm)				
0						SM			
	1						No recovery		
	5				0.0		Gray, silty, fine SAND with trace fine gravel and iron staining (moist) (dense) (no apparent odor or stain)		
	10				0.0		Brown, silty SAND, decreasing silt (wet) (dense)	9 ft	
	15						Boring was completed to 12' bgs. Groundwater was encountered at 9' bgs. Boring was backfilled with bentonite chips.		
	20								
	25								
	30								

ENW/WO/WELL T:\CNEWORLD\687464-1\01000555.GPJ_URSSEA3.GLB_URSSEA3.GDT 10/1/02



Legend

- ⊙ Existing Monitoring Well
- ⊙ Decommissioned Well
- PH-SB-1 ⊙ Soil Boring (Penthouse)
- URS-SB-1 ⊙ Soil Boring (URS)
- URS-TP-1 ⊙ Test Pit (URS)
- AW-SB-1 ⊙ Soil Boring (Aeron & Wright, Inc., 2002)
- Belshaw Property
- Penthouse/SCC Property
- Parcel Boundary
- ▭ Building
- ▭ Former Building Area
- ▲▲▲ Cross-Section Location
- SS - SS - SS - Sanitary Sewer
- E - E - E - Power
- W - W - W - Water
- G - G - G - Gas
- PWR - PWR - Overhead Bus Power Line
- G - G - G - Abandoned Gas
- - - Abandoned Drain Line

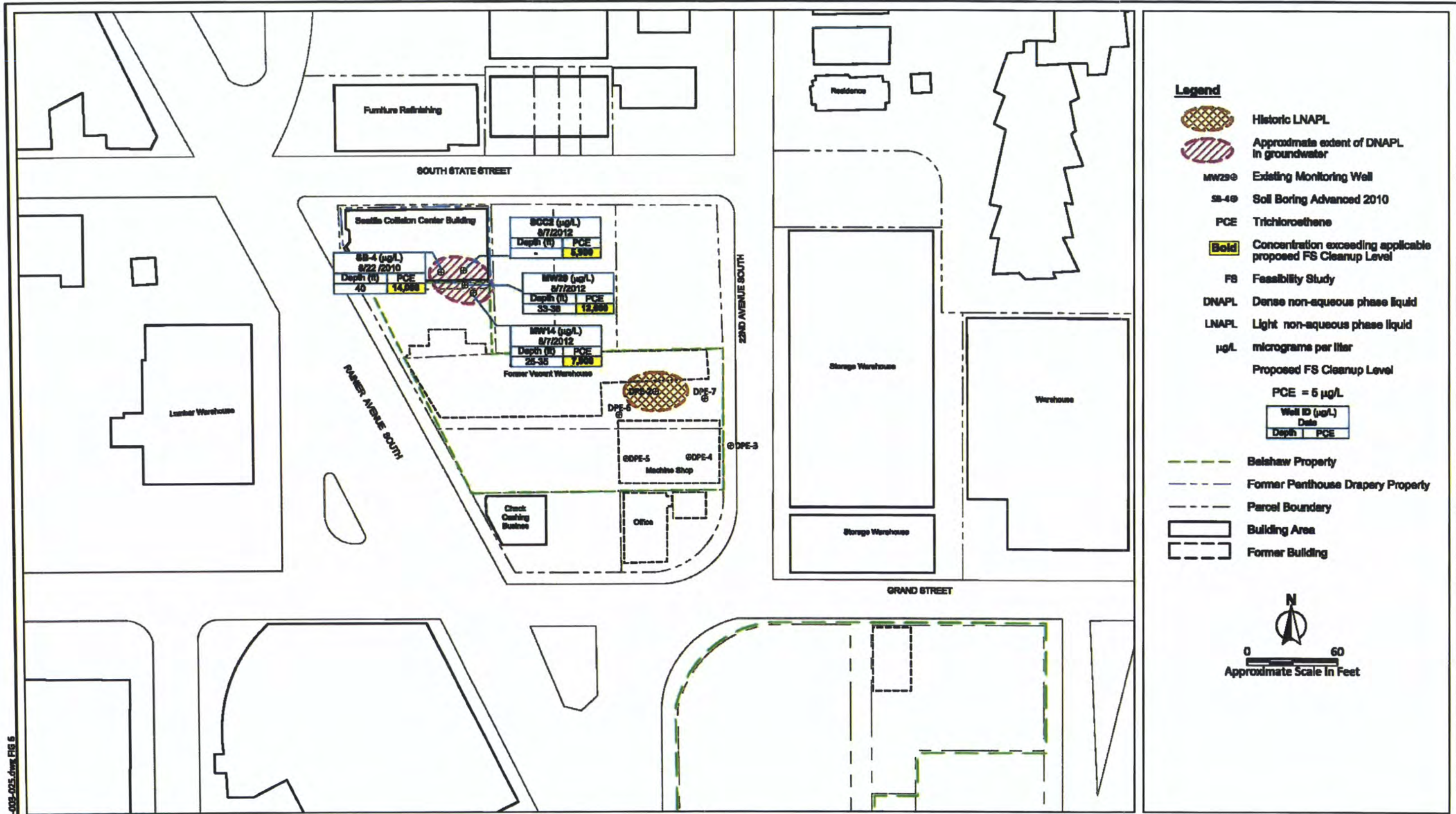
N
0 50
Approximate Scale in Feet

6/9/2014 Drafting 105-003-027.dwg FIG 3 Site



Penthouse Drapery and Belshaw Site
Seattle, Washington
PN: 105-003

Figure 3
Site Plan

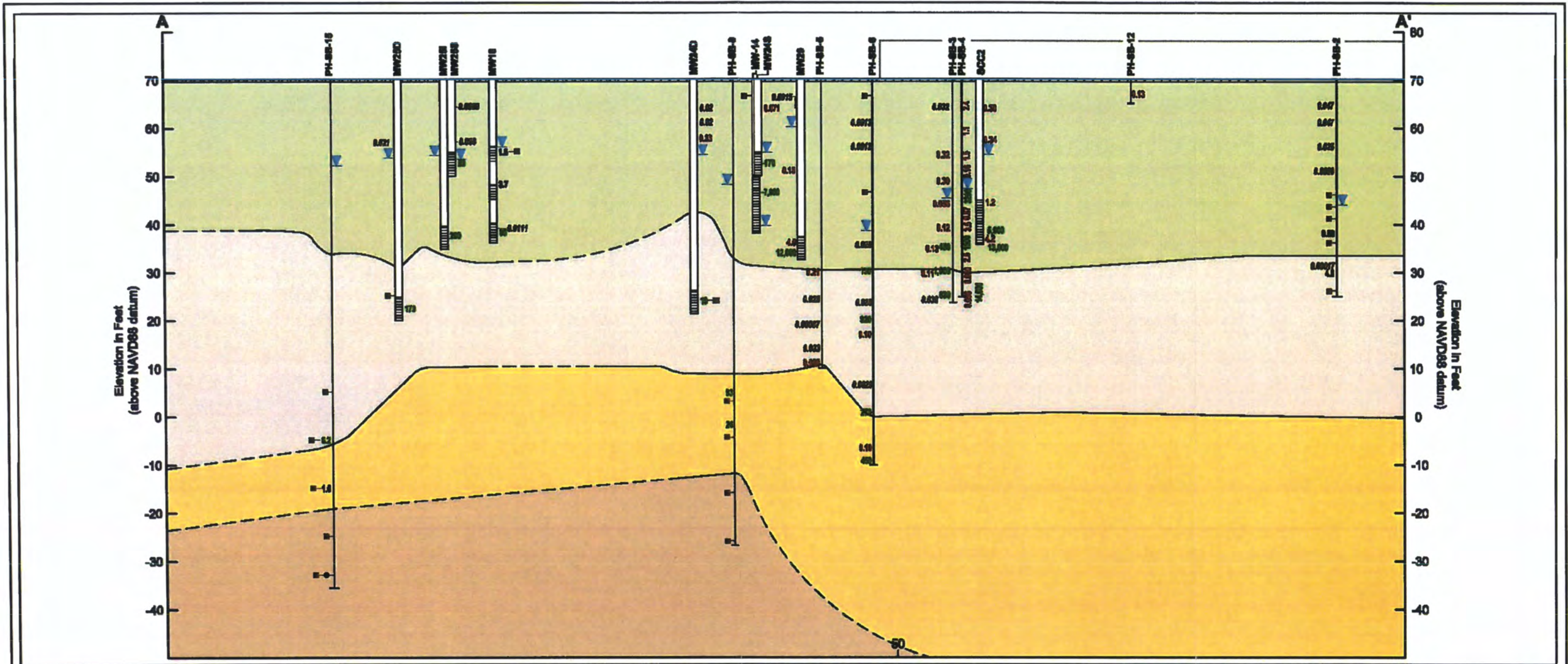


2/17/2014 Drafting: 105-003-025.dwg FIG 6



Penthouse Drapery and Belshaw Site
Seattle, Washington
PN: 105-003

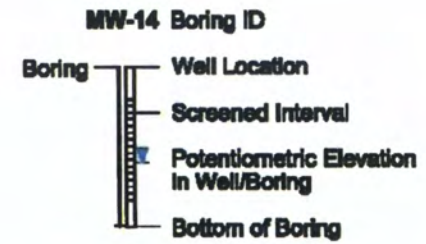
Figure 6
Site Plan with Extent of DNAPL and LNAPL



Legend

- Asphalt / Fill
- Interbedded Silt/Sand
- Silt (ML)
- Sand or Sand and Gravel containing Silt (SM, SM-GM)
- Sandy Silt
- Contact between Sediment Types (dashed where inferred)
- Building

- Concentration of PCE in Groundwater in µg/L that Exceeds Proposed FS Cleanup Level of 5 µg/L
- Concentration of PCE in Groundwater in µg/L Below Proposed FS Cleanup Level of 5 µg/L
- PCE in Groundwater Not Detected
- Concentration of PCE in Soil in mg/kg that Exceeds Proposed FS Cleanup Level of 0.05 mg/kg
- Concentration of PCE in Soil in mg/kg Below Proposed FS Cleanup Level of 0.05 mg/kg
- PCE in Soil Not Detected



Notes:
 Concentrations of PCE are displayed if they exceed the Proposed FS Cleanup Level.
 PCE = tetrachloroethene
 µg/L = micrograms per liter
 mg/kg = milligrams per kilogram
 FS = Feasibility Study

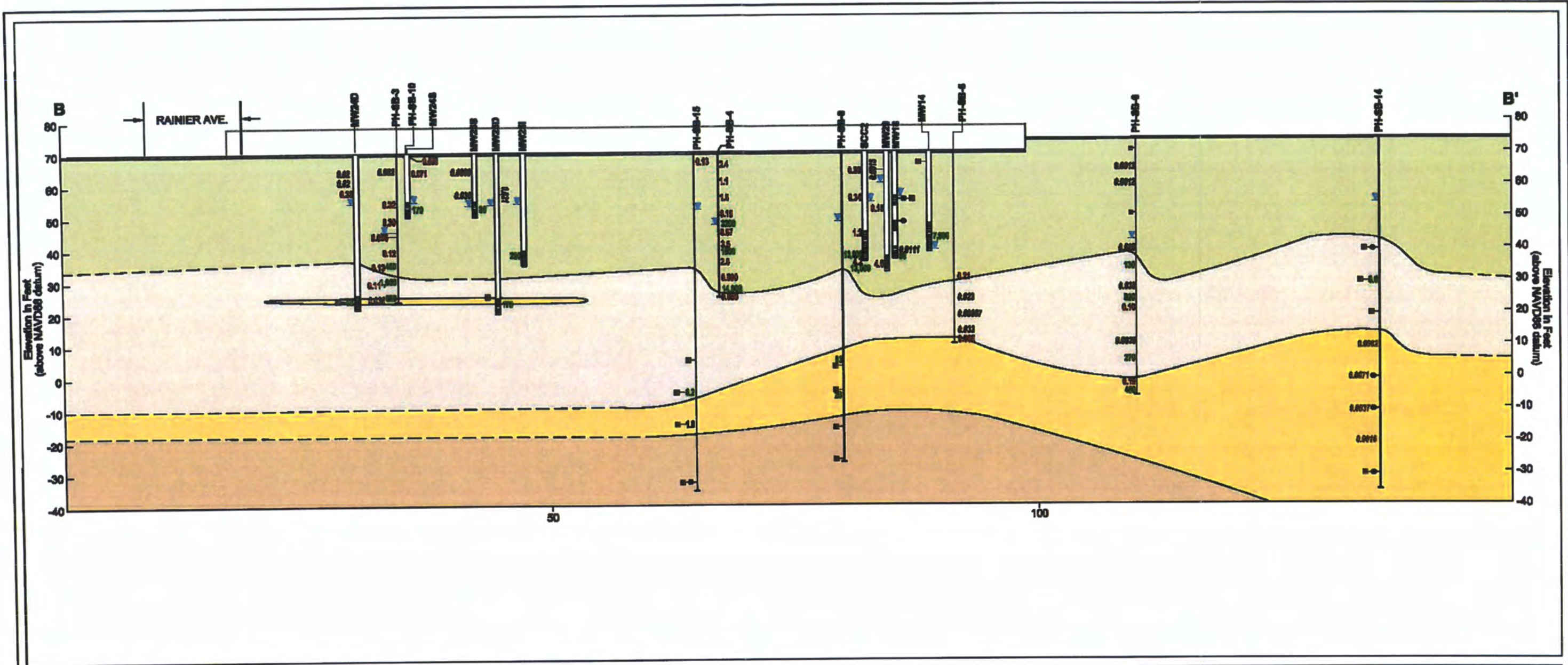


2/27/2014 Drafting 105-003-016.dwg FIG 7 AA FS



Penthouse Drapery and Belshaw Site
 Seattle, Washington
 PN: 105-003

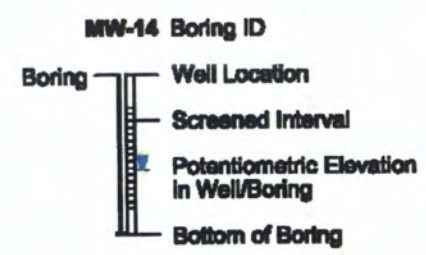
Figure 7
 Cross-Section A-A'



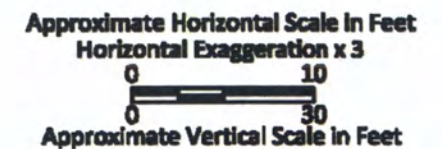
Legend

- Asphalt / Fill
- Interbedded Silt/Sand
- Silt (ML)
- Sand or Sand and Gravel containing Silt (SM, SM-GM)
- Sandy Silt
- Contact between Sediment Types (dashed where inferred)
- Building

- Concentration of PCE in Groundwater in µg/L that Exceeds Proposed FS Cleanup Level of 5 µg/L
- Concentration of PCE in Groundwater in µg/L Below Proposed FS Cleanup Level of 5 µg/L
- PCE in Groundwater Not Detected
- Concentration of PCE in Soil in mg/kg that Exceeds Proposed FS Cleanup Level of 0.05 mg/kg
- Concentration of PCE in Soil in mg/kg Below Proposed FS Cleanup Level of 0.05 mg/kg
- PCE in Soil Not Detected



Notes:
 Concentrations of PCE are displayed if they exceed the Proposed FS Cleanup Level.
 PCE = tetrachloroethene
 µg/L = micrograms per liter
 mg/kg = milligrams per kilogram
 FS = Feasibility Study



2/17/2014 Drafting 105-003-016.dwg FIG 8 00 FS

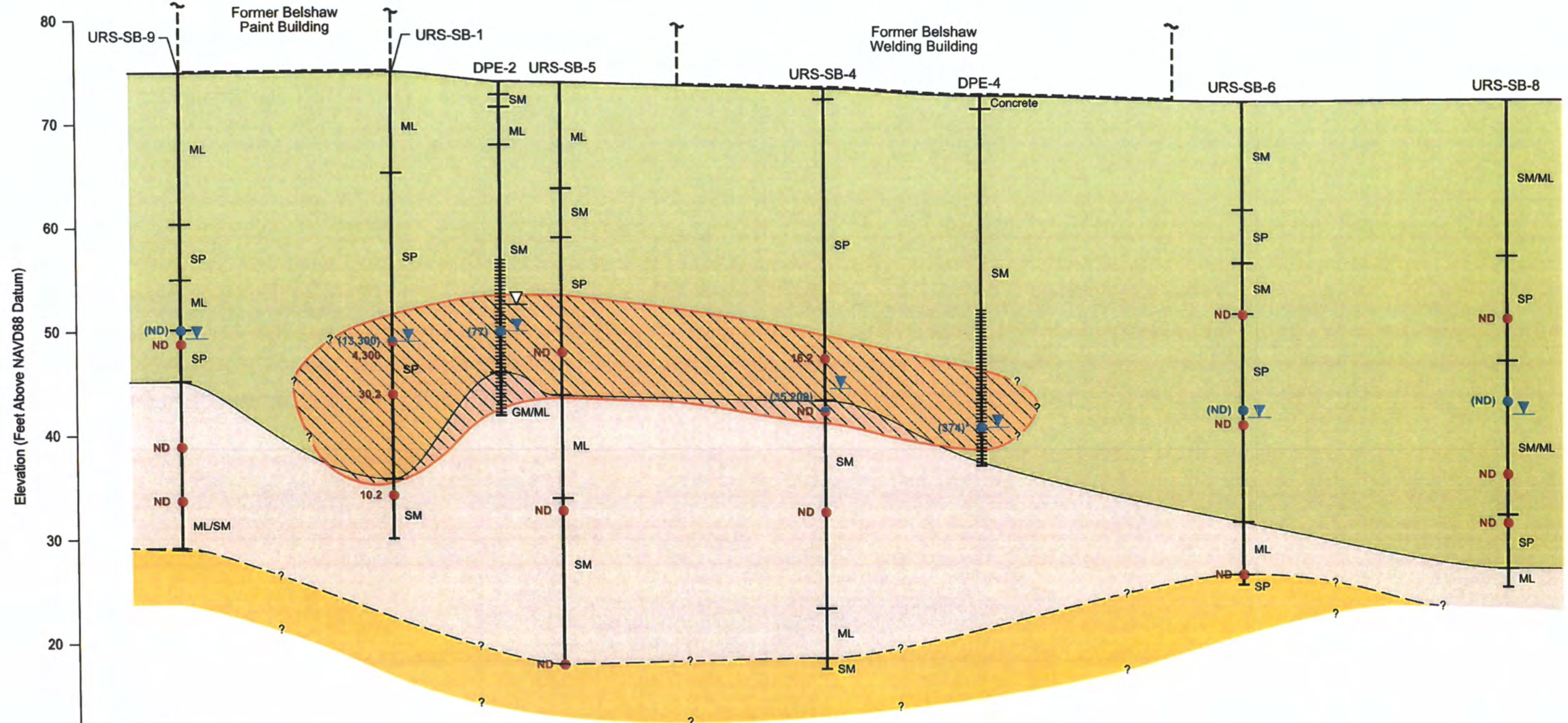


Penthouse Drapery and Belshaw Site
 Seattle, Washington
 PN: 105-003

Figure 8
 Cross-Section B-B'

C
North

C'
South



Legend

- Sample location
- (ND) 2012 Gasoline-range TPH in groundwater ($\mu\text{g/L}$) at $<50 \mu\text{g/L}$ reporting limit
- ND 2012 Gasoline-range TPH in soil (mg/kg) at $<7 \text{mg/kg}$ reporting limit

- ▼ Groundwater at time of drilling
- ▽ Static groundwater level on 7/23/12
- Screened interval
- Estimated extent of gasoline-range TPH in soil and groundwater

- Interbedded silt/sand
- Silt (ML)
- Sand or sand and gravel containing silt (SM, SM-GM)

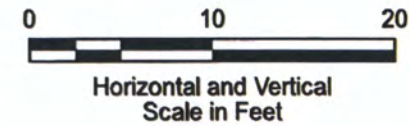
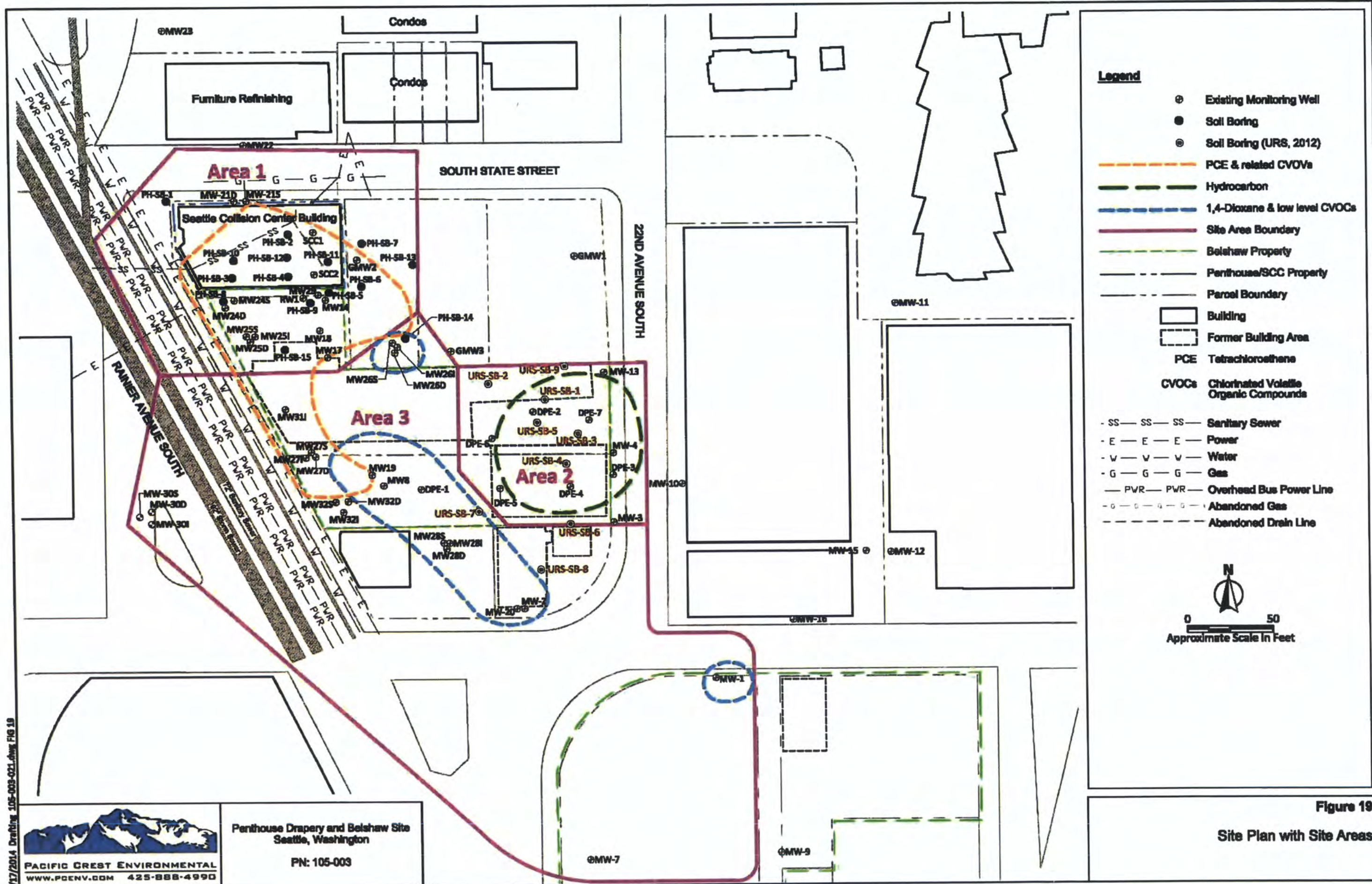


Figure 9
Geologic Cross Section C-C' (North to South)



Legend

- ⊕ Existing Monitoring Well
- Soil Boring
- ⊕ Soil Boring (URS, 2012)
- PCE & related CVOVs
- Hydrocarbon
- 1,4-Dioxane & low level CVOVs
- Site Area Boundary
- Belshaw Property
- Penitence/SCC Property
- Parcel Boundary
- Building
- Former Building Area
- PCE Tetrachloroethene
- CVOVs Chlorinated Volatile Organic Compounds
- SS - SS - SS - Sanitary Sewer
- E - E - E - Power
- W - W - W - Water
- G - G - G - Gas
- PWR - PWR - Overhead Bus Power Line
- G - G - G - Abandoned Gas
- - - Abandoned Drain Line

N
0 50
Approximate Scale In Feet

Figure 19
Site Plan with Site Areas

Project: Bellshaw-Enodis
 Project Location: Seattle, King County, Washington
 Project Number: 33749445

Log of Boring MW-1 (B-10)
 Sheet 1 of 1

Date(s) Drilled	6/5/02	Logged By	DTB	Checked By	VDA
Drilling Method	HSA	Drilling Contractor	Cascade Drilling	Total Depth of Borehole	30 feet
Drill Rig Type	CME-55	Drill Bit Size/Type	9"	Ground Surface Elevation	
Groundwater Level	21.25	Sampling Method	D&M	Hammer Data	140#
Borehole Backfill	Location				

Elevation, feet	Downhole Depth, feet	SAMPLES			Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS AND OTHER TESTS
		Type	Number	Blows/6ft.				
0						SP	Surface: Gravel Parking Area Brown, fine to coarse SAND, trace silt (moist) (very dense) (no apparent odor or stain)	
	1		50 30 34 N=64	0.0				
	2		50/6"	0.0				
	3		50/6"	0.0		SM	Brown, silty, fine SAND (moist with increasing moisture) (very dense) (no apparent odor or stain)	
	4		50/4"	0.0			Same as above, occasional fine gravel	Increasing moisture
	5		50/3"	0.0		SM/GM	Brown, silty SAND and GRAVEL (increasing moisture) (very dense) (no apparent odor or stain) 21.25 ft	Driller's note: Increasing gravels
	6		50/1"	-			Same as above (decreasing moisture) (no apparent odor or stain)	
	30						Same as above (no apparent odor or stain) Boring was completed to 30' bgs. Groundwater was encountered at 21.25' bgs. Boring was completed as monitoring well.	

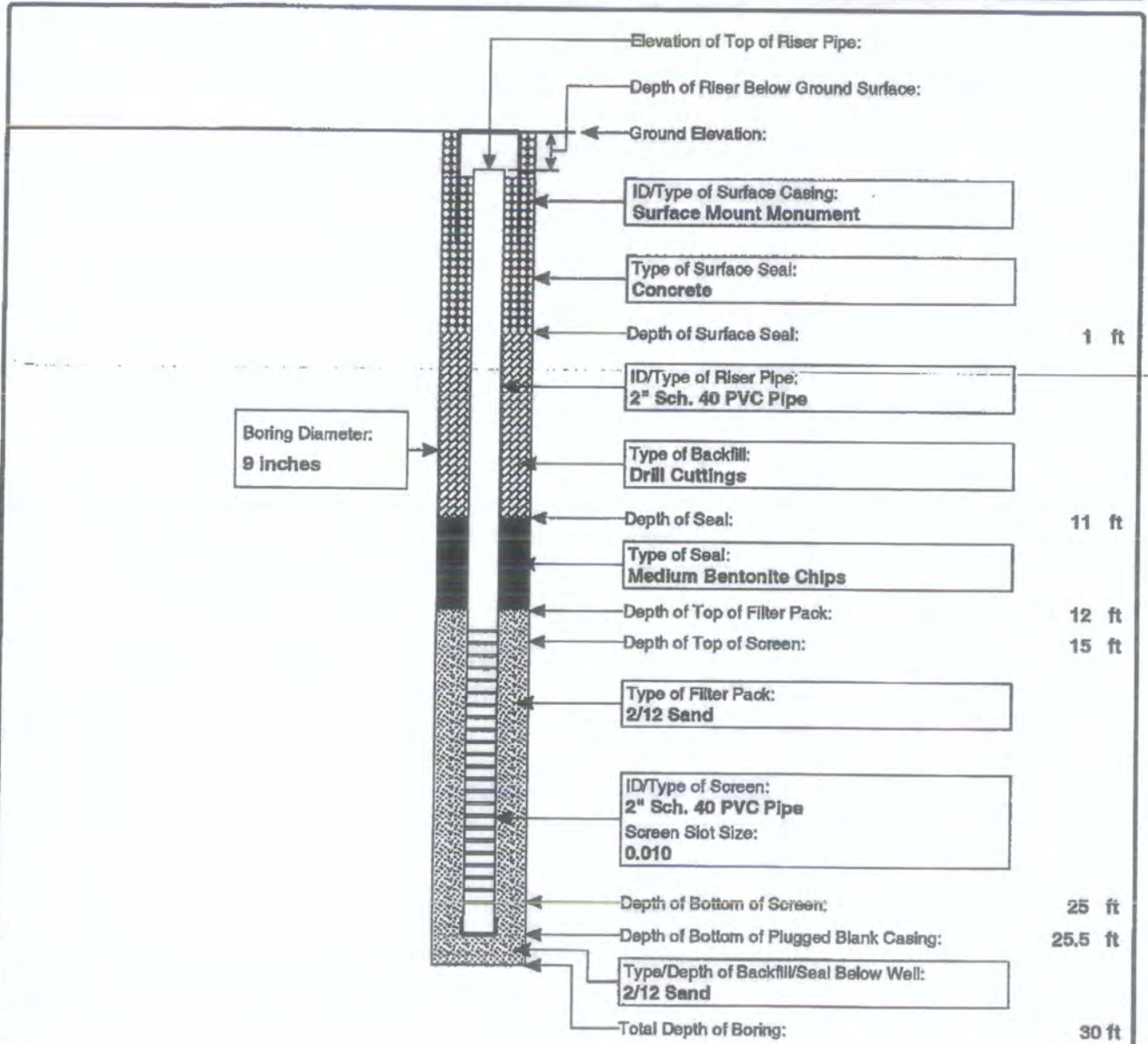
ENV W/O WELL T:\NEWORLD\337494-1\01000555.GPJ URSSEA3.GLB URSSEA3.GDT 10/1/02



Project: Belshaw Enodis
 Project Location: Seattle, Washington
 Project Number: 33749445

**MONITORING WELL
 CONSTRUCTION LOG
 FOR WELL MW-1 (B-10)**

Well Location	North end of southern gravel parking area	Date(s) Installed	6/5/02	Time
Installed By	Cascade Drilling	Observed By	DTB	Total Depth (ft)
Method of Installation HSA				
Screened Interval	15'-25'	Completion Zone	0'-25'	
Remarks				



NOTE: DIAGRAM IS NOT TO SCALE

WELL_CONSTR_BELOW_GROUND_T:\ONEWORLD\337494-1\BELSHAW.GPJ_URSSEA3.GLB_URSSEA3.GDT_10/1/02



Project: Enodis - Belshaw Property
 Project Location: Seattle Washington
 Project Number: 33749445

Log of Boring B-11

Sheet 1 of 1

Date(s) Drilled	2/20/2003	Logged By	BBS	Checked By	DRR
Drilling Method	Hollow Stem Auger	Drilling Contractor	Cascade Drilling, Inc.	Total Depth of Borehole	22.5 feet
Drill Rig Type	Truck-mounted	Drill Bit Size/Type		Ground Surface Elevation	
Groundwater Level	18	Sampling Method	Dames & Moore Split Barrel	Hammer Data	140lb Downhole Hammer
Borehole Backfill	Bentonite Chips	Location	West of welding building		

Elevation, feet	Downhole Depth, feet	SAMPLES				Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS AND OTHER TESTS
		Type	Number	Blows/ 6in.	Recovery (%)				
0							Crushed rock/Gravel area		
5	5	1	50 for 6"	100	0		Brown, slightly gray, gravelly, silty SAND No apparent petroleum odor or staining (moist) (dense to very dense)		
10	10	2	21 - 22 24	100	0		Soil sample collected		
15	15	3	21 50 for 6"	100	0		Soil sample collected		
20	20	4	50 for 6"	100	0		Ground water encountered, soil is wet	18 ft.	
25	22 1/2	Boring encountered refusal at 22 1/2 feet below ground surface (bgs) on 2/20/2003. Groundwater encountered at approximately 18 feet bgs at the time of the investigation. The boring was backfilled with bentonite.							
30									
35									

ENV2 W/O WELL K:\005\BELSHAW-1\ADDITL-1\33749445.GPJ URSSEA3.GLB URSSEA3.GDT 4/7/03



Figure A-2.1

Project: Enodis - Belshaw Property
 Project Location: Seattle Washington
 Project Number: 33749445

Log of Boring B-12

Sheet 1 of 1

Date(s) Drilled	2/20/2003	Logged By	BBS	Checked By	DRR
Drilling Method	Hollow Stem Auger	Drilling Contractor	Cascade Drilling, Inc.	Total Depth of Borehole	30.5 feet
Drill Rig Type	Truck-mounted	Drill Bit Size/Type		Ground Surface Elevation	
Groundwater Level	24	Sampling Method	Dames & Moore Split Barrel	Hammer Data	140lb Downhole Hammer
Borehole Backfill	Bentonite Chips	Location	North of welding building		

Elevation, feet	Downhole Depth, feet	SAMPLES				Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS AND OTHER TESTS
		Type	Number	Blows/ 6in.	Recovery (%)				
0							ML Crushed rock/Gravel area Dark brown to brown SILT, some sand and gravel No apparent petroleum odor or staining		
5	5	X	1	8 - 14 15	100	0	SM/ GM Brown, gravelly, silty, SAND, No apparent petroleum odor or staining (moist) (dense to very dense)		
10	10	X	2	10 - 25 32	100	0	GM Brown, silty, sandy, GRAVEL No apparent petroleum odor or staining (moist) (very dense)	Soil sample collected	
15	15	X	3	29 50 for 6"	100	0	SM/ GM Brown, gravelly, silty, SAND (moist to wet) (very dense)		
20	20	X	4	50 for 6"	100	31.6		Soil sample collected	
25	25	X	5	50 for 6"	100	990	Groundwater encountered, soil is wet Petroleum odor and sheen on the water was observed	Soil sample collected	
30	30	X	6	50 for 6"	100	17.2		Soil sample collected	
35							Boring completed at 30 1/2 feet below ground surface (bgs) on 2/20/2003. Groundwater encountered at approximately 24 feet bgs at the time of the investigation. The boring was backfilled with bentonite.		

ENV2 W/O WELL K10061BELSHA-1\ADDDTT-1\33749445.GPJ URSSSE3.GLB URSSSE3.GDT 4/7/03



Figure A-3.1

Project: Enodis - Belshaw Property
 Project Location: Seattle Washington
 Project Number: 33749445

Log of Boring B-13

Sheet 1 of 1

Date(s) Drilled	2/21/2003	Logged By	BBS	Checked By	DRR
Drilling Method	Hollow Stem Auger	Drilling Contractor	Cascade Drilling, Inc.	Total Depth of Borehole	9 feet
Drill Rig Type	Limited Access	Drill Bit Size/Type		Ground Surface Elevation	
Groundwater Level	Not Encountered	Sampling Method	Dames & Moore Split Barrel	Hammer Data	140lb Downhole Hammer
Borehole Backfill	Bentonite Chips	Location	Inside welding building		

Elevation, feet	Downhole Depth, feet	SAMPLES				Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS AND OTHER TESTS
		Type Number	Blows/ 6in.	Recovery (%)	OVM (ppm)				
0							Concrete floor slab of Welding Building		
						SM	Brown, silty, SAND (fill) No apparent petroleum odor or staining		
5		1	4 50 for 6"	100	0	SM/ GM	Brown, gravelly, silty SAND No apparent petroleum odor or staining (moist) (very dense)	Soil sample collected	
10							Boring encountered refusal at 9 feet below ground surface (bgs) on 2/20/2003. Groundwater was not encountered at the time of the investigation. The boring was backfilled with bentonite with a concrete surface cap.		
15									
20									
25									
30									
35									

ENV2 W/O WELL K0006BELSHA-1\ADDIT-1\33749445.GPJ URSSEA3.GLB URSSEA3.GDT 4/7/03



Figure A-4.1

Project: Enodis - Belshaw Property
 Project Location: Seattle Washington
 Project Number: 33749445

Key to Log of Boring and Descriptive Terms for Soil

Unified Soil Classification System (ASTM D2487 & D2488)

Major Divisions		Symbols		Typical Descriptions	
		Graph	Letter		
Coarse Grained Soils More than 50% of No. 200 Sieve Size	Gravels More than 50% of Coarse Fraction Retained in No. 4 Sieve	Clean Gravels (less than 5% fines)		GW Well-Graded Gravels, Gravel-Sand Mixtures, Little or no Fines	
		Gravels with Fines (more than 5% fines)		GP Poorly-Graded Gravels, Gravel-Sand Mixtures, Little or no Fines	
		Sands More than 60% of Coarse Fraction Passing through No. 4 Sieve	Clean Sand (less than 5% fines)		SW Well-Graded Sands, Gravelly Sands, Little or no Fines
			Sands with Fines (more than 5% fines)		SP Poorly Graded Sands, Gravelly Sands, Little or no Fines
	Sands with Fines (more than 12% fines)		SM Silty Sands, Sand-Clay Mixtures		
			SC Clayey Sands, Sand-Clay Mixtures		
Fine Grained Soils More than 50% of Material is Smaller than No. 200 Sieve Size	Silt and Clays Liquid Limit Less than 50%		ML Inorganic Silts and very Fine Sands, Rock Flour, Silty or Clayey Fine Sands or Clayey Silts with Slight Plasticity		
			CL Inorganic Clays of Low to Medium Plasticity, Gravelly Clays, Sandy Clays, Silty Clays, Lean Clays		
			OL Organic Silts and Organic Silty Clays of Low Plasticity		
	Silt and Clays Liquid Limit Greater than 50%		MH Inorganic Silts, Micaceous or Diatomaceous Fine Sand or Silty Soils		
			CH Inorganic Clays of High Plasticity, Fat Clays		
			OH Organic Clays of Medium to High Plasticity, Organic Silts		
Highly Organic Soils		PT Peat, Humus, Swamp Soils with High Organic Contents (see ASTM D4427-92)			

Abbreviations

SA	Sieve Analysis
M	Moisture
DD	Dry Density
AL	Atterberg Limits
HA	Hydrometer Analysis
C	Consolidation
Pc	Constant Head Permeability
Pf	Falling Head Permeability
DS	Direct Shear
TX	Triaxial
TV	Torvane Shear
LV	Laboratory Vane Shear
PP	Pocket Penetrometer
OVA	Organic Vapor Analyzer
OC	Organic Content
N	Number of hammer blows for last 12 inches sampled

Relative Density or Consistency

Coarse-Grained Soils		Fine-Grained Soils	
Relative Density	N, SPT Blows / ft	Relative Consistency	N, SPT Blows / ft
Very loose sand	0 - 4	Very soft	< 2
Loose	4 - 10	Soft	2 - 4
Medium dense	10 - 30	Medium stiff	4 - 8
Dense	30 - 50	Stiff	8 - 15
Very dense	Over 50	Very stiff	15 - 30
		Hard	Over 30

Sampler Symbols

	3" O.D. Split Spoon Sample with brass rings		3" O.D. Shelby Tube Sample
	Core		Piston Sample
	Non-standard penetration test		Grab Sample
	2" O.D. Split Spoon with 140lb Hammer and 30-inch drop (SPT)		

Minor Descriptors

Trace	0 - 5%
Slightly (clayey, silty, sandy, gravelly)	5 - 12%
Clayey, silty, sandy, gravelly	12 - 30%
Very (clayey, silty, sandy, gravelly)	30 - 50%

Moisture Content

Dry	Absence of moisture, dusty
Moist	Damp but no visible water
Wet	Visible free water, from below the water table

NOTES:

1. Descriptions and stratum lines are interpretive; field descriptions may have been modified to reflect lab test results. Descriptions on these logs apply only at the specific boring locations and at the time the borings were advanced; they are not warranted to be representative of subsurface conditions at other locations or times.
2. Dual Symbols are used to indicate borderline soil classifications

USCS4 K:\005BELSHA-1\ADDIT-1\33749445.GPJ URS\SEA3.GLB URS\SEA3.GDT 4/7/03

Project: Bellshaw-Enodis
 Project Location: Seattle, King County, Washington
 Project Number: 33749445

Log of Boring MW-6

Sheet 1 of 1

Date(s) Drilled	6/13/02	Logged By	DTB	Checked By	VDA
Drilling Method	HSA	Drilling Contractor	Cascade Drilling	Total Depth of Borehole	25 feet
Drill Rig Type	CME-55	Drill Bit Size/Type	9"	Ground Surface Elevation	
Groundwater Level		Sampling Method	D&M	Hammer Data	140#
Borehole Backfill		Location			

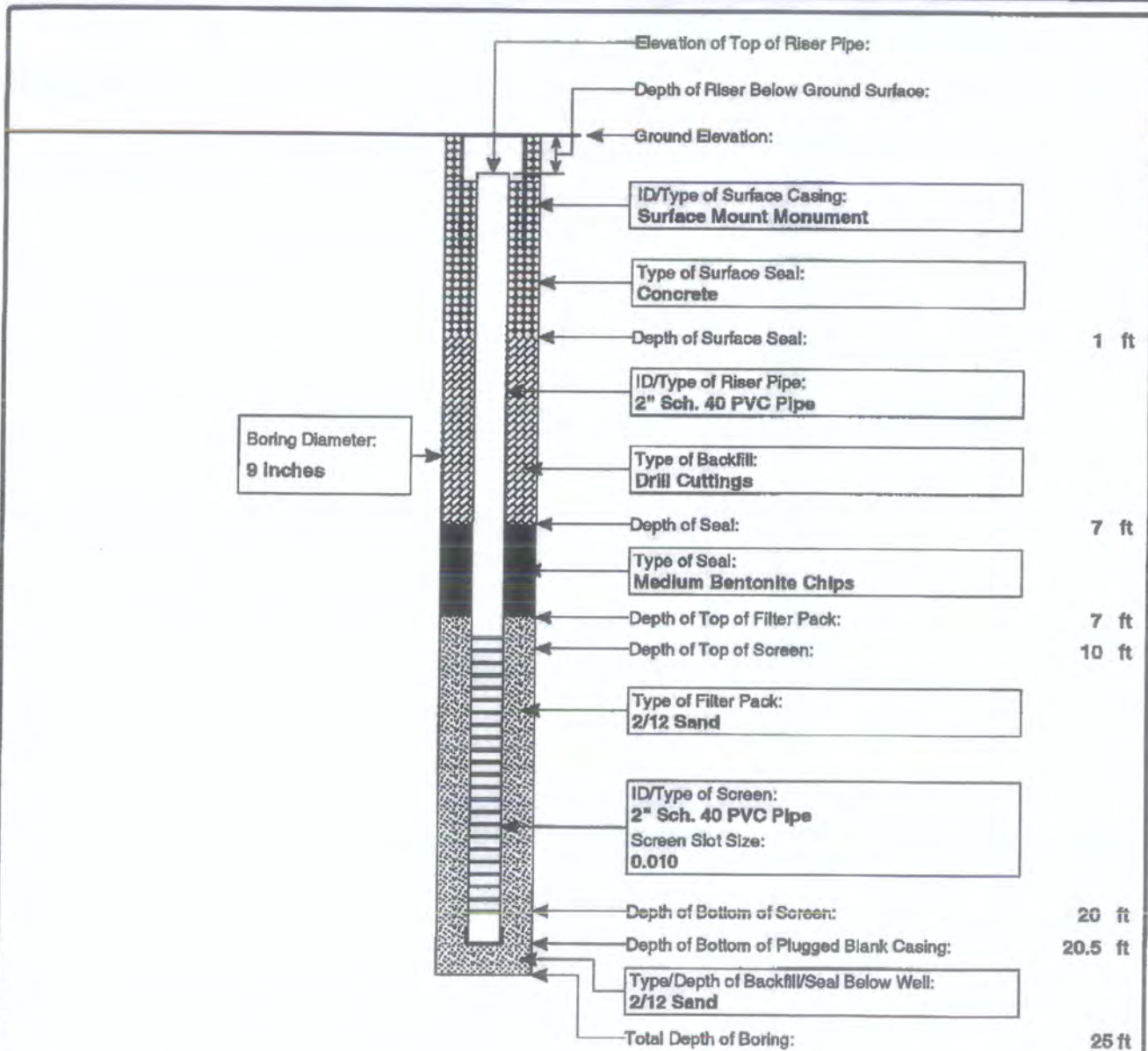
Elevation, feet	Downhole Depth, feet	SAMPLES				USCS	MATERIAL DESCRIPTION	REMARKS AND OTHER TESTS
		Type	Number	Blows/ 6in.	OVM (ppm)			
0						SM	Surface: asphalt with gravel base	
	1		9	0.0			Gray, silty, fine to coarse SAND, little clay, organics, iron staining (moist) (dense) (no apparent odor or stain)	
	2		15	0.0				
	3		30	0.0			Grading brown, trace fine to coarse subrounded gravel	
	4		50/6"	0.0		SP	Brown, fine to coarse SAND, trace fine to coarse gravel, little silt (moist) (very dense) (no apparent odor or stain)	Driller's note: wet zone from 10'-15'
	5		50/6"	0.0			(decreasing moisture) (no apparent odor or stain)	
	6		50/3"	0.0			(dry) (very dense) (no apparent odor or stain)	
	25						Boring was completed to 25' bgs. Groundwater was not encountered. Installed temporary well screen from 10' bgs to 20' bgs, 0.010 slot size. Boring was backfilled to 20' with bentonite chips. Well was abandoned on 7/10/2002.	

ENV W/O WELL T:\ONEWORLD\337494-1\01000555.OPJ URSSSEAS.GLB URSSSEAS.GDT 10/1/02

Project: Belshaw Enodis
 Project Location: Seattle, Washington
 Project Number: 33749445

MONITORING WELL CONSTRUCTION LOG FOR WELL MW-6

Well Location	Between Main Building and Assembly Building	Date(s) installed	6/13/02	Time	
Installed By	Cascade Drilling	Observed By	DTB	Total Depth (ft)	25
Method of Installation	HSA				
Screened Interval	10'-20'	Completion Zone	0'-20'		
Remarks					



NOTE: DIAGRAM IS NOT TO SCALE

Project: Bellshaw-Enodis
 Project Location: Seattle, King County, Washington
 Project Number: 33749445

Log of Boring MW-7

Sheet 1 of 1

Date(s) Drilled 6/13/02	Logged By DTB	Checked By VDA
Drilling Method HSA	Drilling Contractor Cascade Drilling	Total Depth of Borehole 35 feet
Drill Rig Type CME-55	Drill Bit Size/Type 9"	Ground Surface Elevation
Groundwater Level 25	Sampling Method D&M	Hammer Data 140#
Borehole Backfill	Location	

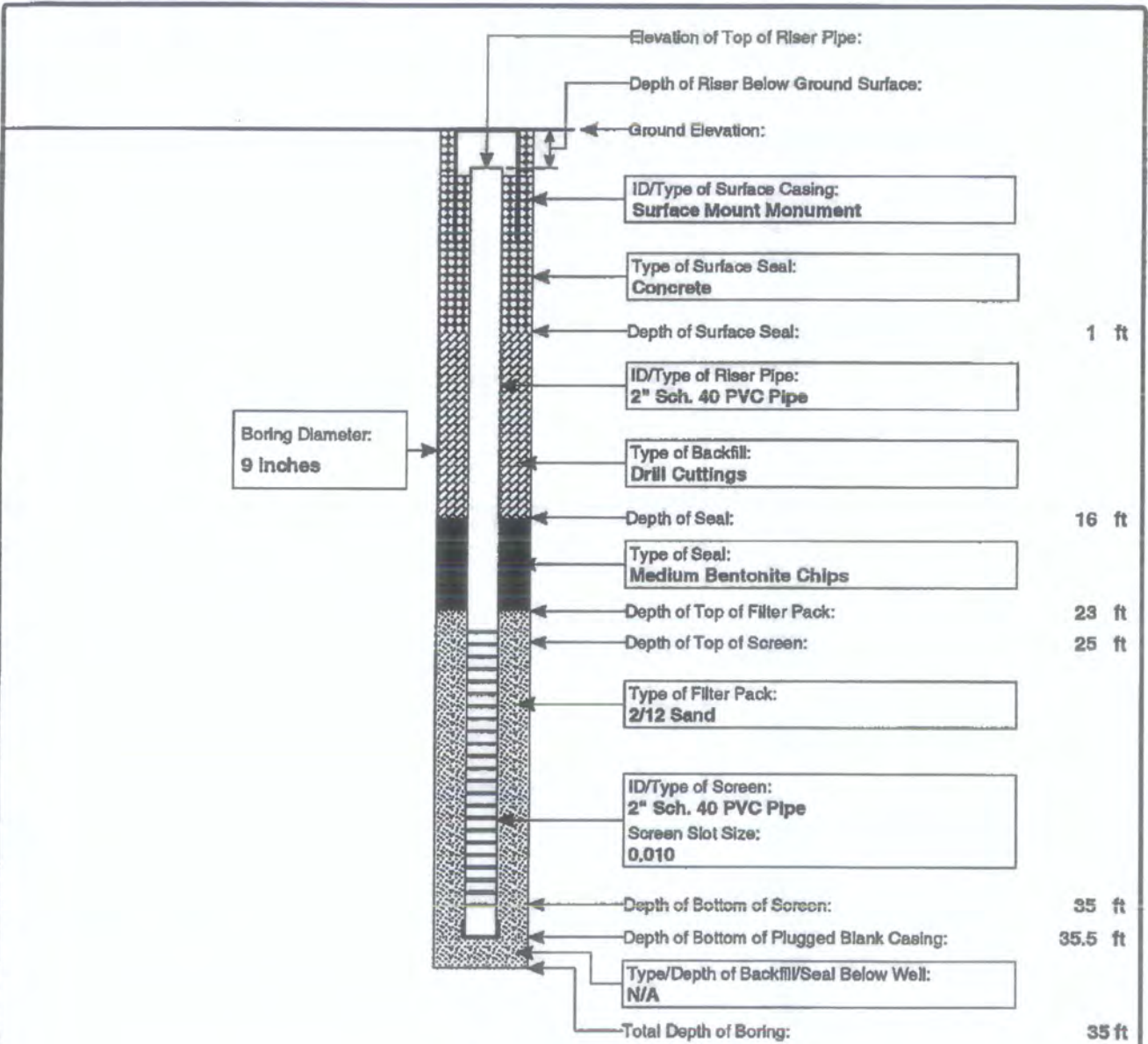
Elevation, feet	Downhole Depth, feet	SAMPLES			Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS AND OTHER TESTS
		Type	Number	Blows/ 6in.				
0						Surface: gravel parking area		
	1	SM/GM	50/3"	0.0		Brown, silty SAND and GRAVEL (dry) (very dense) (no apparent odor or stain)		
5								
	2	ML	50/6"	0.0		Brown SILT and SAND with some gravel (moist) (very dense) (no apparent odor or stain)		
10								
	3	SM	50/6"	0.0		Brown grading to dark gray, silty, fine to coarse SAND, organics, wood (moist) (very dense) (no apparent odor or stain)		
15								
	4		30 50/6"	0.0		Brown, silty, fine SAND (increasing moisture) (very dense)		
20								
	5		30 50/6"	0.0		Brown, decreasing silt, increasing coarse SAND (wet) (very dense)	25 ft	
25								
	6		50/5"	0.0			Driller's note: auger advanced easier at 27'	
30								
	7	SP	50/6"	0.0		Gray, fine to coarse SAND, trace silt (wet) (very dense) (no apparent odor or stain)	Increasing moisture	
35								
						Same as above Boring was completed to 35' bgs. Groundwater was encountered at 25' bgs. Boring was completed as monitoring well.		
40								

ENV W/O WELL T:\ONNEWORLD\337494-1\01000555.GPJ URISSEAS.OLB URISSEAS.GDT 10/1/02

Project: Belshaw Enodis
 Project Location: Seattle, Washington
 Project Number: 33749445

MONITORING WELL CONSTRUCTION LOG FOR WELL MW-7

Well Location	Southwest corner, south gravel parking area	Date(s) Installed	6/13/02	Time
Installed By	Cascade Drilling	Observed By	DTB	Total Depth (ft)
Method of Installation				
HSA				
Screened Interval	20'-35'	Completion Zone	0'-35'	
Remarks				



NOTE: DIAGRAM IS NOT TO SCALE

WELL_CONSTR_BELSHAW_GROUND T:\ONEWORLD\33749445\1\BELSHAW.DPJ URSSSEAS.GLB URSSSEAS.GDT 10/1/02

Project: Enodis - Belshaw Property
 Project Location: Seattle Washington
 Project Number: 33749445

Log of Boring MW-8

Sheet 1 of 1

Date(s) Drilled	2/20/2003	Logged By	BBS	Checked By	DRR
Drilling Method	Hollow Stem Auger	Drilling Contractor	Cascade Drilling, Inc.	Total Depth of Borehole	30.5 feet
Drill Rig Type	Truck-mounted	Drill Bit Size/Type		Ground Surface Elevation	
Groundwater Level	15	Sampling Method	Dames & Moore Split Barrel	Hammer Data	140lb Downhole Hammer
Borehole Backfill	Monitoring well installed	Location	South of paint building		

Elevation, feet	Downhole Depth, feet	SAMPLES				Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS AND OTHER TESTS
		Type	Number	Blows/ 6in.	Recovery (%)				
0							Crushed rock/gravel area		
			1	27 - 35 34	100	0	SM	Black, cemented gravelly, silty SAND, possibly asphalt	Soil sample collected
			2	11 - 18 18	100	0		Brown, slightly gray, SAND, some silt and gravel No apparent petroleum odor or staining (moist) (dense to very dense)	Soil sample collected
			3	7 - 11 22	100	0			
			4	30 50 for 6"	100	0		grades to silty SAND	Soil sample collected
			5	27 50 for 6"	100	0			
			6	37 50 for 6"	100	0			
			7	40 50 for 6"	100	0	SM/GM	Brown, slightly gray, silty, gravelly, SAND No apparent petroleum odor or staining (moist to wet) (very dense)	Soil sample collected
			8	50 for 6"	100	0			15 ft ∇ Soil sample collected
			9	50 for 6"	100	0			
			10	50 for 6"	100	0	ML/GM	Brown, slightly gray, gravelly, sandy, SILT No apparent petroleum odor or staining (moist) (hard)	
			11	50 for 6"	100	0			
			Boring completed at 30 1/2 feet below ground surface (bgs) on 2/20/2003. Groundwater encountered at approximately 15 feet bgs at the time of the investigation. A monitoring well was installed into the boring, see attached page for well construction details.						
35									

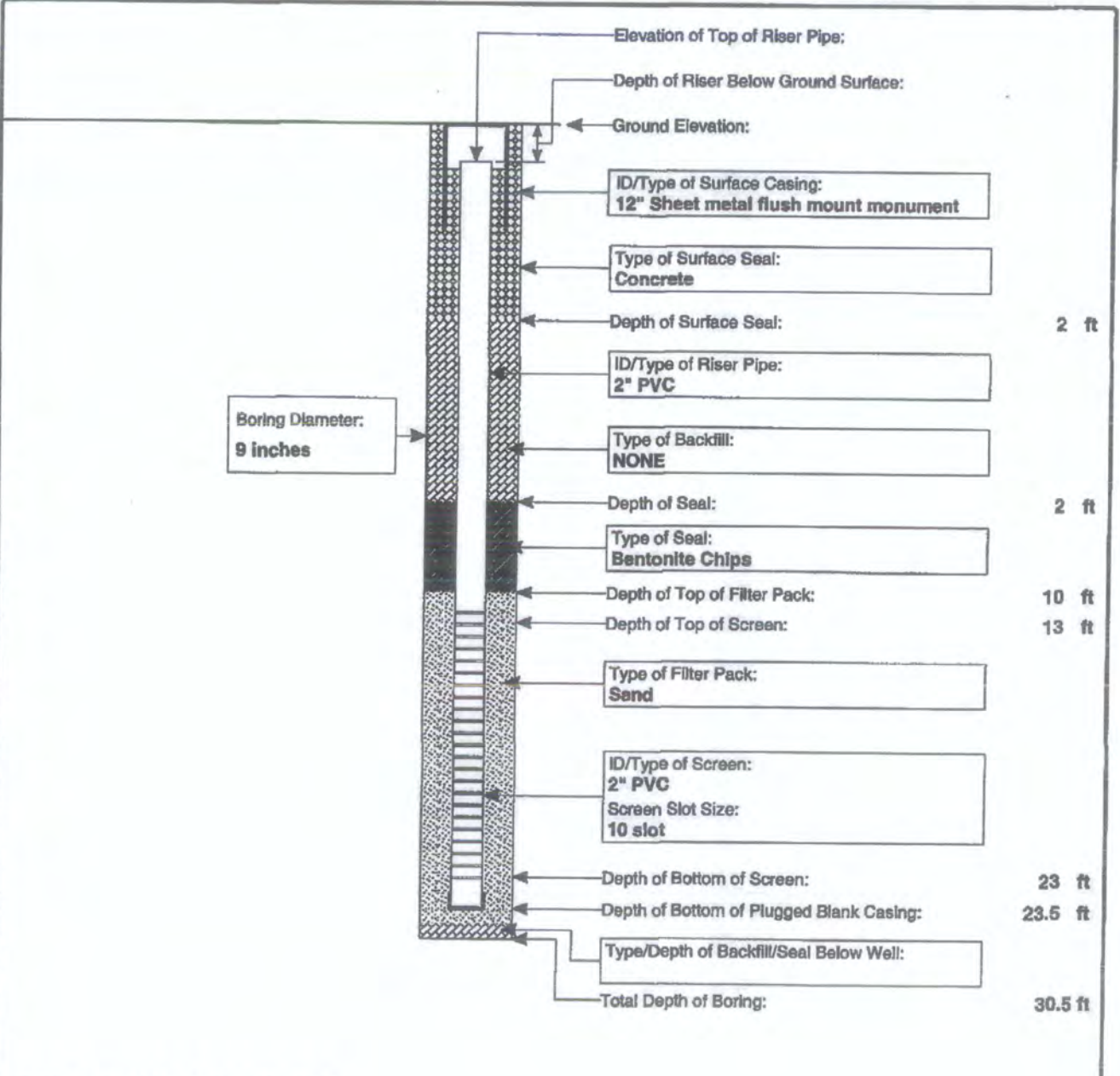
ENV2 W/O WELL: K:\005BELSHA-1\ADDITL-1\33749445.GPJ URSSEA3.GLB URSSEA3.GDT 4/7/03



Figure A-5.1

Project: Enodis - Belshaw Property Project Location: Seattle Washington Project Number: 33749445	MONITORING WELL CONSTRUCTION LOG FOR WELL MW-8
---	---

Well Location	South of Paint Building	Date(s) Installed	2/20/2003	Time	1030
Installed By	Cascade Drilling, Inc.	Observed By	BBS	Total Depth (ft)	30.5
Method of Installation	Hollow Stem Auger Drilling				
Screened Interval	13 - 23 feet bgs	Completion Zone	0 - 23.5 feet bgs		
Remarks					



WELL_CONST_BELOW_GROUND&C K:\005BELSHA-1\ADDIT1-133749445.GPJ_URSSEA3.GLB_URSSEA3.GDT_4/7/03

NOTE: DIAGRAM IS NOT TO SCALE



Figure A-5.2

Project: Enodis - Belshaw Property
 Project Location: Seattle Washington
 Project Number: 33749445

Log of Boring MW-9

Sheet 1 of 1

Date(s) Drilled	2/20/2003	Logged By	BBS	Checked By	DRR
Drilling Method	Hollow Stem Auger	Drilling Contractor	Cascade Drilling, Inc.	Total Depth of Borehole	26 feet
Drill Rig Type	Truck-mounted	Drill Bit Size/Type		Ground Surface Elevation	
Groundwater Level	15	Sampling Method	Dames & Moore Split Barrel	Hammer Data	140lb Downhole Hammer
Borehole Backfill	Monitoring well installed	Location	In southeast corner of parking lot		

Elevation, feet	Downhole Depth, feet	SAMPLES				Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS AND OTHER TESTS
		Type	Number	Blows/ 6in.	Recovery (%)				
0							Crushed rock/Gravel area		
5	14 - 12 17	1	100	0		GM/SM	Brown to dark brown silty, SAND & GRAVEL No apparent petroleum odor or staining (moist) (dense)		
10	6 - 10 10	2	100	0		ML	Perched water lens Brown SILT, some sand No apparent petroleum staining or odor (stiff)		
15	7 - 8 9	3	100	0		SM/GM	Brown, gravelly, silty, SAND No apparent petroleum odor or staining (wet) (medium dense to very dense)	15 ft ∇ Soil sample collected	
20	6 - 10 20	4	100	0				Soil sample collected	
25	8 20 for 6'	5	100	0					
30							Boring completed at 26 feet below ground surface (bgs) on 2/20/2003. Groundwater encountered at approximately 15 feet bgs at the time of the investigation. A monitoring well was installed into the boring, see attached page for well construction details.		
35									

ENV2 W/O WELL K3005BELSHA-1\ADDITT-133749445.GPJ URSSEA3.0LB URSSEA3.GDT 4/7/03



Figure A-6.1

Project: Enodis - Belshaw Property Project Location: Seattle Washington Project Number: 33749445	MONITORING WELL CONSTRUCTION LOG FOR WELL MW-9
---	---

Well Location	Southeast corner of gravel parking lot	Date(s) Installed	2/20/2003	Time	1310
Installed By	Cascade Drilling, Inc.	Observed By	BBS	Total Depth (ft)	26
Method of Installation	Hollow Stem Auger Drilling				
Screened interval	15 - 25 feet bgs	Completion Zone	0 - 25 feet bgs		
Remarks					

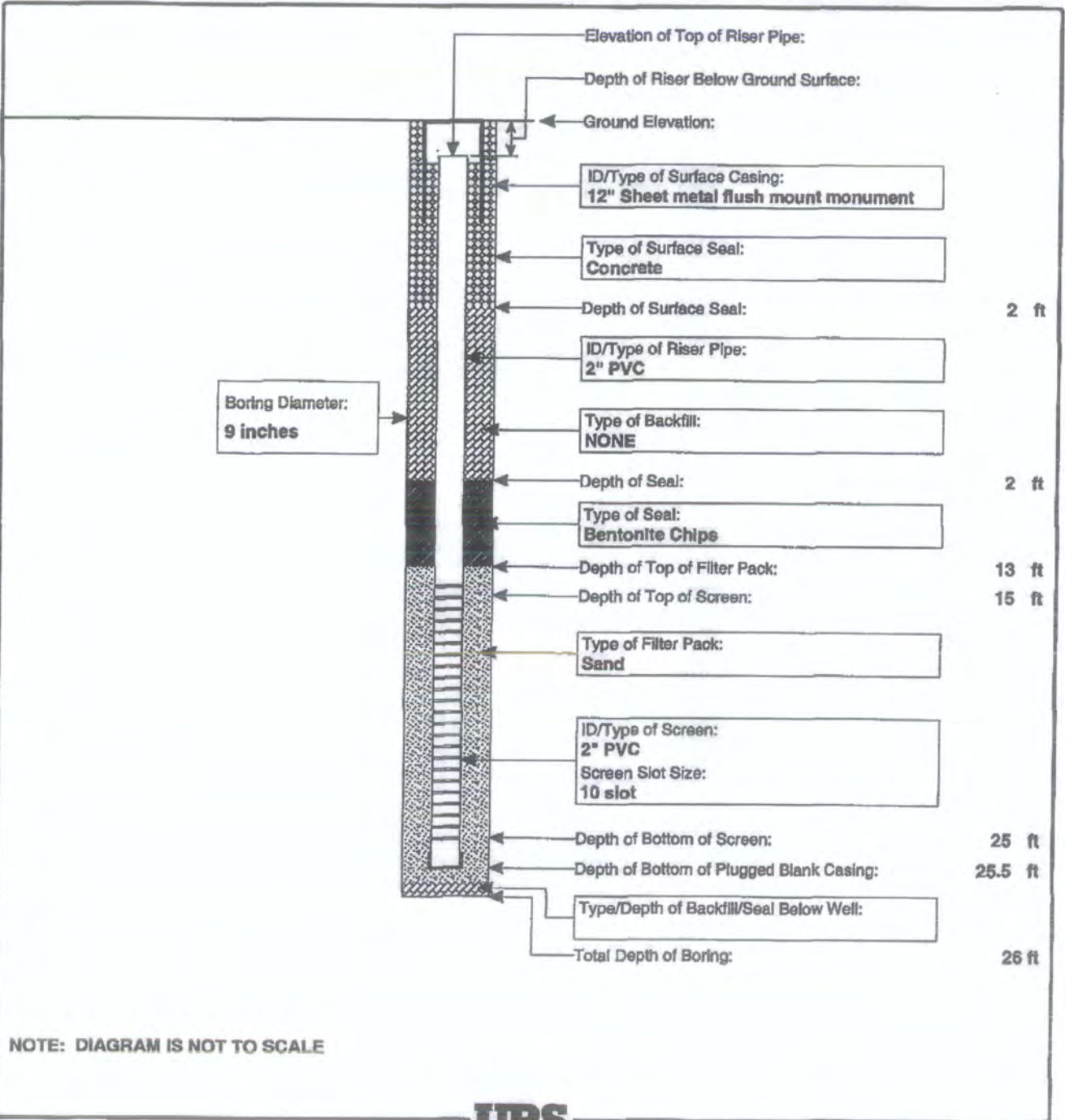


Figure A-6.2

Project: Enodis - Belshaw Property Project Location: Seattle Washington Project Number: 33749445	Log of Boring MW-10 Sheet 1 of 1
---	--

Date(s) Drilled: 2/20/2003	Logged By: BBS	Checked By: DRR
Drilling Method: Hollow Stem Auger	Drilling Contractor: Cascade Drilling, Inc.	Total Depth of Borehole: 30.5 feet
Drill Rig Type: Truck-mounted	Drill Bit Size/Type:	Ground Surface Elevation:
Groundwater Level: 20	Sampling Method: Dames & Moore Split Barrel	Hammer Data: 140lb Downhole Hammer
Borehole Backfill: Monitoring well installed	Location: Near southwest corner of main building	

Elevation, feet	Downhole Depth, feet	SAMPLES				Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS AND OTHER TESTS
		Type	Number	Blows/ 6in.	Recovery (%)				
0							Cracked concrete sidewalk		
						ML/GM	Dark brown, gravelly, sandy, SILT No apparent petroleum odor or staining		
						SM/GM	Brown, gravelly, silty SAND No apparent petroleum odor or staining (moist to wet) (very dense)		
	1	X	14 - 25 35	100	0				
	5	X	19 50 for 6"	100	0				
	3	X	21 - 31 37	100	0			Soil sample collected	
	10	X	22 50 for 6"	100	0				
	15	X	50 for 6"	100	0			Soil sample collected	
	20	X	22 - 30 38	100	0		Grades to some silt, ground water encountered, soil is wet	20 ft ▽ Soil sample collected	
	25	X	31 50 for 6"	100	0		Grades to silty and moist		
	30	X	50 for 4"	100	0				
	35						Boring completed at 30 1/2 feet below ground surface (bgs) on 2/20/2003. Groundwater encountered at approximately 20 feet bgs at the time of the investigation. A monitoring well was installed into the boring on the following day, see attached page for well construction details.		

ENV2 WFO WELL_K:\005\BELSHA-1\ADDITT-1\33749445.GPJ_URSSSEAS.GLB_URSSSEAS.GDT_4/7/03

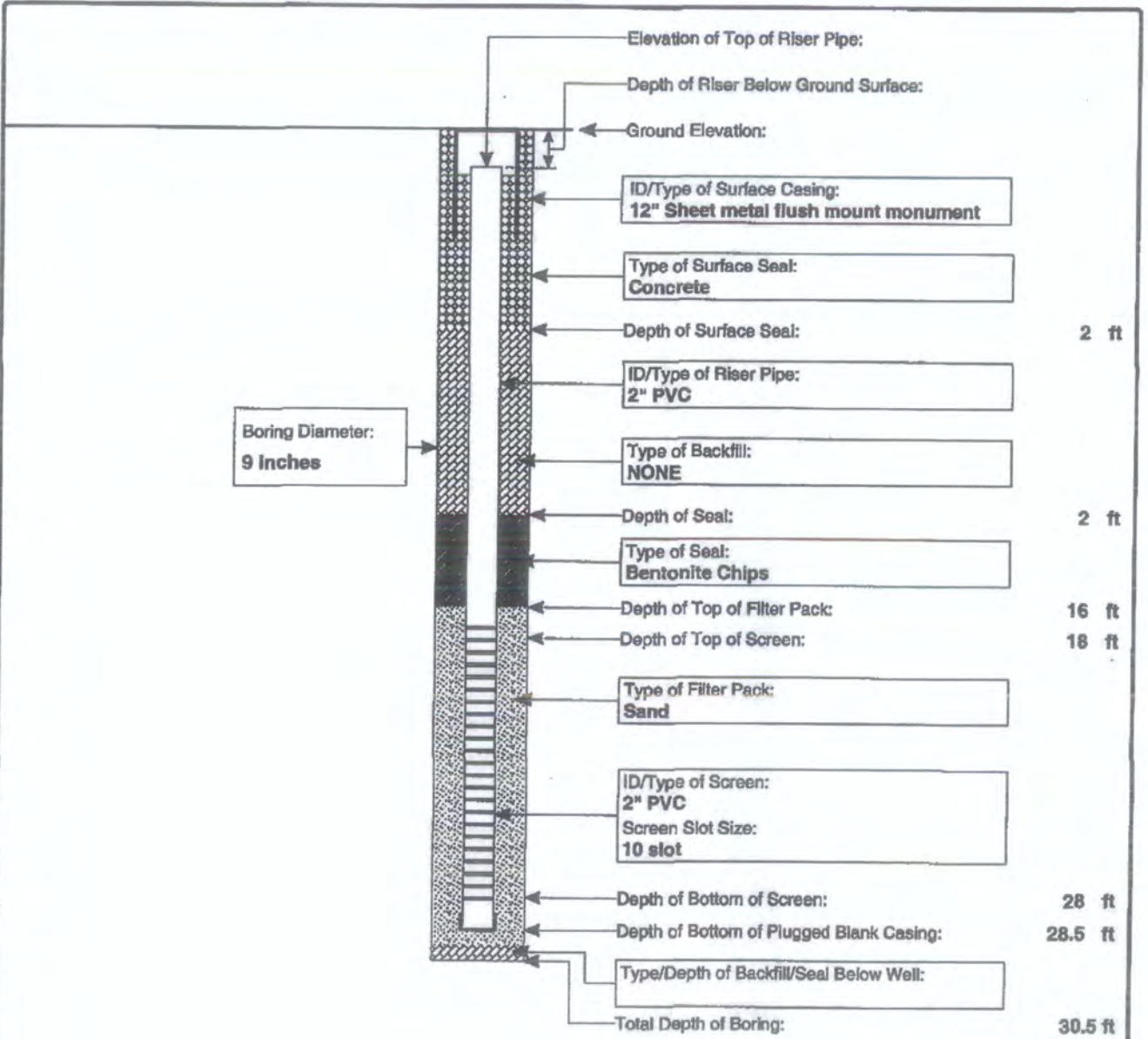


Figure A-7.1

Project: Enodis - Belshaw Property
 Project Location: Seattle Washington
 Project Number: 33749445

**MONITORING WELL
 CONSTRUCTION LOG
 FOR WELL MW-10**

Well Location	Southwest corner of Main Building	Date(s) Installed	2/20/2003 - 2/21/2003	1500
Installed By	Cascade Drilling, Inc.	Observed By	BBS	Total Depth (ft)
Method of Installation Hollow Stem Auger Drilling				
Screened Interval	18 - 28 feet bgs	Completion Zone	0 - 28.5 feet bgs	
Remarks				



NOTE: DIAGRAM IS NOT TO SCALE

WELL_CONST_BELOW_GROUND2C K:\005\BELSHA--1\DDIT--133769445.GPJ URSSEA3.GLB URSSEA3.GDT 4/7/03



Figure A-7.2

Project: Enodis - Belshaw Property
 Project Location: Seattle Washington
 Project Number: 33749445

Log of Boring MW-11
 Sheet 1 of 1

Date(s) Drilled	2/21/2003	Logged By	BBS	Checked By	DRR
Drilling Method	Hollow Stem Auger	Drilling Contractor	Cascade Drilling, Inc.	Total Depth of Borehole	10 feet
Drill Rig Type	Limited Access	Drill Bit Size/Type		Ground Surface Elevation	
Groundwater Level	5	Sampling Method	Dames & Moore Split Barrel	Hammer Data	140lb Downhole Hammer
Borehole Backfill	Monitoring well installed	Location	Northwest corner of assembly building		

Elevation, feet	Downhole Depth, feet	SAMPLES				Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS AND OTHER TESTS
		Type	Number	Blows/ 6in.	Recovery (%)				
0							ML	Dark brown SILT, some sand and gravel No apparent petroleum odor or staining (moist to wet, perched water) (stiff to hard)	Soil sample collected
	1		26 - 28	19	100	0			
	2		5 - 5	8	100	0			
5	3		3 - 21	21	100	0			Soil sample collected
	4		8 - 12	22	100	0	ML	Brown, mottled orange SILT, some sand and gravel No apparent petroleum odor or staining (some saturated zones) (hard)	Soil sample collected
	5		7 - 11	20	100	0			
	6		10 - 17	20	100	0			
10								Boring completed at 10 feet below ground surface (bgs) on 2/21/2003. Perched groundwater encountered at approximately 5 feet bgs at the time of the investigation. A monitoring well was installed into the boring, see attached page for well construction details.	
15									
20									
25									
30									
35									

ENW2 W/O WELL K:\005\BELSHA-1\ADDTI-1\33749445.GPJ URSSEA3.GLB URSSEA3.GDT 4/7/03

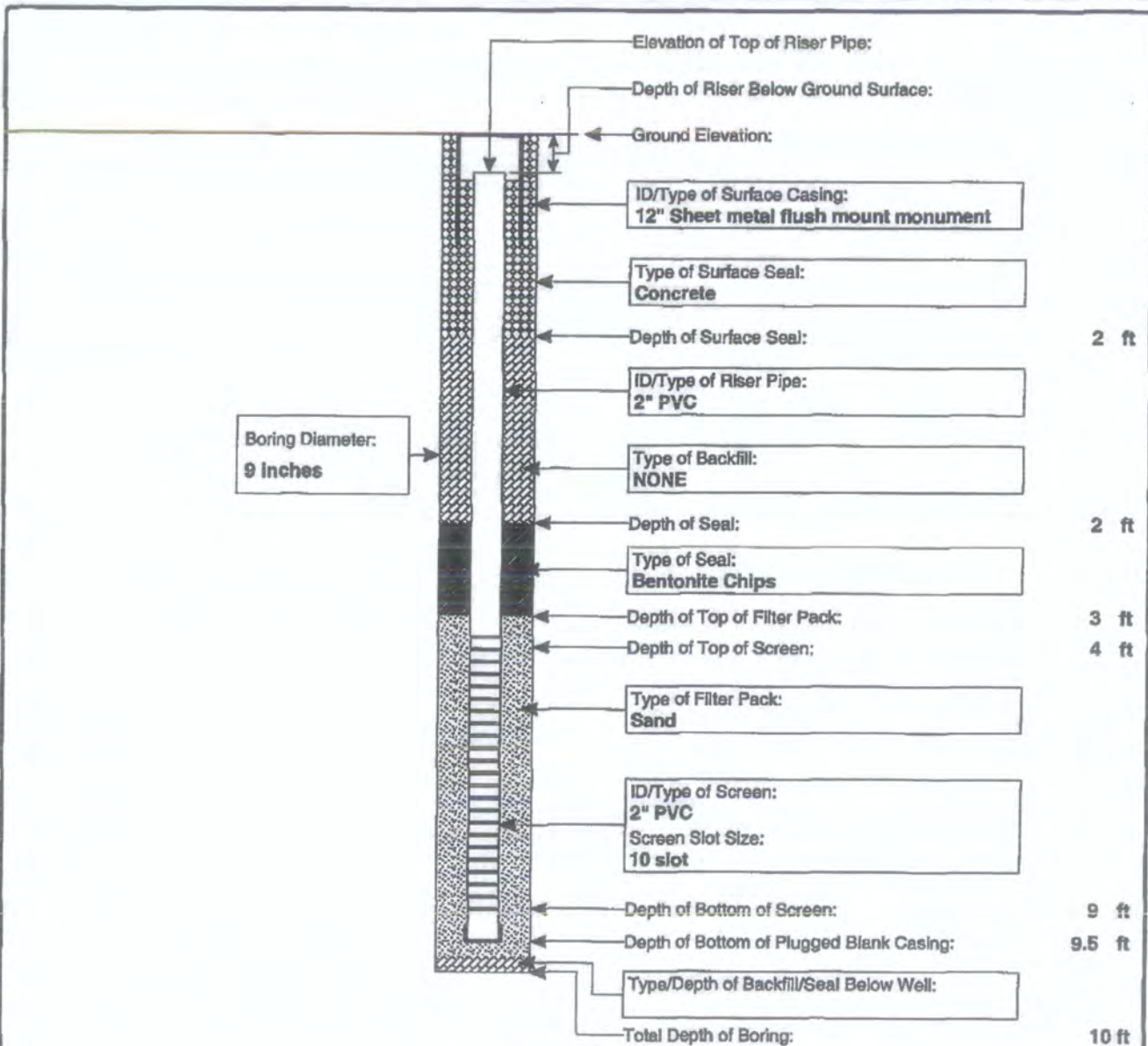


Figure A-8.1

Project: Enodis - Belshaw Property
 Project Location: Seattle Washington
 Project Number: 33749445

MONITORING WELL CONSTRUCTION LOG FOR WELL MW-11

Well Location	Northwest corner of Assembly Building	Date(s) Installed	2/21/2003	Time	0945
Installed By	Cascade Drilling, Inc.	Observed By	BBS	Total Depth (ft)	10
Method of Installation	Hollow Stem Auger Drilling				
Screened Interval	4 - 9 feet bgs	Completion Zone	0 - 10 feet bgs		
Remarks					



NOTE: DIAGRAM IS NOT TO SCALE

WELL_CONST_BELCOW_GROUND2C K:\005BELSHA-1\ADDITI-1\33749445.GPJ URSSEA3.GLB URSSEA3.GDT 4/7/03



Figure A-8.2

Project: Enodis - Belshaw Property
 Project Location: Seattle Washington
 Project Number: 33749445

Log of Boring MW-12

Sheet 1 of 1

Date(s) Drilled	2/21/2003	Logged By	BBS	Checked By	DRR
Drilling Method	Hollow Stem Auger	Drilling Contractor	Cascade Drilling, Inc.	Total Depth of Borehole	30.5 feet
Drill Rig Type	Limited Access	Drill Bit Size/Type		Ground Surface Elevation	
Groundwater Level	13	Sampling Method	Dames & Moore Split Barrel	Hammer Data	140lb Downhole Hammer
Borehole Backfill	Monitoring well installed	Location	Southwest corner of assembly building in loading bay		

Elevation, feet	Downhole Depth, feet	SAMPLES				Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS AND OTHER TESTS
		Type	Number	Blows/ 6in.	Recovery (%)				
0							Concrete slab for truck loading bay		
						SM	Description from soil cuttings Brown SAND, some gravel and silt No apparent petroleum odor or staining		
5		1		0					
		2		0					
10		3	50 for 5'	100	0	SM/GM	Brown, gravelly, silty, SAND No apparent petroleum odor or staining (moist) (very dense)	13 ft. ∇	
							Cuttings wet and fluid in nature		
15		4	50 for 4'	100	-		Grades to SAND and SILT		
20		5	50 for 2'	100	-		Grades back to silty SAND No enough soil to sample		
25		6	100 for 4'	100	-		No enough soil to sample		
							Petroleum odor and staining noted in soil cuttings	Composite soil sample collected from soil cuttings	
30		7	50 for 4'	100	-		No enough soil to sample		
							Boring completed at 30 1/2 feet below ground surface (bgs) on 2/21/2003. Groundwater encountered at approximately 13 feet bgs at the time of the investigation. A monitoring well was installed into the boring, see attached page for well construction details.		
35									

EN2 WFO WELL K:\005\BEL-SHA-1\ADDITT-133749445.GPJ URISSEAS.GLB URISSEAS.GDT 4/7/03

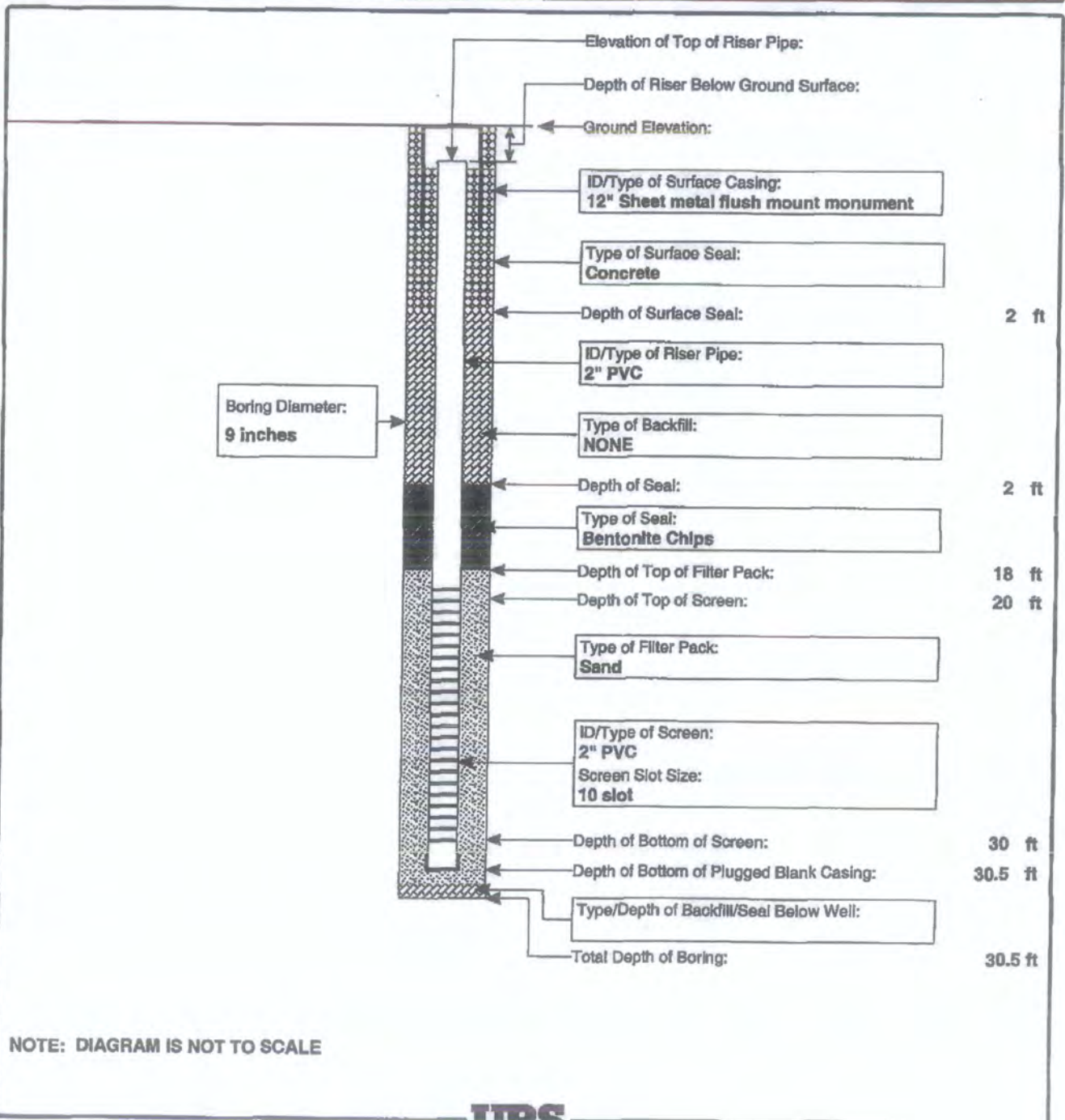


Figure A-9.1

Project: Enodis - Belshaw Property
 Project Location: Seattle Washington
 Project Number: 33749445

**MONITORING WELL
 CONSTRUCTION LOG
 FOR WELL MW-12**

Well Location	Southwest corner of Assembly Building in loading dock	Date(s) Installed	2/21/2003	Time	1130
Installed By	Cascade Drilling, Inc.	Observed By	BBS	Total Depth (ft)	30.5
Method of Installation	Hollow Stem Auger Drilling				
Screened Interval	20 - 30 feet bgs	Completion Zone	0 - 30.5 feet bgs		
Remarks					



WELL_CONST_BELOW_GROUND2C I:\005BELSHA-1\ADDITT-133749445.GPJ URSSSEAS.GLB URSSSEAS3.GDT 4/7/03



Figure A-9.2

Project: Enodis - Belshaw Property
 Project Location: Seattle Washington
 Project Number: 33749445

Log of Boring MW-13

Sheet 1 of 1

Date(s) Drilled	2/21/2003	Logged By	BBS	Checked By	DRR
Drilling Method	Hollow Stem Auger	Drilling Contractor	Cascade Drilling, Inc.	Total Depth of Borehole	30.5 feet
Drill Rig Type	Limited Access	Drill Bit Size/Type		Ground Surface Elevation	
Groundwater Level	24	Sampling Method	Dames & Moore Split Barrel	Hammer Data	140lb Downhole Hammer
Borehole Backfill	Monitoring well installed	Location	Northeast side of paint building		

Elevation, feet	Downhole Depth, feet	SAMPLES				Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS AND OTHER TESTS
		Type	Number	Blows/ 6in.	Recovery (%)				
0							ML	Dark brown to brown SILT, some sand and gravel	
5		1	17 - 21 28	100	0		ML/SM	Brown, gravelly SILT and SAND No apparent petroleum odor or staining (moist to wet, perched water) (Dense/Hard)	
10		2	15 - 21 26	100	0		SM/GM	Brown, gravelly SAND, some silt No apparent petroleum odor or staining (moist) (dense to very dense)	
15		3	50 for 6"	100	0			Grades to trace silt	
20		4	50 for 3"	100	0			Grades to some gravel	
25		5	70 for 6"	100	0			Ground water encountered, soil is wet	24 ft ▽ Soil sample collected
30		6	50 for 6"	100	0				
35								Boring completed at 30 1/2 feet below ground surface (bgs) on 2/20/2003. Groundwater encountered at approximately 24 feet bgs at the time of the investigation. A monitoring well was installed into the boring, see attached page for well construction details.	

ENV2 WID WELL_K1005BELSHA-1\ADDIT1-183749445.GPJ_URSSSEAS.GLB_URSSSEAS.GDT_4/7/03

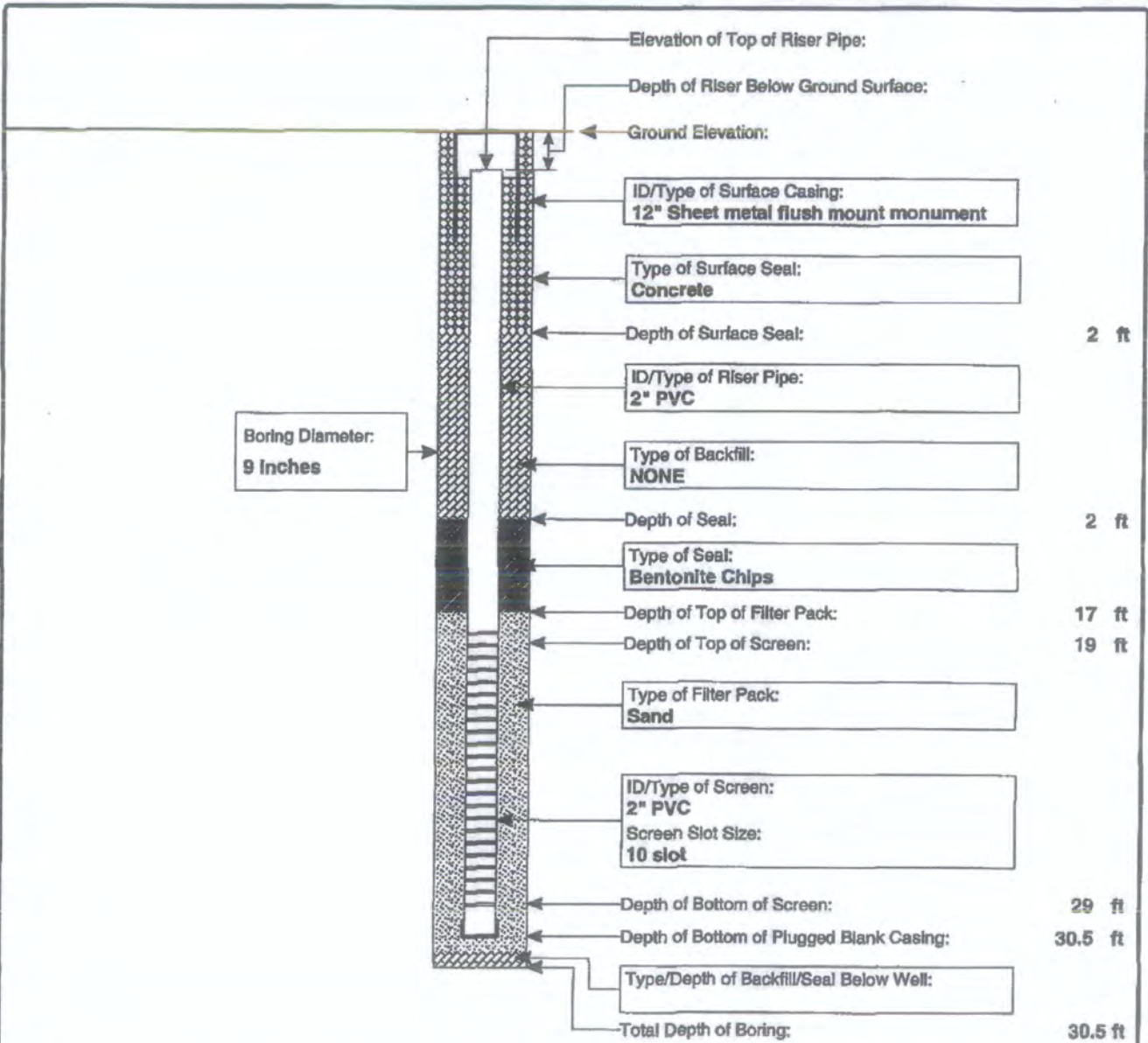


Figure A-10.1

Project: Enodis - Belshaw Property
 Project Location: Seattle Washington
 Project Number: 33749445

MONITORING WELL CONSTRUCTION LOG FOR WELL MW-13

Well Location	Northeast corner of Paint Building	Date(s) Installed	2/21/2003	Time	1430
Installed By	Cascade Drilling, Inc.	Observed By	BBS	Total Depth (ft)	30.5
Method of Installation	Hollow Stem Auger Drilling				
Screened Interval	19 - 29 feet bgs	Completion Zone	0 - 30 feet bgs		
Remarks					



NOTE: DIAGRAM IS NOT TO SCALE



Figure A-10.2

WELL_CONST_BELOW_GROUND2C K:\MSIBELSHA-1\ADDITT-1\33749445.GPJ URSSEA3.GLB URSSEA3.GDT 4/7/03

Project: Belshaw
 Project Location: Seattle, Washington
 Project Number: 33763763

Log of Boring URS-SB-1
 Sheet 1 of 2

Date(s) Drilled	9/4/12	Logged By	AP	Checked By	
Drilling Method	Hollow Stem Auger	Drilling Contractor	Cascade	Total Depth of Borehole	45.5 feet bgs
Drill Rig Type	CME 75	Drill Bit Size/Type	8.5"	Ground Surface Elevation	
Groundwater Level (feet bgs)	25' bgs	Sampling Method	D&M Sampler	Hammer Data	300 lb.
Borehole Backfill	Cetco Medium Chips	Location			

Elevation, feet	Downhole Depth, feet	SAMPLES				Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS AND OTHER TESTS
		Type	Number	Blows/ 6in.	Recovery (%)				
0						ML	Grass and GRAVEL (fill) Light gray/light brown SILT with clay, interbedded fine sand lensed (moist) (no odor, no staining)		
5			6 7 8		0.0 0.0 0.0				
10			16 18 20		0.0 0.0 0.0	SP	Light brown fine SAND (moist) (no odor, no staining)		
15			10 12 15		0.0 0.0 0.0				
20			20 23 28		0.0 0.0 0.0				
25		URS-SB-1-GW-URS-SB-1-26	21 23 25		1035		Grading (wet) (strong gasoline odor)	25 ft. ▾	
30									

ENV2 W/O WELL_C:\DOCUMENTS AND SETTINGS\ANN_CAMPBELL\DESKTOP\WORK FILES\NOV 7\33763763\LOGS.GPJ_URSSEA3B.GLB_URSSEA3.GDT_11/7/12



Project: Belshaw
 Project Location: Seattle, Washington
 Project Number: 33763763

Log of Boring URS-SB-1

Sheet 2 of 2

Elevation, feet	Downhole Depth, feet	SAMPLES				Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS AND OTHER TESTS
		Type	Number	Blows/ 6in.	Recovery (%)				
30	26 28	URS-SB-1-31	22	26	28	56 84 71		Grading (slight gasoline odor)	
35	23 25 28		23	25	28	61 78 72		Grading trace fine gravel	
40	33 50	URS-SB-1-41	33	50		0.0 0.0	SM	Light gray silty fine SAND with fine gravel (wet) (no odor, no staining)	
45	45.5	URS-SB-1-45.5	50			0.0		Boring was completed to 45.5' bgs. Groundwater was encountered at 25' bgs. Boring was backfilled with Cetco medium chips.	
50									
55									
60									
65									

ENV2 W/O WELL. C:\DOCUMENTS AND SETTINGS\MANN_CAMPBELL\DESKTOP\WORK FILES\NOV 733763763\LOGS.GPJ_URSSEA3B.GLB_URSSEA3.GDT. 11/7/12



Project: Belshaw
 Project Location: Seattle, Washington
 Project Number: 33763763

Log of Boring URS-SB-2

Sheet 1 of 2

Date(s) Drilled	9/4/12	Logged By	AP	Checked By	
Drilling Method	Hollow Stem Auger	Drilling Contractor	Cascade	Total Depth of Borehole	46 feet bgs
Drill Rig Type	CME 75	Drill Bit Size/Type	8.5"	Ground Surface Elevation	
Groundwater Level (feet bgs)	25.5' bgs	Sampling Method	D&M Sampler	Hammer Data	300 lb.
Borehole Backfill	Cetco Medium Chips	Location			

Elevation, feet	Downhole Depth, feet	SAMPLES				Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS AND OTHER TESTS
		Type	Number	Blows/ 6in.	Recovery (%)				
0							Grass and GRAVEL (fill) Light brown/light gray SILT with trace fine sand and trace fine gravel (dry) (no odor, no staining)		
5			42 50		0.0 0.0				
10			46/50		0.0				
15			48 50		0.0 0.0		SM Light brown/light gray silty fine SAND with trace fine gravel (moist) (no odor, no staining)		
20			49 50		0.0 0.0		ML Light brown SILT with clay (dry) (no odor, no staining)		
25		URS-SB-2-GW-URS-SB-2-25.5	43 50				SP Light brown/light gray fine SAND, trace silt (wet) (no odor, no staining) 25.5 ft		
30									

ENV2 W/O WELL C:\DOCUMENTS AND SETTINGS\ANN_CAMPBELL\DESKTOP\WORK FILES\NOV 7\33763763\LOGS.GPJ_URSSEA38.GLB_URSSEA3.GDT 11/7/12



Project: Belshaw
 Project Location: Seattle, Washington
 Project Number: 33763763

Log of Boring URS-SB-2

Sheet 2 of 2

Elevation, feet	Downhole Depth, feet	SAMPLES				Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS AND OTHER TESTS
		Type	Number	Blows/ 6in.	Recovery (%)				
30				41/50		0.0	ML	Gray SILT with trace fine gravel (moist) (no odor, no staining)	
35		URS-SB-2-36		40 50		0.0 0.0	SP	Light gray fine SAND (moist) (no odor, no staining)	
40				28 35 56		0.0 0.0 0.0			
45		URS-SB-2-46		36 50		0.0 0.0	ML	Light gray SILT with trace fine SAND (moist) (no odor, no staining)	
50								Boring was completed to 46' bgs. Groundwater was encountered at 25.5' bgs. Boring was backfilled with Cetco medium chips.	
55									
60									
65									

ENV2 W/O WELL C:\DOCUMENTS AND SETTINGS\ANN_CAMPBELL\DESKTOP\WORK FILES\NOV 7\33763763\LOGS.GPJ_URSSEA3B.GLB_URSSEA3.GDT 11/7/12

Project: Belshaw
 Project Location: Seattle, Washington
 Project Number: 33763763

Log of Boring URS-SB-3

Sheet 1 of 2

Date(s) Drilled	9/4/12	Logged By	AP	Checked By	
Drilling Method	Hollow Stem Auger	Drilling Contractor	Cascade	Total Depth of Borehole	56.5 feet bgs
Drill Rig Type	CME 75	Drill Bit Size/Type	8.5"	Ground Surface Elevation	
Groundwater Level (feet bgs)	30.5' bgs	Sampling Method	D&M Sampler	Hammer Data	300 lb.
Borehole Backfill	Cetco Medium Chips	Location			

Elevation, feet	Downhole Depth, feet	SAMPLES				Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS AND OTHER TESTS
		Type	Number	Blows/ 6in.	Recovery (%)				
0							Grass and GRAVEL (fill) Light gray/light brown fine SAND with fine gravel (dry) (no odor, no staining)		
5				15 23 25 35 50	0.0 0.0 0.0				
10				35 50	0.0 0.0	ML	Light brown SILT with trace fine gravel (dry) (no odor, no staining)		
15				45 50	0.0 0.0	SM	Light brown silty fine SAND with trace gravel (moist) (no odor, no staining)		
20		URS-SB-3-20.5		50	20.5		Grading (slight gasoline odor)		
25				41 50	7.6 5.1	ML	Light brown SILT with fine gravel (moist) (slight gasoline odor)		
30									

ENV2.W00.WELL.C:\DOCUMENTS AND SETTINGS\IANN_CAMPBELL\DESKTOP\WORK FILES\NOV 7\33763763\LOGS.GPJ_URSSA3B.GLB_URSSA3.GDT 11/7/12



Project: Belshaw
 Project Location: Seattle, Washington
 Project Number: 33763763

Log of Boring URS-SB-3

Sheet 2 of 2

Elevation, feet	Downhole Depth, feet	SAMPLES				Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS AND OTHER TESTS
		Type	Number	Blows/ 6in.	Recovery (%)				
30		URS-SB-3-31 URS-SB-3-GW	37 50		8.9 10.1	SM	Medium gray silty fine SAND (wet) 30.5 ft. ∇		
35		URS-SB-3-36	38 50		0.0	ML	Light gray SILT with interbedded fine sand lenses (very moist) (no odor, no staining)		
40			42 50		0.0 0.0				
45		URS-SB-3-46.5	23 28 30		0.0 0.0 0.0	SP	Medium gray fine SAND with interbedded silt lenses, trace fine gravel (moist) (no odor, no staining)		
50			24 28 30		0.0 0.0 0.0	ML	Medium gray SILT with trace fine gravel (moist) (no odor, no staining)		
55			25 18 28		0.0 0.0 0.0				
60							Boring was completed to 56.5' bgs. Groundwater was encountered at 30.5' bgs. Boring was backfilled with Cetco medium chips.		
65									

ENV2 W/O WELL C:\DOCUMENTS AND SETTINGS\IANI_CAMPBELL\DESKTOP\WORK FILES\NOV 7\33763763\LOGS.GPJ_URSSEA3B.GLB_URSSEA3.GDT 11/7/12

Project: Belshaw
 Project Location: Seattle, Washington
 Project Number: 33763763

Log of Boring URS-SB-4

Sheet 1 of 2

Date(s) Drilled	9/5/12	Logged By	AP	Checked By	
Drilling Method	Hollow Stem Auger	Drilling Contractor	Cascade	Total Depth of Borehole	56.5 feet bgs
Drill Rig Type	CME 75	Drill Bit Size/Type	8.5"	Ground Surface Elevation	
Groundwater Level (feet bgs)	28' bgs	Sampling Method	D&M Sampler	Hammer Data	300 lb.
Borehole Backfill	Cetco Medium Chips	Location			

ENV2 W/O WELL C:\DOCUMENTS AND SETTINGS\ANN_CAMPBELL\DESKTOP\WORK FILES\NOV 733763763\LOGS.GPJ_URSSEA3B.GLB_URSSEA3.GDT_11/7/12

Elevation, feet	Downhole Depth, feet	SAMPLES				Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS AND OTHER TESTS
		Type	Number	Blows/ 6in.	Recovery (%)				
0							Grass and GRAVEL (fill)		
						SP	Light brown fine SAND with trace silt and trace fine gravel (moist) (no odor, no staining)		
5			21 32 40		0.0 0.0 0.0				
10			32 38 40		0.0 0.0 0.0		Grading trace fine gravel (moist)		
15			48 50		0.0 0.0				
20			46 50		0.0 0.0		Grading light brown fine SAND with trace silt and trace fine gravel (moist) (no odor, no staining)		
25		URS-SB-4-26	42 50		14.1 12.7		Grading medium gray fine SAND (very moist) (slight hydrocarbon odor)		
							Grading (wet)	28 ft. ▼	
30									



Project: Belshaw
 Project Location: Seattle, Washington
 Project Number: 33763763

Log of Boring URS-SB-4

Sheet 2 of 2

Elevation, feet	Downhole Depth, feet	SAMPLES				Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS AND OTHER TESTS
		Type	Number	Blows/ 6in.	Recovery (%)				
30	31	URS-SB-4	41	50	0.0	0.0	SM	Medium gray silty fine SAND with trace fine gravel (wet) (no odor, no staining)	
35	50		48	50	0.0	0.0		Grading with interbedded silt lenses and trace fine gravel (wet) (no odor, no staining)	
40	41	URS-SB-4	39	50	0.0	0.0			
45	50		43	50	0.0	0.0			
50	23		8	30	0.0	0.0	ML	Light brown/light gray SILT with interbedded fine sand lenses (moist) (no odor, no staining)	
55	32		18	32	0.0	0.0	SM	Medium gray silty fine SAND with some interbedded silt lenses (very moist) (no odor, no staining)	
60								Boring was completed to 56.5' bgs. Groundwater was encountered at 28' bgs. Boring was backfilled with Cetco medium chips.	
65									

ENV2 W/O WELL C:\DOCUMENTS AND SETTINGS\ANN_CAMPBELL\DESKTOP\WORK FILES\NOV 7\33763763\LOGS.GPJ_URSSA3B.GLB_URSSA3.GDT 11/7/12



Project: Belshaw
 Project Location: Seattle, Washington
 Project Number: 33763763

Log of Boring URS-SB-5

Sheet 1 of 2

Date(s) Drilled	9/5/12	Logged By	AP	Checked By	
Drilling Method	Hollow Stem Auger	Drilling Contractor	Cascade	Total Depth of Borehole	56.5 feet bgs
Drill Rig Type	CME 75	Drill Bit Size/Type	8.5"	Ground Surface Elevation	
Groundwater Level (feet bgs)	Not Encountered	Sampling Method	D&M Sampler	Hammer Data	300 lb.
Borehole Backfill	Cetco Medium Chips	Location			

ENV2 W/O WELL C:\DOCUMENTS AND SETTINGS\ANN_CAMPBELL\DESKTOP\WORK FILES\NOV 7\33763763\LOGS.GPJ_URSSEA3B.GLB_URSSEA3.GDT 11/7/12

Elevation, feet	Downhole Depth, feet	SAMPLES				Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS AND OTHER TESTS
		Type	Number	Blows/ 6in.	Recovery (%)				
0							Grass		
						ML	Light brown SILT with trace fine sand (moist) (no odor, no staining)		
5			48 50		0.0 0.0				
10			25 32 50		0.0 0.0 0.0	SM	Light brown silty fine SAND with fine gravel (moist) (no odor, no staining)		
15			38 50		0.0 0.0	SP	Light brown fine SAND with fine gravel, trace silt (moist) (no odor, no staining)		
20			37 50		0.0 0.0				
25		URS-SB-5-26	47 50		0.0 0.0				
30									

Project: Belshaw
 Project Location: Seattle, Washington
 Project Number: 33763763

Log of Boring URS-SB-5

Sheet 2 of 2

Elevation, feet	Downhole Depth, feet	SAMPLES				Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS AND OTHER TESTS
		Type	Number	Blows/6in.	Recovery (%)				
30				48/50		0.0	ML	Light gray SILT with trace fine gravel (moist) (no odor, no staining)	
35				41 50		0.0 0.0		Grading medium gray SILT with clay (moist)	
40		URS-SB-5-41		42 50		0.0 0.0	SM	Medium gray sandy SILT with trace gravel (moist) (no odor, no staining)	
45				23 38 50		0.0 0.0 0.0		Grading medium brown sandy SILT with clay, trace fine gravel (dry)	
50				17 28 31		0.0 0.0 0.0			
55		URS-SB-5-56.5		18 22 23		0.0 0.0 0.0		Grading medium gray silty fine SAND, trace fine gravel (moist)	
								Boring was completed to 56.5' bgs. Groundwater was not encountered. Boring was backfilled with Cetco medium chips.	
60									
65									

ENV2 W/O WELL C:\DOCUMENTS AND SETTINGS\ANN_CAMPBELL\DESKTOP\WORK FILES\NOV 7\33763763\LOGS.GPJ_URSSA18.GLB_URSSA3.GDT 11/7/12



Project: Belshaw
 Project Location: Seattle, Washington
 Project Number: 33763763

Log of Boring URS-SB-6

Sheet 1 of 2

Date(s) Drilled	9/5/12	Logged By	AP	Checked By	
Drilling Method	Hollow Stem Auger	Drilling Contractor	Cascade	Total Depth of Borehole	46 feet bgs
Drill Rig Type	CME 75	Drill Bit Size/Type	8.5"	Ground Surface Elevation	
Groundwater Level (feet bgs)	29' bgs	Sampling Method	D&M Sampler	Hammer Data	300 lb.
Borehole Backfill	Cetco Medium Chips	Location			

Elevation, feet	Downhole Depth, feet	SAMPLES				Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS AND OTHER TESTS
		Type	Number	Blows/ 6in.	Recovery (%)				
0							Grass and GRAVEL (fill)		
						SM	Light brown silty fine SAND with fine gravel (dry) (no odor, no staining)		
5			38	50	0.0				
					0.0				
10			20-28	32	0.0				
					0.0	SP	Light brown fine SAND (moist) (no odor, no staining)		
15			42	50	0.0				
					0.0	SM	Light brown silty fine SAND with fine gravel (moist) (no odor, no staining)		
20		URS-SB-6-21	47	50	0.0				
					0.0	SP	Medium brown fine SAND with fine gravel, trace silt (very moist) (no odor, no staining)		
25			48	50	0.0				
					0.0				
30		URS-SB-6					Grading (wet)	29 ft. ▼	

ENV2.W0.WELL C:\DOCUMENTS AND SETTINGS\ANN_CAMPBELL\DESKTOP\WORK FILES\NOV 7\33763763\LOGS.GPJ_URSSEA3B.GLB_URSSEA3.GDT_11/7/12



Project: Belshaw
 Project Location: Seattle, Washington
 Project Number: 33763763

Log of Boring URS-SB-6

Sheet 2 of 2

ENV2 W/O WELL C:\DOCUMENTS AND SETTINGS\IANN_CAMPBELL\DESKTOP\WORK FILES\NOV 7\33763763\LOGS.GPJ_URSSSEA3B.GLB_URSSSEA3.GDT 11/7/12

Elevation, feet	Downhole Depth, feet	SAMPLES				Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS AND OTHER TESTS
		Type	Number	Blows/ 6in.	Recovery (%)				
30		GW	43						
		URS-SB-6-31	50						
	35		32						
			35						
			45				Grading medium brown fine SAND (wet)		
	40		37						
			50				ML Medium gray SILT with trace interbedded fine sand lenses (dry) (no odor, no staining)		
	45	URS-SB-6-46	45						
			50				SP Medium brown fine SAND with trace fine gravel (wet) (no odor, no staining)		
								Boring was completed to 46' bgs. Groundwater was encountered at 29' bgs. Boring was backfilled with Cetco medium chips.	
	50								
	55								
	60								
	65								

Project: Belshaw
 Project Location: Seattle, Washington
 Project Number: 33763763

Log of Boring URS-SB-7

Sheet 1 of 2

Date(s) Drilled	9/6/12	Logged By	AP	Checked By	
Drilling Method	Hollow Stem Auger	Drilling Contractor	Cascade	Total Depth of Borehole	46.5 feet bgs
Drill Rig Type	CME 75	Drill Bit Size/Type	8.5"	Ground Surface Elevation	
Groundwater Level (feet bgs)	29.5' bgs	Sampling Method	D&M Sampler	Hammer Data	300 lb.
Borehole Backfill	Cetco Medium Chips	Location			

ENV2 W/O WELL C:\DOCUMENTS AND SETTINGS\ANN_CAMPBELL\DESKTOP\WORK FILES\NOV 7\33763763\LOGS.GPJ_URSSSE3B.GLB_URSSSE3A3.GDT_11/7/12

Elevation, feet	Downhole Depth, feet	SAMPLES				Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS AND OTHER TESTS
		Type	Number	Blows/6in.	Recovery (%)				
0							Grass and GRAVEL (fill) SM Light brown silty fine SAND (moist) (no odor, no staining)		
5				48 50		0.0 0.0			
10				43 50		0.0 0.0	Grading light brown silty fine SAND with interbedded fine sand lenses (moist)		
15				45 50		0.0	Grading light brown silty fine SAND (moist)		
20				49 50		0.0 0.0	SP Light brown fine SAND with trace fine gravel (moist) (no odor, no staining)		
25				49 50		0.0 0.0	ML Medium gray sandy SILT with fine gravel (moist) (no odor, no staining)		
30							Grading (wet)	29.5 ft ▼	



Project: Belshaw
 Project Location: Seattle, Washington
 Project Number: 33763763

Log of Boring URS-SB-7

Sheet 2 of 2

ENV2 WIO WELL C:\DOCUMENTS AND SETTINGS\ANN_CAMPBELL\DESKTOP\WORK FILES\NOV 7\33763763\LOGS.GPJ_URSSEA3B.GLB_URSSEA3.GDT 11/17/12

Elevation, feet	Downhole Depth, feet	SAMPLES				Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS AND OTHER TESTS
		Type Number	Blows/6in.	Recovery (%)	PID/OVM (ppm)				
30		SB-7-GW URS-SB-7-31	49 50		0.0 0.0				
35			43 50		0.0 0.0		Grading light gray SILT with trace fine gravel (moist)		
40		URS-SB-7-41	36 50		0.0 0.0	SP	Medium brown fine SAND (very moist) (no odor, no staining)		
45			38 36 50		0.0 0.0 0.0	ML	Medium gray SILT with fine gravel (moist) (no odor, no staining)		
50							Boring was completed to 46.5' bgs. Groundwater was encountered at 29.5' bgs. Boring was backfilled with Cetco medium chips.		
55									
60									
65									

Project: Belshaw
 Project Location: Seattle, Washington
 Project Number: 33763763

Log of Boring URS-SB-8

Sheet 1 of 2

Date(s) Drilled	9/6/12	Logged By	AP	Checked By	
Drilling Method	Hollow Stem Auger	Drilling Contractor	Cascade	Total Depth of Borehole	46 feet bgs
Drill Rig Type	CME 75	Drill Bit Size/Type	8.5"	Ground Surface Elevation	
Groundwater Level (feet bgs)	29' bgs	Sampling Method	D&M Sampler	Hammer Data	300 lb.
Borehole Backfill	Cetco Medium Chips	Location			

Elevation, feet	Downhole Depth, feet	SAMPLES				Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS AND OTHER TESTS
		Type	Number	Blows/ 6in.	Recovery (%)				
0							Grass		
						ML/SM	Light brown sandy SILT with trace fine gravel (moist) (no odor, no staining)		
5			11 25 30		0.0 0.0 0.0				
10			36 50		0.0 0.0				
15			37 50		0.0 0.0	SP	Medium brown fine SAND with trace fine gravel (moist) (no odor, no staining)		
20		URS-SB-8-21	39 50		0.0 0.0		Grading (very moist)		
25			37 50		0.0 0.0	SM/ML	Light brown sandy SILT with trace fine gravel (dry) (no odor, no staining)		
30		URS-SB-8					Grading (wet)	29 ft. ▼	

ENZY W/O WELL C:\DOCUMENTS AND SETTINGS\ANN_CAMPBELL\DESKTOP\WORK FILES\NOV 7\33763763\LOGS.GPJ_URSSEA3B.GLB_URSSEA3.GDT_11/7/12



Project: Belshaw
 Project Location: Seattle, Washington
 Project Number: 33763763

Log of Boring URS-SB-8

Sheet 2 of 2

Elevation, feet	Downhole Depth, feet	SAMPLES				Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS AND OTHER TESTS
		Type	Number	Blows/6in.	Recovery (%)				
30		GW	URS-SB-8-31	18 50		0.0 0.0			
35				31 50		0.0 0.0			
40			URS-SB-8-41.5	18 26 32		0.0 0.0 0.0	SP	Medium brown fine SAND with coarse gravel (wet)	
45				39 50		0.0 0.0	MH	Light brown SILT with clay (dry)	
50								Boring was completed to 46' bgs. Groundwater was encountered at 29' bgs. Boring was backfilled with Cetco medium chips.	
55									
60									
65									

ENV2 W/O WELL C:\DOCUMENTS AND SETTINGS\ANN_CAMPBELL\DESKTOP\WORK FILES\NOV 7\33763763\LOGS.GPJ_URSSA3B.GLB_URSSA3.GDT 11/7/12



Project: Belshaw
 Project Location: Seattle, Washington
 Project Number: 33763763

Log of Boring URS-SB-9

Sheet 1 of 2

Date(s) Drilled	9/6/12	Logged By	AP	Checked By	
Drilling Method	Hollow Stem Auger	Drilling Contractor	Cascade	Total Depth of Borehole	46 feet bgs
Drill Rig Type	CME 75	Drill Bit Size/Type	8.5"	Ground Surface Elevation	
Groundwater Level (feet bgs)	24.5' bgs	Sampling Method	D&M Sampler	Hammer Data	300 lb.
Borehole Backfill	Cetco Medium Chips	Location			

ENV2 WIO WELL C:\DOCUMENTS AND SETTINGS\ANN_CAMPBELL\DESKTOP\WORK FILES\NOV 7\33763763\LOGS.GPJ_URSSEA3B.GLB_URSSEA3.GDT_11/7/12

Elevation, feet	Downhole Depth, feet	SAMPLES				Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS AND OTHER TESTS
		Type	Number	Blows/6in.	Recovery (%)				
0							Grass		
						ML	Light brown/light gray silty CLAY with trace fine sand (moist) (no odor, no staining)		
	5			16 23 28	0.0 0.0 0.0				
	10			7 8 9	0.0 0.0 0.0		Grading interbedded fine sand lenses (moist)		
	15			12 18 25	0.0 0.0 0.0	SP	Light brown fine SAND (moist)		
	20			48 50	0.0 0.0	ML	Light brown SILT with trace fine gravel (dry) (no odor, no staining)		
	25			46 50	0.0 0.0	SP	Grading (wet) Medium brown fine to coarse SAND with fine gravel, trace silt (wet) (no odor, no staining)	24.5 ft	
	30								

Project: Belshaw
 Project Location: Seattle, Washington
 Project Number: 33763763

Log of Boring URS-SB-9

Sheet 2 of 2

ENV2 W/O WELL C:\DOCUMENTS AND SETTINGS\ANN_CAMPBELL\DESKTOP\WORK FILES\NOV 7\33763763\LOGS.GPJ_URSSEA3B.GLB_URSSEA3.GDT_11/17/12

Elevation, feet	Downhole Depth, feet	SAMPLES				Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS AND OTHER TESTS
		Type	Number	Blows/ 6in.	Recovery (%)				
30				44 50		0.0 0.0		ML/SM	Medium brown silty fine to coarse SAND with coarse gravel (wet0 (no odor, no staining)
35		URS-SB-9-36		42 50		0.0 0.0			
40		URS-SB-9-42		45 50		0.0 0.0			
45				48 50		0.0 0.0			Grading light brown SILT (dry)
									Boring was completed to 48' bgs. Groundwater was encountered at 24.5' bgs. Boring was backfilled with Cetco medium chips.
50									
55									
60									
65									

APPENDIX B

Summary of Historical Well Screening and Groundwater Elevations

Table 6
Water Level Measurements and Water Quality Parameter Summary
Penthouse Drapery and Belshaw Site
Seattle, Washington
Pacific Crest No: 105-003

Location ID	Sampled By	Date Gauged	Sample Date	CMT Well Port	Top of Casing Elevation ¹	Screen Interval ²	Depth to Groundwater ³	Potentiometric Surface (feet)	Pump Intake Depth ²	Groundwater Quality Parameters					Comments				
										Temperature (°C)	Specific Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	pH	Oxidation Reduction Potential (mV)					
MW-1	URS	6/13/2002	6/10/2002	NA	70.21	15-25	17.89	52.52	23	15	1.6	3.8	6.8	NM					
	URS	3/6/2003	3/6/2003				18.31	51.90	21	13.5	0.529	2.24	6.14	NM					
	URS	5/6/2005	5/2/2005				18.46	51.75	21	14.17	0.359	4.74	6.19	NM					
	URS	5/27/2008	5/27/2008				17.64	52.57	21.5	14.85	0.791	4.64	5.53	373					
	URS	4/17/2009	4/9/2009				17.29	52.92	20	13	0.374	4.31	6.35	195					
	URS	7/23/2012	7/25/2012				--	--	--	--	--	--	--	--	--				
MW-2	URS	6/13/2002	6/10/2002	NA	69.17	6-21	13.87	55.3	20	16	0.43	2.8	6.8	NM					
	URS	3/6/2003	3/7/2003				14.09	55.08	17	13.5	0.338	0	5.31	NM					
	URS	1/14/2005	2/9/2005				16.32	52.85	19	15	0.284	1.91	5.04	NM					
	URS	5/6/2005	5/3/2005				13.88	55.29	18	15.97	0.155	0.56	5.91	NM					
	URS	5/27/2008	5/30/2008				14.19	54.98	18	15.51	0.674	0	5.34	110					
	URS	4/17/2009	4/9/2009				12.78	56.39	15	13.7	0.958	1.02	5.29	270					
	Pacific Crest	7/23/2012	8/7/2012				14.07	55.1	NM	NM	NM	NM	NM	NM	NM				
MW-3	URS	6/13/2002	6/10/2002	NA	71.7	20-30	15.87	55.83	25	15	0.72	2.8	6.9	NM					
	URS	3/6/2003	3/6/2003				16.33	55.37	22	13.7	0.652	0	6.43	NM					
	URS	5/28/2004	5/21/2004				18.3	53.4	22	15.72	0.64	0	6.56	NM					
	URS	8/8/2004	8/7/2004				19.7	52	28	16.2	0.592	1.65	7.67	NM					
	URS	11/10/2004	11/10/2004				20.26	51.44	22	13.44	0.709	5.39	7.15	41					
	URS	1/14/2005	2/9/2005				18.88	52.82	22	12.4	0.681	1.17	6.01	NM					
	URS	5/6/2005	5/3/2005				16.16	55.54	22	16.32	0.655	0.99	7.53	NM					
	URS	9/15/2005	9/1/2005				21.03	50.67	22	--	--	--	--	--					
	URS	2/7/2007	2/7/2007				14.55	57.15	22	--	--	--	--	--					
	URS	5/27/2008	5/27/2008				15.57	56.13	23	15.68	0.999	0.2	6.4	337					
	URS	4/17/2009	4/9/2009				14.81	56.89	27	15.5	0.9	0.13	6.88	196					
	URS	7/23/2012	7/23/2012				15.14	56.56	NM	NM	NM	NM	NM	NM	NM				
	MW-4	URS	6/13/2002				6/10/2002	NA	73.24	20-35	20.68	52.56	30	15	0.017	2	7.4	NM	
URS		3/6/2003	3/6/2003	21.29	51.95	24	14.2				0.65	0	6.47	NM					
URS		5/28/2004	5/21/2004	25.45	47.79	25	15.75				0.687	0	6.38	-143					
URS		8/8/2004	8/7/2004	24.6	48.64	27	15.4				0.452	0.92	7.94	NM					
URS		11/10/2004	11/10/2004	26.04	47.2	27	13.4				0.443	6.55	7.4	2					
URS		1/14/2005	2/9/2005	25.3	47.94	27	15				0.39	2.65	6.81	NM					
URS		5/6/2005	5/3/2005	21.27	51.97	27	15.9				0.602	2.48	7.17	NM					
URS		9/15/2005	9/1/2005	24.68	48.56	27	--				--	--	--	--					
URS		10/12/2006	10/12/2006	22.11	51.13	27	--				--	--	--	--					
URS		5/24/2007	5/24/2007	20.58	52.66	27	--				--	--	--	--					
URS		5/27/2008	5/30/2008	20.62	52.62	27.5	14.4				0.999	0	6.6	220					
URS		4/17/2009	4/9/2009	19.71	53.53	30	15.2				0.999	0	5.82	206					
URS		7/23/2012	NS	NA	NA	NA	NA				NA	NA	NA	NA	NA	NA	Damaged.		
MW-5		URS	6/13/2002	NS	NA	77.74	10-20				Dry	NA	NA	NA	NA	NA	NA	NA	Decommissioned
		URS	6/18/2002	NS							Dry	NA	NA	NA	NA	NA	NA	NA	NA
MW-6	URS	6/13/2002	NS	NA	77.61	10-20	Dry	NA	NA	NA	NA	NA	NA	NA	Decommissioned				
	URS	6/18/2002	NS				Dry	NA	NA	NA	NA	NA	NA	NA	NA	7/10/02			
MW-7	URS	6/13/2002	6/21/2002	NA	68.29	17-32	25	43.29	20	15.9	813	0.49	7.11	NM					
	URS	3/6/2003	3/6/2003				16.46	51.83	21	13.4	0.48	0.42	6.82	NM					
	URS	5/6/2005	5/3/2005				16.78	51.51	21	13.64	0.256	0.99	6.69	NM					
	URS	5/27/2008	5/27/2008				15.1	53.19	24.5	15.66	0.933	1.2	6.5	352					
	URS	4/17/2009	4/9/2009				15.93	52.36	24.5	14.1	0.447	2.37	6.13	186					
	URS	7/23/2012	NS				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Not located.		

Table 6
Water Level Measurements and Water Quality Parameter Summary
Penthouse Drapery and Belshaw Site
Seattle, Washington
Pacific Crest No: 105-003

Location ID	Sampled By	Date Gauged	Sample Date	CMT Well Port	Top of Casing Elevation ¹	Screen Interval ²	Depth to Groundwater ³	Potentiometric Surface (feet)	Pump Intake Depth ³	Groundwater Quality Parameters					Comments
										Temperature (°C)	Specific Conductivity (nS/cm)	Dissolved Oxygen (mg/L)	pH	Oxidation Reduction Potential (mV)	
MW-8	URS	3/6/2003	3/7/2003	NA	70.68	13-23	15.56	55.12	20	13.1	0.812	4.77	6.42	NM	
	URS	5/6/2005	5/4/2005				16.19	54.49	20	13.52	0.517	4.88	6.58	NM	
	URS	5/27/2008	5/29/2008				15.99	54.69	19.5	13.85	0.999	2.19	6.03	350	
	URS	4/17/2009	4/13/2009				15.2	55.48	20	11.7	53.2	7.07	6.06	258	
	Pacific Crest	10/7/2010	8/19/2010				17.28	53.4	22	14.75	0.507	2.11	6.46	325.2	
	Pacific Crest	7/23/2012	8/7/2012				15.48	55.20	NM	NM	NM	NM	NM	NM	
MW-9	URS	3/6/2003	3/6/2003	NA	68.7	15-25	16.64	52.06	20	13.1	0.423	1.78	5.81	NM	
	URS	5/6/2005	5/2/2005				16.63	52.07	20	13.9	0.38	1.53	5.96	NM	
	URS	5/27/2008	5/27/2008				15.3	53.4	20.5	16.38	0.916	0	5.53	345	
	URS	4/17/2009	4/9/2009				15.86	52.84	20	12.8	0.9	0	5.32	181	
	Pacific Crest	7/23/2012	NS				15.63	53.07	NM	NM	NM	NM	NM	NM	
	MW-10	URS	3/6/2003				3/6/2003	NA	72.29	18-28	18.83	53.46	21	13.8	0.537
URS		5/27/2008	5/28/2008	18.63	53.66	23.5	15.34				0.661	6.36	5.65	394	
URS		4/17/2009	4/9/2009	18.35	53.94	25	15.3				0.814	6.68	5.55	244	
Pacific Crest		7/23/2012	NS	17.75	54.54	NM	NM				NM	NM	NM	NM	
MW-11		URS	3/6/2003	3/6/2003	NA	78.42	5-10				7.25	65.04	8.5	12.3	0.831
	URS	5/3/2005	5/3/2005	7.2				71.22	8.5	13.24	0.695	0.49	6.79	NM	
	URS	4/17/2009	4/10/2009	5.51				72.91	8	10.1	0.681	0	6.43	-3	
	URS	7/23/2012	NS	7.5				70.92	NM	NM	NM	NM	NM	NM	
	MW-12	URS	3/6/2003	3/7/2003				NA	NA	20-30	9.85	--	20	13.8	0.208
URS		5/2/2005	5/2/2005	NA	NA	22	15				0.306	0.45	7.18	NM	
URS		7/23/2012	NS	14.49	--	NM	NM				NM	NM	NM	NM	
MW-13	URS	3/6/2003	3/6/2003	NA	74.27	20-30	22.48	51.79	25	14.1	1.28	0	8.95	NM	
	URS	8/6/2004	8/7/2004				23.85	50.42	26	15.3	0.911	1.37	7.58	NM	
	URS	11/10/2004	11/10/2004				25.54	48.73	25	13.93	0.007	5.56	6.48	140	
	URS	1/14/2005	2/9/2005				23.86	50.41	25	15.1	0.299	6.7	7.59	NM	
	URS	5/6/2005	5/3/2005				22.5	51.77	25	15.24	0.303	6.22	6.97	NM	
	URS	5/27/2008	5/27/2008				21.68	52.59	25.5	15.93	0.522	8.45	5.88	392	
	URS	4/17/2009	4/9/2009				21.36	52.91	25	14.8	0.222	10.04	6.67	146	
	Pacific Crest	7/23/2012	NS				20.82	53.45	NM	NM	NM	NM	NM	NM	
	MW-14	URS	6/11/2003				6/11/2003	NA	69.98	22-32	16.9	53.08	22	15.3	123.1
URS		10/21/2003	10/21/2003	17.81	52.17	25	15.9				0.354	3.02	6.69	179	
URS		5/6/2005	5/4/2005	16.04	53.94	24	14.86				0.286	4.85	6.75	NM	
URS		5/27/2008	5/29/2008	15.64	54.34	27	14.3				0.659	3.77	5.92	299	
URS		4/17/2009	4/10/2009	14.72	55.26	27	15.6				0.944	0.47	6.54**	-175	
Pacific Crest		10/7/2010	10/7/2010	16.39	53.59	30	16.45				0.347	4.52	6.38	182.1	
URS		7/23/2012	8/7/2012	14.75	55.23	NM	NM				NM	NM	NM	NM	
MW-15	URS	6/11/2003	6/11/2003	NA	76.38	10-20	16.03	53.95	--	--	--	--	--	--	
	URS	--	5/2/2005				14.75	61.63	17.5	16.62	0.392	0.61	6.84	NM	
	URS	4/17/2009	4/10/2009				12.87	63.51	16.5	11.4	0.551	0	6.38	168	
	Pacific Crest	4/17/2009	4/10/2009				16.89	59.49	NM	NM	NM	NM	NM	NM	
	URS	7/23/2012	NS				17.2	54.77	22	16.34	0.656	0.75	6.67	NM	
MW-16	URS	--	5/2/2005	NA	71.97	20-30	15.78	56.19	25	14.7	0.738	0	6.65	94	
	URS	4/17/2009	4/9/2009				15.24	56.73	NM	NM	NM	NM	NM	NM	
	URS	7/23/2012	NS												

Table 6
Water Level Measurements and Water Quality Parameter Summary
Penthouse Drapery and Belshaw Site
Seattle, Washington
Pacific Crest No: 105-003

Location ID	Sampled By	Date Gauged	Sample Date	CMT Well Port	Top of Casing Elevation ¹	Screen Interval ²	Depth to Groundwater ²	Potentiometric Surface (feet)	Pump Intake Depth ²	Groundwater Quality Parameters					Comments
										Temperature (°C)	Specific Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	pH	Oxidation Reduction Potential (mV)	
MWV-17	URS	10/21/2003	10/21/2003	NA	69.71	20-30	17.61	52.1	25	15.1	0.792	5.89	7.21	177	
	URS		10/29/2003						21	13.5	0.44	3.56	6.43	149	
	URS		10/29/2003						25	13.2	0.453	3.14	6.45	166	
	URS		10/29/2003						29	13.1	0.92	3.18	6.99	162	
	URS		8/6/2004						8/6/2004	17.6	52.11	29.5	--	--	--
	URS	5/6/2005	5/4/2005				15.62	54.09	22	14.06	0.301	5.17	6.56	NM	
	URS	5/27/2008	5/29/2008				15.22	54.49	25	13.28	0.974	4.29	5.97	333	
	URS	4/17/2009	4/10/2009				14.4	55.31	25	13.7	0.9	7.46	8.85**	189	
	Pacific Crest	10/7/2010	8/18/2010				16.25	53.46	25	16.92	0.34	5.82	6.21	304.2	
	Pacific Crest	7/23/2014	NS				NA	NA	NA	NA	NA	NA	NA	NA	Destroyed.
MWV-18	URS	5/6/2005	5/5/2005	(Port #1)	69.91	14-17	14.45	55.46	16.3	--	--	--	--	--	
	URS	5/27/2008	5/29/2008				14.32	55.59	15.5	13.87	0.835	8.58	5.44	378	
	URS	4/17/2009	4/13/2009				12.58	57.33	14.5	11.3	0.346	6.17	6.2	172	
	Pacific Crest	NM	10/5/2010				NM	NM	16.5	NM	NM	NM	NM	NM	
	Pacific Crest	7/24/2012	7/24/2012				13.93	55.98	16.5	23.74	0.408	7.68	6.34	107.7	
	URS	5/6/2005	5/5/2005				15.4	54.51	23.3	14.68	0.509	2.15	6.61	NM	
	URS	5/27/2008	5/29/2008				14.93	54.98	23.5	13.99	0.784	2.2	5.7	195	
	URS	4/17/2009	4/13/2009				14.03	55.88	23.5	12.6	0.345	2.99	6.38	152	
	Pacific Crest	NM	10/5/2010				NM	NM	24	15.79	0.400	3.27	6.32	107.1	
	Pacific Crest	NM	7/24/2012				NM	NM	23.5	15.45	0.415	3.9	4.27	14.5	
MWV-19	URS	5/6/2005	5/5/2005	(Port #3)	69.91	30-40	15.9	54.01	31.8	14.77	0.489	1.5	7.08	NM	
	URS	5/27/2008	5/29/2008				15.34	54.57	32	13.83	0.778	1.15	5.85	218	
	URS	4/17/2009	4/13/2009				14.71	55.2	33.5	12.9	0.365	0	6.55	146	
	Pacific Crest	NM	10/5/2010				NM	NM	35	14.99	0.402	2.40	6.34	198.7	
	Pacific Crest	NM	7/24/2012				NM	NM	35	15.59	0.405	2.66	5.41	21.1	
	URS	5/6/2005	5/5/2005				15.55	54.9	16.6	13.95	2.94	1.69	6.69	NM	
	URS	5/27/2008	5/28/2008				15.15	55.3	17	13.82	0.999	0.09	6.69	339	
	URS	4/17/2009	4/13/2009				14.59	55.86	16.5	11	0.668	1.01	6.91	189	
	Pacific Crest	NM	10/5/2010				NM	NM	15	NM	NM	NM	NM	NM	
	Pacific Crest	NM	7/25/2012				NM	NM	16	14.37	0.486	2.73	5.23	123.6	
MWV-19	URS	5/6/2005	5/5/2005	(Port #2)	70.45	22-26	15.75	54.7	23.5	15.23	1.23	0.84	7.75	NM	
	URS	5/27/2008	5/28/2008				15.57	54.88	24	13.89	0.999	0	6.38	341	
	URS	4/17/2009	4/13/2009				17.48	52.97	24	12.5	0.478	0	6.58	33	
	Pacific Crest	NM	10/5/2010				NM	NM	23	15.15	0.459	2.37	6.47	-20.8	
	Pacific Crest	NM	7/25/2012				NM	NM	24	15.68	0.424	1.72	5.61	22.1	
	URS	5/6/2005	5/5/2005				15.85	54.6	39.1	15.83	0.465	1	7.63	NM	
	URS	5/27/2008	5/28/2008				15.61	54.84	39.5	15.02	0.804	1.18	6.44	308	
	Pacific Crest	4/17/2009	4/13/2009				14.92	55.53	39.5	13.1	0.358	0	6.69	96	
	URS	4/17/2009	4/13/2009				NM	NM	40	14.68	0.381	1.58	6.54	122.2	
	Pacific Crest	NM	10/5/2010				NM	NM	39.5	15.35	0.352	1.94	4.91	93.1	

Table 6
 Water Level Measurements and Water Quality Parameter Summary
 Penthouse Drapery and Belshaw Site
 Seattle, Washington
 Pacific Crest No: 105-003

Location ID	Sampled By	Date Gauged	Sample Date	CMT Well Port	Top of Casing Elevation ¹	Screen Interval ²	Depth to Groundwater ²	Potentiometric Surface (feet)	Pump Intake Depth ²	Groundwater Quality Parameters					Comments
										Temperature (°C)	Specific Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	pH	Oxidation Reduction Potential (mV)	
MW-20	URS	5/6/2006	5/6/2005	(Port #1)	71.16	27.5-31	15.84	55.32	29	16.15	0.461	2.55	7.06	NM	
	URS	5/27/2008	5/30/2008				15.25	55.91	29.5	15.88	0.772	0	6.02	195	
	URS	4/17/2009	4/9/2009				14.64	56.52	30	14.1	0.394	0	6.59	-41	
	Pacific Crest	NM	7/25/2012				NM	NM	28.5	16.86	0.245	1.17	5.21	-43.2	
	URS	5/6/2006	5/6/2005	(Port #2)	71.16	36-38	16.5	54.66	36.7	17.37	0.99	1.11	8.78	NM	
	URS	5/27/2008	5/30/2008				16	55.16	37	16.43	0.999	0	6.79	-15	
	Pacific Crest	4/17/2009	4/10/2009				15.63	55.53	37	13.5	0.9	0	9.52**	-150	
	URS	4/17/2009	4/10/2009				NM	NM	37	18	0.406	0.41	7.22	16	
	URS	5/6/2006	5/6/2005	(Port #3)	71.16	14-17	14.65	56.51	16.6	--	--	--	--	--	
	URS	5/27/2008	5/30/2008				14.33	56.83	15.5	15.47	0.814	2.63	6.25	182	
	URS	4/17/2009	4/10/2009				13.66	57.5	15.5	12.9	0.999	10.71	9.1**	140	
	Pacific Crest	NM	7/25/2012				NM	NM	15.5	18.1	0.298	7.2	6.75	212	
	URS	5/27/2008	5/31/2008	(Port #5)	71.16	23.5-24.5	15.06	56.1	24	16.52	0.999	0	8.88	-25	
	URS	4/17/2009	4/10/2009				14.5	56.66	24	13.6	0.999	1.7	10.6**	-180	
	Pacific Crest	NM	7/25/2012				NM	NM	24	18.4	0.62	3.45	7.71	-81	
MW-21S	URS	5/6/2006	5/5/2005	NA	71.26	14.5-29.5	15.72	55.54	37	14.68	0.463	2.83	6.16	NM	
	URS	5/27/2008	5/30/2008				15.37	55.89	23	14.52	0.917	1.92	5.33	395	
	URS	4/17/2009	4/10/2009				15.04	56.22	25	13.7	0.411	2.58	6.16	187	
	Pacific Crest	10/7/2010	8/18/2010				16.12	55.14	25	16.43	0.441	3.82	5.86	338.6	
	Pacific Crest	7/23/2012	8/7/2012				14.55	56.71	NM	NM	NM	NM	NM	NM	
MW-21D	URS	5/6/2006	5/5/2005	NA	71.12	35-40	16.01	55.11	23	15.16	0.732	0.55	6.98	NM	
	URS	5/27/2008	5/30/2008				15.72	55.4	37.5	14.69	0.999	0	5.65	390	
	URS	4/17/2009	4/10/2009				15.26	55.86	37.5	14.2	0.452	0	6.46	162	
	Pacific Crest	10/7/2010	8/18/2010				16.39	54.73	25	16.44	0.37	2.43	6.32	327.2	
	Pacific Crest	7/23/2012	8/7/2012				14.87	56.25	NM	NM	NM	NM	NM	NM	
MW-22	URS	5/6/2006	5/4/2005	NA	71.33	25-35	11.92	59.41	27	14.68	0.826	1	8.14	NM	
	URS	5/27/2008	5/30/2008				12.31	59.02	30	15.45	0.845	0	6.38	368	
	URS	4/17/2009	4/10/2009				11.82	59.51	30	15.1	0.9	0	9.04**	99	
	Pacific Crest	10/7/2010	8/18/2010				13.02	58.31	25	17.6	0.314	0.51	6.84	303.5	
	Pacific Crest	7/23/2012	8/7/2012				11.81	59.52	NM	NM	NM	NM	NM	NM	
MW-23	URS	5/6/2006	5/4/2005	NA	70.47	16-31	10.02	60.45	18	16.59	0.99	4.04	7.49	NM	
	URS	5/27/2008	5/28/2008				10.42	60.05	23	15.76	0.999	0	5.93	332	
	URS	4/17/2009	4/16/2009				9.96	60.51	23.5	14.4	0.472	0	6.32	173	
	Pacific Crest	7/23/2012	NS				10.31	60.16	NM	NM	NM	NM	NM	NM	
MW-24S	URS	4/17/2009	4/15/2009	NA	69.3	15-20	14.15	55.15	18	13.7	0.098	7.36	6.07	189	
	Pacific Crest	10/7/2010	10/7/2010				15.44	53.86	19	16.79	0.383	1.47	5.89	124.2	
	Pacific Crest	7/23/2012	8/7/2012				14.61	54.69	NM	NM	NM	NM	NM	NM	
MW-24D	URS	4/17/2009	4/15/2009	NA	69.31	44-49	14.35	54.96	46	14.5	63	2.04	6.96	-205	
	Pacific Crest	10/7/2010	10/7/2010				15.62	53.69	47	15.75	0.670	0.55	7.08	-109.9	
	Pacific Crest	7/23/2012	8/7/2012				14.61	54.7	NM	NM	NM	NM	NM	NM	
MW-25S	URS	4/17/2009	4/15/2009	NA	69.02	13-18	13.99	55.43	15.5	12.8	0.691	8.16	6.44	114	
	Pacific Crest	10/7/2010	10/6/2010				15.14	53.88	17.5	15.47	0.608	3.77	6.19	294.6	
	Pacific Crest	7/23/2012	8/7/2012				14.26	54.76	NM	NM	NM	NM	NM	NM	
MW-25I	URS	4/17/2009	4/15/2009	NA	68.85	29-34	13.55	55.3	31.5	13.8	0.493	8.08	6.65	8	
	Pacific Crest	10/7/2010	10/6/2010				15.08	53.77	33	15.72	0.385	3.32	6.13	300.7	
	Pacific Crest	7/23/2012	8/7/2012				14.09	54.76	NM	NM	NM	NM	NM	NM	
MW-25D	URS	4/17/2009	4/15/2009	NA	69.03	44-49	14.13	54.9	48.5	13.9	0.726	1.89	7.29	-130	
	Pacific Crest	10/7/2010	10/6/2010				15.45	53.58	47	14.77	0.456	2.32	6.48	264.3	
	Pacific Crest	7/23/2012	8/7/2012				14.41	54.62	NM	NM	NM	NM	NM	NM	

Table 6
Water Level Measurements and Water Quality Parameter Summary
Penthouse Drapery and Beishaw Site
Seattle, Washington
Pacific Crest No: 105-003

Location ID	Sampled By	Date Gauged	Sample Date	CMT Well Port	Top of Casing Elevation ¹	Screen Interval ²	Depth to Groundwater ³	Potentiometric Surface (feet)	Pump Intake Depth ²	Groundwater Quality Parameters					Comments
										Temperature (°C)	Specific Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	pH	Oxidation Reduction Potential (mV)	
MW-26S	URS	4/17/2009	4/16/2009	NA	72.4	15-20	17.79	54.61	19.5	12.5	1.32	8.52	7.29	84	
	Pacific Crest	10/7/2010	8/18/2010				19.23	53.17	19.5	18.14	0.331	6.92	6.18	314	
	Pacific Crest	7/23/2012	8/7/2012				17.74	54.66	NM	NM	NM	NM	NM	NM	
MW-26I	URS	4/17/2009	4/16/2009	NA	72.32	34-39	17.8	54.52	36.5	13.3	51	5.82	6.49	167	
	Pacific Crest	10/7/2010	8/18/2010				19.28	53.04	25	15.66	0.348	2.16	6.84	297.4	
	Pacific Crest	7/23/2012	8/7/2012				17.73	54.59	NM	NM	NM	NM	NM	NM	
MW-26D	URS	4/17/2009	4/16/2009	NA	72.23	54-57	18.45	53.78	55.5	15.2	0.536	0.4	7.31	-132	
	Pacific Crest	10/7/2010	8/18/2010				19.58	52.65	30	14.89	0.282	5.85	6.56	306.2	
	Pacific Crest	7/23/2012	8/7/2012				18.22	54.01	NM	NM	NM	NM	NM	NM	
MW-27S	URS	4/17/2009	4/16/2009	NA	69.4	15.5-20.5	12.17	57.23	18	12.1	0.096	10.44	6.49	162	
	Pacific Crest	10/7/2010	8/19/2010				15.52	53.88	19	14.45	0.212	5.25	5.9	337	
	Pacific Crest	7/23/2012	8/7/2012				13.58	55.82	NM	NM	NM	NM	NM	NM	
MW-27I	URS	4/17/2009	4/16/2009	NA	69.46	31-36	12.68	56.78	34	13.3	38.9	9.86	6.17	213	
	Pacific Crest	10/7/2010	8/19/2010				15.73	53.73	28	15.12	0.195	6.28	5.94	342	
	Pacific Crest	7/23/2012	8/7/2012				13.84	55.62	NM	NM	NM	NM	NM	NM	
MW-27D	URS	4/17/2009	4/16/2009	NA	69.23	43-48	35.78	33.45	46	--	--	--	--	--	Bailed dry
	Pacific Crest	10/7/2010	8/19/2010				16.44	52.79	45	14.94	0.348	2.53	7.15	319.2	
	Pacific Crest	7/23/2012	8/7/2012				14.58	54.65	NM	NM	NM	NM	NM	NM	
MW-28S	URS	4/17/2009	4/15/2009	NA	70.01	18-23	15.6	54.41	21	12.6	0.118	7.38	7.01	204	
	Pacific Crest	7/23/2012	8/7/2012				16.83	53.18	NM	NM	NM	NM	NM	NM	
MW-28I	URS	4/17/2009	4/15/2009	NA	69.87	33-38	15.56	54.31	36	13.7	53.3	2.27	6.4	150	
	Pacific Crest	7/23/2012	8/7/2012				15.47	54.4	NM	NM	NM	NM	NM	NM	
MW-28D	URS	4/17/2009	4/15/2009	NA	69.57	54-59	17.15	52.42	57	13.9	69.1	1.7	6.62	-171	
	Pacific Crest	7/23/2012	8/7/2012				17.77	51.8	NM	NM	NM	NM	NM	NM	
MW-29	URS	4/17/2009	4/15/2009	NA	70.11	33-38	14.9	55.21	36	14.6	54.1	3.93	6.63	-44	
	Pacific Crest	10/7/2010	10/7/2010				16.45	53.66	37	15.83	0.459	0.59	6.44	185.5	
	Pacific Crest	7/23/2012	8/7/2012				14.93	55.18	NM	NM	NM	NM	NM	NM	
MW-30S	Pacific Crest	10/7/2010	10/6/2010	NA	69.73	19-24	15.38	54.35	23	18.01	1.243	2.48	6.74	120.2	
	Pacific Crest	7/23/2012	8/7/2012				15	54.73	NM	NM	NM	NM	NM	NM	
MW-30I	Pacific Crest	10/7/2010	10/4/2010	NA	69.68	40-45	15.54	54.14	43	15.96	0.913	1.38	7.00	-86.0	
	Pacific Crest	7/23/2012	8/7/2012				15.1	54.56	NM	NM	NM	NM	NM	NM	
MW-30D	Pacific Crest	10/7/2010	10/6/2010	NA	69.54	65-70	17.74	51.8	68	16.53	0.954	0.6	7.35	-162.0	
	Pacific Crest	7/23/2012	8/7/2012				16.82	52.72	NM	NM	NM	NM	NM	NM	
MW-31S	Pacific Crest	10/7/2010	10/6/2010	NA	70.01	15-20	16.14	53.87	19	15.98	1.328	7.79	6.96	248.4	
	Pacific Crest	7/23/2012	8/7/2012				14.54	55.47	NM	NM	NM	NM	NM	NM	
MW-31I	Pacific Crest	10/7/2010	10/6/2010	NA	69.98	35-40	16.40	53.58	39	15.26	0.549	1.62	6.85	239	
	Pacific Crest	7/23/2012	8/7/2012				14.80	55.18	NM	NM	NM	NM	NM	NM	
MW-31D	Pacific Crest	10/7/2010	10/5/2010	NA	69.97	66-71	18.27	51.70	60	14.71	0.521	0.62	7.91	-99.7	
	Pacific Crest	7/23/2012	8/7/2012				17.28	52.89	NM	NM	NM	NM	NM	NM	
MW-32S	Pacific Crest	10/7/2010	10/4/2010	NA	70.01	20-25	16.61	53.40	20	14.62	1.372	6.62	6.82	223.8	
	Pacific Crest	7/23/2012	8/7/2012				14.57	55.44	NM	NM	NM	NM	NM	NM	
MW-32I	Pacific Crest	10/7/2010	10/4/2010	NA	70.09	38-43	16.78	53.31	40	14.83	0.474	8.15	6.92	163.9	
	Pacific Crest	7/23/2012	8/7/2012				15.02	55.07	NM	NM	NM	NM	NM	NM	
MW-32D	Pacific Crest	10/7/2010	10/4/2010	NA	69.8	66-71	18.05	51.75	50	14.57	0.552	0.56	6.91	-157.5	
	Pacific Crest	7/23/2012	8/7/2012				17.15	52.65	NM	NM	NM	NM	NM	NM	

Table 6
 Water Level Measurements and Water Quality Parameter Summary
 Penthouse Drapery and Belshaw Site
 Seattle, Washington
 Pacific Crest No: 105-003

Location ID	Sampled By	Date Gauged	Sample Date	CMT Well Port	Top of Casing Elevation ¹	Screen Interval ²	Depth to Groundwater ²	Potentiometric Surface (feet)	Pump Intake Depth ²	Groundwater Quality Parameters					Comments		
										Temperature (°C)	Specific Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	pH	Oxidation Reduction Potential (mV)			
DPE-1	URS	6/11/2003	6/11/2003	NA	71.41	13-23	17.25	54.16	20	16.1	0.165	3.8	6.82	NM			
	URS	5/28/2004	5/21/2004				17.2	54.21	20	14.5	0.339	7.33	5.63	172			
	URS	8/6/2004	8/6/2004				19.9	51.51	22	17	0.298	4.34	6.71	NM			
	URS	11/10/2004	11/10/2004				20.56	50.85	22	14.24	0.273	7	6.01	201			
	URS	1/14/2005	2/9/2005				18.15	53.26	20	14.3	0.248	7.03	7.03	NM			
	URS	5/6/2005	5/4/2005				17.46	53.95	20	13.83	0.298	6.52	6.27	NM			
	URS	11/30/2005	12/2/2005				20.43	50.98	20	--	--	--	--	--			
	URS	5/27/2008	5/29/2008				17.09	54.32	20	13.8	0.636	6.15	5.66	346			
	URS	4/17/2009	4/13/2009				16.3	55.11	20	12.2	26.2	6.76	5.82	272			
	URS	7/23/2012	7/24/2012				--	--	--	--	--	--	--	--			
DPE-2	URS	1/14/2005	2/9/2005	NA	74.03	17-32	--	--	25	14.2	0.575	0.54	8.12	NM			
	URS	5/6/2005	5/3/2005				--	--	27	15.76	0.771	0.47	8.48	NM			
	URS	8/19/2005	9/1/2005				--	--	27	--	--	--	--	--			
	URS	11/30/2005	12/2/2005				--	--	27	--	--	--	--	--			
	URS	6/6/2006	6/6/2006				21.83	52.2	27	--	--	--	--	--			
	URS	10/12/2006	10/12/2006				22.7	51.33	27	--	--	--	--	--			
	URS	2/7/2007	2/7/2007				20.91	53.12	27	--	--	--	--	--			
	URS	5/24/2007	5/24/2007				21.33	52.7	27	--	--	--	--	--			
	URS	8/10/2007	8/10/2007				22.02	52.01	27	--	--	--	--	--			
	URS	12/27/2007	12/27/2007				21.82	52.21	24.99	--	--	--	--	--			
	URS	3/27/2008	3/27/2008				21.61	52.42	25	12.32	0.728	0.3	6.43	-121			
	URS	5/27/2008	5/30/2008				21.4	52.63	26.5	14.55	0.999	0	6.42	-104			
	URS	4/17/2009	4/13/2009				21.17	52.66	28	13.4	44.5	1.7	6.17	-51			
	URS	7/23/2012	7/24/2012				--	--	--	--	--	--	--	--			
	DPE-3	URS	6/11/2003				6/11/2003	NA	72.7	20-35	20.9	51.8	25	18.6	0.284	1.78	7.37
URS		8/6/2004	8/6/2004	--	--	25	16				0.613	0.35	7.81	NM			
URS		11/10/2004	11/10/2004	--	--	25	13.35				0.624	5.47	7.03	21			
URS		1/14/2005	2/9/2005	--	--	25	15.2				0.601	0.36	8.55	NM			
URS		5/6/2005	5/3/2005	--	--	25	16.11				0.781	0.42	8.48	NM			
URS		8/19/2005	9/1/2005	--	--	25	--				--	--	--	--			
URS		11/30/2005	12/2/2005	--	--	25	--				--	--	--	--			
URS		6/6/2006	6/6/2006	19.92	52.78	25	--				--	--	--	--			
URS		10/12/2006	10/12/2006	20.75	51.95	25	--				--	--	--	--			
URS		2/7/2007	2/7/2007	18.6	54.1	25	--				--	--	--	--			
URS		5/24/2007	5/24/2007	19.19	53.51	25	--				--	--	--	--			
URS		8/10/2007	8/10/2007	19.9	52.8	25	--				--	--	--	--			
URS		12/27/2007	12/21/2007	19.65	53.05	22.83	--				--	--	--	--			
URS		3/27/2008	3/27/2008	19.39	53.31	25	12.6				1.07	0.32	6.74	-104			
URS		5/27/2008	5/30/2008	19.37	53.33	27.5	15.35				1.1	0	6.9	-129			
URS	7/23/2012	7/24/2012	--	--	--	--	--	--	--	--							
DPE-4	URS	--	5/21/2004	NA	--	20-35	--	--	34.8	15.52	1.57	0	7.35	11			
	URS	--	9/1/2005				--	--	35	--	--	--	--	--	--		
	URS	--	8/10/2007				--	--	35	--	--	--	--	--	--		
	Pacific Crest	--	4/13/2009				--	--	28	--	--	13.8	80.1	1.66	6.59	-84	
	URS	--	4/13/2009				--	--	28	--	--	--	--	--	--	--	
	URS	7/23/2012	NS				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Destroyed.
DPE-5	URS	--	12/27/2007	NA	--	19.5-34.5	--	--	32.85	--	--	--	--	--			
	URS	7/23/2012	NS				NA	NA	NA	NA	NA	NA	NA	NA	NA	Destroyed.	

Table 6
 Water Level Measurements and Water Quality Parameter Summary
 Penthouse Drapery and Belshaw Site
 Seattle, Washington
 Pacific Crest No: 105-003

Location ID	Sampled By	Date Gauged	Sample Date	CMT Well Port	Top of Casing Elevation ¹	Screen Interval ²	Depth to Groundwater ²	Potentiometric Surface (feet)	Pump Intake Depth ²	Groundwater Quality Parameters					Comments	
										Temperature (°C)	Specific Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	pH	Oxidation Reduction Potential (mV)		
DFE-6	URS	--	5/21/2004	NA	--	20-40	--	--	39.1	15.41	1.74	0.18	7.63	-49		
	URS	--	3/27/2008				--	--	25	8.37	0.251	5.74	6.39	140		
	Pacific Crest	--	4/13/2009				--	--	30	13.1	20.2	6.56	6.14	274		
	URS	--	4/13/2009				--	--	30	--	--	--	--	--	--	
	URS	7/23/2012	7/24/2012				--	--	--	--	--	--	--	--	--	
DFE-7	URS	--	9/1/2005	NA	--	20-35	--	--	29	--	--	--	--	--		
	URS	11/30/2005	12/2/2005				--	--	27	--	--	--	--	--	--	
	URS	6/6/2006	6/6/2006				20.92	--	27	--	--	--	--	--	--	
	URS	10/12/2006	10/12/2006				21.9	--	27	--	--	--	--	--	--	
	URS	2/7/2007	2/7/2007				19.65	--	27	--	--	--	--	--	--	
	URS	5/24/2007	5/24/2007				20.14	--	27	--	--	--	--	--	--	
	URS	--	8/10/2007				--	--	28.5	--	--	--	--	--	--	
	URS	--	12/27/2007				--	--	20.8	--	--	--	--	--	--	
	URS	--	3/27/2008				--	--	--	25	11.64	0.143	3.4	6.59	--	
	URS	7/23/2012	7/23/2012				--	--	--	--	--	--	--	--	--	
GMW-1	G-Logics	2/23/2005	2/23/2005	NA	77.68	20-35	25.27	52.41	--	--	--	--	--	--		
	URS	4/17/2009	4/10/2009				24.01	53.67	30	--	--	--	--	--		
	Pacific Crest	7/23/2012	NS				23.33	54.35	NM	NM	NM	NM	NM	NM		
GMW-2	G-Logics	2/23/2005	2/23/2005	NA	73.99	15-30	19.63	54.36	--	--	--	--	--	--		
GMW-3	G-Logics	2/23/2005	2/23/2005	NA	73.8	15-30	20.91	52.89	--	--	--	--	--	--		
	URS	4/17/2009	4/10/2009				18.94	54.86	25	--	--	--	--	--		
	Pacific Crest	7/23/2012	NS				19.05	54.75	NM	NM	NM	NM	NM	NM		
SCC-1	URS	5/27/2008	5/17/2008	NA	--	27.5-37.5	--	--	--	--	--	--	--	--		
	URS	5/27/2008	5/28/2008				--	--	32.5	15.26	0.999	0	6.28	286		
	Pacific Crest	10/7/2010	8/17/2010				16.32	--	30	16.01	0.378	1.14	6.27	285		
	Pacific Crest	7/23/2012	8/7/2012				14.72	--	NM	NM	NM	NM	NM	NM		
SCC-2	URS	5/27/2008	5/17/2008	NA	--	25-35	--	--	--	--	--	--	--	--		
	URS	5/27/2008	5/28/2008				--	--	30	15.02	0.999	2.99	6.95	312		
	Pacific Crest	10/7/2010	8/17/2010				16.18	--	25	16.28	0.273	5.27	6.21	331.9		
	Pacific Crest	7/23/2012	8/7/2012				15.16	--	NM	NM	NM	NM	NM	NM		

NOTES:

¹Elevation of top of casing (NAVD88)

²Depth below top of well casing

C = celsius

mS/cm = millisiemens per centimeter

mg/L = milligrams per liter

mV = millivolts

NA = not applicable

NM = not measured

NS = not sampled

-- = not reported

Pacific Crest = Pacific Crest Environmental, LLC

G-Logics = G-Logics, Inc.

URS = URS Corporation

APPENDIX C

Previous Investigations and Interim Action Details

Appendix C – Environmental Background (1986-2009)

Following is a summary of the previous environmental investigations/actions performed by Others at the Subject Property parcels and the north-adjacent Seattle Collision Center (former Penthouse Drapery Cleaners) property.

1.1 Previous Investigations

Based on Aspect's review of the available environmental reports provided by GSC and Ecology files¹, the environmental background at the Subject Property parcels consisted of at least four Phase I ESAs and five subsurface investigations that were completed between 1986 and 2009, followed by the RI investigation by Others between 2010 and 2014 (Section 4.3 of this report).

Following is a chronological summary of the previous environmental investigations:

1.1.1 Phase I Environmental Site Assessments (1995 and 2001) – Belshaw

Based on our review of a limited subsurface investigation report prepared by Aaron & Wright (AW, 2002) discussed in the next section, an Environmental Assessment (EA) and a Phase I ESA were performed for the Subject Property between 1995 and 2001. Reportedly, the EA was performed by Dames & Moore in January 1995 and the Phase I ESA was performed by PricewaterhouseCoopers, LLP in June 2001. Although, the reports of the EA and the Phase I ESA were not available to Aspect, the following environmental concerns were noted by those assessments for the Subject Property as reported in AW's report (AW, 2002):

- The Subject Property was used for the manufacture of donut making machinery and baking equipment, and included a foundry, weld/paint shop, pattern shop, and assembly and shipping areas.
- An automotive repair facility occupied part of the Subject Property circa 1950.
- Two leaded gasoline tanks had been closed in place on the site in 1986.
- A heating oil tank believed to be 500-600 gallons located under the floor of the Main building.
- There were unsubstantiated reports of miscellaneous dumping of solvents and thinners outside the doors of the Subject Property buildings.

1.1.2 Limited Subsurface Investigation (February/March 2002) – Belshaw

Based on our review of the AW report (AW, 2002), a limited subsurface investigation was performed for Belshaw in February 2002 to evaluate the environmental concerns identified by the 1995 EA and the 2001 Phase I ESA and determine if there were impacts to the soil and groundwater at the Subject Property. The investigation consisted: completion of 8 soil borings to an approximated depth of 15

¹ Aspect reviewed Ecology files for documents pertaining to the Subject Property history. We acknowledge review of these references with "Ecology File" review terminology and don't include a full reference in this RI Workplan's reference section. These documents are available for public review at Ecology's Northwest Regional Office.

feet bgs, soil sampling, collection of grab groundwater samples from at least 4 borings, and chemical testing.

Soil samples were collected at 2- to 5-foot depth intervals, beginning at two feet bgs, from the eight soil borings AW-SB-1 through AW-SB-8 across the East, West, and South Block areas (Figure 4). Grab groundwater samples were collected from three borings AW-SB-3, AW-SB-6, and AW-SB-7. The soil and groundwater samples were chemically analyzed for volatile organic compounds (VOCs), semi-VOCs (SVOCs), total petroleum hydrocarbons (TPH; gasoline- and diesel-range), and Resource Conservation and Recovery Act (RCRA) Metals.

Ten soil samples and three grab shallow groundwater samples were tested from the eight soil borings. According to the chemical analytical results,

- Benzene was detected at a concentration (0.0824 milligrams per kilogram [mg/kg]) exceeding the MTCA Method A Cleanup Level of 0.03 mg/kg in the 7-foot deep soil sample from AW-SB-7 that was performed near the former UST (Figure 6). Benzene was not detected in the 12-foot deep sample from this boring.
- Trichloroethene (TCE) was detected in the grab groundwater samples from SB-3 and SB-7 at concentrations (14.9 and 8.58 micrograms per liter [$\mu\text{g/L}$], respectively) exceeding MTCA Method A Cleanup Level of 5 $\mu\text{g/L}$.
- Naphthalene (555 $\mu\text{g/L}$), gasoline-range organics (120,000 $\mu\text{g/L}$), diesel-range organics (23,900 $\mu\text{g/L}$), and BTEX (804 $\mu\text{g/L}$, 8,240 $\mu\text{g/L}$, 1,980 $\mu\text{g/L}$, 11,500 $\mu\text{g/L}$; respectively) were detected in the grab groundwater sample from SB-6 at concentrations exceeding their respective MTCA Method A cleanup levels.

Groundwater Condition in 2017

Although BTEX, gasoline- and diesel-range hydrocarbons, TCE, and naphthalene were detected at concentrations exceeding the MTCA cleanup levels in the three grab shallow groundwater samples, the chemical results of these grab shallow groundwater samples are not representative of the current groundwater quality at the Site because shallow groundwater samples collected from permanent monitoring wells (AC-MW-2 near SB-3 and AC-MW-5 near SB-7, Figure 16) during recent investigation did not contain contaminants at levels of regulatory significance (Aspect, 2018a).

1.1.3 Soil and Groundwater Investigation (October 2002) – Belshaw

URS Corporation (URS) performed a soil and groundwater investigation on behalf of Enodis for further site characterization with a goal to develop remedial alternatives and ultimately a remedial action plan to address the soil and groundwater contamination identified by the Feb/March 2002 investigation.

Based on our review of the URS report (URS, 2002), this assessment was performed for Enodis from May through October 2002 to satisfy the conditions of property sale and consisted of completion of 10 soil borings (URS-B-1 through URS-B-10, Figure 4) in the East, West, and South Block areas to depths ranging from approximately 8 feet bgs (refusal) to 35 feet bgs, 7 borings converted to permanent monitoring wells (URS-MW-1 through URS-MW-7, Figure 4), soil and groundwater sampling, and chemical testing.

Soil samples were collected at 2.5- to 5-foot depth intervals from the ten soil borings. Groundwater samples were collected from five of the seven monitoring wells because URS-MW-5 and URS-MW-

6 were observed dry and subsequently decommissioned. The soil and groundwater samples were chemically analyzed for VOCs, and total petroleum hydrocarbons (gasoline-, diesel-, and oil-range).

Four soil samples from the nine soil borings, five groundwater samples from the five permanent monitoring wells, and one (1) grab shallow groundwater sample from URS-B-9 were tested. According to the chemical analytical results:

- Contaminants either were not detected or detected at concentrations below the MTCA Method A cleanup levels in the four soil samples (Figure 6).
- Trichloroethene (TCE, 12.8 µg/L) in URS-MW-1, PCE (14.1 µg/L) in URS-MW-2, diesel-range hydrocarbons (951 and 918 µg/L) in URS-MW-3 and URS-MW-4; respectively, oil-range hydrocarbons (512 µg/l) in URS-MW-3, gasoline-range hydrocarbons (5,220 µg/L) in URS-MW-4 were detected at concentrations exceeding the MTCA cleanup levels.
- The PCE contamination identified in the groundwater was attributed to the north-adjacent property which was previously occupied by a commercial drycleaner (Penthouse Drapery Cleaners).

Groundwater Condition in 2017

The shallow groundwater sampling from new wells completed in 2017 by Aspect indicated no exceedances of petroleum hydrocarbons in groundwater at these locations except for AC-MW-10 (Figure 16). Also, the shallow groundwater sample collected from a permanent monitoring well (AC-MW-05, Figure 16) that was installed at this location during Aspect's 2017 study was tested for gasoline- and diesel-range hydrocarbons and did not contain contaminants at levels of regulatory significance. The URS-MW-2 well was resampled by Aspect in 2017 and PCE was detected in groundwater at a concentration below the MTCA Method A Cleanup Level and TCE was not detected (Aspect, 2018a).

1.1.4 Additional Site Characterization (2003) – Belshaw

URS performed additional site characterization investigation to further evaluate the soil and groundwater contamination (sourced from former Belshaw operations at the Subject Property) identified by the October 2002 investigation. Based on our review of the URS report (URS, 2003) this investigation was performed for Enodis in March 2003 and consisted of completion of a geophysical survey; three soil borings soil borings in the West Block area (URS-B-11 through URS-B-13, Figure 4) to depths ranging from approximately 9 feet bgs (refusal) to 30½ feet bgs; installation of six permanent monitoring wells (URS-MW-8 through URS-MW-13, Figure 4); soil and groundwater sampling; and chemical testing.

Soil samples were collected at 2- to 5-foot depth intervals from the explorations. Groundwater samples were collected from the six monitoring wells. The soil and groundwater samples were chemically analyzed for VOCs, and total petroleum hydrocarbons (gasoline-, diesel-, and oil-range).

The geophysical survey was conducted to identify potential tanks near the east boundary of the West Block and west boundary of the East Block. The survey did not identify any USTs at these locations. Eight soil samples from the nine explorations and six groundwater samples were tested. According to the soil and groundwater chemical analytical results:

- Gasoline-range hydrocarbons (3,150 mg/kg) and xylenes (25.19 mg/kg) were detected at concentrations exceeding the MTCA Method A cleanup levels only in the 25-foot deep sample at URS-B-12 (Figure 6).

- Gasoline-range hydrocarbons (54.5J² mg/kg) were also detected at concentrations exceeding the MTCA Method A Cleanup Level of 30 mg/kg (since benzene is present) in a composite soil sample that was obtained from the drill cuttings of URS-MW-12 exploration (Figure 6). The laboratory “J” flagged this concentration as “estimated”.
- Diesel-range hydrocarbons (910 µg/L) were detected at concentrations exceeding the MTCA Method A Cleanup Level of 500 µg/L only in URS-MW-12.

1.1.5 Phase I ESA (January 2005) – Centioli

G-Logics performed a Phase I ESA of the three north-most parcels (Parcels 754830-1095, -1100, and 1822300005) located on the West Block of the Subject Property (Figure 2) that were historically occupied by two residences and associated sheds (Figure 2). Based on our review of the Phase I ESA report (G-Logics, 2005a), the Phase I ESA was performed for the Centioli Family, LLC (Centioli) in January 2005 to support a property transaction. The following recognized environmental conditions (RECs) were identified by the Phase I ESA:

- A heating oil UST appeared to be present at the location of a vent pipe observed on the west side of the residence located at 2117 South State Street (Parcel 754830-1095).
- On-site vehicle repair activity was suspected in the sheds associated with the residences based on the presence of automotive parts and surficial soil staining.
- The presence of documented soil and groundwater contamination in the central portion of the former Belshaw parcel (Parcel 754830-1115)

G-logics recommended soil/groundwater testing at these parcels to evaluate the RECs.

1.1.6 Phase II ESA (February/March 2005) – Centioli

Based on our review of the G-Logics report (G-Logics, 2005b) this investigation was performed for Centioli Family, LLC (Centioli) in February and March 2005 to evaluate soil and groundwater conditions at the three north-most parcels of the West Block for supporting a property transaction and consisted of completion of five test pits in the West Block area (GTP-1 through GTP-5, Figure 4) to an approximate depth of 4 feet bgs, installation of three groundwater monitoring wells (GMW-1, GMW-2, and GMW-3, Figure 4) to approximate depths ranging from 29- to 35-feet bgs, soil and groundwater sampling, and chemical testing.

Soil samples were collected at 1- to 5-foot depth intervals from the explorations. Groundwater samples were collected from the three monitoring wells. The soil and groundwater samples were chemically analyzed for total petroleum hydrocarbons (gasoline-, diesel-, and oil-range), and metals.

Eleven soil samples from the five test pits and three groundwater samples from the three monitoring wells were tested. According to the soil and groundwater chemical analytical results:

- Contaminants either were not detected or detected at concentrations less than the MTCA cleanup levels in the soil samples.
- PCE was detected at a concentration (22 µg/L) exceeding the MTCA Method A Cleanup Level only in the shallow groundwater sample from GMW-2 (Figure 4) that was in proximity of the north-adjacent SCC property/former Penthouse Drapery, a commercial drycleaner).

² The chemical laboratory flagged the listed concentration as an estimate.

Groundwater Condition in 2017

The 2017 testing results from monitoring wells installed by Aspect (AC-MW-01 and AC-MW-09, Figure 15) near the G-Logic wells indicated no MTCA exceedances of metals. The PCE exceedance in one of the G-Logic well completed at the Subject Property in proximity to the north-adjacent property could not be located because it is likely buried under 2-feet of gravel that was placed at the Subject Property by the then tenant in 2014 (discussed in Section 3.1 of this report) or possibly decommissioned for the operation of the ERH remediation system (discussed in Section 4.4 of this report).

1.1.7 Phase I ESA (March 2006) – Centioli

G-Logics performed a Phase I ESA of the southwest parcel (Parcel 754830-1125) of the West Block (Figure 2). A small single-story building present on this parcel was formerly occupied by Check Mart, a retail business.

Based on our review of the Phase I ESA report (G-Logics, 2006), the Phase I ESA was performed for the Centioli Family, LLC (Centioli) in March 2006. The following are the key findings noted in the Phase I ESA:

- No conditions indicative of releases or threatened releases of pollutants, contaminants, petroleum and petroleum products, or controlled substances to the soil and groundwater were discovered at this parcel.
- There exists a moderate potential for contamination migration from the Belshaw parcels (documented soil and groundwater contamination) to this parcel.

No recommendations were noted in the Phase I ESA report.

1.1.8 Additional Site Assessment (May 2006) – Belshaw

URS collected groundwater samples in May 2005 from 7 groundwater monitoring wells (URS-MW-1, URS-MW-7, MW-9, MW-11, MW-12, MW-15 and MW-16) at the Subject Property to further assess the diesel-range hydrocarbons contamination. Each of the groundwater samples were submitted for chemical analysis of diesel-range hydrocarbons and VOCs.

According to the groundwater chemical analytical results:

- Diesel-range hydrocarbons were detected at concentrations (984 to 2,060 µg/L) exceeding the MTCA Method A Cleanup Level of 500 µg/L in MW-11, MW-12, and MW-15.
- TCE and 1,4-dioxane were detected at concentrations (9.08 µg/L and 9.13 µg/L, respectively) exceeding their respective MTCA cleanup levels of 5 µg/L and 0.438 µg/L only in MW-1.

According to the hydraulic conductivity testing completed during this investigation, the reported groundwater flow direction was to the southwest at an approximate gradient of 0.06 feet/feet. The average hydraulic conductivity in the saturated till is estimated to be 1.9 feet/day with a corresponding average groundwater velocity of 0.3 feet/day (approximately 110 feet/year). These horizontal conductivity values are consistent with the low permeability glacial till soils encountered at the Subject Property.

Groundwater Condition in 2017

The 2017 testing results from the monitoring wells installed by Aspect (AC-MW-5, Figure 12) near the former URS-MW-11 indicated no MTCA exceedances of diesel-range hydrocarbons. However,

the 2017 testing results confirmed MTCA exceedance of diesel range hydrocarbons in MW-12. The well MW-15 was not sampled during the 2017 study.

The 2017 testing results from the monitoring well (AC-MW-2) installed by Aspect near the former URS-MW-1 well on the South Block indicated no MTCA exceedances for TCE and 1,4-dioxane.

1.1.9 Site Investigations (Reports Not Available)

The reports for some of the subsurface investigations were not available to Aspect. The following excerpts are based on our review of a draft remedial investigation/feasibility study (RI/FS) report prepared by Pacific Crest Environmental (Pacific Crest) in 2014 that mentioned completion of the following explorations.

In late April and early May 2005, URS advanced eight borings (MW-18, MW-19, MW-20, MW-21S, MW-21D, MW-22, MW-23 and HA-1), installed three Continuous Multi Tubing (CMT) wells (MW-18, MW-19, and MW-20), and four standard construction groundwater monitoring wells (MW-21S, MW-21D, MW-22 and MW-23) in the West Block of the Subject Property to evaluate PCE-contamination in groundwater sourced from the north-adjacent property (former Penthouse Drapery Cleaners). URS collected soil and groundwater samples during the investigation for laboratory analysis. A CMT well consists of single borehole completed as multiple monitoring wells with discrete screen intervals (ports) designed to sample multiple saturated zones (Pacific Crest, 2014).

In May 2008, URS advanced two soil borings (SCC-1 and SCC-2) that were completed as groundwater monitoring wells (SCC-1 and SCC-2), collected soil and groundwater samples for analysis from beneath the SCC Building, and collected groundwater samples for laboratory analysis from select groundwater monitoring wells (Pacific Crest, 2014). These wells were installed to evaluate groundwater conditions in the northwest corner of the West Block (Subject Property) relative to the documented PCE contamination beneath the north-adjacent property (SCC/former Penthouse Drapery Cleaners).

In April 2009, URS advanced 15 borings (MW-24-S, MW-24-D, MW-25-S, MW-25-I, MW-25-D, MW-26-S, MW-26-I, MW-26-D, MW-27-S, MW-27-I, MW-27-D, MW-28-S, MW-28-I, MW-28-D, and MW-29) in the West Block area using hollow-stem auger and rotosonic drilling methods; that were completed as groundwater monitoring wells; completed in-situ hydraulic conductivity testing (i.e. "slug" tests) in select groundwater monitoring wells; conducted groundwater monitoring and sampling in select wells in the Investigation Area; and submitted soil and groundwater samples for laboratory analysis. The scope of work was determined to evaluate the PCE impacts (sourced from the north-adjacent property) and petroleum and 1,4-dioxane impacts (sourced from the historical USTs and former manufacturing operations at the Subject Property) by URS on behalf of Enodis, in consultation with Pacific Crest on behalf of Penthouse Drapery, and Farallon Consulting, LLC (Farallon) on behalf of Belshaw (Pacific Crest, 2014).

1.2 Environmental Actions

The environmental actions completed at the Subject Property included three separate UST removal, a buried-in-place UST, and an interim cleanup action performed by Others between 1986 and 2008. Following is a summary of each of the UST removal and the Interim cleanup action based on our review of the previous environmental reports and Ecology files.

1.2.1 USTs Removal (1986)

Based on our review of an UST Notification Form dated March 26, 1986 that is present in Ecology File, two undocumented steel leaded gasoline USTs (approximate storage capacity of 500 to 1,000 gallons) and associated piping were closed-in-place from the Subject Property. No other information was available regarding the exact location of the USTs or the soil conditions following removal of the USTs.

1.2.2 USTs Removal (1989)

Based on our review of a letter dated April 19, 1989 written by John Dochnahl of Dochnahl Trucking & Excavating to Ecology that is present in Ecology File, John mentioned the intent to remove two USTs from the Subject Property. Although no report or information is available regarding the USTs removal or soil conditions at these locations, it seems the tanks were removed on August 17, 1989 based on hand-written notes in Ecology files reviewed by Aspect.

Presumably, these tanks were the former unleaded gasoline tanks in the east-central portion (Parcel 7548301115) of the West Block (Figure 3). This presumption is supported by the results of the 2017 geophysical survey that did not identify any USTs in this portion of the Subject Property.

1.2.3 UST Buried-in-Place (1993)

Based on our review of a letter dated August 16, 1994 from the Water Pollution Control Department of Seattle to Mr. Bill Knight of Belshaw that is present in Ecology File, a 250-gallon UST was removed from the ground in the alley located between the Main Building and the Foundry building (East Block, Figure 3) on August 12, 1993 by unidentified personnel that resulted in a fuel spill.

Also, anecdotal information from an un-dated anonymous letter sent to the Seattle-King County Health Department that was reviewed by Aspect in Ecology files, mentioned that the fuel spill continued until the tank was empty. Subsequently, the tank was cut, filled with imported sand, and buried at the same location by Belshaw personnel. Asphalt was paved over the buried tank and a power generator was installed at this location.

The presence of this buried-in-place UST and documented gasoline-contamination in soil and diesel-contamination in groundwater at a nearby exploration performed by Others (URS-MW-12) confirms the historical fuel spill (Figures 10 and 16).

1.2.4 UST Removal and Soil Remediation (October 2005)

G-Logics performed a UST removal followed by remedial excavation to remove heating oil-contaminated soil from the north-central portion (Parcel 7548301095) of the West Block. Following is a summary of the UST removal and soil remediation based on our review of the G-Logics report (G-Logics, 2005c):

- A 250-gallon steel heating oil UST was removed on October 25, 2005 from the north portion of the West Block. The heating oil tank was associated with the former residence. The top of the UST was encountered at approximately 4 feet bgs and the tank was approximately 5 feet long and 3 foot in diameter. The overburden was considered clean and excavated to access the tank.
- Contamination was noted by the presence of dense blue-gray sand between 4 to 8 feet bgs extending 5 to 15 feet laterally in the southeast direction which was confirmed by the chemical analytical results of a soil sample obtained from southeast sidewall of the tank pit

(diesel-range hydrocarbons were detected at a concentration of 4,500 mg/kg exceeding the MTCA Method A Cleanup Level of 2,000 mg/kg).

- The vertical extent of the contaminated soil was limited to an approximate depth of 9 feet bgs based on the results of a base sample (diesel- and oil-range hydrocarbons were not detected).
- Contaminated soil in the southeast sidewall was excavated and clean limits were confirmed through a confirmation soil sample where hydrocarbons were not detected.
- Approximately 66 tons of heating oil-contaminated soil was excavated and transported to the Rabanco waste facility (currently Republic Waste Services) in Seattle for permitted disposal.

Soil Condition in 2017

Aspect evaluated the soil conditions at this former UST location by collecting soil samples from a direct-push boring (DP-11, Figure 6). Petroleum hydrocarbons were detected at a concentration less than the MTCA Method A Cleanup Level in the 5-foot sample and not detected in the 10-foot sample.

1.2.5 Interim Action – Dual Phase Extraction System (2004 – 2008)

A dual phase extraction (DPE) soil and groundwater remediation system was installed within the gasoline affected area on the east-central portion of the West Block in April and May 2004. Six DPE wells (URS-DPE-2 through URS-DPE-7) were installed within the treatment area and connected by a series of subgrade piping to an enclosure equipped with extraction pumps and vapor and groundwater treatment systems. The system began operations in May 2004 and groundwater extraction rates during early operations were approximately 1 gallon per minute (Pacific, 2014). The approximate footprint of the DPE groundwater treatment system as reported by Others is shown in Figure 3.

The system operated on a continuous basis, except for minor shutdowns for equipment replacement and maintenance, until monthly on/off pulsing operations began in May 2006 through January 2008. After evaluating system extraction performance and concluding that an asymptotic maximum volume of contaminants had been extracted from the subsurface with consideration of disproportionate cost analysis, a determination was made to monitor natural attenuation from that point forward (Pacific, 2014).

Total vapor phase total petroleum hydrocarbons (TPH) recovery was estimated to be 919 pounds. Approximately 202 pounds of liquid phase TPH was recovered from groundwater extraction. A total of approximately 715,000 gallons of treated water was discharged to the sanitary sewer in accordance with King County Discharge Authorization (Pacific, 2014).

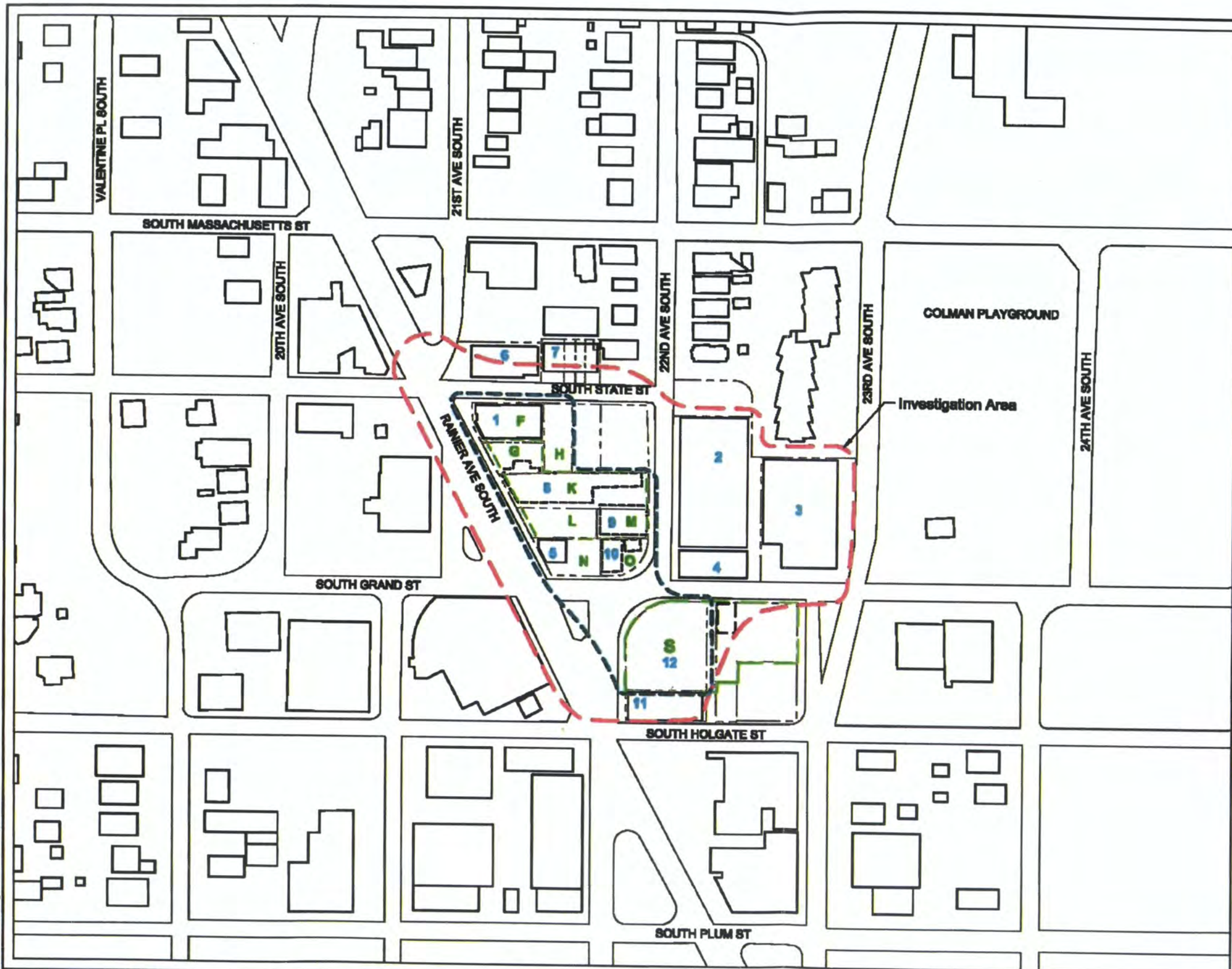
Soil and Groundwater Condition in 2017

Based on Aspect's 2017 testing, residual gasoline- and benzene-contaminated soil and groundwater at concentrations exceeding MTCA cleanup levels are present at the location of the former DPE system on the West Block of the Subject Property (AC-SB-5 and AC-MW-10, Figure 10 and 16).

APPENDIX D

**RI/FS Figures and Ecology
Letters**

Handwritten notes:
2/2/01
1/2/01



- Legend**
- Investigation Area
 - Affected Properties
 - Curb
 - Parcel Boundary
 - Belshaw Property
 - ▭ Building Area
 - ▭ Former Building

ID	Building Name
1	Seattle Collision Center
2	Former Main Building
3	Former Assembly Building
4	Former Foundry Building
5	Check Cashing Business
6	Furniture Store
7	Condominiums
8	Former Paint Building
9	Former Walking Shop
10	Residence
11	Dere Auto
12	Former Parking
ID	Parcel Number
F	7848301188
G	7848301180
H	7848301100
K	7848301118
L	7848301120
M	1822900020
N	7848301128
O	1822900028
S	3881800518



2/17/2014 Drafting 105-003-003.dwg FIG 2 Invest Area Pnl

PACIFIC CREST ENVIRONMENTAL
WWW.PCENV.COM 425-888-4990

Penthouse Drapery and Belshaw Site
Seattle, Washington
PN: 105-003

Figure 2
Investigation Area



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

Northwest Regional Office • 3190 160th Ave SE • Bellevue, WA 98008-5452 • 425-649-7000
711 for Washington Relay Service • Persons with a speech disability can call 877-833-6341

July 1, 2015

Snarf LLC/Brunzer LLC/Sleepy Koala LLC
PO Box 80068
Seattle, WA 98108

Re: SITE HAZARD ASSESSMENT: Facility Site ID #97763114

Belshaw Brothers Inc.
1750 22nd Ave. S.
Seattle, WA 98144
Property Tax #1822300020, 1822300175, 1822300180, 0924049007,
3881900515, 3881900540, 3881900550, 3881900560, 7548301115,
7548301120, 7548301150
Cleanup Site ID 3018

Dear Sir or Madam:

The Washington State Department of Ecology (Ecology) is writing to inform you that the above referenced property was subject to a site hazard assessment (SHA) as required under the Model Toxics Control Act, on April 2, 2015. The site was determined to be contaminated with diesel, 1,1-dichloroethene, trichloroethene, and benzene. The site's hazard ranking, an estimation of the potential threat to human health and/or the environment relative to all other Washington state sites assessed at this time, has been determined by Ecology to be a 3, where a 1 represents the highest relative risk and 5 the lowest.

For your information, Ecology will be publishing ranking of this, and other recently assessed sites, in the August 2015 Special Issue of the Site Register. The hazard ranking will be used in conjunction with other considerations in determining Ecology's priority for future action at this site. This report is available here: <https://fortress.wa.gov/ecy/gsp/Sitepage.aspx?csid=3018>. To view the documentation Ecology has available electronically; on the right-hand side of the web-page, click on View Electronic Documents.

For inquiries regarding what may occur with your site now that it is on Ecology's Hazardous Sites List, please contact me at (425) 649-7136 or by email at donna.musa@ecy.wa.gov.

Sincerely,

Donna Musa
Site Hazard Assessments
Toxics Cleanup Program

cc: Ted Benson, Ecology





STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

Northwest Regional Office • 3190 160th Ave SE • Bellevue, WA 98008-5452 • 425-649-7000
711 for Washington Relay Service • Persons with a speech disability can call 877-833-6341

October 27, 2014

MR. WILLIAM CARROLL
PACIFIC CREST ENVIRONMENTAL
P.O. BOX 952
NORTH BEND, WA 98045

Re: Opinion pursuant to WAC 173-340-515(5) on Proposed Remedial Action for the following Hazardous Waste Site:

- **Name:** Penthouse Drapery Cleaners
- **Address:** 1752 Rainier Avenue South
- **Facility/Site No.:** 23408
- **VCP No.:** NW2278
- **Cleanup Site ID No.:** 3184

Dear Mr. Carroll:

Thank you for submitting documents regarding your proposed remedial action for the **Penthouse Drapery Cleaners** facility (Site) for review by the Washington State Department of Ecology (Ecology) under the Voluntary Cleanup Program (VCP). Ecology appreciates your initiative in pursuing this administrative option for cleaning up hazardous waste sites under the Model Toxics Control Act (MTCA), Chapter 70.105D RCW.

This letter constitutes an advisory opinion regarding a review of submitted documents/reports pursuant to requirements of MTCA and its implementing regulations, Chapter 70.105D RCW and Chapter 173-340 WAC, for characterizing and addressing the following releases at the Site:

- Total petroleum hydrocarbons in the gasoline range (TPH-G), tetrachloroethene (PCE) in Soil
- PCE, trichloroethylene (TCE), cis-1,2-dichloroethene (DCE), 1,1,1-trichloroethane (TCA), 1,1-dichloroethene, 1,1-dichloroethane, 1,2-dichloroethane, and 1,4-dioxane in Ground Water
- PCE in Air

Ecology is providing this advisory opinion under the specific authority of RCW 70.105D.030(1)(i) and WAC 173-340-515(5).



Mr. William Carroll
October 27, 2014
Page 2

This opinion does not resolve a person's liability to the state under MTCA or protect a person from contribution claims by third parties for matters addressed by the opinion. The state does not have the authority to settle with any person potentially liable under MTCA except in accordance with RCW 70.105D.040(4). The opinion is advisory only and not binding on Ecology.

Ecology's Toxics Cleanup Program has reviewed the following information regarding your proposed remedial actions:

1. Pacific Crest Environmental, 2014. *Draft Remedial Investigation Feasibility Study Report, Former Penthouse Drapery, 1752 Rainier Avenue South, Seattle, Washington.* July 28.
2. Pacific Crest Environmental, 2011. *Remedial Investigation-Feasibility Study Report, Former Penthouse Drapery, 1752 Rainier Avenue South, Seattle, Washington.* May 13.
3. Pacific Crest Environmental, 2010. *Sampling and Analysis Plan, Former Penthouse Drapery, 1752 Rainier Avenue South, Seattle, Washington, Ecology VCP # NW2278.* August 3.
4. Pacific Crest Environmental, 2010. *Data Summary Report, Former Penthouse Drapery, 1752 Rainier Avenue South, Seattle, Washington.* July 30.

The reports listed above will be kept in the Central Files of the Northwest Regional Office of Ecology (NWRO) for review by appointment only. Appointments can be made by calling the NWRO resource contact at (425) 649-7235 or sending an email to: nwro_public_request@ecy.wa.gov.

The Site is defined by the extent of contamination caused by the following releases:

- Total petroleum hydrocarbons in the gasoline range (TPH-G), tetrachloroethene (PCE) in Soil
- PCE, trichloroethylene (TCE), cis-1,2-dichloroethene (DCE), 1,1,1-trichloroethane (TCA), 1,1-dichloroethene, 1,1-dichloroethane, 1,2-dichloroethane, and 1,4-dioxane in Ground Water
- PCE in Air

The Site is more particularly described in Enclosure A to this letter, which includes a detailed Site diagram. The description of the Site is based solely on the information contained in the documents listed above.

Based on a review of supporting documentation listed above, pursuant to requirements contained in MTCA and its implementing regulations, Chapter 70.105D RCW and Chapter 173-340 WAC, for characterizing and addressing the releases at the Site, Ecology has determined:

- The following comments from Ecology's previous opinion letter dated September 20, 2011 do not appear to have been addressed in the 2014 Remedial Investigation (RI) Feasibility Study (FS):
 - *An interpretation of stratigraphic conditions specific to the investigation area is needed to provide a basis for understanding PCE distribution in the subsurface. The grain size description in the RI/FS is not sufficient for Ecology to understand what kinds of deposits are controlling contaminant migration at this Site. Also, the description of geology in the text and the conditions shown on the cross sections need to be consistent (see Enclosure A, Site Description; Geology).*
 - *The discrepancy between ground water flow direction estimates based on elevation contouring and the actual shape of the PCE plume should be evaluated.*
 - *The vertical extent of soil and ground water contamination has not been determined at the Property. Specifically, PCE was still detectable in soil at a depth of 61 feet at the base of SB-5, suggesting the possibility it extends deeper. Ground water is also contaminated at this depth and the potential for deeper impact has not been explored. A search for water supply wells in the area needs to be made using Ecology's database and other standard sources.*
- The RI (Sections 1 and 2) does not adequately explain the source of 1,4-dioxane on the Site. The source of 1,4-dioxane is briefly described in Section 4.2.4.3 but this information should be presented earlier in the RI and clearly described. Additional sampling rounds that include analysis for 1,4-dioxane should include MW-9 to determine if the plume extends to the southeast off the Property.
- The horizontal and vertical extent of CVOC contamination extends further than is shown by the three RI cross-sections. Data from SCC1, SCC2, MW-14, MW-18, MW-19, MW-24D, MW-25D and MW28D indicate that the vertical extent of contamination has not been delineated at these locations and that should be shown on cross-sections. Also, a cross-section should be drawn to incorporate the MW-30 cluster with an interpretation of stratigraphy beneath Rainier Avenue. The text

(Section 3.3.2.2; page 3-9) states that two monitoring wells (MW-3; MW-13) and four DPE wells (DPE-2, DPE-3, DPE-6 and DPE-7) were sampled on September 24, 2012. However, the results of this sampling round do not appear to be included in any of the tables or figures.

- Highly-elevated concentrations of PCE detected in ground water at the Penthouse portion of the Property are not seen directly downgradient which suggests significant downward migration of PCE in the source area. No deep wells have been installed to confirm this possibility but electrical resistance heating electrodes are proposed to depths of nearly 50 feet below the ground surface in this area. The cleanup action plan will need to include wells or data points that will demonstrate that the source has been mitigated at depth.
- The text (Section 4.1; top of page 4-2) discusses the inferred eastern boundary of CVOC contamination in ground water and the distribution of contaminants east of Rainier Avenue based on the results from wells completed east of Rainier Avenue (well cluster MW-30). However, well cluster MW-30 is west of Rainier Avenue so the discussion needs to be revised accordingly. The Conceptual Site Model should incorporate more of the Site hydrogeology.
- The text (Section 4.2.4.3) discusses and Figure 14 shows the distribution of 1,4-dioxane in ground water on the Site. The text states that 1,4-dioxane has been detected in ground water as deep as 59 feet below the ground surface. The text and figures need to describe and illustrate the contaminant distribution in terms of the 3 identified aquifer zones. A cross-section showing the extent of 1,4-dioxane would be helpful.
- Ecology agrees (RI Section 2.2.2) that the Site qualifies for an exclusion from a terrestrial ecological evaluation; there are less than 1.5 acres of contiguous undeveloped land on or within 500 feet of the Site. The exclusion should be documented using the form at:
http://www.ecy.wa.gov/programs/tcp/Policies/terrestrial/Forms_PrimaryExclusions.pdf
- The locations of all decommissioned monitoring wells such as MW-5 and MW-6 should be shown on Site Maps that show monitoring wells with a different symbol from existing wells.
- On Figure 2, the "Investigation Area" boundary does not include the area including the MW-30 monitoring well cluster.

- On Figure 6, ground water sampling locations (wells or borings) that were used to bound the approximate extent of DNAPL should also be shown. On Figure 6, the definition of 'PCE' should be 'tetrachloroethene'.
- The shallow zone ground water elevation data shown in Figure 12 should be contoured as shown in Figure 7 in the previous RI report dated May 13, 2011. Arrows should be used in addition to contouring which confirms the arrow directions.
- On Figures 12 and 13, the date of the potentiometric surface map data is shown as July 24, 2012 but the gauging date in Table 16 is July 23, 2012. The discussion of ground water flow is primarily based on this one round of ground water elevation data. Are there additional ground water elevation data that was collected after July 2012 that could be incorporated into the discussion? Additional and preferably more current ground water elevation measurement rounds should be used to show that the ground water flow directions indicated by the data are consistent.
- Figure 13 shows the deep zone potentiometric surface drawn from 3 data points (note: a triangulation would typically yield a single direction). There are additional data points listed in Table 16 which should be displayed on the figure and used in the contouring.
- On Figure 16, definitions of 'PCE' and 'TCE' are reversed. The depths of screened intervals of SCC1 and SCC2 provided in Table 7a should be added to Figure 16. The legend of Figure 16 needs to define the dash (-) symbol. The results for MW-1 say the sample was collected on August 7, 2012 but Table 7a says it was collected on July 25, 2012. According to Table 7a, the result for PCE in MW-1 should be shown as '<1.0'.
- On Figure 18, the results from the sample collected at 65 feet needs to be highlighted as exceeding the Method A cleanup level.
- On Figure 19, please correct "PCE & related CVOVs" and label South Grand Street.
- Ecology concurs with the proposed FS cleanup levels presented in RI Tables 1, 2 and 3.
- Table 6 should contain a column indicating which aquifer zone has been designated as the one the well is screened in based on lithology encountered and well screen depth. Table 6 should also include a note explaining why ground water levels were not measured in MW-1, MW-4, MW-7, MW-19 and MW-20 on July 23, 2014. The notes should include the definition of 'NE' used in the cleanup level row.

Mr. William Carroll
October 27, 2014
Page 6

- Ecology concurs with the remedial alternative selected for Area 1 – electric resistive heating (ERH) and enhanced in-situ anaerobic bioremediation (Alternative 4). The draft cleanup action plan (dCAP) should describe the extent to which the area beneath Rainier Avenue South will be affected by the ERH.
- Ecology concurs with the remedial alternative selected for Area 2 – excavation and enhanced aerobic bioremediation (Alternative 2). The dCAP should include a contingency if contamination is found to extend deeper than the proposed excavation depth of 30 feet below the ground surface.
- Ecology concurs with the remedial alternative selected for Area 3 – enhanced reductive dechlorination and monitored natural attenuation (Alternative 2). The dCAP should include documentation that sufficient natural attenuation processes will be demonstrable on the Site to achieve cleanup in the stated time frame.

This opinion does not represent a determination by Ecology that a proposed remedial action will be sufficient to characterize and address the specified contamination at the Site or that no further remedial action will be required at the Site upon completion of the proposed remedial action. To obtain either of these opinions, you must submit appropriate documentation to Ecology and request such an opinion under the VCP. **This letter also does not provide an opinion regarding the sufficiency of any other remedial action proposed for or conducted at the Site.**

Please note that this opinion is based solely on the information contained in the documents listed above. Therefore, if any of the information contained in those documents is materially false or misleading, then this opinion will automatically be rendered null and void.

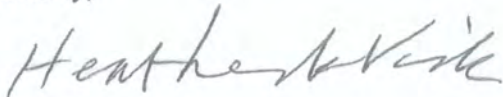
The state, Ecology, and its officers and employees make no guarantees or assurances by providing this opinion, and no cause of action against the state, Ecology, its officers or employees may arise from any act or omission in providing this opinion.

Again, Ecology appreciates your initiative in conducting independent remedial action and requesting technical consultation under the VCP. As the cleanup of the Site progresses, you may request additional consultative services under the VCP, including assistance in identifying applicable regulatory requirements and opinions regarding whether remedial actions proposed for or conducted at the Site meet those requirements.

Mr. William Carroll
October 27, 2014
Page 7

If you have any questions regarding this opinion, please contact me at (425) 649-7064 or
hvic461@ecy.wa.gov.

Sincerely,

A handwritten signature in black ink that reads "Heather Vick". The signature is written in a cursive style with a large, sweeping initial 'H'.

Heather Vick, LHg
NWRO Toxics Cleanup Program

Enclosure: (1) A Site Description and Diagrams

cc: Sonia Fernandez, VCP Coordinator, Ecology

Mr. William Carroll
October 27, 2014
Page 8

Enclosure A

Description and Diagrams of the Site

Site Description

This section provides Ecology's understanding and interpretation of Site conditions. It forms the basis for the conclusions and opinions expressed in the body of the letter.

Site and Property Definition: The "Site" is the volumetric area that has been contaminated, and consists of partially comingled plumes that resulted from the following separate releases:

- Former Penthouse Drapery (now Seattle Collision Center) at 1752 Rainier Avenue South – releases of dry cleaning solvents including tetrachloroethene (PCE) with degradation products trichloroethylene (TCE) and 1,2-cis-dichloroethylene (DCE) in soil, ground water, and air.
- Belshaw (former subsidiary of Enodis and current subsidiary of AGA Foodservice) at various properties southeast of Former Penthouse Drapery – releases of metal cleaning solvents including 1,1,1-trichloroethane (1,1,1-TCA) as well as 1,4-dioxane, a solvent stabilizer; releases of petroleum hydrocarbons in the gasoline range (TPH-G) from a former underground storage tank (UST) system.

The estimated areal extent of the Site is shown on Figure 2 in the attached Site Diagrams. As illustrated, the Site includes the entire Penthouse property, portions of the adjoining properties to the south, and east, and a possible westward extension into the Rainier Avenue South right-of-way. The Site also appears to extend southward and eastward beyond Grand Street, based on PCE, TCE, and DCE detections in wells MW-1, MW-2, and MW-20.

Property Definition: The following King County tax parcels comprise the Property and are to be addressed by the cleanup:

Property Affiliation	Parcel Number	Size (Acres)	Address	Former/Current Use
Penthouse	7548301155	0.11	1752 Rainier Avenue S.	Penthouse Drapery/Seattle Collision Center
Penthouse	7548301150	0.08	None provided	
Penthouse	7548301100	0.10	None provided	
Belshaw	7548301115	0.23	1762 Rainier Avenue S	Paint building; donut equipment manuf.
Belshaw	7548301120	0.12	None provided	
Belshaw	1822300020	0.08	1765 22 nd Avenue S	Welding shop; donut equipment manuf.
Belshaw	7548301125	0.09	2100 S. Grand Street	Check cashing business
Belshaw	1822300025	0.07	2110 S. Grand Street	Residence
Belshaw	3881900515	0.35	None provided	Parking

Source: King County Parcelviewer webpage

Taken together, these nine parcels comprise the Property for purposes of this opinion letter. The Property includes most of the area between Rainier Avenue, 22nd Avenue South, South Holgate Street, and South State Street. The location of the Property within the Site is illustrated in a Site Diagram. Figure 2 of the Site Diagrams shows an area of "Affected Properties" which corresponds to the nine tax parcels identified in the table above.

Note also that two other property-related definitions are used in this letter to distinguish which area of the Site is being discussed. One of these is the “**Penthouse affiliation parcels**”. This term is defined as the parcel at 1752 Rainier Avenue South (7548301155) as well as surrounding parcels to the south and east (see table above) and Figure 2 in the Site Diagrams.

A second group of parcels termed the “**Belshaw affiliation parcels**” in this letter adjoins the Penthouse property to the south and to the east across 22nd Avenue South, as illustrated on Figure 2 in the Site Diagrams. The western part of the Belshaw property is within the Property; the eastern part of the Belshaw affiliation (i.e. east of 22nd Avenue South) is not. The table above contains the Belshaw affiliation parcels that are part of the Property.

Site Definition. The Site is defined as a PCE release from former dry cleaning operations on the Penthouse affiliation parcels. Note that two other releases have occurred within the Property (see definition of areas in paragraph below) and at least one resulting plume has become comingled with the PCE release. These additional two releases are thus considered part of the Site. The first Belshaw release is 1,1,1-TCA which appears to have occurred on the Belshaw portion of the Property, based on detections of this compound in ground water at monitoring wells MW-8, MW-19, and DPE-1. Concentrations of 1,4-dioxane above the Method B cleanup level have been found to be co-located with the 1,1,1-TCA in ground water. The second Belshaw release consists of gasoline from one or two USTs on the Belshaw portion of the Property.

The Site has been divided into three areas based on the type of contamination found in ground water. Figure 19 in the Site Diagrams shows the three areas which include:

Area	Contamination in Ground Water	Source	Comingled With:
1	PCE and related degradation products	Former Penthouse Drapery	Area 2 plume
2	1,4-dioxane & 1,1,1-TCA	Belshaw - Paint and Welding	Area 1 plume
3	Petroleum hydrocarbons – TPH-G	Belshaw - UST system	None

Finally, a larger area in which various investigations have taken place is defined as the “Investigation Area” on Figure 2 in the Site Diagrams.

Area and Property Description: The Property is in the Rainier Valley business district, and is situated on Rainier Avenue South, the major thoroughfare serving the area. Commercial businesses line Rainier Avenue, and are scattered throughout the area. Residential properties are also present in close proximity to the Property. Directly across the street to the north are a new condominium development and a neighborhood with single-family homes. A large apartment complex and a defunct manufacturing facility are located to the east. The Property is approximately 500 feet south of Interstate 90.

Property History and Current Use:

Penthouse Affiliation Parcels: The Penthouse Drapery portion of the Property was developed by at least 1947 with the construction of a 4,790-square foot, masonry commercial building. A number of companies have occupied the building since then including Associated Industries Fabricators (aircraft parts manufacturing) from 1951 to 1970, two pool supply companies (1970 to 1980, Penthouse Drapery (~1980 to 1990), Don-Vinn Restaurant Equipment (1994 to 1998) and Seattle Collision Center (1998 to present). Seattle Collision Center is currently in operation on the Property in the existing building.

Belshaw Affiliation Parcels: The remainder of the Property immediately south of the Penthouse Drapery affiliation parcels consists of the western portion of the Belshaw Brothers, Inc. (Belshaw) affiliation parcels. The Belshaw property was developed beginning in approximately 1924 when a bakery and restaurant equipment manufacturing facility began operation on the Property. As part of the manufacturing facility, a welding building and a paint building were formerly present in the eastern portion of this area. Prior to construction of the Assembly Building in 1988, Belshaw personnel reportedly disposed of spent solvents on unpaved portions of the Belshaw affiliation parcels to control overgrown weeds including Himalayan blackberries. There are several more Belshaw affiliation parcels present east of 22nd Avenue South (shown in Figure 2 of the Site Diagrams) but these are not considered part of the Site.

Contaminant Sources and History of Releases:

Penthouse Affiliation Parcels: Potential contaminant sources for this Site include dry cleaning fluid spills and disposal at the former dry cleaners. The dry cleaning fluid consisted principally of PCE. There is no record of specific locations of spills or leaks at the former Penthouse property, nor is any information available to Ecology on the dry cleaner operation. On the basis of dry cleaner operation dates, the release of PCE most likely occurred between 1980 and 1990.

Belshaw Affiliation Parcels: Sources include solvents used in manufacturing including 1,1,1-TCA. In addition, 1,4-dioxane was used as a solvent stabilizer. The solvent releases most likely occurred between the 1950s and 1990s. In addition, spent solvents were used for weed control on the unpaved Belshaw parcels. A former fueling station was located adjacent to the Former Welding Shop Building. An underground storage tank (UST) system located adjacent to the former welding shop was reportedly removed from this area at an unknown date.

Physiographic Setting: The Site is situated within and near the northern end of the Rainier Valley, between the Beacon Hill upland on the west and the Mt. Baker Ridge upland on the east. The uplands rise to elevations of 200 to 400 feet above sea level; the valley floor at the Site is at an elevation of approximately 70 feet above mean sea level. The axis along the lowest point of the valley approximately follows Rainier Avenue, sloping gently down to the southeast. The Site is close to the eastern edge of the valley, which is marked by a curving break in slope. On the

north, the break in slope is right at the boundary of the Site at South State Street. On the east, it is about 150 feet east of 22nd Avenue South, and on the west, considerably further away.

Surface/Storm Water/Sanitary System: Information regarding surface water bodies and storm water runoff and transport at and near the Site has not been presented in the RI/FS. Storm water utility information is particularly important because of the potential for preferential contaminant transport.

Ecological Setting: Information regarding the ecological setting has not been presented in the RI/FS. Ecology believes that some terrestrial habitat may be present in the landscaped residential neighborhood north of the Site, but this remains to be evaluated.

Geology: Geologic conditions in the investigation area have been thoroughly explored to a depth of about 70 feet below ground surface (bgs), but no genetic interpretation has been provided. The RI/FS presents a lithologic description as follows – 12 feet of fine sand, with interbedded silts and gravel, overlying interbedded silty fine sand and clay to the depth explored (Page 3-11). This description conflicts to some degree with the geologic cross sections (Figure 4 and 5), which show mostly silt with three or four beds of sand or silty gravelly sand.

Ground Water: The depth to water beneath the investigation area ranges from approximately 12 to 18 feet bgs. Below these depths are several water-bearing zones which largely coincide with sandy interbeds within the silt. These are termed the Shallow Zone, Intermediate Zone, and Deep Zone. A water bearing zone is also intermittently present between the Intermediate and Deep Zones. The top of the Shallow Zone appears to be the water table (unconfined conditions), whereas the deeper water bearing zones are confined, with potentiometric heads slightly below the water table.

Both horizontal and vertical ground water flow has been characterized at the Site. The vertical flow appears to be generally downward, based on declining heads with depth at monitoring well clusters where observation is possible. A downward vertical gradient is unexpected in a valley between two uplands but the nearest surface water body, Lake Washington, is a probable sink influencing the flow regime; the deeper water-bearing zones are most likely actively discharging there thus inducing downward flow from the shallow zone.

Lateral ground water flow directions, by contrast, are as expected for the situation - generally down valley to the south-southeast. However, there is a disconnect between the PCE distribution in ground water, and the various potentiometric surface contour maps - Figures 7, 8 and 9 in the RI/FS and Figure 5, 6, and 7 in the Data Summary Report. The PCE distribution shows transport almost directly southeast down Rainier Avenue, whereas the ground water contour maps show a more easterly or even northeasterly flow. It is possible the operation of the dual-phase extraction system between 2004 and 2007 in the eastern part of the Cleanup property

resulted in a slight lowering of ground water levels, thus implying continuing flow in that direction. However, even in 2010 the water levels at MW-26 remain anomalously depressed.

Water Use: Potable water is provided to the area by the City of Seattle. However, no information has been provided on whether water supply wells also exist in the area.

Release and Extent of Contamination - Soil: PCE contamination in soil extends to depths of greater than 70 feet below land surface (the full depth has not been determined) in the source area at the Penthouse property. The affected area appears to be on the order of 100 by 100 feet in plan dimension, although it may extend further to the east and west where the boundaries of the contaminated area have not been defined. Contaminated soil also extends more than 100 feet to the southeast (the southern edge has not been defined), associated with the PCE contaminant plume in ground water (see below). Soil PCE concentrations in this down gradient area are considerably less than in the source area.

The PCE has moved downward despite the presence of the dense silts underlying the Site. The silts must have a greater vertical permeability than expected or are discontinuous allowing vertical downward migration of the dense nonaqueous phase liquids (DNAPL). This condition coupled with a downward vertical gradient in ground water appears to have distributed the bulk of the PCE contamination downward directly below the source. PCE detected in soil downgradient of the source area likely was derived from the PCE transported in ground water.

Light non-aqueous phase liquids (LNAPL) have been found on the Site in the vicinity of the former UST system at the former welding shop building. DPE well DPE-2 had up to 2 feet of LNAPL prior to the initiation of the DPE system. During active remediation, LNAPL was recovered and contaminant concentrations declined steadily. Ground water sampling conducted in the July 2012 sampling round indicated that TPH-G and benzene concentrations were below MTCA Method A cleanup levels. Based on these results, it appears that LNAPL is no longer present in the subsurface near the former UST system.

Extent of Contamination – Ground Water: Extensive ground water monitoring data show a PCE plume extending southeastward over 350 feet from the source area. The PCE contamination is present in all three water bearing zones, and declines from near-free-product-level concentrations directly at the source to a few parts per billion at the distal edge of the plume.

TCE and DCE are also present in the plume at much lower concentrations than PCE. The compounds are breakdown products of PCE and indicate degradation is ongoing. However, the highest concentrations of TCE detected to date were in the well furthest upgradient (MW-23). This result may indicate a separate upgradient release (i.e., a different site).

The compound TCA has also been detected on the Belshaw property portion of the Cleanup property at MW-8, MW-19, and DPE-1. This compound is not a breakdown product of TCE, and appears to have been released from a separate source near these wells. An assessment of the extent of 1,4-dioxane was conducted in 2012 by sampling wells in which 1,1,1-TCA had been previously detected. The results indicated a plume of 1,4-dioxane at concentrations exceeding the Method B cleanup level (0.438 µg/L) extending southeast across the Belshaw affiliation parcels. The extent of the plume is unknown and potentially extends off-Property to the southeast.

Investigation History:

The following table is a chronology of investigative activities that have been conducted on the Property:

Chronology of Field Investigative Activities – Penthouse Drapery Cleaners Site (NW2278)

Date	Property Affiliation	Field Investigative Activity
February 2002	Belshaw	8 soil borings: AW-SB-1 to AW-SB-8
June 2002	Belshaw	11 soil borings: B-1 to B-10 and MW-7; 7 monitoring wells (MW-1 to MW-7) installed
February 2003	Belshaw	9 soil borings: B-11 to B-13 and MW-8 to MW-13; 6 monitoring wells installed; GPR survey for UST
May 2003	Belshaw	5 soil borings: MW-14, DPE-1 to DPE-3 and B-16; DPE pilot testing performed
October 2003	Penthouse	1 soil boring: MW-17; 1 monitoring well (MW-17) installed; 1 test pit (TP-1) excavated
February 2005	Penthouse	3 soil borings: (GMW-1 to GMW-3; 3 monitoring wells (GMW-1 to GMW-3) installed
May 2005	Penthouse	8 soil borings: MW-18 to MW-20, MW-21S, MW-21D, MW-22, MW-23 and HA-1; 3 continuous multi-tubing (CMT) wells (MW-18 to MW-20) and 4 monitoring wells (MW-21S, MW-21D, MW22 and MW-23) were installed
May 2008	Penthouse	2 soil borings: SCC-1 and SCC-2; soil and ground water samples collected
April 2009	Penthouse and Belshaw	15 soil borings: MW-24S, MW-24D, MW-25S, MW-25I, MW-25D, MW-26S, MW-26I, MW-26D, MW-27S, MW-27I, MW-27D, MW-28S, MW-28I, MW-28D and MW-29
February 2010 to April 2011	Penthouse	4 soil borings: PH-SB-2 to PH-SB-5; 9 monitoring well borings (MW-30S, MW-30I, MW-30D, MW-31S, MW-31I, MW-30D, MW-32S, MW-32I, MW-32D) and wells installed; 1 subslab soil vapor sample and one ambient air sample; SVE pilot test after converting soil boring PH-SB-5 to a recovery well.
July 2012	Penthouse	Underground utility video surveillance and underground utility survey; 8 deep soil borings: PH-SB-1, PH-SB-6, PH-SB-7, PH-SB-8, PH-SB-9, PH-SB-13, PH-SB-14 and PH-SB-15; 3 shallow soil borings: PH-SB-10 to PH-SB-12
September 2012	Belshaw	9 soil borings: URS-SB-1 to URS-SB-9

Exploration of the investigation area began with a Phase I ESA in 1995, and was followed by

additional Phase I ESAs and multiple field sampling efforts between 2002 and the most recent RI activities in 2010. During this seven year period, at least 44 borings were drilled for various purposes to depths ranging up to 71.5 feet below ground surface (bgs); hundreds of soil samples were obtained for chemical analysis; and 66 ground water samples were obtained from specific locations or depth intervals. Multiple sampling events occurred at the majority of ground water monitoring wells.

Other field activities provided ancillary characterization data. Specifically, pilot testing for a dual-phase extraction (DPE) system was completed in 2003, and a DPE system was installed and operated between 2004 and 2007. There has also been recent testing for a soil vapor extraction (SVE) system.

An assessment of soil vapor intrusion was also completed in 2010. The assessment consisted of obtaining an ambient air sample and a below-floor -slab soil vapor sample at the Penthouse property for analysis of PCE and its' breakdown products.

The boundary of the contaminant plume within the three or four water bearing zones has been largely determined to the east and north, but not to the southeast, southwest, or west. The base of contaminant plume has also not been determined.

Extent of Contamination – Air:

An assessment of soil vapor intrusion was completed in 2010. The assessment consisted of obtaining an ambient air sample and a below-floor -slab soil vapor sample at the Penthouse property for analysis of PCE and its' breakdown products.

Remedial Activities:

In 2004, a dual-phase extraction (DPE) system was installed in Area 2 as an interim cleanup action that included six DPE wells (DPE-2 through DPE-7) to address TPH-G in soil and ground water. The DPE system ran on a continuous basis from May 2004 until monthly pulsing operations were implemented from May 2006 through March 2007 when a blower failed. A refurbished blower allowed the system to be operated until January 2008 when the blower failed again. An evaluation of the system performance indicated asymptotic results so natural attenuation monitoring was implemented. The DPE system reduced contaminant levels by an average of approximately 95%. A portion of the remediation area remains with concentrations exceeding the Method A cleanup level in area approximately 1,750 square feet in size.

In October 2010, a pilot test was conducted to assess the feasibility of using soil vapor extraction (SVE) as a remedial technology for reducing concentrations of CVOCs in soil and ground water at the Site. The objective of the SVE pilot test was to monitor the response of the vadose zone to

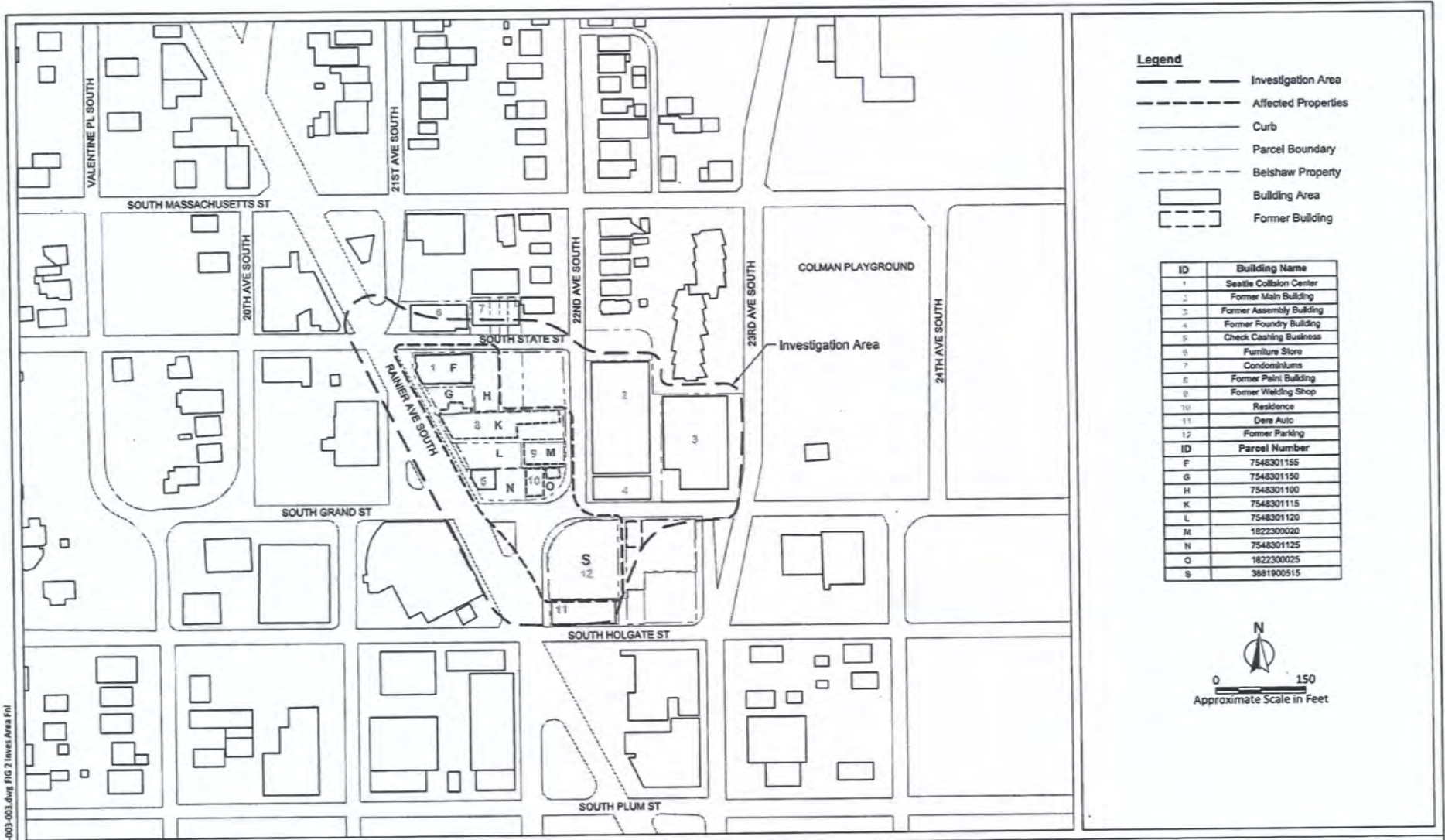
Mr. William Carroll
October 27, 2014
Page 8

an induced vacuum using well RW-1 as an extraction well and monitoring points VMP-1 and VMP-2 as well as monitoring wells MW-24S, MW-25S and MW-26S as vacuum monitoring points.

The pilot test resulted in a low radius of SVE influence which was attributed to possibly the shallow screened interval depths of RW-1 (10 to 15 feet bgs) and VMP-1 and VMP-2 as well as soil heterogeneity.

Mr. William Carroll
October 27, 2014
Page 9

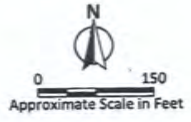
Site Diagrams



Legend

- Investigation Area
- Affected Properties
- Curb
- Parcel Boundary
- Belshaw Property
- Building Area
- Former Building

ID	Building Name
1	Seattle Collision Center
2	Former Main Building
3	Former Assembly Building
4	Former Foundry Building
5	Check Cashing Business
6	Furniture Store
7	Condominiums
8	Former Paint Building
9	Former Welding Shop
10	Residence
11	Deer Auto
12	Former Parking
ID	Parcel Number
F	7548301155
G	7548301150
H	7548301100
K	7548301115
L	7548301120
M	1822300020
N	7548301125
O	1822300025
S	3881900515

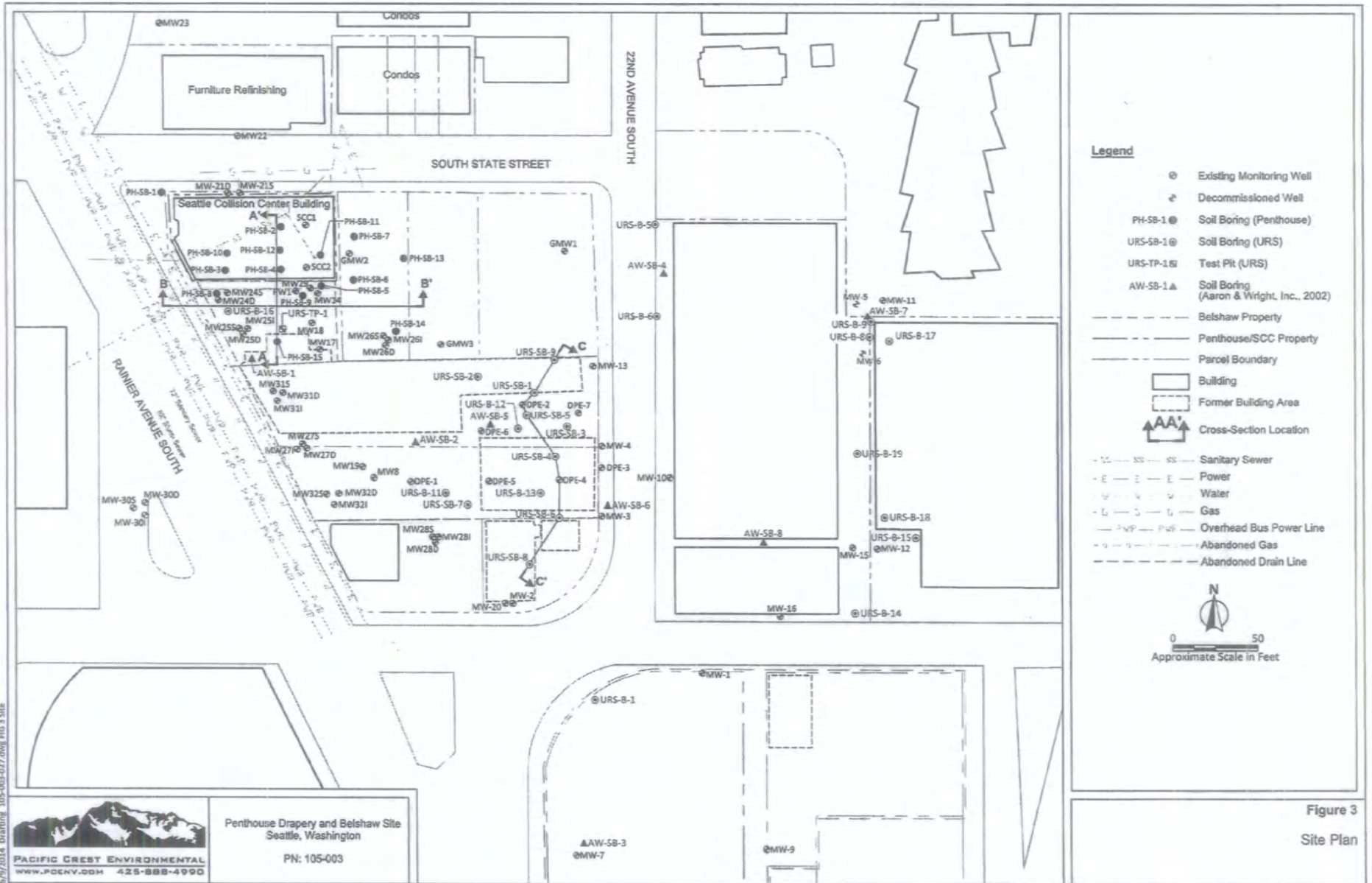


2/17/2014 Drafting 105-003-003.dwg FIG 2 Inves Area.rvt



Penthouse Drapery and Belshaw Site
 Seattle, Washington
 PN: 105-003

Figure 2
 Investigation Area

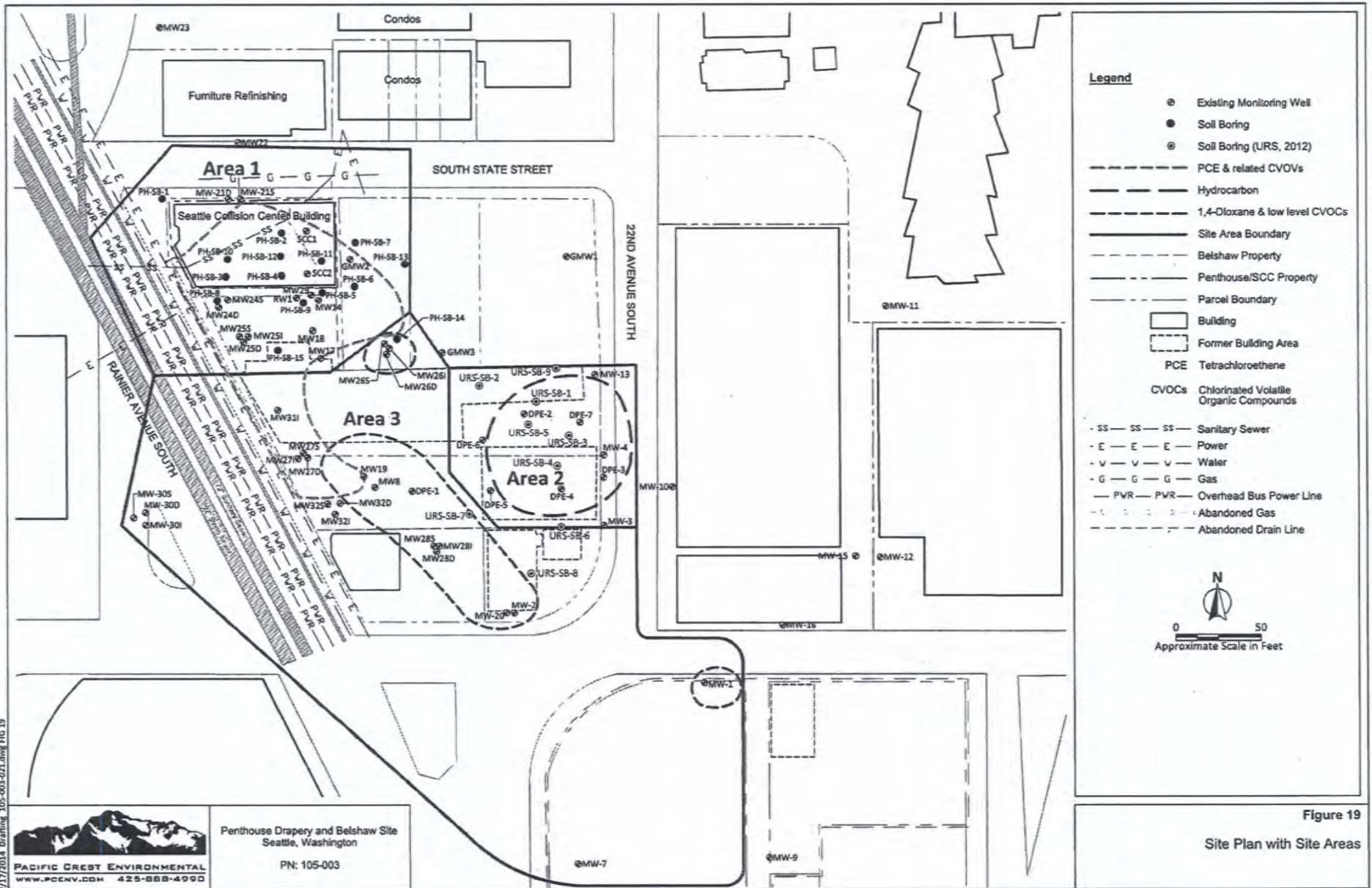


6/9/2014 Drafting 105-003-027.dwg FIG 3 Site



Penthouse Drapery and Belshaw Site
Seattle, Washington

PN: 105-003





STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

Northwest Regional Office • 3190 160th Ave SE • Bellevue, WA 98008-5452 • 425-649-7000

711 for Washington Relay Service • Persons with a speech disability can call 877-833-6341

October 15, 2015

MR. WILLIAM CARROLL
PACIFIC CREST ENVIRONMENTAL LLC
P.O. BOX 952
NORTH BEND, WA 98045

Re: Opinion pursuant to WAC 173-340-515(5) on Proposed Remedial Action for the following Hazardous Waste Site:

- **Name:** Penthouse Drapery Cleaners
- **Address:** 1752 Rainier Avenue South
- **Facility/Site No.:** 23408
- **VCP No.:** NW2278
- **Cleanup Site ID No.:** 3184

Dear Mr. Carroll:

Thank you for submitting documents regarding your proposed remedial action for the **Penthouse Drapery Cleaners** facility (Site) for review by the Washington State Department of Ecology (Ecology) under the Voluntary Cleanup Program (VCP). Ecology appreciates your initiative in pursuing this administrative option for cleaning up hazardous waste sites under the Model Toxics Control Act (MTCA), Chapter 70.105D RCW.

This letter constitutes an advisory opinion regarding a review of submitted documents/reports pursuant to requirements of MTCA and its implementing regulations, Chapter 70.105D RCW and Chapter 173-340 WAC, for characterizing and addressing the following releases at the Site:

- Total petroleum hydrocarbons in the gasoline range (TPH-G) and tetrachloroethene (PCE) in Soil
- PCE, trichloroethylene (TCE), cis-1,2-dichloroethene (DCE), 1,1,1-trichloroethane (TCA), 1,1-dichloroethene, 1,1-dichloroethane, 1,2-dichloroethane, and 1,4-dioxane in Ground Water
- PCE in Air

Ecology is providing this advisory opinion under the specific authority of RCW 70.105D.030(1)(i) and WAC 173-340-515(5).

This opinion does not resolve a person's liability to the state under MTCA or protect a person from contribution claims by third parties for matters addressed by the opinion. The state does



Mr. William Carroll
October 15, 2015
Page 2

not have the authority to settle with any person potentially liable under MTCA except in accordance with RCW 70.105D.040(4). The opinion is advisory only and not binding on Ecology.

Ecology's Toxics Cleanup Program has reviewed the following information regarding your proposed remedial actions:

1. Pacific Crest Environmental, LLC, 2015. *Draft Cleanup Action Plan – Site Area 1, Former Penthouse Drapery, 1752 Rainier Avenue South, Seattle, Washington.* July 9.
2. Pacific Crest Environmental, LLC, 2015. *Response to Ecology's Opinion Letter dated October 27, 2014, Former Penthouse Drapery, 1752 Rainier Avenue South, Seattle, Washington.* April 3.
3. Pacific Crest Environmental, LLC, 2014. *Draft Remedial Investigation Feasibility Study Report, Former Penthouse Drapery, 1752 Rainier Avenue South, Seattle, Washington.* July 28.
4. Pacific Crest Environmental, LLC, 2011. *Remedial Investigation-Feasibility Study Report, Former Penthouse Drapery, 1752 Rainier Avenue South, Seattle, Washington.* May 13.
5. Pacific Crest Environmental, LLC, 2010. *Sampling and Analysis Plan, Former Penthouse Drapery, 1752 Rainier Avenue South, Seattle, Washington, Ecology VCP # NW2278.* August 3.
6. Pacific Crest Environmental, LLC, 2010. *Data Summary Report, Former Penthouse Drapery, 1752 Rainier Avenue South, Seattle, Washington.* July 30.

The reports listed above will be kept in the Central Files of the Northwest Regional Office of Ecology (NWRO) for review by appointment only. Appointments can be made by calling the NWRO resource contact at (425) 649-7235 or sending an email to: nwro_public_request@ecy.wa.gov.

The Site is defined by the extent of contamination caused by the following releases:

- TPH-G and PCE in Soil
- PCE, trichloroethylene (TCE), cis-1,2-dichloroethene (DCE), 1,1,1-trichloroethane (TCA), 1,1-dichloroethene, 1,1-dichloroethane, 1,2-dichloroethane, and 1,4-dioxane in Ground Water
- PCE in Air

Based on a review of supporting documentation listed above, pursuant to **requirements contained in MTCA and its implementing regulations, Chapter 70.105D RCW and Chapter 173-340 WAC, for characterizing and addressing the releases at the Site, Ecology has determined:**

- The April 3, 2015 response letter to Ecology's opinion letter dated October 27, 2014 generally clarified the questions and issues raised in the opinion letter. The draft Remedial Investigation/Feasibility Study (RI/FS) should be finalized with the additional information and revised tables and figures provided with the response letter.
- The response to Comment No. 11 in the April 3, 2015 response letter states that attempts to generate potentiometric surface elevation contour maps have produced anomalous results. Synoptic water level data should continue to be collected including rounds with the nine new wells proposed in the Cleanup Action Plan. Additional attempts to contour the water level elevation data should continue as well in an effort to resolve the anomalous data. The direction of the hydraulic gradient in all water-bearing zones is needed to confirm adequate characterization and remediation of the Site.
- The Site-specific cleanup levels for soil, ground water and air provided in the Feasibility Study (FS) are appropriate for the Site.
- The remediation of Site Area 1 (SA-1) will include the following elements:
 - Nine existing monitoring wells constructed of PVC will be decommissioned.
 - Nine new monitoring wells will be installed to replace the decommissioned PVC wells. The nine monitoring wells will be installed as three well nests, each comprised of a shallow, intermediate and deep water-bearing zone well. The well casings will be carbon steel; the well screens will be stainless steel.
 - Combination electrode/soil vapor extraction (SVE) wells will be installed in single nominal 13-inch diameter boreholes in twenty locations within a grid. Within each borehole, a screen for the electrical resistance heating (ERH) electrode and a screen for an SVE system component will be placed:
 - Two deep electrode/SVE wells will be installed inside the Seattle Collision Center (SCC) building.

- Three angled electrode/SVE wells will be installed under the SCC building from locations adjacent to and south of the building.
 - Five temperature monitoring probes are proposed however Figure 7 shows only three temperature monitoring probes. Temperature monitoring probes will be constructed of 1.5-inch diameter chlorinated polyvinyl chloride (CPVC) housing thermocouples installed at approximately 5-foot vertical intervals.
 - Conveyance piping constructed of CPVC will connect the SVE wells.
- The ERH mechanical and electrical system components include an SVE blower, a steam condenser unit and a control panel.
 - Recovered vapors and ground water will be treated using GAC. Treated vapors will be discharged to the atmosphere and treated ground water will be discharged to the sanitary sewer. Soil vapor will be discharged through a 3-inch diameter stack extending above the SCC Building roof-line.
 - The ERH system will operate until the design remediation energy of 1,790,000 kWh has been input.
 - The ERH system will be shut down when post-ERH performance sampling indicates that concentrations of CVOCs at SA-1 are below Method A cleanup levels in soil and the Site-specific remediation levels in ground water.
 - The ERH system components will be decommissioned when the cleanup is complete and will not be removed until post-ERH performance sampling demonstrates that there is no need for further operation.
 - Volatile organic compounds remaining in ground water at concentrations below Site-specific remediation levels but exceeding Site-specific cleanup levels following ERH will be degraded by enhanced in-situ anaerobic bioremediation. The remaining VOCs will be degraded in place by biodegradation, hydrolysis and reductive dehalogenation by zero valent iron. Additional enhancements may be needed.
 - Performance monitoring will be conducted in indoor and ambient air, ground water, soil and the ERH system effluent (air and water).
 - Confirmational monitoring will be conducted to confirm the long-term effectiveness of the cleanup action. A minimum of four consecutive quarters of ground water

Mr. William Carroll
October 15, 2015
Page 5

monitoring data below the Site-specific cleanup levels will be obtained from all wells in SA-1.

- The above list confirms Ecology's understanding of the implementation of FS Alternative 1 in SA-1. Ecology agrees with the approach.

This opinion does not represent a determination by Ecology that a proposed remedial action will be sufficient to characterize and address the specified contamination at the Site or that no further remedial action will be required at the Site upon completion of the proposed remedial action. To obtain either of these opinions, you must submit appropriate documentation to Ecology and request such an opinion under the VCP. **This letter also does not provide an opinion regarding the sufficiency of any other remedial action proposed for or conducted at the Site.**

Please note that this opinion is based solely on the information contained in the documents listed above. Therefore, if any of the information contained in those documents is materially false or misleading, then this opinion will automatically be rendered null and void.

The state, Ecology, and its officers and employees make no guarantees or assurances by providing this opinion, and no cause of action against the state, Ecology, its officers or employees may arise from any act or omission in providing this opinion.

Again, Ecology appreciates your initiative in conducting independent remedial action and requesting technical consultation under the VCP. As the cleanup of the Site progresses, you may request additional consultative services under the VCP, including assistance in identifying applicable regulatory requirements and opinions regarding whether remedial actions proposed for or conducted at the Site meet those requirements.

If you have any questions regarding this opinion, please contact me at (425) 649-7064 or hvic461@ecy.wa.gov.

Sincerely,

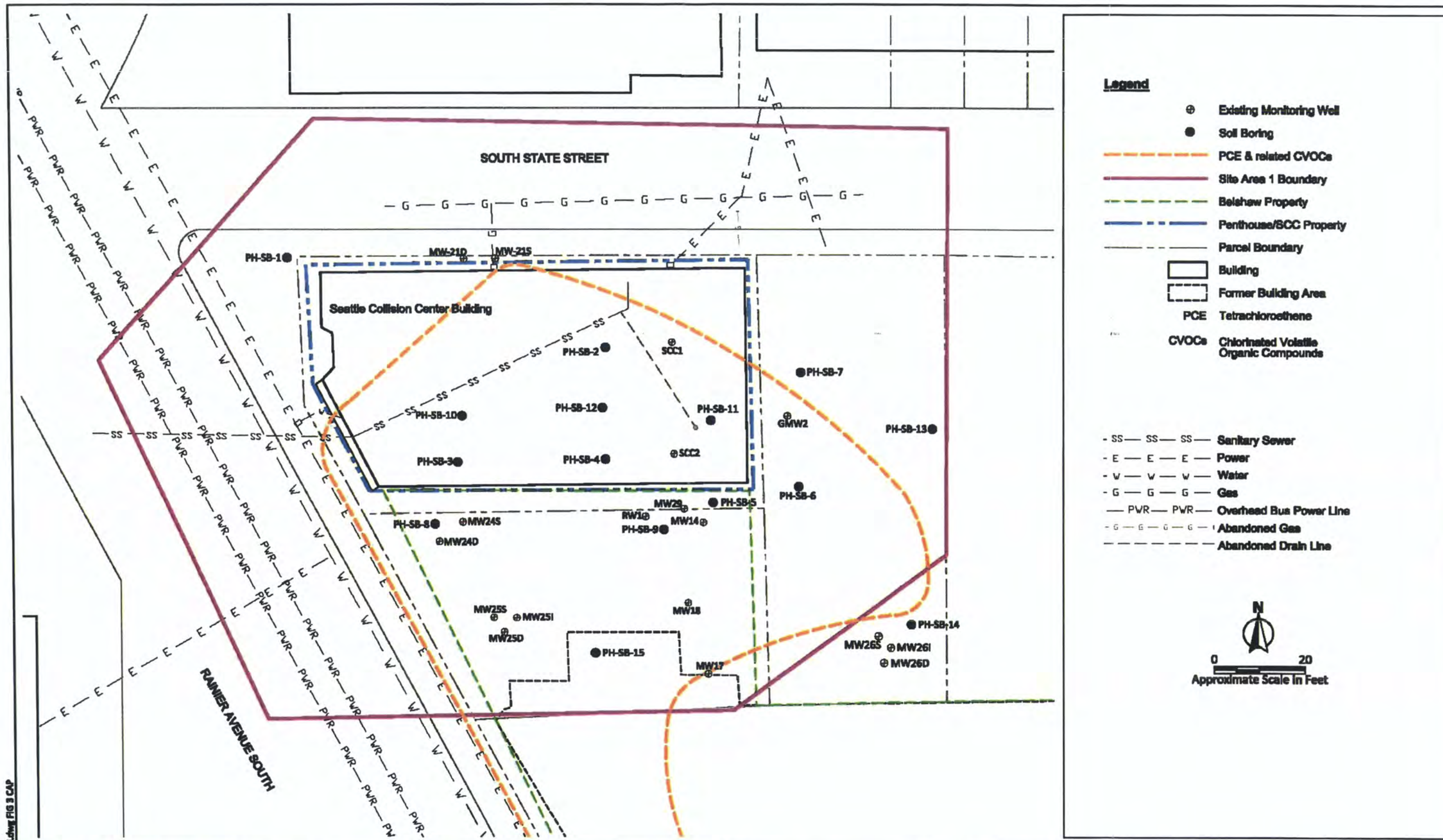


Heather Vick, LHg
NWRO Toxics Cleanup Program

cc: David Raubvogel, AECOM
Sonia Fernandez, VCP Coordinator, Ecology

APPENDIX E

Electrical Resistance Heating System Plans



- Legend**
- ⊕ Existing Monitoring Well
 - Soil Boring
 - - - - - PCE & related CVOCs
 - Site Area 1 Boundary
 - - - - - Belshaw Property
 - - - - - Penthouse/SCC Property
 - - - - - Parcel Boundary
 - ▭ Building
 - ▭ Former Building Area
 - PCE Tetrachloroethene
 - CVOCs Chlorinated Volatile Organic Compounds
 - SS - SS - SS - Sanitary Sewer
 - E - E - E - Power
 - W - W - W - Water
 - G - G - G - Gas
 - PWR - PWR - Overhead Bus Power Line
 - G - G - G - Abandoned Gas
 - - - - - Abandoned Drain Line

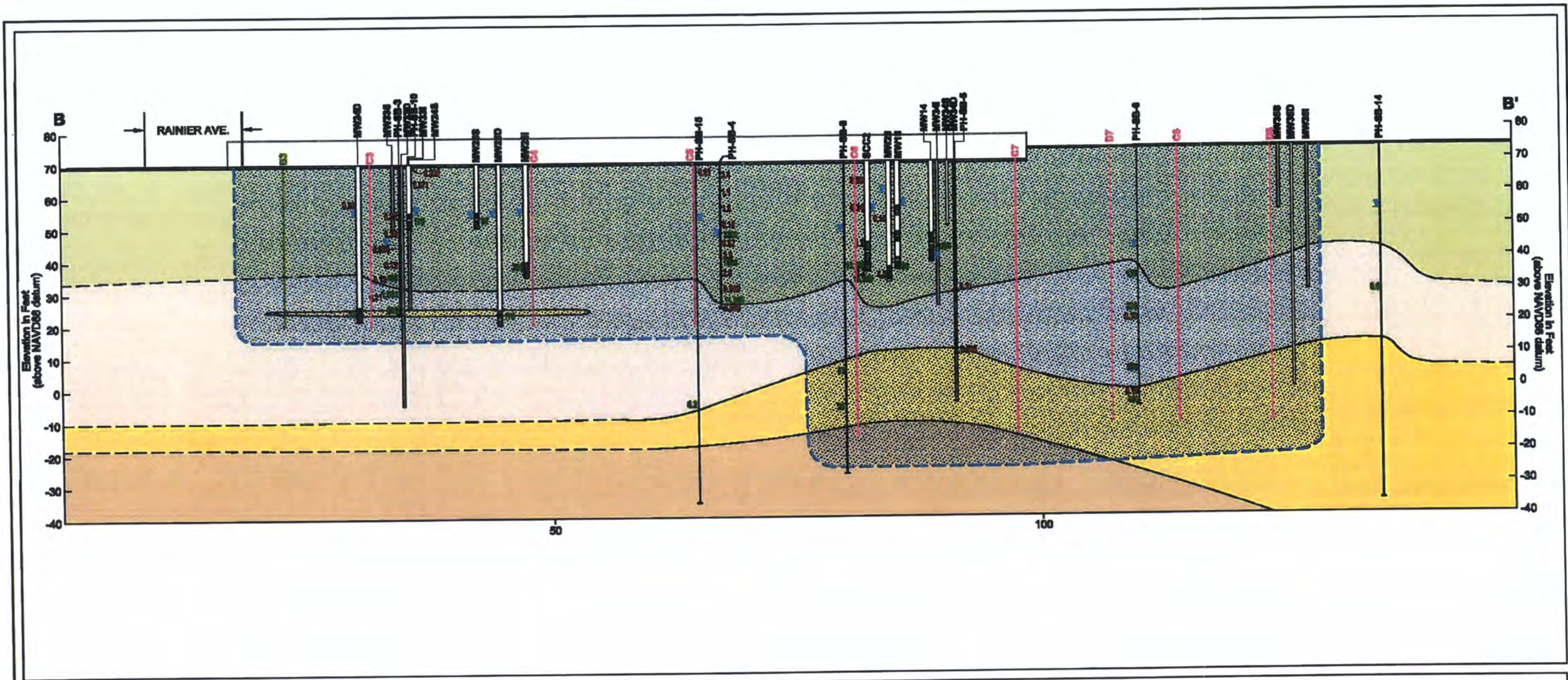


7/7/2015 105-003-056.dwg FIG 3 CAP



Penthouse Drapery and Belshaw Site
Seattle, Washington
PN: 105-003

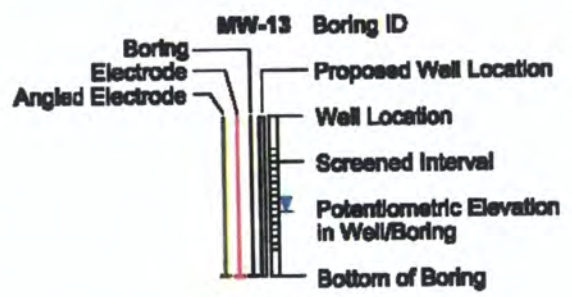
Figure 3
Site Area 1 Plan



Legend

- Asphalt / Fill
- Interbedded Silt/Sand
- Silt (ML)
- Sand or Sand and Gravel containing Silt (SM, SM-GM)
- Sandy Silt
- Contact between Sediment Types (dashed where Inferred)
- Building

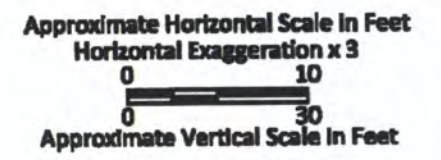
- Concentration of PCE in Groundwater in µg/L that Exceeds Proposed FS Cleanup Level of 5 µg/L
- Concentration of PCE in Soil in mg/kg that Exceeds Proposed FS Cleanup Level of 0.05 mg/kg
- Estimated Area of Heating Influence



Notes:

Concentrations of PCE are displayed if they exceed the Proposed FS Cleanup Level.

PCE = tetrachloroethene
 µg/L = micrograms per liter
 mg/kg = milligrams per kilogram
 FS = Feasibility Study



7/7/2015 105-003-038.dwg FIG 9 CAP



Penthouse Drapery and Belshaw Site
 Seattle, Washington
 PN: 105-003

Figure 9
 Cross Section B-B' with Electrodes

Depth	PCE	TCE
5-6	0.047	<0.00078
8.5-10	0.047	<0.00079
13.5-15	0.025	<0.00094
18.5-20	0.0080	<0.00084
23.5-25	<0.00081	<0.00081
26-27.5	<0.00090	<0.00090
28.5-30	<0.00089	<0.00089
33.5-35	<0.00062	<0.00062
38.5-40	0.00017	<0.00078
43.5-45	<0.0085	<0.00085

Depth	PCE	TCE
2-4	0.13	<0.00094
SB12-2-4 (duplicate)		
2-4	0.084	<0.00096

Depth	PCE	TCE
0-1	0.089	<0.00094

Depth	PCE	TCE
5-6.5	0.032	<0.00099
15-16.5	0.32	<0.00088
20-21.5	0.30	<0.00090
25-26.5	0.056	<0.00076
25-26.5	0.049	<0.00081
30-31.5	0.12	<0.00084
35-36.5	0.13	<0.00090
40-41.5	0.11	<0.00077
45-46.5	0.036	<0.00087

Depth	PCE	TCE
0.5-6	0.0030	<0.0011
6-10	0.0046	<0.0013
10-16.5	0.23	<0.0013
20-26	0.43	<0.0010
33-35	0.0020	<0.00088
40-46	<0.0011	<0.0011
50-55	0.064	<0.00082
64-66	<0.00084	<0.00084
74-80	<0.00093	<0.00093

Depth	PCE	TCE
6	0.02	<0.03
9	0.02	<0.03
14	0.33	0.03
46	<0.02	<0.03

Depth	PCE	TCE
5-6.5	2.4	<0.00088
10-11.5	1.1	<0.00076
15-16.5	1.5	<0.00077
20-21.5	0.16	<0.00084
25-26.5	0.87	<0.00092
30-30.5	3.5	<0.00077
35-36.5	2.6	<0.00082
40-41.5	0.09	<0.00074
45-56	0.056	<0.00071

Depth	PCE	TCE
6	0.0069	<0.0011
6	<0.02	<0.03
13	0.036	<0.3

Depth	PCE	TCE
63.5-70	<0.00097	<0.00097
70-78.5	<0.0011	<0.0011
85-87.5	<0.0013	<0.0013
95-97.5	<0.0012	<0.0012

Depth	PCE	TCE
9	0.0018	<0.00068
41.5	0.0053	0.00099
71.5	<0.00067	<0.00067

Depth	PCE	TCE
6.5	0.22	<0.03
9.5	0.14	<0.03
11.5	0.16	<0.03

Depth	PCE	TCE
2-4	<0.00090	<0.00090
7.5-9.5	<0.0011	<0.0011
13-17	<0.00096	<0.00096
25-26.5	<0.0010	<0.0010
34-35	<0.00094	<0.00094
42-45	<0.0012	<0.0012
52.5-55	<0.0012	<0.0012
62.5-65	<0.0011	<0.0011
75-77.5	<0.0011	<0.0011

Depth	PCE	TCE
34-36	<0.0010	<0.0010
44-46	<0.00092	<0.00092
54-56	<0.0012	<0.0012
64-66	<0.00099	<0.00099
74-76	<0.0010	<0.0010
86-88	<0.00092	<0.00092
94-96	<0.0011	<0.0011
104-106	<0.0012	<0.0012

Depth	PCE	TCE
2-4	0.0087	<0.00094
8-10	0.024	<0.0010
10-12	0.025	<0.00092

Depth	PCE	TCE
2.5-5	<0.0010	<0.0010
7.5-10	0.0013	<0.00096
12.5-15	0.0012	<0.00096
22.5-25	<0.00093	<0.00093
33-36	0.028	<0.00097
46-47	0.0038	<0.0010
51-55	0.10	<0.00091
62.5-65	0.0029	<0.0011
75-78	0.19	<0.0011

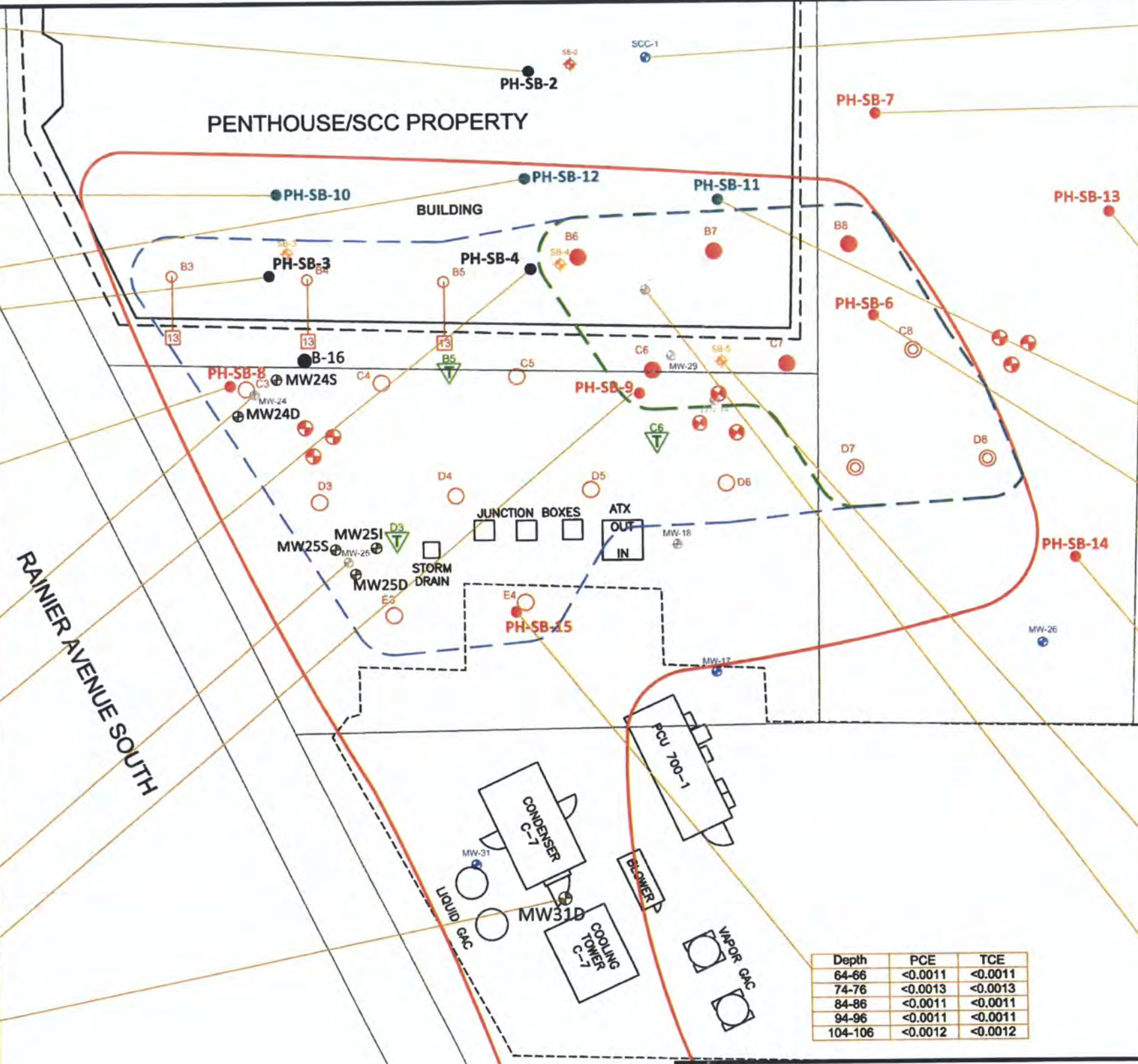
Depth	PCE	TCE
34-36	<0.00083	<0.00083
44-46	<0.0010	<0.0010
54-56	<0.0011	<0.0011
64-66	0.0082	<0.00093
74-76	0.0071	<0.0011
86-88	0.0037	<0.0011
94-96	0.0016	<0.0012
104-106	<0.0011	<0.0011

Depth	PCE	TCE
40	0.21	<0.00080
46	0.023	<0.00089
51	0.00087	<0.00098
56	0.033	<0.00085
56	0.032	<0.00083
61	0.088	<0.0011

Depth	PCE	TCE
5	0.39	<0.03
15	0.34	<0.03
25	1.2	<0.03
35	4.2	<0.03


LEGEND

- SOIL BORING ADVANCED 2010
- EXISTING MONITORING WELL
- EXISTING MONITORING WELL TO BE ABANDONED
- ERH ELECTRODE (5'-50') (QTY. 9)
- ERH ELECTRODE (40'-85') (QTY. 3)
- ERH ELECTRODE (5'-85') (QTY. 5)
- ANGLED ELECTRODE (5'-50') (QTY. 3)
- TEMPERATURE MONITORING POINT (QTY. 3)
- EXTENT OF COCS IN GROUNDWATER ABOVE SITE PSL
- CONFIRMATION MONITORING WELL (QTY. 9)
- AREA OF HEATING INFLUENCE
- AREA OF DEEP HEATING INFLUENCE



DRAFT
Not Approved for Construction





TRS
Accelerating Value

DESIGNED BY
D. SEILER

DRAWN BY
A. PEABODY

CHECKED BY
TRS PERSONNEL

PROJECT MANAGER
J. LILLIE

APPROVED FOR IMPLEMENTATION

BY _____ DATE _____

FOR _____ DATE _____

FOR
FORMER PENTHOUSE DRAPERY
SEATTLE, WASHINGTON

**SITE PLAN
SOIL CONCENTRATIONS**

DATE 05/08/15 PROJECT SEA12

SHEET **Y-1A**

CONFIDENTIAL: INFORMATION CONTAINED IN THIS DOCUMENT IS CONFIDENTIAL AND THE PROPERTY OF TRS GROUP, INC. NO INFORMATION CONTAINED HEREIN MAY BE DUPLICATED, USED OR DISTRIBUTED WITHOUT THE EXPRESSED WRITTEN PERMISSION OF TRS GROUP, INC. LONGVIEW, WA.

SCC1 (µg/L) 8/7/2012			
Depth	PCE	TCE	TCA
27.5-37.5	27	<0.20	<0.20

PH-SB-2 (µg/L) 8/15/2010		
Depth	PCE	TCE
32	0.58	<0.20
40	4.8	<0.20

PH-SB-4 (µg/L) 8/22/2010		
Depth	PCE	TCE
24	3,200	<50
30	1,500	<20
40	14,000	<100

PH-SB-3 (µg/L) 9/12/2010		
Depth	PCE	TCE
35	450	<4.0
40	1000	<4.0
40	970	<4.0
45	630	<4.0

SCC2 (µg/L) 8/7/2012			
Depth	PCE	TCE	TCA
25-35	5,900	<30	<30

PH-SB-8 (µg/L) 9/10/2012		
Depth	PCE	TCE
25	740	<0.40
35	110	<10
45	91	<10
55	56	<0.40
65	18	<0.20

MW24S (µg/L) 8/7/2012			
Depth	PCE	TCE	TCA
15-20	170	<1.0	<1.0

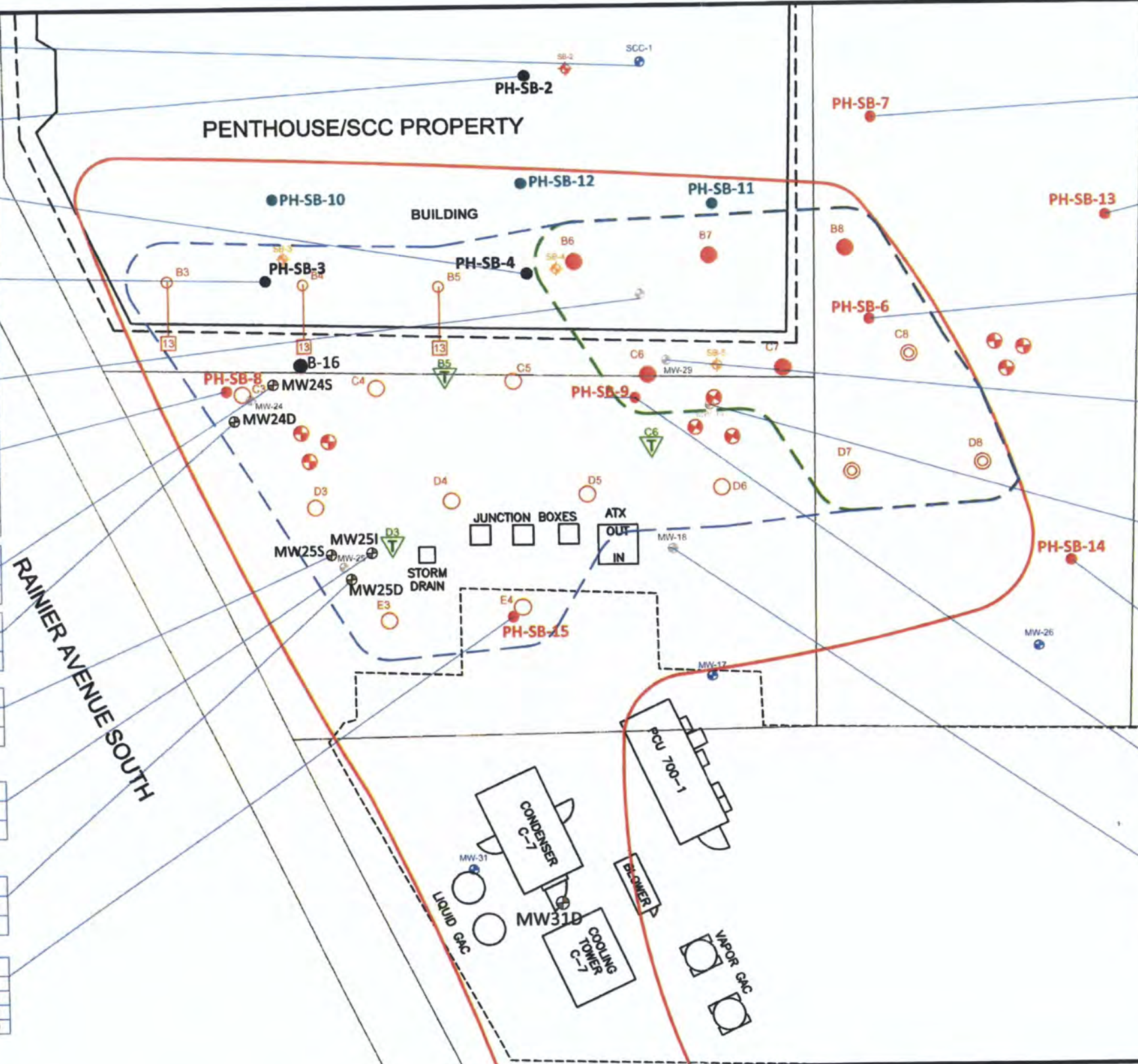
MW24D (µg/L) 8/7/2012			
Depth	PCE	TCE	TCA
44-49	19	3.0	0.26

MW25S (µg/L) 8/7/2012			
Depth	PCE	TCE	TCA
13-18	89	1.6	<1.0

MW25I (µg/L) 8/7/2012			
Depth	PCE	TCE	TCA
29-34	290	7.4	<2.0

MW25D (µg/L) 8/7/2012			
Depth	PCE	TCE	TCA
44-49	170	10	<1.0

PH-SB-15 (µg/L) 1/3/2013		
Depth	PCE	TCE
70-80	6.2	<0.20
80-90	1.0	<0.20
100-106.5	<0.20	<0.20



PH-SB-7 (µg/L) 9/4/12		
Depth	PCE	TCE
30	0.37	<0.20
48	0.62	<0.20
75	<0.20	<0.20

PH-SB-13 (µg/L) 1/8/2013		
Depth	PCE	TCE
70-80	<0.20	<0.20
80-90	1.2	<0.20
100-110	0.56	<0.20

PH-SB-6 (µg/L) 9/6/2012		
Depth	PCE	TCE
35	130	<0.40
50	920	<10
70	270	<2.0
80	450	<2.0

MW29 (µg/L) 8/7/2012			
Depth	PCE	TCE	TCA
33-38	12,000	<60	<60

MW14 (µg/L) 8/7/2012			
Depth	PCE	TCE	TCA
25-35	7,900	<50	<50

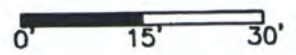
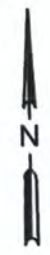
PH-SB-14 (µg/L) 12/28/2012		
Depth	PCE	TCE
30-40	<0.20	<0.20
40-50	8.6	<0.20
70-80	2.7	<0.20
80-90	0.41	<0.20
100-110	<0.20	<0.20

PH-SB-9 (µg/L) 9/7/2012		
Depth	PCE	TCE
65	83	<0.40
75	26	<2.0

MW18 (µg/L) 7/24/2012			
Depth	PCE	TCE	TCA
14-17	1.6	<0.020	<0.020
22-25	3.7	<0.020	<0.020
30-40	89	<0.40	<0.40

LEGEND

- SOIL BORING ADVANCED 2010
- EXISTING MONITORING WELL
- EXISTING MONITORING WELL TO BE ABANDONED
- ERH ELECTRODE (5'-50') (QTY. 9)
- ERH ELECTRODE (40'-85') (QTY. 3)
- ERH ELECTRODE (5'-85') (QTY. 5)
- ANGLED ELECTRODE (5'-50') (QTY. 3)
- TEMPERATURE MONITORING POINT (QTY. 3)
- EXTENT OF COCS IN GROUNDWATER ABOVE SITE PSL
- CONFIRMATION MONITORING WELL (QTY. 9)
- AREA OF HEATING INFLUENCE
- AREA OF DEEP HEATING INFLUENCE

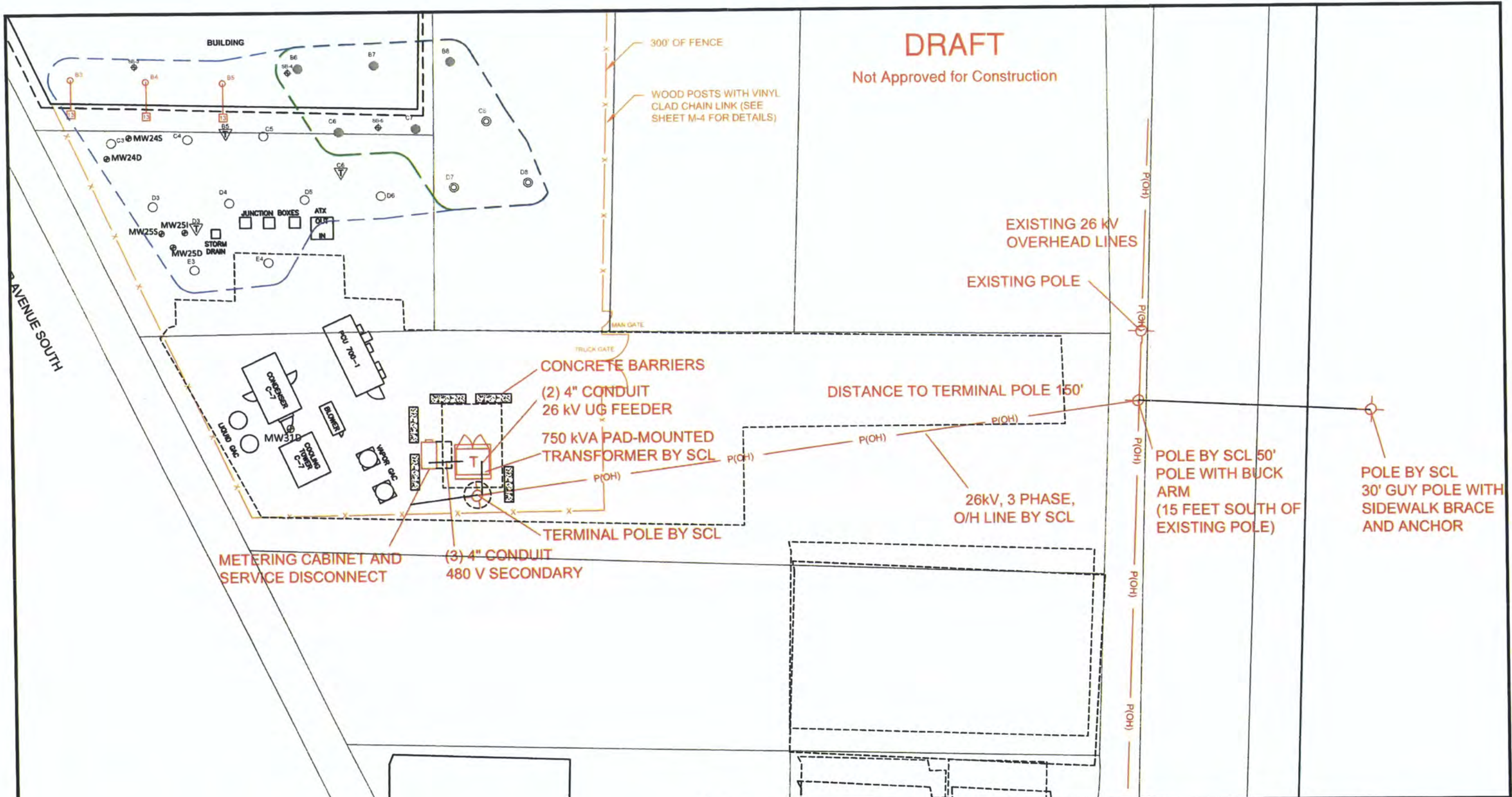


DRAFT
Not Approved for Construction



CONFIDENTIAL: INFORMATION CONTAINED IN THIS DOCUMENT IS CONFIDENTIAL AND THE PROPERTY OF TRS GROUP, INC. NO INFORMATION CONTAINED HEREIN MAY BE DUPLICATED, USED OR DISTRIBUTED WITHOUT THE EXPRESSED WRITTEN PERMISSION OF TRS GROUP, INC. LONGVIEW, WA.

DESIGNED BY D. SEILER	FOR FORMER PENTHOUSE DRAPERY SEATTLE, WASHINGTON
DRAWN BY A. PEABODY	SITE PLAN GW CONCENTRATIONS
CHECKED BY TRS PERSONNEL	
PROJECT MANAGER J. LILLIE	DATE 05/08/15 PROJECT SEA12
APPROVED FOR IMPLEMENTATION	SHEET Y-1B
BY _____	DATE _____



DRAFT

Not Approved for Construction

300' OF FENCE
WOOD POSTS WITH VINYL CLAD CHAIN LINK (SEE SHEET M-4 FOR DETAILS)

EXISTING 26 KV OVERHEAD LINES
EXISTING POLE

CONCRETE BARRIERS
(2) 4" CONDUIT
26 KV UG FEEDER
750 kVA PAD-MOUNTED TRANSFORMER BY SCL

DISTANCE TO TERMINAL POLE 150'

26kV, 3 PHASE, O/H LINE BY SCL

POLE BY SCL 50' POLE WITH BUCK ARM (15 FEET SOUTH OF EXISTING POLE)

POLE BY SCL 30' GUY POLE WITH SIDEWALK BRACE AND ANCHOR

METERING CABINET AND SERVICE DISCONNECT

(3) 4" CONDUIT
480 V SECONDARY

RAVENUE SOUTH



	DESIGNED BY D. SEILER	FOR FORMER PENTHOUSE DRAPERY SEATTLE, WASHINGTON
	DRAWN BY A. PEABODY	ELECTRICAL SERVICE
CHECKED BY TRS PERSONNEL	DATE 05/08/15 PROJECT SEA12	
PROJECT MANAGER J. LILLIE	APPROVED FOR IMPLEMENTATION	SHEET Y-1C
BY _____ DATE _____		
FOR _____		

CONFIDENTIAL: INFORMATION CONTAINED IN THIS DOCUMENT IS CONFIDENTIAL AND THE PROPERTY OF TRS GROUP, INC. NO INFORMATION CONTAINED HEREIN MAY BE DUPLICATED, USED OR DISTRIBUTED WITHOUT THE EXPRESSED WRITTEN PERMISSION OF TRS GROUP, INC. LONGVIEW, WA.

APPENDIX F

Aspect 2017 Exploration Logs



Mt. Baker Housing Ass'n - Grand St Commons - 170304

Monitoring Well Log

Project Address & Site Specific Location

1750 & 1765 22nd Ave S. Seattle WA, West Block

Coordinates (SPN NAD83 ft)

E:1277459 N:217715

Exploration Number

AC-MW-01

Contractor

Cascade

Equipment

CME 75 truck rig

Sampling Method

300-lb autohammer w/ Dames & Moore sampler

Ground Surface (GS) Elev. (NAVD88)

74.5'

Operator

Curtis

Exploration Method(s)

Hollow Stem Auger

Work Start/Completion Dates

8/28/2017

Top of Casing Elev. (NAVD88)

73.9'

Depth to Water (Below GS)

21.01' (Static)

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
		Flush 8-inch-diameter monument					FILL Loose, dry, gray, sandy GRAVEL (GP); coarse gravel, fine to medium sand.	
		2-inch-diameter PVC casing in concrete					Loose, moist, dark brown, silty SAND (SM); fine to medium sand, trace gravel.	
		2-inch-diameter PVC casing in bentonite chips					GLACIAL DEPOSITS (RECESSIONAL LACUSTRINE) Medium stiff, moist, gray-brown, CLAY (CL); low plasticity.	
70			S-1	Chemically Analyzed	Sheen= none Odor= none PID= <1 ppm Blows/ft (non-SPT)= 7			
5			S-2		Sheen= none Odor= none PID= <1 ppm Blows/ft (non-SPT)= 13		Becomes stiff	5
65			S-3	Chemically Analyzed	Sheen= none Odor= none PID= <1 ppm Blows/ft (non-SPT)= 23		Becomes very stiff	10
10			S-4		Sheen= none Odor= none PID= <1 ppm Blows/ft (non-SPT)= 66		GLACIAL DEPOSITS (GLACIALLY OVERRIDDEN) Very dense, slightly moist, gray, silty to very silty SAND (SM); fine to medium sand, trace to some gravel.	15
60		slotted screen in sand						
15								
55								

Legend

- No Soil Sample Recovery
- Split Barrel 3.25" X 2.375" (D&M)

Water Level

Static Water Level

See Exploration Log Key for explanation of symbols

Logged by: FK
Approved by: DHM 1/11/2018

Exploration Log
AC-MW-01

Sheet 1 of 2



Mt. Baker Housing Ass'n - Grand St Commons - 170304

Monitoring Well Log

Project Address & Site Specific Location

Coordinates (SPN NAD83 ft)

Exploration Number

1750 & 1765 22nd Ave S. Seattle WA, West Block

E:1277459 N:217715

AC-MW-01

Contractor

Equipment

Sampling Method

Ground Surface (GS) Elev. (NAVD88)

Ecology Well Tag No.
BKA 324

Cascade

CME 75 truck rig

300-lb autohammer w/ Dames & Moore sampler

74.5'

Operator

Exploration Method(s)

Work Start/Completion Dates

Top of Casing Elev. (NAVD88)

Depth to Water (Below GS)

Curtis

Hollow Stem Auger

8/28/2017

73.9'

21.01' (Static)

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
		▼ 11/15/2017	S-5		Sheen= none Odor= none PID= <1 ppm Blows/ft (non-SPT)= 100		GLACIAL DEPOSITS (GLACIALLY OVERRIDDEN) Very dense, slightly moist, gray, silty to very silty SAND (SM); fine to medium sand, trace to some gravel. (continued) Becomes moist	
25			S-6		Sheen= none Odor= none PID= <1 ppm Blows/ft (non-SPT)= 100			25
30			S-7		Sheen= none Odor= none PID= <1 ppm Blows/ft (non-SPT)= 100	Hard, slightly moist, gray, slightly sandy to sandy SILT (ML); low plasticity, fine to medium sand, trace coarse sand and fine gravel.		30
							Bottom of exploration at 30 ft. bgs.	
35								35

Legend

- No Soil Sample Recovery
- Split Barrel 3.25" X 2.375" (D&M)

Water Level

▼ Static Water Level

See Exploration Log Key for explanation of symbols

Logged by: FK
Approved by: DHM 1/11/2018

Exploration Log
AC-MW-01

Sheet 2 of 2



Mt. Baker Housing Ass'n - Grand St Commons - 170304

Monitoring Well Log

Project Address & Site Specific Location

Coordinates (SPN NAD83 ft)

Exploration Number

1750 & 1765 22nd Ave S. Seattle WA, South Block

E:1277578 N:217468

AC-MW-02

Contractor

Equipment

Sampling Method

Ground Surface (GS) Elev. (NAVD88)

Ecology Well Tag No. BKA 325

Cascade

CME 75 truck rig

300-lb autohammer w/ Dames & Moore sampler

70'

Operator

Exploration Method(s)

Work Start/Completion Dates

Top of Casing Elev. (NAVD88)

Depth to Water (Below GS)

Curtis

Hollow Stem Auger

8/28/2017

69.4'

16.31' (Static)

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
5	65	Flush 8-inch-diameter monument 2-inch-diameter PVC casing in concrete 2-inch-diameter PVC casing in bentonite chips	S-1 S-2	Chemically Analyzed	Sheen= none Odor= none PID= <1 ppm Blows/ft (non-SPT)= 12		FILL Loose, dry, gray, sandy GRAVEL (GP); coarse gravel; fine to medium sand. Medium dense, moist, dark brown, silty to very silty SAND (SM); fine to medium sand, trace gravel, trace wood debris.	5
10	60	slotted screen in sand	S-3	Chemically Analyzed	Sheen= moderate Odor= slight diesel PID= 5 ppm Blows/ft (non-SPT)= 4		GLACIAL DEPOSITS (RECESSIONAL LACUSTRINE) Medium stiff, moist, brown, CLAY (CL); low plasticity.	10
15	55	Static Water Level	S-4		Sheen= none Odor= none PID= <1 ppm Blows/ft (non-SPT)= 8		WEATHERED GLACIAL DEPOSITS (GLACIALLY OVERRIDDEN) Medium dense, very moist, gray-brown, slightly gravelly, silty to very silty SAND (SM); fine to medium sand, fine to coarse subrounded gravel.	15

Legend

- No Soil Sample Recovery
- Split Barrel 3.25" X 2.375" (D&M)

Water Level

Static Water Level

See Exploration Log Key for explanation of symbols

Logged by: FK
Approved by: DHM 1/11/2018

Exploration Log
AC-MW-02

Sheet 1 of 2



Mt. Baker Housing Ass'n - Grand St Commons - 170304

Monitoring Well Log

Project Address & Site Specific Location 1750 & 1765 22nd Ave S. Seattle WA, South Block		Coordinates (SPN NAD83 ft) E:1277578 N:217468	Exploration Number AC-MW-02
Contractor Cascade	Equipment CME 75 truck rig	Sampling Method 300-lb autohammer w/ Dames & Moore sampler	Ground Surface (GS) Elev. (NAVD88) 70' Ecology Well Tag No. BKA 325
Operator Curtis	Exploration Method(s) Hollow Stem Auger	Work Start/Completion Dates 8/28/2017	Top of Casing Elev. (NAVD88) 69.4' Depth to Water (Below GS) 16.31' (Static)

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
			S-5		Sheen= none Odor= none PID= <1 ppm Blows/ft (non-SPT)= 28		WEATHERED GLACIAL DEPOSITS (GLACIALLY OVERRIDDEN) Medium dense, very moist, gray-brown, slightly gravelly, silty to very silty SAND (SM); fine to medium sand, fine to coarse subrounded gravel. (continued) Becomes wet	
25	45		S-6		Sheen= none Odor= none PID= <1 ppm Blows/ft (non-SPT)= 50		GLACIAL DEPOSITS (GLACIALLY OVERRIDDEN) Hard, slightly moist, gray, slightly sandy SILT (ML); low plasticity, fine to medium sand, trace coarse sand and fine gravel.	25
							Bottom of exploration at 25 ft. bgs.	
30	40							30
35	35							35

ASPECT STANDARD EXPLORATION LOG TEMPLATE P:\GINT\PROJECTS\IMBHA BELSHAW 170304.GPJ December 9, 2018

Legend

- No Soil Sample Recovery
- Split Barrel 3.25" X 2.375" (D&M)

Water Level

See Exploration Log Key for explanation of symbols

Logged by: FK
Approved by: DHM 1/11/2018

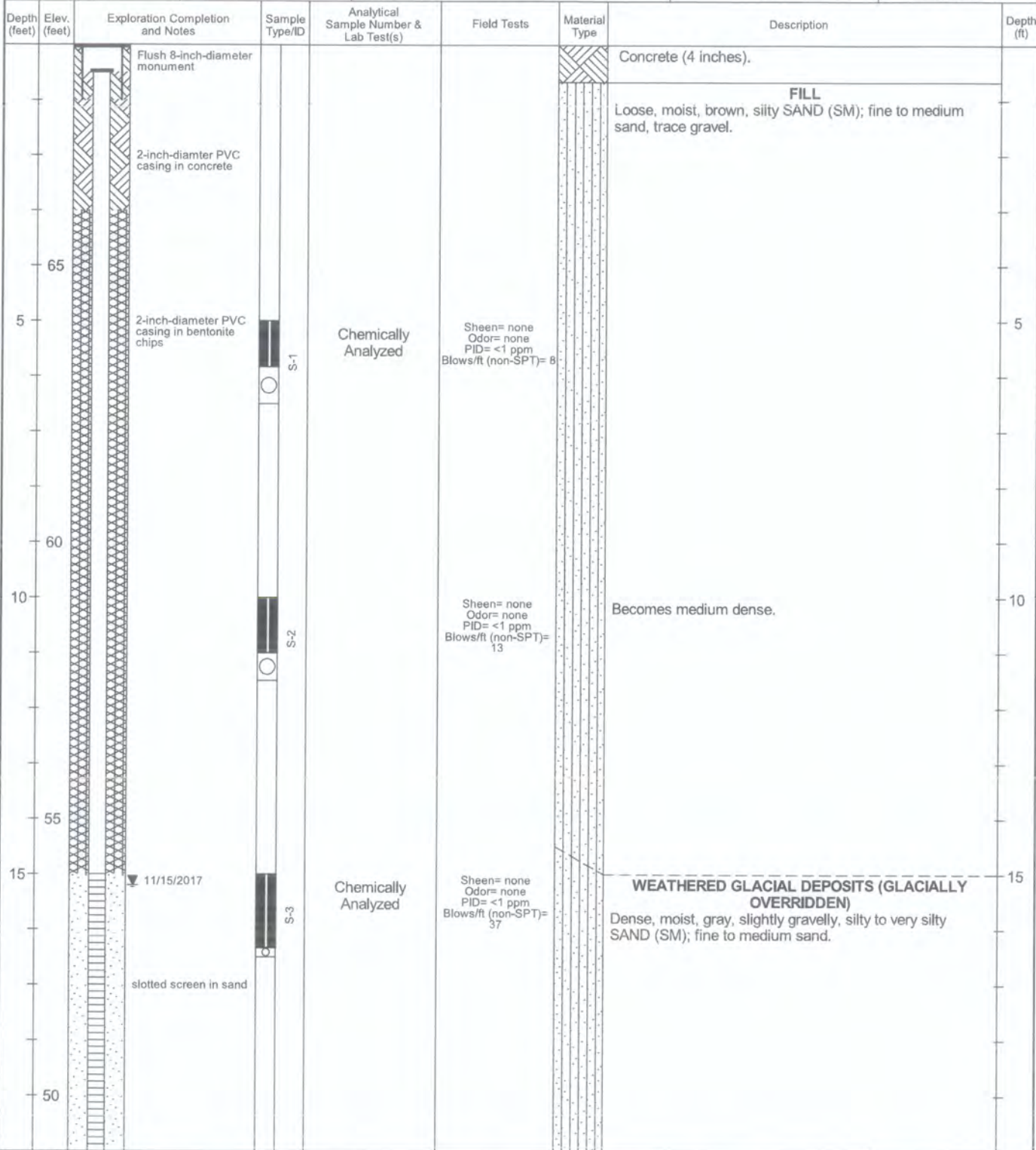
Exploration Log
AC-MW-02



Mt. Baker Housing Ass'n - Grand St Commons - 170304
Project Address & Site Specific Location
 1750 & 1765 22nd Ave S, Seattle WA, Island at intersection of S Grand St & Rainier Ave S

Monitoring Well Log
Coordinates (SPN NAD83 ft)
 E:1277416 N:217529
Ground Surface (GS) Elev. (NAVD88)
 69'
Top of Casing Elev. (NAVD88)
 68.6'
Exploration Number
AC-MW-03
Ecology Well Tag No.
 BKA 326
Depth to Water (Below GS)
 15.2' (Static)

<i>Contractor</i> Cascade	<i>Equipment</i> CME 75 truck rig	<i>Sampling Method</i> 300-lb autohammer w/ Dames & Moore sampler	<i>Ground Surface (GS) Elev. (NAVD88)</i> 69'	AC-MW-03 <i>Ecology Well Tag No.</i> BKA 326
<i>Operator</i> Curtis	<i>Exploration Method(s)</i> Hollow Stem Auger	<i>Work Start/Completion Dates</i> 8/29/2017	<i>Top of Casing Elev. (NAVD88)</i> 68.6'	



ASPECT STANDARD EXPLORATION LOG TEMPLATE P:\GINT\PROJECTS\MBHA BELSHAW 170304.GPJ, December 9, 2018

Legend

- No Soil Sample Recovery
- Split Barrel 3.25" X 2.375" (D&M)

Water Level

Static Water Level

See Exploration Log Key for explanation of symbols

Logged by: FK
 Approved by: DHM 1/11/2018

Exploration Log
AC-MW-03

Sheet 1 of 2



Mt. Baker Housing Ass'n - Grand St Commons - 170304

Monitoring Well Log

Project Address & Site Specific Location
 1750 & 1765 22nd Ave S. Seattle WA, Island at intersection of S Grand St & Rainier Ave S

Coordinates (SPN NAD83 ft)
 E:1277416 N:217529

Exploration Number

AC-MW-03

Ecology Well Tag No. BKA 326

Contractor

Cascade

Equipment

CME 75 truck rig

Sampling Method

300-lb autohammer w/ Dames & Moore sampler

Ground Surface (GS) Elev. (NAVD88)

69'

Operator

Curtis

Exploration Method(s)

Hollow Stem Auger

Work Start/Completion Dates

8/29/2017

Top of Casing Elev. (NAVD88)

68.6'

Depth to Water (Below GS)

15.2' (Static)

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
45			S-4		Sheen= none Odor= none PID= <1 ppm Blows/ft (non-SPT)= 42		WEATHERED GLACIAL DEPOSITS (GLACIALLY OVERRIDDEN) Dense, moist, gray, slightly gravelly, silty to very silty SAND (SM); fine to medium sand. (continued)	
25			S-5		Sheen= none Odor= none PID= <1 ppm Blows/ft (non-SPT)= 50		GLACIAL DEPOSITS (GLACIALLY OVERRIDDEN) Dense, very moist to wet, gray, slightly gravelly, silty to very silty SAND (SM); fine to medium sand.	25
40			S-6					
30							Bottom of exploration at 30 ft. bgs.	30
35								35
30								30

ASPECT STANDARD EXPLORATION LOG TEMPLATE P:\GINT\PROJECTS\MBHA BELSHAW 170304.GPJ December 9, 2018

Legend

- No Soil Sample Recovery
- Split Barrel 3.25" X 2.375" (D&M)

Water Level

Static Water Level

See Exploration Log Key for explanation of symbols

Logged by: FK
 Approved by: DHM 1/11/2018

Exploration Log
AC-MW-03



Mt. Baker Housing Ass'n - Grand St Commons - 170304

Monitoring Well Log

Project Address & Site Specific Location

Coordinates (SPN NAD83 ft)

Exploration Number

1750 & 1765 22nd Ave S, Seattle WA, East Block

E:1277690 N:217686

AC-MW-04

Contractor

Equipment

Sampling Method

Ground Surface (GS) Elev. (NAVD88)

Ecology Well Tag No. BKA 327

Cascade

CME 75 truck rig

300-lb autohammer w/ Dames & Moore sampler

78'

Operator

Exploration Method(s)

Work Start/Completion Dates

Top of Casing Elev. (NAVD88)

Depth to Water (Below GS)

Curtis

Hollow Stem Auger

8/29/2017

77.4'

24.75' (Static)

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
		Flush 8-inch-diameter monument					Asphalt (3 inches).	
		2-inch-diameter PVC casing in concrete					FILL Loose, moist, brown, silty SAND (SM); fine to medium sand, trace fine to coarse subrounded gravel.	
75								
5		2-inch-diameter PVC casing in bentonite chips	S-1	Chemically Analyzed	Sheen= slight Odor= none PID= <1 ppm Blows/ft (non-SPT)= 10			5
70								
10			S-2		Sheen= none Odor= none PID= <1 ppm Blows/ft (non-SPT)= 7		GLACIAL DEPOSITS (RECESSIONAL LACUSTRINE) Medium stiff, moist, brown, CLAY (CL); low plasticity.	10
65								
15			S-3	Chemically Analyzed	Sheen= none Odor= none PID= <1 ppm Blows/ft (non-SPT)= 15		WEATHERED GLACIAL DEPOSITS (GLACIALLY OVERRIDDEN) Medium dense, moist, gray-brown, silty to very silty SAND (SM); fine to medium sand, trace gravel.	15
60								

Legend

- No Soil Sample Recovery
- Split Barrel 3.25" X 2.375" (D&M)

Static Water Level

See Exploration Log Key for explanation of symbols

Logged by: FK
Approved by: DHM 1/11/2018

Exploration Log
AC-MW-04

ASPECT STANDARD EXPLORATION LOG TEMPLATE P:\GINT\PROJECTS\MBHA BELSHAW 170304.GPJ December 9, 2018



Mt. Baker Housing Ass'n - Grand St Commons - 170304

Monitoring Well Log

Project Address & Site Specific Location
1750 & 1765 22nd Ave S. Seattle WA, East Block

Coordinates (SPN NAD83 ft)
E:1277690 N:217686

Exploration Number

AC-MW-04

Contractor: Cascade
Equipment: CME 75 truck rig
Sampling Method: 300-lb autohammer w/ Dames & Moore sampler

Ground Surface (GS) Elev. (NAVD88)
78'

Ecology Well Tag No.
BKA 327

Operator: Curtis
Exploration Method(s): Hollow Stem Auger
Work Start/Completion Dates: 8/29/2017

Top of Casing Elev. (NAVD88)
77.4'

Depth to Water (Below GS)
24.75' (Static)

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
55		slotted screen in sand	S-1		Sheen= none Odor= none PID= <1 ppm Blows/ft (non-SPT)= 36		WEATHERED GLACIAL DEPOSITS (GLACIALLY OVERRIDDEN) Medium dense, moist, gray-brown, silty to very silty SAND (SM); fine to medium sand, trace gravel. (continued) Becomes dense and slightly gravelly.	
25		▼ 11/15/2017	S-5		Sheen= none Odor= none PID= <1 ppm Blows/ft (non-SPT)= 75		GLACIAL DEPOSITS (GLACIALLY OVERRIDDEN) Very dense, moist, gray, slightly gravelly, silty to very silty SAND (SM); fine to medium sand, fine subrounded gravel.	25
50			S-6		Sheen= none Odor= none PID= <1 ppm Blows/ft (non-SPT)= 50			
30			S-7		Sheen= none Odor= none PID= <1 ppm Blows/ft (non-SPT)= 56		Hard, slightly moist, gray, slightly sandy SILT (ML); low plasticity, fine to medium sand.	30
45								
35							Bottom of exploration at 35 ft. bgs.	35
40								

ASPECT STANDARD EXPLORATION LOG TEMPLATE P:\GINT\PROJECTS\MBHA BELSHAW 170304.GPJ December 9, 2018

Legend

- No Soil Sample Recovery
- Split Barrel 3.25" X 2.375" (D&M)

Water Level
▼ Static Water Level

See Exploration Log Key for explanation of symbols

Logged by: FK
Approved by: DHM 1/11/2018

Exploration Log

AC-MW-04

Sheet 2 of 2



Mt. Baker Housing Ass'n - Grand St Commons - 170304

Monitoring Well Log

Project Address & Site Specific Location

Coordinates (SPN NAD83 ft)

Exploration Number

1750 & 1765 22nd Ave S. Seattle WA, East Block

E:1277693 N:217751

AC-MW-05

Contractor

Equipment

Sampling Method

Ground Surface (GS) Elev. (NAVD88)

Ecology Well Tag No.
BKA 458

Cascade

CME 55

300-lb autohammer w/ Dames & Moore sampler

78'

Operator

Exploration Method(s)

Work Start/Completion Dates

Top of Casing Elev. (NAVD88)

Depth to Water (Below GS)

Curtis

Hollow Stem Auger

11/8/2017

77.5'

19.04' (Static)

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
		Flush 8-inch-diameter monument					Asphalt (2 inches).	
		2-inch-diameter PVC casing in concrete					FILL Loose, moist, brown, gravelly, silty SAND (SM); fine to medium sand, trace roots and organics.	
75								
		2-inch-diameter PVC casing in bentonite chips	S-1	Chemically Analyzed	Sheen= none Odor= none PID= <1 ppm Blows (non-SPT)= 4,5,5		GLACIAL DEPOSITS (RECESSIONAL LACUSTRINE) Stiff, moist, brown, CLAY (CL); low plasticity.	5
5								
			S-2	Chemically Analyzed	Sheen= none Odor= none PID= <1 ppm Blows (non-SPT)= 4,5,4			10
10								
			S-3	Chemically Analyzed	Sheen= none Odor= none PID= <1 ppm Blows (non-SPT)= 11,13,13		WEATHERED GLACIAL DEPOSITS (GLACIALLY OVERRIDDEN) Medium dense, moist, gray, gravelly, silty to very silty SAND (SM); fine to medium sand.	15
15								
60								
		11/15/2017						

Legend

- No Soil Sample Recovery
- Split Barrel 3.25" X 2.375" (D&M)

Water Level

Static Water Level

See Exploration Log Key for explanation of symbols

Logged by: FK
Approved by: DHM 1/11/2018

Exploration Log
AC-MW-05

Sheet 1 of 2



Mt. Baker Housing Ass'n - Grand St Commons - 170304

Monitoring Well Log

Project Address & Site Specific Location

Coordinates (SPN NAD83 ft)

Exploration Number

1750 & 1765 22nd Ave S. Seattle WA, East Block

E:1277693 N:217751

AC-MW-05

Contractor

Equipment

Sampling Method

Ground Surface (GS) Elev. (NAVD88)

Cascade

CME 55

300-lb autohammer w/ Dames & Moore sampler

78'

Ecology Well Tag No. BKA 458

Operator

Exploration Method(s)

Work Start/Completion Dates

Top of Casing Elev. (NAVD88)

Depth to Water (Below GS)

Curtis

Hollow Stem Auger

11/8/2017

77.5'

19.04' (Static)

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
55		slotted screen in sand	S-5		Sheen= none Odor= none PID= <1 ppm Blows (non-SPT)= 6,26,25		GLACIAL DEPOSITS (GLACIALLY OVERRIDDEN) Very dense, moist, gray, very gravelly, silty to very silty SAND (SM); fine to medium sand.	
25			S-5		Sheen= none Odor= none PID= <1 ppm Blows (non-SPT)= 11,19,26		Becomes dense and very moist.	25
50			S-6		Sheen= none Odor= none PID= <1 ppm Blows (non-SPT)= 48,50/6		Becomes very dense and wet.	30
30			S-7	Chemically Analyzed	Sheen= none Odor= none PID= <1 ppm Blows (non-SPT)= 50/6		Hard, moist, gray, slightly sandy to sandy SILT (ML); low plasticity, fine to medium sand, trace coarse sand and fine gravel. Bottom of exploration at 35 ft. bgs.	35
45								
40								

ASPECT STANDARD EXPLORATION LOG TEMPLATE P:\GINT\PROJECTS\BIMBHA BELSHAW 170304.GPJ December 9, 2018

Legend

- No Soil Sample Recovery
- Split Barrel 3.25" X 2.375" (D&M)

Static Water Level

See Exploration Log Key for explanation of symbols

Logged by: FK
Approved by: DHM 1/11/2018

Exploration Log
AC-MW-05



Mt. Baker Housing Ass'n - Grand St Commons - 170304

Monitoring Well Log

Project Address & Site Specific Location

Coordinates (SPN NAD83 ft)

Exploration Number

1750 & 1765 22nd Ave S, Seattle WA, East Block

E:1277793 N:217652

AC-MW-06

Contractor

Equipment

Sampling Method

Ground Surface (GS) Elev. (NAVD88)

Ecology Well Tag No.
BKA 459

Cascade

CME 55

300-lb autohammer w/ Dames & Moore sampler

78'

Operator

Exploration Method(s)

Work Start/Completion Dates

Top of Casing Elev. (NAVD88)

Depth to Water (Below GS)

Curtis

Hollow Stem Auger

11/9/2017

77.5'

22.07' (Static)

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
		Flush 8-inch-diameter monument				Concrete (5 inches).		
		2-inch-diameter PVC casing in concrete				GLACIAL DEPOSITS (GLACIALLY OVERRIDDEN) Very dense, moist, brown and gray, slightly gravelly, silty to very silty SAND (SM); fine to medium sand, fine subrounded gravel.		
75								
5		2-inch-diameter PVC casing in bentonite chips	S-1	Chemically Analyzed	Blows (non-SPT)= 26,50/6 Sheen= none Odor= none PID= <1 ppm Blows (non-SPT)= 26,50/6			5
70								
10			S-2		Blows (non-SPT)= 40,50/6 Sheen= none Odor= none PID= <1 ppm Blows (non-SPT)= 40,50/6			10
65								
15			S-3	Chemically Analyzed	Blows (non-SPT)= 50/5 Sheen= none Odor= none PID= <1 ppm Blows (non-SPT)= 50/5			15
60								

Legend

- No Soil Sample Recovery
- Split Barrel 3.25" X 2.375" (D&M)

Water Level Static Water Level

See Exploration Log Key for explanation of symbols

Logged by: FK
Approved by: DHM 1/11/2018

Exploration Log
AC-MW-06

ASPECT STANDARD EXPLORATION LOG TEMPLATE P:\GINT\PROJECTS\MBHA BELSHAW 170304.GPJ December 9, 2018



Mt. Baker Housing Ass'n - Grand St Commons - 170304

Monitoring Well Log

Project Address & Site Specific Location

Coordinates (SPN NAD83 ft)

Exploration Number

1750 & 1765 22nd Ave S. Seattle WA, East Block

E:1277793 N:217652

AC-MW-06

Contractor

Equipment

Sampling Method

Ground Surface (GS) Elev. (NAVD88)

Ecology Well Tag No. BKA 459

Cascade

CME 55

300-lb autohammer w/ Dames & Moore sampler

78'

Operator

Exploration Method(s)

Work Start/Completion Dates

Top of Casing Elev. (NAVD88)

Depth to Water (Below GS)

Curtis

Hollow Stem Auger

11/9/2017

77.5'

22.07' (Static)

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
55		slotted screen in sand ▼ 11/15/2017	S-5		Blows (non-SPT)= 50/6 Sheen= none Odor= none PID= <1 ppm Blows (non-SPT)= 50/6		GLACIAL DEPOSITS (GLACIALLY OVERRIDDEN) Very dense, moist, brown and gray, slightly gravelly, silty to very silty SAND (SM); fine to medium sand, fine subrounded gravel. (continued) Becomes very moist.	25
25			S-5		Blows (non-SPT)= 50,50/6 Sheen= none Odor= none PID= <1 ppm Blows (non-SPT)= 50,50/6			
50								
30			S-6	Chemically Analyzed	Blows (non-SPT)= 50/6 Sheen= none Odor= none PID= <1 ppm Blows (non-SPT)= 50/6		Hard, moist, gray, slightly sandy SILT (ML); low plasticity, fine to medium sand. Bottom of exploration at 30 ft. bgs.	30
45								
35								35
40								

Legend

- No Soil Sample Recovery
- Split Barrel 3.25" X 2.375" (D&M)

Water Level

▼ Static Water Level

See Exploration Log Key for explanation of symbols

Logged by: FK
Approved by: DHM 1/11/2018

Exploration Log
AC-MW-06

Sheet 2 of 2



Mt. Baker Housing Ass'n - Grand St Commons - 170304

Monitoring Well Log

Project Address & Site Specific Location

Coordinates (SPN NAD83 ft)

Exploration Number

1750 & 1765 22nd Ave S, Seattle WA, East Block

E: 1277785 N: 217596

AC-MW-07

Contractor

Equipment

Sampling Method

Ground Surface (GS) Elev. (NAVD88)

Ecology Well Tag No.
BKA 460

Cascade

CME 55

300-lb autohammer w/ Dames & Moore sampler

78'

Operator

Exploration Method(s)

Work Start/Completion Dates

Top of Casing Elev. (NAVD88)

Depth to Water (Below GS)

Curtis

Hollow Stem Auger

11/10/2017

77.5'

24.02' (Static)

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
		Flush 8-inch-diameter monument				Concrete (6 inches).		
		2-inch-diameter PVC casing in concrete				GLACIAL DEPOSITS (GLACIALLY OVERRIDDEN) Very dense, moist, gray, slightly gravelly, silty to very silty SAND (SM); fine to medium sand, fine subrounded gravel.		
75								
5		2-inch-diameter PVC casing in bentonite chips	S-1	Chemically Analyzed	Sheen= none Odor= none PID= <1 ppm Blows (non-SPT)= 35,50/6			5
70								
10			S-2	Chemically Analyzed	Sheen= none Odor= none PID= <1 ppm Blows (non-SPT)= 30,50/5			10
65								
15			S-3	Chemically Analyzed	Sheen= none Odor= none PID= <1 ppm Blows (non-SPT)= 50/6			15
60								

Legend

- No Soil Sample Recovery
- Split Barrel 3.25" X 2.375" (D&M)

Static Water Level

See Exploration Log Key for explanation of symbols

Logged by: FK
Approved by: DHM 1/11/2018

Exploration Log
AC-MW-07

Sheet 1 of 2



Mt. Baker Housing Ass'n - Grand St Commons - 170304

Monitoring Well Log

Project Address & Site Specific Location 1750 & 1765 22nd Ave S. Seattle WA, East Block		Coordinates (SPN NAD83 ft) E:1277785 N:217596	Exploration Number AC-MW-07
Contractor Cascade	Equipment CME 55	Sampling Method 300-lb autohammer w/ Dames & Moore sampler	Ground Surface (GS) Elev. (NAVD88) 78' Ecology Well Tag No. BKA 460
Operator Curtis	Exploration Method(s) Hollow Stem Auger	Work Start/Completion Dates 11/10/2017	Top of Casing Elev. (NAVD88) 77.5' Depth to Water (Below GS) 24.02' (Static)

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
55		slotted screen in sand 11/15/2017	S-5		Sheen= none Odor= none PID= <1 ppm Blows (non-SPT)= 50/6		GLACIAL DEPOSITS (GLACIALLY OVERRIDDEN) Very dense, moist, gray, slightly gravelly, silty to very silty SAND (SM); fine to medium sand, fine subrounded gravel. (continued)	
25			S-5		Sheen= none Odor= none PID= <1 ppm Blows (non-SPT)= 45,50/6		Becomes very moist.	25
30			S-6		Sheen= none Odor= none PID= <1 ppm Blows (non-SPT)= 50/6		Hard, moist, gray, slightly sandy SILT (ML); low plasticity, fine to medium sand. Bottom of exploration at 30 ft. bgs.	30
45								
35								35
40								

ASPECT STANDARD EXPLORATION LOG TEMPLATE P:\GINT\PROJECTS\MBHA BELSHAW 170304.GPJ December 9, 2018

Legend

- No Soil Sample Recovery
- Split Barrel 3.25" X 2.375" (D&M)

Static Water Level

See Exploration Log Key for explanation of symbols

Logged by: FK
Approved by: DHM 1/11/2018

Exploration Log
AC-MW-07
Sheet 2 of 2



Mt. Baker Housing Ass'n - Grand St Commons - 170304

Monitoring Well Log

Project Address & Site Specific Location

Coordinates (SPN NAD83 ft)

Exploration Number

1750 & 1765 22nd Ave S. Seattle WA, West Block

E:1277485 N:217785

AC-MW-09

Contractor

Equipment

Sampling Method

Ground Surface (GS) Elev. (NAVD88)

Ecology Well Tag No.
BKA 456

Cascade

CME 55

300-lb autohammer w/ Dames & Moore sampler

77'

Operator

Exploration Method(s)

Work Start/Completion Dates

Top of Casing Elev. (NAVD88)

Depth to Water (Below GS)

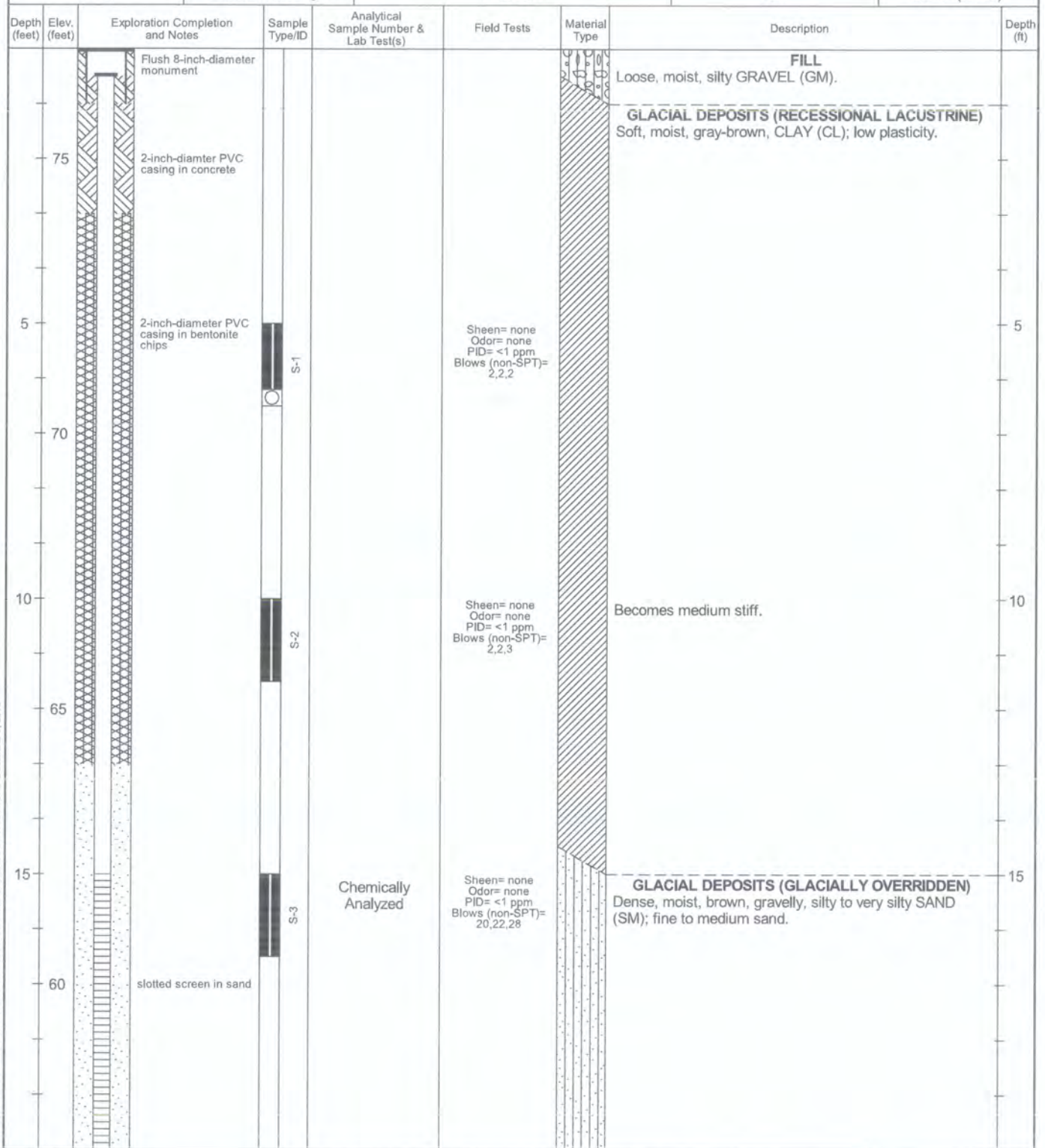
Curtis

Hollow Stem Auger

11/3/2017

76.3'

23.19' (Static)



ASPECT STANDARD EXPLORATION LOG TEMPLATE P:\GINT\PROJECTS\MBHA BELSHAW 170304.GPJ, December 9, 2018

Legend

- No Soil Sample Recovery
- Split Barrel 3.25" X 2.375" (D&M)

Water Level

Static Water Level

See Exploration Log Key for explanation of symbols

Logged by: FK
Approved by: DHM 1/11/2018

Exploration Log
AC-MW-09

Sheet 1 of 2



Mt. Baker Housing Ass'n - Grand St Commons - 170304

Monitoring Well Log

Project Address & Site Specific Location
1750 & 1765 22nd Ave S. Seattle WA, West Block

Coordinates (SPN NAD83 ft)
E:1277485 N:217785

Exploration Number
AC-MW-09

Contractor: Cascade
Equipment: CME 55
Sampling Method: 300-lb autohammer w/ Dames & Moore sampler

Ground Surface (GS) Elev. (NAVD88)
77'

Ecology Well Tag No.
BKA 456

Operator: Curtis
Exploration Method(s): Hollow Stem Auger
Work Start/Completion Dates: 11/3/2017

Top of Casing Elev. (NAVD88)
76.3'

Depth to Water (Below GS)
23.19' (Static)

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
55		11/15/2017	S-4	Chemically Analyzed	Sheen= none Odor= none PID= <1 ppm Blows (non-SPT)= 8,18,30		GLACIAL DEPOSITS (GLACIALLY OVERRIDDEN) Dense, moist, brown, gravelly, silty to very silty SAND (SM); fine to medium sand. (continued)	
25			S-5		Sheen= none Odor= none PID= <1 ppm Blows (non-SPT)= 18,22,31		Becomes very dense, wet, and gray.	25
50			S-6		Sheen= none Odor= none PID= <1 ppm Blows (non-SPT)= 19,23,26			30
30			S-7		Sheen= none Odor= none PID= <1 ppm Blows (non-SPT)= 18,25,36			35
45							Bottom of exploration at 35 ft. bgs.	35
35								
40								

ASPECT STANDARD EXPLORATION LOG TEMPLATE P:\GINT\PROJECTS\MBHA BELSHAW 170304.GPJ December 9, 2018

Legend

- No Soil Sample Recovery
- Split Barrel 3.25" X 2.375" (D&M)

Water Level

Static Water Level

See Exploration Log Key for explanation of symbols

Logged by: FK
Approved by: DHM 1/11/2018

Exploration Log
AC-MW-09



Mt. Baker Housing Ass'n - Grand St Commons - 170304

Monitoring Well Log

Project Address & Site Specific Location

Coordinates (SPN NAD83 ft)

Exploration Number

1750 & 1765 22nd Ave S. Seattle WA, West Block

E:1277511 N:217675

AC-MW-10

Contractor

Equipment

Sampling Method

Ground Surface (GS) Elev. (NAVD88)

Ecology Well Tag No. BKA 457

Cascade

CME 55

300-lb autohammer w/ Dames & Moore sampler

73.5'

Operator

Exploration Method(s)

Work Start/Completion Dates

Top of Casing Elev. (NAVD88)

Depth to Water (Below GS)

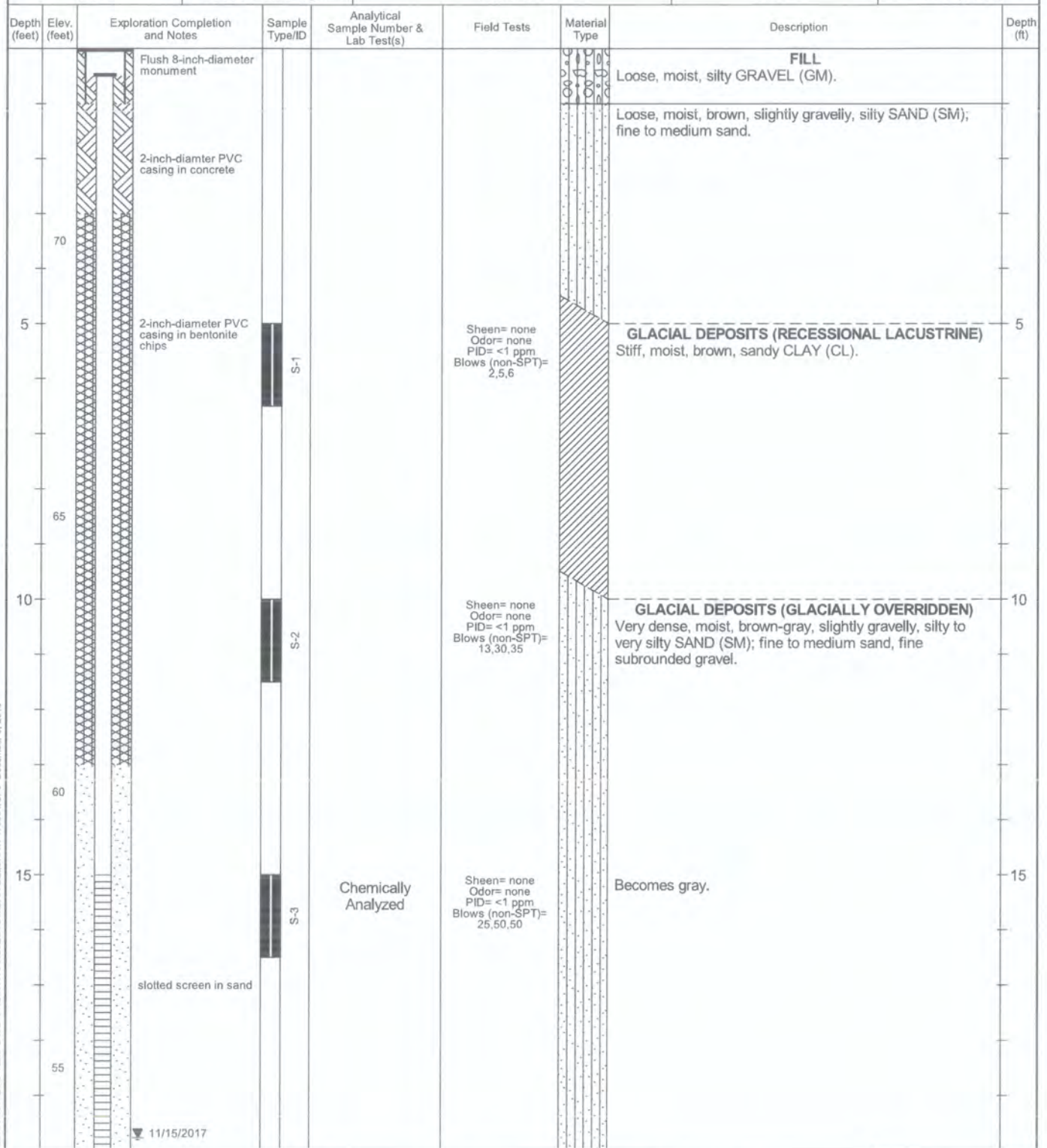
Curtis

Hollow Stem Auger

11/6/2017

72.7'

19.76' (Static)



ASPECT STANDARD EXPLORATION LOG TEMPLATE P:\GINTW\PROJECTS\MBHA BELSHAW 170304.GPJ December 9, 2018

Legend

- No Soil Sample Recovery
- Split Barrel 3.25" X 2.375" (D&M)

Water Level

Static Water Level

See Exploration Log Key for explanation of symbols

Logged by: FK
Approved by: DHM 1/11/2018

Exploration Log
AC-MW-10

Sheet 1 of 2



Mt. Baker Housing Ass'n - Grand St Commons - 170304

Monitoring Well Log

Project Address & Site Specific Location
1750 & 1765 22nd Ave S. Seattle WA, West Block

Coordinates (SPN NAD83 ft)
E:1277511 N:217675

Exploration Number

AC-MW-10

Contractor

Equipment

Sampling Method

Ground Surface (GS) Elev. (NAVD88)

Ecology Well Tag No.
BKA 457

Cascade

CME 55

300-lb autohammer w/ Dames & Moore sampler

73.5'

Operator

Exploration Method(s)

Work Start/Completion Dates

Top of Casing Elev. (NAVD88)

Depth to Water (Below GS)

Curtis

Hollow Stem Auger

11/6/2017

72.7'

19.76' (Static)

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
50			S-4	Chemically Analyzed	Sheen= heavy Odor= strong gasoline PID= 742 ppm Blows (non-SPT)= 35,50/6		GLACIAL DEPOSITS (GLACIALLY OVERRIDDEN) Very dense, moist, brown-gray, slightly gravelly, silty to very silty SAND (SM); fine to medium sand, fine subrounded gravel. (continued)	25
25			S-5		Sheen= heavy Odor= strong gasoline PID= 334 ppm Blows (non-SPT)= 36,50/4			30
45			S-6		Sheen= heavy Odor= strong gasoline PID= 263 ppm Blows (non-SPT)= 13,50/3	Becomes wet.		35
30			S-7	Chemically Analyzed	Sheen= none Odor= none PID= <1 ppm Blows (non-SPT)= 50/6			Hard, moist, gray, slightly sandy SILT (ML); low plasticity, fine to medium sand. Bottom of exploration at 35 ft. bgs.

ASPECT STANDARD EXPLORATION LOG TEMPLATE P:\GINT\PROJECTS\MBHA BELSHAW 170304.GPJ December 9, 2018

Legend

- No Soil Sample Recovery
- Split Barrel 3.25" X 2.375" (D&M)

Static Water Level

See Exploration Log Key for explanation of symbols

Logged by: FK
Approved by: DHM 1/11/2018

Exploration Log
AC-MW-10
Sheet 2 of 2



Mt. Baker Housing Association - Belshaw - 170304

Environmental Exploration Log

Project Address & Site Specific Location

Coordinates (SPN NAD83 ft)

Exploration Number

1750 & 1765 22nd Ave S. Seattle WA, East Block

E:1277694 N:217717 (est)

AC-SB-01

Contractor

Equipment

Sampling Method

Ground Surface (GS) Elev. (NAVD88)

Cascade

CME 55

300-lb autohammer w/ Dames & Moore sampler

78'(est)

Operator

Exploration Method(s)

Work Start/Completion Dates

Top of Casing Elev. (NAVD88)

Depth to Water (Below GS)

Curtis

Hollow Stem Auger

11/8/2017

NA

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
		Borehole backfilled with bentonite chips and capped with asphalt.					Asphalt (2 inches).	
75							FILL Very loose, moist, brown, gravelly, silty SAND (SM); fine to medium sand.	
5			S-1	Chemically Analyzed	Blows (non-SPT)= 2,1,2 Sheen= none Odor= none PID= <1 ppm			5
70								
10			S-2	Chemically Analyzed	Blows (non-SPT)= 2,3,3 Sheen= none Odor= none PID= <1 ppm		GLACIAL DEPOSITS (RECESSIONAL LACUSTRINE) Medium stiff, moist, brown, CLAY (CL); low plasticity.	10
65								
15			S-3		Blows (non-SPT)= 8,10,10 Sheen= none Odor= none PID= <1 ppm		WEATHERED GLACIAL DEPOSITS (GLACIALLY OVERRIDDEN) Medium dense, moist, gray, silty SAND (SM); fine to medium sand.	15
60								

ASPECT STANDARD EXPLORATION LOG TEMPLATE P:\IGNITY\PROJECTS\MBHA BELSHAW 170304.GPJ January 12, 2018

Legend

- No Soil Sample Recovery
- Split Barrel 3.25" X 2.375" (D&M)

Water Level

No Water Encountered

See Exploration Log Key for explanation of symbols

Logged by: FK
Approved by: DHM 1/11/2018

Exploration Log
AC-SB-01

Sheet 1 of 3



Mt. Baker Housing Association - Belshaw - 170304

Environmental Exploration Log

Project Address & Site Specific Location

Coordinates (SPN NAD83 ft)

Exploration Number

1750 & 1765 22nd Ave S. Seattle WA, East Block

E:1277694 N:217717 (est)

AC-SB-01

Contractor

Equipment

Sampling Method

Ground Surface (GS) Elev. (NAVD88)

Cascade

CME 55

300-lb autohammer w/ Dames & Moore sampler

78'(est)

Operator

Exploration Method(s)

Work Start/Completion Dates

Top of Casing Elev. (NAVD88)

Depth to Water (Below GS)

Curtis

Hollow Stem Auger

11/8/2017

NA

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
55			S-1	Chemically Analyzed	Blows (non-SPT)= 12,22,26 Sheen= none Odor= none PID= <1 ppm		GLACIAL DEPOSITS (GLACIALLY OVERRIDDEN) Dense, moist, gray, silty SAND (SM); fine to medium sand.	
25			S-5		Blows (non-SPT)= 18,26,38 Sheen= none Odor= none PID= <1 ppm		Becomes very moist.	25
50			S-6		Blows (non-SPT)= 32,50/6 Sheen= none Odor= none PID= <1 ppm			30
35			S-7		Blows (non-SPT)= 50/6 Sheen= none Odor= none PID= <1 ppm		Becomes wet.	35
40								

Legend

- No Soil Sample Recovery
- Split Barrel 3.25" X 2.375" (D&M)

Water Level

No Water Encountered

See Exploration Log Key for explanation of symbols

Logged by: FK
Approved by: DHM 1/11/2018

Exploration Log
AC-SB-01

Sheet 2 of 3



Mt. Baker Housing Association - Belshaw - 170304

Environmental Exploration Log

Project Address & Site Specific Location

Coordinates (SPN NAD83 ft)

Exploration Number

1750 & 1765 22nd Ave S, Seattle WA, East Block

E:1277694 N:217717 (est)

AC-SB-01

Contractor

Equipment

Sampling Method

Ground Surface (GS) Elev. (NAVD88)

Cascade

CME 55

300-lb autohammer w/ Dames & Moore sampler

78'(est)

Operator

Exploration Method(s)

Work Start/Completion Dates

Top of Casing Elev. (NAVD88)

Depth to Water (Below GS)

Curtis

Hollow Stem Auger

11/8/2017

NA

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
					Blows (non-SPT)= 50/4 Shear= none Odor= none PID= <1 ppm		Hard, moist, gray, slightly sandy SILT (ML); low plasticity, fine to medium sand. Bottom of exploration at 40.5 ft. bgs.	
35								
45								
50								
55								
20								

Legend

- No Soil Sample Recovery
- Split Barrel 3.25" X 2.375" (D&M)

Water Level

No Water Encountered

See Exploration Log Key for explanation of symbols

Logged by: FK
Approved by: DHM 1/11/2018

Exploration Log
AC-SB-01

Sheet 3 of 3



Mt. Baker Housing Association - Belshaw - 170304

Environmental Exploration Log

Project Address & Site Specific Location

Coordinates (SPN NAD83 ft)

Exploration Number

1750 & 1765 22nd Ave S. Seattle WA, East Block

E:1277743 N:217663 (est)

AC-SB-02

Contractor

Equipment

Sampling Method

Ground Surface (GS) Elev. (NAVD88)

Cascade

CME 55

300-lb autohammer w/ Dames & Moore sampler

81'(est)

Operator

Exploration Method(s)

Work Start/Completion Dates

Top of Casing Elev. (NAVD88)

Depth to Water (Below GS)

Curtis

Hollow Stem Auger

11/9/2017

NA

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
80		Borehole backfilled with bentonite chips and capped with concrete.					Concrete (6 inches).	
							GLACIAL DEPOSITS (GLACIALLY OVERRIDDEN) Dense, moist, brown-gray, gravelly, silty to very silty SAND (SM); fine to medium sand.	
5			S-1	Chemically Analyzed	Blows (non-SPT)= 10,18,20 Sheen= none Odor= none PID= <1 ppm			5
75								
10			S-2	Chemically Analyzed	Blows (non-SPT)= 30,30,50 Sheen= none Odor= none PID= <1 ppm		Becomes very dense and gray with cobbles.	10
70								
15			S-3		Blows (non-SPT)= 30,50/6 Sheen= none Odor= none PID= <1 ppm			15
65								

Legend

- No Soil Sample Recovery
- Split Barrel 3.25" X 2.375" (D&M)

Water Level

No Water Encountered

See Exploration Log Key for explanation of symbols

Logged by: FK
Approved by: DHM 1/11/2018

Exploration Log
AC-SB-02

Sheet 1 of 2



Mt. Baker Housing Association - Belshaw - 170304

Environmental Exploration Log

Project Address & Site Specific Location

Coordinates (SPN NAD83 ft)

Exploration Number

1750 & 1765 22nd Ave S. Seattle WA, East Block

E:1277743 N:217663 (est)

AC-SB-02

Contractor

Equipment

Sampling Method

Ground Surface (GS) Elev. (NAVD88)

Cascade

CME 55

300-lb autohammer w/ Dames & Moore sampler

81'(est)

Operator

Exploration Method(s)

Work Start/Completion Dates

Top of Casing Elev. (NAVD88)

Depth to Water (Below GS)

Curtis

Hollow Stem Auger

11/9/2017

NA

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
60			S-1	Chemically Analyzed	Blows (non-SPT)= 20,50/5 Sheen= none Odor= none PID= <1 ppm		GLACIAL DEPOSITS (GLACIALLY OVERRIDDEN) Very dense, moist, brown-gray, gravelly, silty to very silty SAND (SM); fine to medium sand. (continued)	
25			S-2		Blows (non-SPT)= 28,50/6 Sheen= none Odor= none PID= <1 ppm		Becomes very moist.	25
55			S-3		Blows (non-SPT)= 50/6 Sheen= none Odor= none PID= <1 ppm		Hard, moist, gray, slightly sandy SILT (ML); low plasticity, fine to medium sand. Bottom of exploration at 30 ft. bgs.	30
30								
50								
35								
45								

ASPECT STANDARD EXPLORATION LOG TEMPLATE P:\GINT\PROJECTS\MBHA BELSHAW 170304.GPJ January 12, 2018

Legend

- No Soil Sample Recovery
- Split Barrel 3.25" X 2.375" (D&M)

Water Level

No Water Encountered

See Exploration Log Key for explanation of symbols

Logged by: FK
Approved by: DHM 1/11/2018

Exploration Log
AC-SB-02



Mt. Baker Housing Association - Belshaw - 170304

Environmental Exploration Log

Project Address & Site Specific Location
1750 & 1765 22nd Ave S. Seattle WA, East Block

Coordinates (SPN NAD83 ft)
E:1277693 N:217640 (est)

Exploration Number
AC-SB-03

Contractor

Equipment

Sampling Method

Ground Surface (GS) Elev. (NAVD88)

Cascade

CME 55

300-lb autohammer w/ Dames & Moore sampler

78'(est)

Operator

Exploration Method(s)

Work Start/Completion Dates

Top of Casing Elev. (NAVD88)

Depth to Water (Below GS)

Curtis

Hollow Stem Auger

11/7/2017

NA

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
		Borehole backfilled with bentonite chips and capped with asphalt.					Asphalt (2 inches).	
75			S-1	Chemically Analyzed	Blows (non-SPT)= 1,1,1 Sheen= none Odor= none PID= <1 ppm		FILL Very loose, moist, brown, gravelly, silty to very silty SAND (SM); fine to medium sand.	5
10			S-2		Blows (non-SPT)= 4,10,10 Sheen= none Odor= none PID= <1 ppm		WEATHERED GLACIAL DEPOSITS (GLACIALLY OVERRIDDEN) Medium dense, moist, brown-gray, gravelly, silty to very silty SAND (SM); fine to medium sand.	10
15			S-3	Chemically Analyzed	Blows (non-SPT)= 10,11,15 Sheen= none Odor= none PID= <1 ppm			15
60								

ASPECT STANDARD EXPLORATION LOG TEMPLATE P:\GINT\PROJECTS\BIMBHA BELSHAW 170304.GPJ January 12, 2018

Legend

- No Soil Sample Recovery
- Split Barrel 3.25" X 2.375" (D&M)

Water Level

No Water Encountered

See Exploration Log Key for explanation of symbols

Logged by: FK
Approved by: DHM 1/11/2018

Exploration Log
AC-SB-03

Sheet 1 of 3



Mt. Baker Housing Association - Belshaw - 170304

Environmental Exploration Log

Project Address & Site Specific Location

Coordinates (SPN NAD83 ft)

Exploration Number

1750 & 1765 22nd Ave S. Seattle WA, East Block

E:1277693 N:217640 (est)

AC-SB-03

Contractor

Equipment

Sampling Method

Ground Surface (GS) Elev. (NAVD88)

Cascade

CME 55

300-lb autohammer w/ Dames & Moore sampler

78'(est)

Operator

Exploration Method(s)

Work Start/Completion Dates

Top of Casing Elev. (NAVD88)

Curtis

Hollow Stem Auger

11/7/2017

NA

Depth to Water (Below GS)

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
55			S-4		Blows (non-SPT)= 13,32,50/4 Sheen= none Odor= none PID= <1 ppm		GLACIAL DEPOSITS (GLACIALLY OVERRIDDEN) Very dense, moist, gray, gravelly, silty to very silty SAND (SM); fine to medium sand.	
25			S-5		Blows (non-SPT)= 30,50/6 Sheen= none Odor= none PID= <1 ppm			
50			S-6		Blows (non-SPT)= 18,50/5 Sheen= none Odor= none PID= <1 ppm	Becomes wet.		
30			S-7	Chemically Analyzed	Blows (non-SPT)= 50/6 Sheen= none Odor= none PID= <1 ppm			

Legend

- No Soil Sample Recovery
- Split Barrel 3.25" X 2.375" (D&M)

Water Level

No Water Encountered

See Exploration Log Key for explanation of symbols

Logged by: FK
Approved by: DHM 1/11/2018

Exploration Log
AC-SB-03

Sheet 2 of 3



Mt. Baker Housing Association - Belshaw - 170304

Environmental Exploration Log

Project Address & Site Specific Location

Coordinates (SPN NAD83 ft)

Exploration Number

1750 & 1765 22nd Ave S. Seattle WA, East Block

E:1277693 N:217640 (est)

AC-SB-03

Contractor

Equipment

Sampling Method

Ground Surface (GS) Elev. (NAVD88)

Cascade

CME 55

300-lb autohammer w/ Dames & Moore sampler

78'(est)

Operator

Exploration Method(s)

Work Start/Completion Dates

Top of Casing Elev. (NAVD88)

Depth to Water (Below GS)

Curtis

Hollow Stem Auger

11/7/2017

NA

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
			sp 55		Blows (non-SPT)= 50/6 Sheen= none Odor= none PID= <1 ppm		Hard, moist, gray, slightly sandy SILT (ML); low plasticity, fine to medium sand. Bottom of exploration at 40.5 ft. bgs.	
35								
45								45
30								
50								50
25								
55								55
20								

Legend

- No Soil Sample Recovery
- Split Barrel 3.25" X 2.375" (D&M)

Water Level

No Water Encountered

See Exploration Log Key for explanation of symbols

Logged by: FK
Approved by: DHM 1/11/2018

Exploration Log
AC-SB-03

Sheet 3 of 3



Mt. Baker Housing Association - Belshaw - 170304

Environmental Exploration Log

Project Address & Site Specific Location

Coordinates (SPN NAD83 ft)

Exploration Number

1750 & 1765 22nd Ave S. Seattle WA, West Block

E:1277486 N:217634 (est)

AC-SB-04

Contractor

Equipment

Sampling Method

Ground Surface (GS) Elev. (NAVD88)

Cascade

CME 55

300-lb autohammer w/ Dames & Moore sampler

72'(est)

Operator

Exploration Method(s)

Work Start/Completion Dates

Top of Casing Elev. (NAVD88)

Depth to Water (Below GS)

Curtis

Hollow Stem Auger

11/6/2017

NA

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
70		Borehole backfilled with bentonite chips and capped with gravel.					FILL Loose, moist, sandy GRAVEL (GP); angular fine to coarse gravel.	
5			S-1	Chemically Analyzed	Blows (non-SPT)= 2,2,3 Sheen= none Odor= none PID= <1 ppm		Loose, moist, brown, gravelly, silty SAND (SM); fine to medium sand, trace roots.	5
65				S-2	Chemically Analyzed	Blows (non-SPT)= 20,36,39 Sheen= moderate Odor= gasoline PID= 350 ppm		GLACIAL DEPOSITS (GLACIALLY OVERRIDDEN) Very dense, moist, gray, gravelly, silty to very silty SAND (SM); fine to medium sand.
10								
60								
15								
55								

Legend

- No Soil Sample Recovery
- Split Barrel 3.25" X 2.375" (D&M)

Water Level

No Water Encountered

See Exploration Log Key for explanation of symbols

Logged by: FK
Approved by: DHM 1/11/2018

Exploration Log
AC-SB-04

Sheet 1 of 2



Mt. Baker Housing Association - Belshaw - 170304

Environmental Exploration Log

Project Address & Site Specific Location

Coordinates (SPN NAD83 ft)

Exploration Number

1750 & 1765 22nd Ave S. Seattle WA, West Block

E:1277486 N:217634 (est)

AC-SB-04

Contractor

Equipment

Sampling Method

Ground Surface (GS) Elev. (NAVD88)

Cascade

CME 55

300-lb autohammer w/ Dames & Moore sampler

72'(est)

Operator

Exploration Method(s)

Work Start/Completion Dates

Top of Casing Elev. (NAVD88)

Depth to Water (Below GS)

Curtis

Hollow Stem Auger

11/6/2017

NA

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
50			S ₁		Blows (non-SPT)= 50,50/6 Sheen= none Odor= none PID= <1 ppm		GLACIAL DEPOSITS (GLACIALLY OVERRIDDEN) Very dense, moist, gray, gravelly, silty to very silty SAND (SM); fine to medium sand. (continued) Becomes wet and slightly gravelly.	25
25			S ₂		Blows (non-SPT)= 30,29,36 Sheen= none Odor= none PID= <1 ppm			
45								
30			S ₆	Chemically Analyzed	Blows (non-SPT)= 19,50/6 Sheen= none Odor= none PID= <1 ppm		Hard, moist, gray, slightly sandy SILT (ML); low plasticity, fine to medium sand.	30
40							Bottom of exploration at 30 ft. bgs.	
35								35
35								

Legend

- No Soil Sample Recovery
- Split Barrel 3.25" X 2.375" (D&M)

Water Level

No Water Encountered

See Exploration Log Key for explanation of symbols

Logged by: FK
Approved by: DHM 1/11/2018

Exploration Log
AC-SB-04

Sheet 2 of 2



Mt. Baker Housing Association - Belshaw - 170304

Environmental Exploration Log

Project Address & Site Specific Location

Coordinates (SPN NAD83 ft)

Exploration Number

1750 & 1765 22nd Ave S. Seattle WA, West Block

E:1277455 N:217672 (est)

AC-SB-05

Contractor

Equipment

Sampling Method

Ground Surface (GS) Elev. (NAVD88)

Cascade

CME 55

300-lb autohammer w/ Dames & Moore sampler

73'(est)

Operator

Exploration Method(s)

Work Start/Completion Dates

Top of Casing Elev. (NAVD88)

Depth to Water (Below GS)

Curtis

Hollow Stem Auger

11/7/2017

NA

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
		Borehole backfilled with bentonite chips and capped with gravel.					FILL Loose, moist, sandy GRAVEL (GP); angular fine to coarse gravel.	
			S-1	Chemically Analyzed	Blows (non-SPT)= 27.50/6 Sheen= none Odor= none PID= <1 ppm		Moist, brown, gravelly, silty SAND (SM); fine to medium sand, trace roots.	
			S-2		Blows (non-SPT)= 25.50/5 Sheen= none Odor= none PID= <1 ppm		GLACIAL DEPOSITS (GLACIALLY OVERRIDDEN) Very dense, moist, brown-gray, gravelly, silty to very silty SAND (SM); fine to medium sand.	
			S-3		Blows (non-SPT)= 50/2 Sheen= none Odor= none PID= <1 ppm		Becomes gray.	

Legend

- No Soil Sample Recovery
- Split Barrel 3.25" X 2.375" (D&M)

Water Level

No Water Encountered

See Exploration Log Key for explanation of symbols

Logged by: FK
Approved by: DHM 1/11/2018

Exploration Log
AC-SB-05

Sheet 1 of 2



Mt. Baker Housing Association - Belshaw - 170304

Environmental Exploration Log

Project Address & Site Specific Location

Coordinates (SPN NAD83 ft)

Exploration Number

1750 & 1765 22nd Ave S. Seattle WA, West Block

E:1277455 N:217672 (est)

AC-SB-05

Contractor

Equipment

Sampling Method

Ground Surface (GS) Elev. (NAVD88)

Cascade

CME 55

300-lb autohammer w/ Dames & Moore sampler

73'(est)

Operator

Exploration Method(s)

Work Start/Completion Dates

Top of Casing Elev. (NAVD88)

Depth to Water (Below GS)

Curtis

Hollow Stem Auger

11/7/2017

NA

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
50			S-5	Chemically Analyzed	Blows (non-SPT)= 50/6 Sheen= none Odor= none PID= <1 ppm		GLACIAL DEPOSITS (GLACIALLY OVERRIDDEN) Very dense, moist, brown-gray, gravelly, silty to very silty SAND (SM); fine to medium sand. (continued)	25
25			S-5		Blows (non-SPT)= 50/5 Sheen= none Odor= none PID= <1 ppm			
45			S-6	Chemically Analyzed	Blows (non-SPT)= 28,50/5 Sheen= none Odor= none PID= <1 ppm	Becomes wet.		30
30			S-7	Chemically Analyzed	Blows (non-SPT)= 50/6 Sheen= none Odor= none PID= <1 ppm			Hard, moist, gray, slightly sandy SILT (ML); low plasticity.
40							Bottom of exploration at 35 ft. bgs.	
35								

ASPECT STANDARD EXPLORATION LOG TEMPLATE P:\GINT\PROJECTS\BMBHA BELSHAW 170304.GPJ January 12, 2018

Legend

- No Soil Sample Recovery
- Split Barrel 3.25" X 2.375" (D&M)

Water Level

No Water Encountered

See Exploration Log Key for explanation of symbols

Logged by: FK
Approved by: DHM 1/11/2018

Exploration Log
AC-SB-05

Sheet 2 of 2



Mt. Baker Housing Association - Belshaw - 170304

Environmental Exploration Log

Project Address & Site Specific Location

Coordinates (SPN NAD83 ft)

Exploration Number

1750 & 1765 22nd Ave S. Seattle WA, West Block

E:1277421 N:217771 (est)

AC-SB-06

Contractor

Equipment

Sampling Method

Ground Surface (GS) Elev. (NAVD88)

Cascade

CME 55

300-lb autohammer w/ Dames & Moore sampler

75'(est)

Operator

Exploration Method(s)

Work Start/Completion Dates

Top of Casing Elev. (NAVD88)

Depth to Water (Below GS)

Curtis

Hollow Stem Auger

11/3/2017

NA

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
5	70	Borehole backfilled with bentonite chips and capped with gravel.	S-1		Blows (non-SPT)= 2,4,2 Sheen= none Odor= none PID= <1 ppm		FILL Loose, moist, sandy GRAVEL (GP); angular fine to coarse gravel. Loose, moist, brown-gray, gravelly, silty SAND (SM).	5
10	65		S-2		Blows (non-SPT)= 11,45,50 Sheen= none Odor= none PID= <1 ppm		GLACIAL DEPOSITS (GLACIALLY OVERRIDDEN) Very dense, moist, brown, gravelly, silty to very silty SAND (SM); fine to medium sand.	10
15	60		S-3		Blows (non-SPT)= 15,50/6 Sheen= none Odor= none PID= <1 ppm		Becomes gray.	15

Legend

- No Soil Sample Recovery
- Split Barrel 3.25" X 2.375" (D&M)

Water Level

No Water Encountered

See Exploration Log Key for explanation of symbols

Logged by: FK
Approved by: DHM 1/11/2018

Exploration Log
AC-SB-06

Sheet 1 of 2



Mt. Baker Housing Association - Belshaw - 170304

Environmental Exploration Log

Project Address & Site Specific Location

Coordinates (SPN NAD83 ft)

Exploration Number

1750 & 1765 22nd Ave S. Seattle WA, West Block

E:1277421 N:217771 (est)
Ground Surface (GS) Elev. (NAVD88)

AC-SB-06

Contractor

Equipment

Sampling Method

75'(est)

Cascade

CME 55

300-lb autohammer w/ Dames & Moore sampler

Operator

Exploration Method(s)

Work Start/Completion Dates

Top of Casing Elev. (NAVD88)

Depth to Water (Below GS)

Curtis

Hollow Stem Auger

11/3/2017

NA

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
			S-1	Chemically Analyzed	Blows (non-SPT)= 26,50/6 Sheen= none Odor= none PID= <1 ppm		GLACIAL DEPOSITS (GLACIALLY OVERRIDDEN) Very dense, moist, brown, gravelly, silty to very silty SAND (SM); fine to medium sand. (continued)	
25	50		S-5	Chemically Analyzed	Blows (non-SPT)= 32,50/6 Sheen= none Odor= none PID= <1 ppm		Becomes very moist.	25
30	45		S-6		Blows (non-SPT)= 46,50/6 Sheen= none Odor= none PID= <1 ppm			30
35	40		S-7		Blows (non-SPT)= 42,50/6 Sheen= none Odor= none PID= <1 ppm		Becomes moist.	35
			S-8		Blows (non-SPT)= 36,50/6 Sheen= none Odor= none PID= <1 ppm			

Legend

- No Soil Sample Recovery
- Split Barrel 3.25" X 2.375" (D&M)

Water Level

No Water Encountered

Bottom of exploration at 40 ft. bgs.
See Exploration Log Key for explanation of symbols

Logged by: FK
Approved by: DHM 1/11/2018

Exploration Log
AC-SB-06

Sheet 2 of 2



Mt. Baker Housing Association - Belshaw - 170304

Environmental Exploration Log

Project Address & Site Specific Location

Coordinates (SPN NAD83 ft)

Exploration Number

1750 & 1765 22nd Ave S. Seattle WA, West Block

E:1277627 N:217841 (est)

DP-01

Contractor

Equipment

Sampling Method

Ground Surface (GS) Elev. (NAVD88)

Cascade

Direct push rig

Percussion hammer

80'(est)

Operator

Exploration Method(s)

Work Start/Completion Dates

Top of Casing Elev. (NAVD88)

Depth to Water (Below GS)

Tim

Direct push

9/5/2017

NA

No Water Encountered

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
		Borehole backfilled with bentonite chips and capped with gravel.					FILL GRAVEL (GP); angular fine to coarse gravel. Moist, brown, slightly gravelly, silty SAND (SM); fine to medium sand.	
5	75		DP-1-5.0	Chemically Analyzed	Sheen= None Odor= None PID= < 1		Moist, gray and brown, sandy SILT (ML).	5
							Very moist, brown, gravelly, silty SAND (SM); fine to coarse sand.	
10	70		DP-1-10.0			Sheen= None Odor= None PID= < 1	Moist, brown, SAND (SP); fine to medium sand.	10
							GLACIAL DEPOSITS (GLACIALLY OVERRIDDEN) Moist, gray, silty to very silty SAND (SM); fine to medium sand.	
15	65	DP-1-15.0	Chemically Analyzed		Sheen= None Odor= None PID= < 1		Slightly moist, gray, sandy SILT (ML).	15

Legend

Continuous core 1.85" ID

Water Level

No Water Encountered

See Exploration Log Key for explanation of symbols

Logged by: FK
Approved by: DHM 1/11/2018

Exploration Log DP-01

Sheet 1 of 2



Mt. Baker Housing Association - Belshaw - 170304

Environmental Exploration Log

Project Address & Site Specific Location

Coordinates (SPN NAD83 ft)

Exploration Number

1750 & 1765 22nd Ave S. Seattle WA, West Block

E:1277627 N:217841 (est)

DP-01

Contractor

Equipment

Sampling Method

Ground Surface (GS) Elev. (NAVD88)

Cascade

Direct push rig

Percussion hammer

80'(est)

Operator

Exploration Method(s)

Work Start/Completion Dates

Top of Casing Elev. (NAVD88)

Depth to Water (Below GS)

Tim

Direct push

9/5/2017

NA

No Water Encountered

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
			DP-1-20.0		Sheen= None Odor= None PID= < 1		Slightly moist, gray, sandy SILT (ML). (continued)	
			DP-1-25.0		Sheen= None Odor= None PID= < 1		Trace gravel observed.	
			DP-1-30.0		PID= < 1 Odor= None Sheen= None		Becomes slightly gravelly.	
25	55						Moist, gray, gravelly, silty to very silty SAND (SM); fine to medium sand.	25
30	50						Bottom of exploration at 30 ft. bgs.	30
35	45							35

Legend

Continuous core 1.85" ID

Water Level

No Water Encountered

See Exploration Log Key for explanation of symbols

Logged by: FK
Approved by: DHM 1/11/2018

Exploration Log DP-01

Sheet 2 of 2



Mt. Baker Housing Association - Belshaw - 170304

Environmental Exploration Log

Project Address & Site Specific Location

Coordinates (SPN NAD83 ft)

Exploration Number

1750 & 1765 22nd Ave S. Seattle WA, East Block

E:1277602 N:217617 (est)

DP-02

Contractor

Equipment

Sampling Method

Ground Surface (GS) Elev. (NAVD88)

Cascade

Direct push rig

Percussion hammer

73'(est)

Operator

Exploration Method(s)

Work Start/Completion Dates

Top of Casing Elev. (NAVD88)

Depth to Water (Below GS)

Tim

Direct push

9/5/2017

NA

No Water Encountered

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
		Borehole backfilled with bentonite chips and capped with asphalt.				Asphalt.		
						FILL	Moist, brown SAND (SP); fine to medium sand.	
70							Moist, gray, silty SAND (SM); fine to medium sand, trace gravel.	
5			DP-2-5.0	Chemically Analyzed	Sheen= None Odor= None PID= < 1			5
65								
10			DP-2-10.0	Chemically Analyzed	Sheen= None Odor= None PID= < 1		GLACIAL DEPOSITS (GLACIALLY OVERRIDDEN) Moist, gray, gravelly, silty to very silty SAND (SM); fine to medium sand.	10
60								
15			DP-2-15.0		PID= < 1 Odor= None Sheen= None		Bottom of exploration at 15 ft. bgs.	15
55								

ASPECT STANDARD EXPLORATION LOG TEMPLATE P:\GINT\PROJECTS\MBHA BELSHAW 170304.GPJ January 12, 2018

Legend

Sample Method

Continuous core 1.85" ID

Water Level

No Water Encountered

See Exploration Log Key for explanation of symbols

Logged by: FK
Approved by: DHM 1/11/2018

Exploration Log DP-02

Sheet 1 of 1



Mt. Baker Housing Association - Belshaw - 170304

Environmental Exploration Log

Project Address & Site Specific Location

Coordinates (SPN NAD83 ft)

Exploration Number

1750 & 1765 22nd Ave S. Seattle WA, East Block

E:1277704 N:217588 (est)
Ground Surface (GS) Elev. (NAVD88)

DP-03

Contractor

Equipment

Sampling Method

75'(est)

Cascade

Direct push rig

Percussion hammer

Operator

Exploration Method(s)

Work Start/Completion Dates

Top of Casing Elev. (NAVD88)

Depth to Water (Below GS)

Tim

Direct push

9/5/2017

NA

No Water Encountered

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
		Borehole backfilled with bentonite chips and capped with concrete.				Concrete,		
5	70		DP-3-5.0	Chemically Analyzed	Sheen= None Odor= None PID= < 1	Moist, gray, gravelly, silty SAND (SM); fine to medium sand.	5	
10	65		DP-3-10.0		Sheen= None Odor= None PID= < 1		10	
15	60	DP-3-15.0	Chemically Analyzed	Sheen= None Odor= None PID= < 1	Bottom of exploration at 15 ft. bgs.		15	

ASPECT STANDARD EXPLORATION LOG TEMPLATE P:\GINT\PROJECTS\BIMBA BELSHAW 170304.GPJ January 12, 2018

Legend

Continuous core 1.85" ID

Water Level

No Water Encountered

See Exploration Log Key for explanation of symbols

Logged by: FK
Approved by: DHM 1/11/2018

Exploration Log DP-03

Sheet 1 of 1



Mt. Baker Housing Association - Belshaw - 170304

Environmental Exploration Log

Project Address & Site Specific Location

Coordinates (SPN NAD83 ft)

Exploration Number

1750 & 1765 22nd Ave S. Seattle WA, South Block

E:1277626 N:217497 (est)

DP-04

Contractor

Equipment

Sampling Method

Ground Surface (GS) Elev. (NAVD88)

Cascade

Direct push rig

Percussion hammer

73'(est)

Operator

Exploration Method(s)

Work Start/Completion Dates

Top of Casing Elev. (NAVD88)

Depth to Water (Below GS)

Tim

Direct push

9/5/2017

NA

No Water Encountered

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
70		Borehole backfilled with bentonite chips and capped with gravel.	DP-4-5.0	Chemically Analyzed	Sheen= Slight Odor= Slight PID= < 1		FILL GRAVEL (GP); angular fine to coarse gravel.	
5							Moist, gray, brown, slightly gravelly, silty SAND (SM); fine to medium sand, trace brick and wood debris.	5
65			DP-4-10.0	Chemically Analyzed	Sheen= None Odor= None PID= < 1		GLACIAL DEPOSITS (RECESSIONAL LACUSTRINE) Moist, brown, CLAY (CL); low plasticity.	
10							10	
60								
15							Bottom of exploration at 15 ft. bgs.	15
55								

Legend

Sample Method Continuous core 1.85" ID

Water Level No Water Encountered

See Exploration Log Key for explanation of symbols

Logged by: FK
Approved by: DHM 1/11/2018

Exploration Log DP-04

Sheet 1 of 1

ASPECT STANDARD EXPLORATION LOG TEMPLATE P:\GINT\PROJECTS\MBHA BELSHAW 170304.GPJ January 12, 2018



Mt. Baker Housing Association - Belshaw - 170304

Environmental Exploration Log

Project Address & Site Specific Location

Coordinates (SPN NAD83 ft)

Exploration Number

1750 & 1765 22nd Ave S. Seattle WA, South Block

Ground Surface (GS) Elev. (NAVD88)

DP-05

Contractor

Equipment

Sampling Method

75'(est)

Cascade

Direct push rig

Percussion hammer

Operator

Exploration Method(s)

Work Start/Completion Dates

Top of Casing Elev. (NAVD88)

Depth to Water (Below GS)

Tim

Direct push

9/5/2017

NA

No Water Encountered

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)				
5	70	Borehole backfilled with bentonite chips and capped with gravel.	DP-5-5.0	Chemically Analyzed	Sheen= None Odor= None PID= < 1		FILL GRAVEL (GP); angular fine to coarse gravel.	5				
											Moist, gray and brown, slightly gravelly, silty SAND (SM); fine to medium sand, trace organics.	
10	65							DP-5-10.0	Chemically Analyzed	Sheen= None Odor= None PID= < 1		GLACIAL DEPOSITS (RECESSIONAL LACUSTRINE) Moist, brown, CLAY (CL); low plasticity.
15	60		DP-5-15.0		Sheen= None Odor= None PID= < 1		GLACIAL DEPOSITS (GLACIALLY OVERRIDDEN) Moist, gray, gravelly, silty SAND (SM); fine to medium sand.	15				
							Bottom of exploration at 15 ft. bgs.					

ASPECT STANDARD EXPLORATION LOG TEMPLATE P:\GINT\PROJECTS\MBHA BELSHAW 170304.GPJ January 12, 2018

Legend

Continuous core 1.85" ID

Water Level

No Water Encountered

See Exploration Log Key for explanation of symbols

Logged by: FK
Approved by: DHM 1/11/2018

Exploration Log
DP-05

Sheet 1 of 1



Mt. Baker Housing Association - Belshaw - 170304

Environmental Exploration Log

Project Address & Site Specific Location

Coordinates (SPN NAD83 ft)

Exploration Number

1750 & 1765 22nd Ave S. Seattle WA, South Block

E:1277668 N:217397 (est)

DP-06

Contractor

Equipment

Sampling Method

Ground Surface (GS) Elev. (NAVD88)

Cascade

Direct push rig

Percussion hammer

73'(est)

Operator

Exploration Method(s)

Work Start/Completion Dates

Top of Casing Elev. (NAVD88)

Depth to Water (Below GS)

Tim

Direct push

9/5/2017

NA

No Water Encountered

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
70		Borehole backfilled with bentonite chips and capped with gravel.	DP-6-5.0	Chemically Analyzed	Sheen= None Odor= None PID= < 1		FILL GRAVEL (GP); angular fine to coarse gravel.	
	Moist, gray and brown, slightly gravelly, silty SAND (SM); fine to medium sand, trace organics.							
65			DP-6-10.0		Sheen= None Odor= None PID= < 1		GLACIAL DEPOSITS (RECESSIONAL LACUSTRINE) Moist, brown, CLAY (CL); low plasticity.	5
10								
60			DP-6-15.0		Sheen= None Odor= None PID= < 1		GLACIAL DEPOSITS (GLACIALLY OVERRIDDEN) Moist, gray, silty SAND (SM); fine to medium sand, with gravel.	10
15								
55							Bottom of exploration at 15 ft. bgs.	15

Legend

Sample Method

Continuous core 1.85" ID

Water Level

No Water Encountered

See Exploration Log Key for explanation of symbols

Logged by: FK
Approved by: DHM 1/11/2018

Exploration Log DP-06

Sheet 1 of 1



Mt. Baker Housing Association - Belshaw - 170304

Environmental Exploration Log

Project Address & Site Specific Location

Coordinates (SPN NAD83 ft)

Exploration Number

1750 & 1765 22nd Ave S. Seattle WA, South Block

E:1277583 N:217417 (est)

DP-07

Contractor

Equipment

Sampling Method

Ground Surface (GS) Elev. (NAVD88)

Cascade

Direct push rig

Percussion hammer

70'(est)

Operator

Exploration Method(s)

Work Start/Completion Dates

Top of Casing Elev. (NAVD88)

Depth to Water (Below GS)

Tim

Direct push

9/5/2017

NA

No Water Encountered

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
5	65	Borehole backfilled with bentonite chips and capped with gravel.	DP-7-5.0	Chemically Analyzed	Sheen= Slight Odor= None PID= < 1	FILL GRAVEL (GP); angular fine to coarse gravel.		5
10	60		DP-7-10.0	Chemically Analyzed	Sheen= None Odor= None PID= < 1	GLACIAL DEPOSITS (RECESSIONAL LACUSTRINE) Moist, brown, CLAY (CL); low plasticity.		10
15	55		DP-7-15.0			GLACIAL DEPOSITS (GLACIALLY OVERRIDDEN) Moist, gray, gravelly, silty SAND (SM); fine to medium sand.		15
					Sheen= None Odor= None PID= < 1		Bottom of exploration at 15 ft. bgs.	15

Legend

Continuous core 1.85" ID

Water Level

No Water Encountered

See Exploration Log Key for explanation of symbols

Logged by: FK
Approved by: DHM 1/11/2018

**Exploration Log
DP-07**

Sheet 1 of 1



Mt. Baker Housing Association - Belshaw - 170304

Environmental Exploration Log

Project Address & Site Specific Location

Coordinates (SPN NAD83 ft)

Exploration Number

1750 & 1765 22nd Ave S. Seattle WA, South Block

E:1277515 N:217428 (est)

DP-08

Contractor

Equipment

Sampling Method

Ground Surface (GS) Elev. (NAVD88)

Cascade

Direct push rig

Percussion hammer

69'(est)

Operator

Exploration Method(s)

Work Start/Completion Dates

Top of Casing Elev. (NAVD88)

Depth to Water (Below GS)

Tim

Direct push

9/5/2017

NA

No Water Encountered

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
65		Borehole backfilled with bentonite chips and capped with gravel.	DP-8-5.0	Chemically Analyzed	Sheen= Slight Odor= None PID= < 1		FILL GRAVEL (GP); angular fine to coarse gravel.	
5							Moist, brown, slightly gravelly, silty SAND (SM); fine to medium sand.	
							GLACIAL DEPOSITS (RECESSIONAL LACUSTRINE) Moist, brown, CLAY (CL); low plasticity.	
60			DP-8-10.0	Chemically Analyzed	Sheen= None Odor= None PID= < 1		GLACIAL DEPOSITS (GLACIALLY OVERRIDDEN) Moist, gray, gravelly, silty SAND (SM); fine to medium sand.	10
55			DP-8-15.0		Sheen= None Odor= None PID= < 1		Bottom of exploration at 15 ft. bgs.	15
50								

Legend

Sample Method
 Continuous core 1.85" ID

Water Level
 No Water Encountered

See Exploration Log Key for explanation of symbols
 Logged by: FK
 Approved by: DHM 1/11/2018

Exploration Log
DP-08
 Sheet 1 of 1



Mt. Baker Housing Association - Belshaw - 170304

Environmental Exploration Log

Project Address & Site Specific Location

Coordinates (SPN NAD83 ft)

Exploration Number

1750 & 1765 22nd Ave S. Seattle WA, South Block

E:1277538 N:217508 (est)

DP-09

Contractor

Equipment

Sampling Method

Ground Surface (GS) Elev. (NAVD88)

Cascade

Direct push rig

Percussion hammer

70'(est)

Operator

Exploration Method(s)

Work Start/Completion Dates

Top of Casing Elev. (NAVD88)

Depth to Water (Below GS)

Tim

Direct push

9/5/2017

NA

No Water Encountered

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
5	65	Borehole backfilled with bentonite chips and capped with gravel.	DP-9-3.0	Chemically Analyzed	Sheen= Slight Odor= None PID= < 1		FILL GRAVEL (GP); angular fine to coarse gravel.	
	GLACIAL DEPOSITS (RECESSIONAL LACUSTRINE) Moist, brown, CLAY (CL); low plasticity.							
5							GLACIAL DEPOSITS (GLACIALLY OVERRIDDEN) Moist, gray, silty SAND (SM); fine to medium sand.	5
10	60		DP-9-10.0	Chemically Analyzed	Sheen= None Odor= None PID= < 1			10
15	55		DP-9-15.0		Sheen= None Odor= None PID= < 1		Bottom of exploration at 15 ft. bgs.	15

Legend

Continuous core 1.85" ID

Water Level

No Water Encountered

See Exploration Log Key for explanation of symbols

Logged by: FK
Approved by: DHM 1/11/2018

Exploration Log DP-09

Sheet 1 of 1



Mt. Baker Housing Association - Belshaw - 170304

Environmental Exploration Log

Project Address & Site Specific Location

Coordinates (SPN NAD83 ft)

Exploration Number

1750 & 1765 22nd Ave S. Seattle WA, West Block

E:1277418 N:217589 (est)

DP-10

Contractor

Equipment

Sampling Method

Ground Surface (GS) Elev. (NAVD88)

Cascade

Direct push rig

Percussion hammer

69'(est)

Operator

Exploration Method(s)

Work Start/Completion Dates

Top of Casing Elev. (NAVD88)

Depth to Water (Below GS)

Tim

Direct push

9/5/2017

NA

No Water Encountered

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
65		Borehole backfilled with bentonite chips and capped with asphalt.	DP-10-5.0	Chemically Analyzed	Sheen= None Odor= None PID= < 1	Asphalt.	WEATHERED GLACIAL DEPOSITS (GLACIALLY OVERRIDDEN) Moist, gray, gravelly, silty SAND (SM); fine to medium sand.	5
5								
60			DP-10-8.0		Sheen= None Odor= None PID= < 1		Bottom of exploration at 8 ft. bgs. Note: Refusal encountered at 8 ft. bgs.	10
10								
55								15
15								
50								

Legend

Continuous core 1.85" ID

Water Level

No Water Encountered

See Exploration Log Key for explanation of symbols

Logged by: FK
Approved by: DHM 1/11/2018

Exploration Log DP-10



Mt. Baker Housing Association - Belshaw - 170304

Environmental Exploration Log

Project Address & Site Specific Location
1750 & 1765 22nd Ave S. Seattle WA, West Block

Coordinates (SPN NAD83 ft)
E:1277420 N:217788 (est)

Exploration Number
DP-11

Contractor

Equipment

Sampling Method

Ground Surface (GS) Elev. (NAVD88)

Cascade

Direct push rig

Percussion hammer

75'(est)

Operator

Exploration Method(s)

Work Start/Completion Dates

Top of Casing Elev. (NAVD88)

Depth to Water (Below GS)

Tim

Direct push

9/5/2017

NA

No Water Encountered

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
							FILL	
							GRAVEL (GP); angular fine to coarse gravel.	
							Moist, gray and brown, slightly gravelly, silty SAND (SM); fine to medium sand, trace organics.	
5	70	Borehole backfilled with bentonite chips and capped with gravel.	DP-11-5.0	Chemically Analyzed	Sheen= Slight Odor= None PID= < 1			5
10	65		DP-11-10.0	Chemically Analyzed	Sheen= None Odor= None PID= < 1		WEATHERED GLACIAL DEPOSITS (GLACIALLY OVERRIDDEN) Moist, gray, gravelly, silty SAND (SM); fine to medium sand.	10
15	60		DP-11-15.0			Sheen= None Odor= None PID= < 1		Bottom of exploration at 15 ft. bgs.

Legend

Sample Method
 Continuous core 1.85" ID

Water Level
 No Water Encountered

See Exploration Log Key for explanation of symbols

Logged by: FK
Approved by: DHM 1/11/2018

Exploration Log
DP-11
Sheet 1 of 1

ASPECT STANDARD EXPLORATION LOG TEMPLATE P:\GINTY\PROJECTS\MBHA BELSHAW 170304.GPJ January 12, 2018



Mt. Baker Housing Association - Belshaw - 170304

Environmental Exploration Log

Project Address & Site Specific Location

Coordinates (SPN NAD83 ft)

Exploration Number

1750 & 1765 22nd Ave S. Seattle WA, West Block

E:1277483 N:217785 (est)

DP-12

Contractor

Equipment

Sampling Method

Ground Surface (GS) Elev. (NAVD88)

Cascade

Direct push rig

Percussion hammer

77'(est)

Operator

Exploration Method(s)

Work Start/Completion Dates

Top of Casing Elev. (NAVD88)

Depth to Water (Below GS)

Tim

Direct push

9/5/2017

NA

No Water Encountered

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
75		Borehole backfilled with bentonite chips and capped with gravel.	DP-12-5.0	Chemically Analyzed	Sheen= Slight Odor= None PID= < 1		FILL GRAVEL (GP); angular fine to coarse gravel.	
	Moist, gray and brown, slightly gravelly, silty SAND (SM); fine to medium sand, trace organics.							
5	GLACIAL DEPOSITS (RECESSIONAL LACUSTRINE) Moist, brown, CLAY (CL); low plasticity.						5	
70	WEATHERED GLACIAL DEPOSITS (GLACIALLY OVERRIDDEN) Very moist, gray, gravelly, silty SAND (SM); fine to medium sand.						10	
10			DP-12-7.5	Chemically Analyzed	Sheen= None Odor= None PID= < 1			
65			DP-12-15.0		Sheen= None Odor= None PID= < 1			15
15							Bottom of exploration at 15 ft. bgs.	15
60								

Legend

Continuous core 1.85" ID

Water Level

No Water Encountered

See Exploration Log Key for explanation of symbols

Logged by: FK
Approved by: DHM 1/11/2018

Exploration Log DP-12

Sheet 1 of 1



Mt. Baker Housing Association - Belshaw - 170304

Environmental Exploration Log

Project Address & Site Specific Location

Coordinates (SPN NAD83 ft)

Exploration Number

1750 & 1765 22nd Ave S. Seattle WA, West Block

E:1277501 N:217714 (est)

DP-13

Contractor

Equipment

Sampling Method

Ground Surface (GS) Elev. (NAVD88)

Cascade

Direct push rig

Percussion hammer

75'(est)

Operator

Exploration Method(s)

Work Start/Completion Dates

Top of Casing Elev. (NAVD88)

Depth to Water (Below GS)

Tim

Direct push

9/5/2017

NA

No Water Encountered

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
		Borehole backfilled with bentonite chips and capped with gravel.					FILL GRAVEL (GP); angular fine to coarse gravel.	
							Moist, gray and brown, slightly gravelly, silty SAND (SM); fine to medium sand, trace organics.	
							GLACIAL DEPOSITS (RECESSIONAL LACUSTRINE) Moist, brown, CLAY (CL); low plasticity.	
5	70		DP-13-5.0	Chemically Analyzed	Sheen= None Odor= None PID= < 1			5
10	65		DP-13-10.0	Chemically Analyzed	Sheen= None Odor= None PID= < 1			10
15	60		DP-13-15.0		Sheen= None Odor= None PID= < 1		GLACIAL DEPOSITS (GLACIALLY OVERRIDDEN) Moist, gray, gravelly, silty SAND (SM); fine to medium sand.	15
							Bottom of exploration at 15 ft. bgs.	

Legend

Continuous core 1.85" ID

No Water Encountered

See Exploration Log Key for explanation of symbols

Logged by: FK
Approved by: DHM 1/11/2018

Exploration Log DP-13

Sheet 1 of 1



Mt. Baker Housing Association - Belshaw - 170304

Environmental Exploration Log

Project Address & Site Specific Location

Coordinates (SPN NAD83 ft)

Exploration Number

1750 & 1765 22nd Ave S. Seattle WA, West Block

E:1277384 N:217715 (est)

DP-14

Contractor

Equipment

Sampling Method

Ground Surface (GS) Elev. (NAVD88)

Cascade

Direct push rig

Geoprobe 6600

71'(est)

Operator

Exploration Method(s)

Work Start/Completion Dates

Top of Casing Elev. (NAVD88)

Depth to Water (Below GS)

Tim

Direct push

9/6/2017

NA

No Water Encountered

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)			
70		Borehole backfilled with bentonite chips and capped with gravel.	DP-14-3.0	Chemically Analyzed	Sheen= Slight Odor= None PID= < 1		FILL GRAVEL (GP); angular fine to coarse gravel.				
										Moist, gray and brown, slightly gravelly, silty SAND (SM); fine to medium sand, trace wood debris.	
5								DP-14-5.0	Chemically Analyzed	Sheen= None Odor= None PID= < 1	WEATHERED GLACIAL DEPOSITS (GLACIALLY OVERRIDDEN) Moist, gray, gravelly, silty SAND (SM); fine to medium sand.
65											
10				Chemically Analyzed	Sheen= None Odor= None PID= < 1			10			
60											
15					Sheen= None Odor= None PID= < 1		Bottom of exploration at 15 ft. bgs.	15			
55											

Legend

Continuous core 1.85" ID

Water Level

No Water Encountered

See Exploration Log Key for explanation of symbols

Logged by: FK
Approved by: DHM 1/11/2018

Exploration Log DP-14

Sheet 1 of 1



Mt. Baker Housing Association - Belshaw - 170304

Environmental Exploration Log

Project Address & Site Specific Location

Coordinates (SPN NAD83 ft)

Exploration Number

1750 & 1765 22nd Ave S. Seattle WA, West Block

E:1277495 N:217660 (est)

DP-15

Contractor

Equipment

Sampling Method

Ground Surface (GS) Elev. (NAVD88)

Cascade

Direct push rig

Geoprobe 6600

73'(est)

Operator

Exploration Method(s)

Work Start/Completion Dates

Top of Casing Elev. (NAVD88)

Depth to Water (Below GS)

Tim

Direct push

9/6/2017 to 9/6/2107

NA

No Water Encountered

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
							FILL	
							GRAVEL (GP); angular fine to coarse gravel.	
							Moist, gray and brown, slightly gravelly, silty SAND (SM); fine to medium sand.	
							GLACIAL DEPOSITS (RECESSIONAL LACUSTRINE)	
							Moist, brown, CLAY (CL); low plasticity.	
							GLACIAL DEPOSITS (GLACIALLY OVERRIDDEN)	
							Moist, gray, silty SAND (SM); fine to medium sand.	
70		Borehole backfilled with bentonite chips and capped with gravel.	DP-15-3.0	Chemically Analyzed	Sheen= None Odor= None PID= < 1			
5	DP-15-5.0		Sheen= None Odor= None PID= < 1					
65	DP-15-10.0		Sheen= None Odor= None PID= < 1					
10			DP-15-15.0	Chemically Analyzed	Sheen= None Odor= None PID= < 1		Bottom of exploration at 15 ft. bgs.	15
15								
55								

Legend

Continuous core 1.85" ID

No Water Encountered

See Exploration Log Key for explanation of symbols

Logged by: FK
Approved by: DHM 1/11/2018

Exploration Log DP-15

Sheet 1 of 1



Mt. Baker Housing Association - Belshaw - 170304

Environmental Exploration Log

Project Address & Site Specific Location

Coordinates (SPN NAD83 ft)

Exploration Number

1750 & 1765 22nd Ave S. Seattle WA, West Block

E:1277483 N:217604 (est)

DP-16

Contractor

Equipment

Sampling Method

Ground Surface (GS) Elev. (NAVD88)

Cascade

Direct push rig

Geoprobe 6600

72'(est)

Operator

Exploration Method(s)

Work Start/Completion Dates

Top of Casing Elev. (NAVD88)

Depth to Water (Below GS)

Tim

Direct push

9/6/2017

NA

No Water Encountered

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
70		Borehole backfilled with bentonite chips and capped with gravel.	DP-16-3.0	Chemically Analyzed	Sheen= Slight Odor= None PID= < 1		FILL GRAVEL (GP); angular fine to coarse gravel.	
			DP-16-5.0				Moist, gray and brown, slightly gravelly, silty SAND (SM); fine to medium sand, trace roots.	
5			DP-16-10.0	Chemically Analyzed	Sheen= None Odor= None PID= < 1		WEATHERED GLACIAL DEPOSITS (GLACIALLY OVERRIDDEN) Moist, gray, gravelly, silty SAND (SM); fine to medium sand.	5
65			DP-16-15.0	Chemically Analyzed	Sheen= None Odor= None PID= < 1		Bottom of exploration at 15 ft. bgs.	15
10								
60								
15								
55								

Legend

Continuous core 1.85" ID

Water Level

No Water Encountered

See Exploration Log Key for explanation of symbols

Logged by: FK
Approved by: DHM 1/11/2018

Exploration Log DP-16

Sheet 1 of 1



Mt. Baker Housing Association - Belshaw - 170304

Environmental Exploration Log

Project Address & Site Specific Location

Coordinates (SPN NAD83 ft)

Exploration Number

1750 & 1765 22nd Ave S. Seattle WA, East Block

E:1277695 N:217740 (est)

DP-17

Contractor

Equipment

Sampling Method

Ground Surface (GS) Elev. (NAVD88)

Cascade

Direct push rig

Geoprobe 6600

78'(est)

Operator

Exploration Method(s)

Work Start/Completion Dates

Top of Casing Elev. (NAVD88)

Depth to Water (Below GS)

Tim

Direct push

9/6/2017

NA

No Water Encountered

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
75		Borehole backfilled with bentonite chips and capped with concrete.	DP-17-3.0	Chemically Analyzed	Sheen= Slight Odor= None PID= < 1	Asphalt.	FILL Moist, brown, slightly gravelly, silty SAND (SM); fine to medium sand, trace burnt wood debris.	
5	DP-17-5.0		Sheen= None Odor= None PID= < 1		GLACIAL DEPOSITS (RECESSIONAL LACUSTRINE) Very moist, brown, CLAY (CL); low plasticity.	5		
70	DP-17-10.0		Chemically Analyzed		Sheen= None Odor= None PID= < 1	GLACIAL DEPOSITS (GLACIALLY OVERRIDDEN) Moist, gray and brown, silty SAND (SM).	10	
10			DP-17-15.0		Sheen= None Odor= None PID= < 1		Becomes very moist.	
65							Becomes slightly gravelly and moist.	
15							Bottom of exploration at 15 ft. bgs.	15
60								

Legend

Continuous core 1.85" ID

No Water Encountered

See Exploration Log Key for explanation of symbols

Logged by: FK
Approved by: DHM 1/11/2018

**Exploration Log
DP-17**

Sheet 1 of 1

ASPECT STANDARD EXPLORATION LOG TEMPLATE P:\GINT\PROJECTS\MBHA BELSHAW 170304.GPJ January 12, 2018



Mt. Baker Housing Association - Belshaw - 170304

Environmental Exploration Log

Project Address & Site Specific Location

Coordinates (SPN NAD83 ft)

Exploration Number

1750 & 1765 22nd Ave S. Seattle WA, East Block

E:1277760 N:217720 (est)

DP-18

Contractor

Equipment

Sampling Method

Ground Surface (GS) Elev. (NAVD88)

Cascade

Direct push rig

Geoprobe (54LT)

84'(est)

Operator

Exploration Method(s)

Work Start/Completion Dates

Top of Casing Elev. (NAVD88)

Depth to Water (Below GS)

Tim

Direct push

9/6/2017

NA

No Water Encountered

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
80		Borehole backfilled with bentonite chips and capped with asphalt.	DP-18-3.0	Chemically Analyzed	Sheen= None Odor= None PID= < 1	Concrete.		
5			DP-18-5.0	Chemically Analyzed	Sheen= None Odor= None PID= < 1	WEATHERED GLACIAL DEPOSITS (GLACIALLY OVERRIDDEN) Moist, brown, slightly gravelly, silty SAND (SM); fine to medium sand.		
5			DP-18-7.0	Chemically Analyzed	Sheen= None Odor= None PID= < 1	GLACIAL DEPOSITS (GLACIALLY OVERRIDDEN) Moist, gray, gravelly, silty SAND (SM); fine to medium sand.		
75						Bottom of exploration at 7 ft. bgs.		
10						Note: Refusal encountered at 7 ft bgs.		
70								
15								
65								

Legend

Continuous core 1.85" ID

Water Level

No Water Encountered

See Exploration Log Key for explanation of symbols

Logged by: FK
Approved by: DHM 1/11/2018

Exploration Log DP-18

Sheet 1 of 1



Mt. Baker Housing Association - Belshaw - 170304

Environmental Exploration Log

Project Address & Site Specific Location

Coordinates (SPN NAD83 ft)

Exploration Number

1750 & 1765 22nd Ave S. Seattle WA, East Block

E:1277608 N:217720 (est)

DP-19

Contractor

Equipment

Sampling Method

Ground Surface (GS) Elev. (NAVD88)

Cascade

Direct push rig

Geoprobe (54LT)

76'(est)

Operator

Exploration Method(s)

Work Start/Completion Dates

Top of Casing Elev. (NAVD88)

Depth to Water (Below GS)

Tim

Direct push

9/6/2017

NA

No Water Encountered

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
75		<p>Borehole backfilled with bentonite chips and capped with concrete.</p>	DP-19-2.0	Chemically Analyzed	Sheen= None Odor= None PID= < 1	<p>Concrete.</p>		
						<p>WEATHERED GLACIAL DEPOSITS (GLACIALLY OVERRIDDEN) Moist, brown and gray, gravelly, silty SAND (SM); fine to medium sand.</p>		
							Bottom of exploration at 2 ft. bgs. Note: Refusal encountered at 2 ft bgs.	
5								5
70								
10								10
65								
15								15
60								

Legend

Continuous core 1.85" ID

Water Level

No Water Encountered

See Exploration Log Key for explanation of symbols

Logged by: FK
Approved by: DHM 1/11/2018

Exploration Log DP-19

Sheet 1 of 1



Mt. Baker Housing Association - Belshaw - 170304

Environmental Exploration Log

Project Address & Site Specific Location

Coordinates (SPN NAD83 ft)

Exploration Number

1750 & 1765 22nd Ave S. Seattle WA, East Block

E:1277769 N:217662 (est)

DP-20

Contractor

Equipment

Sampling Method

Ground Surface (GS) Elev. (NAVD88)

Cascade

Direct push rig

Geoprobe (54LT)

82'(est)

Operator

Exploration Method(s)

Work Start/Completion Dates

Top of Casing Elev. (NAVD88)

Depth to Water (Below GS)

Tim

Direct push

9/6/2017

NA

No Water Encountered

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
80		Borehole backfilled with bentonite chips and capped with concrete.	DP-20-3.0	Chemically Analyzed	Sheen= None Odor= None PID= < 1	Concrete.	WEATHERED GLACIAL DEPOSITS (GLACIALLY OVERRIDDEN) Moist, brown, slightly gravelly, silty SAND (SM); fine to medium sand.	
5			DP-20-5.0			GLACIAL DEPOSITS (GLACIALLY OVERRIDDEN) Moist, gray, gravelly, silty SAND (SM); fine to medium sand.		
							Bottom of exploration at 5 ft. bgs. Note: Refusal encountered at 5 ft bgs.	5
75								
10								
70								
15								
65								

Legend

Continuous core 1.85" ID

No Water Encountered

See Exploration Log Key for explanation of symbols

Logged by: FK
Approved by: DHM 1/11/2018

**Exploration Log
DP-20**

Sheet 1 of 1



Mt. Baker Housing Association - Belshaw - 170304

Environmental Exploration Log

Project Address & Site Specific Location

Coordinates (SPN NAD83 ft)

Exploration Number

1750 & 1765 22nd Ave S. Seattle WA, East Block

E:1277614 N:217666 (est)

DP-21

Contractor

Equipment

Sampling Method

Ground Surface (GS) Elev. (NAVD88)

Cascade

Direct push rig

Geoprobe (54LT)

75'(est)

Operator

Exploration Method(s)

Work Start/Completion Dates

Top of Casing Elev. (NAVD88)

Depth to Water (Below GS)

Tim

Direct push

9/6/2017

NA

No Water Encountered

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
		<p>Borehole backfilled with bentonite chips and capped with concrete.</p>	DP-21-2.0	Chemically Analyzed	Sheen= None Odor= None PID= < 1	<p>Concrete.</p>	WEATHERED GLACIAL DEPOSITS (GLACIALLY OVERRIDDEN) Moist, brown, slightly gravelly, silty SAND (SM); fine to medium sand.	
								Bottom of exploration at 2 ft. bgs. Note: Refusal encountered at 2 ft bgs.
5	70							5
10	65							10
15	60							15

Legend

Continuous core 1.85" ID

Water Level

No Water Encountered

See Exploration Log Key for explanation of symbols

Logged by: FK
 Approved by: DHM 1/11/2018

Exploration Log
DP-21

Sheet 1 of 1



Mt. Baker Housing Association - Belshaw - 170304

Environmental Exploration Log

Project Address & Site Specific Location

Coordinates (SPN NAD83 ft)

Exploration Number

1750 & 1765 22nd Ave S. Seattle WA, East Block

E:1277768 N:217606 (est)

DP-22

Contractor

Equipment

Sampling Method

Ground Surface (GS) Elev. (NAVD88)

Cascade

Direct push rig

Geoprobe (54LT)

81'(est)

Operator

Exploration Method(s)

Work Start/Completion Dates

Top of Casing Elev. (NAVD88)

Depth to Water (Below GS)

Tim

Direct push

9/6/2017

NA

No Water Encountered

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
80		Borehole backfilled with bentonite chips and capped with concrete.	DP-22-3.0	Chemically Analyzed	Sheen= None Odor= None PID= < 1	Concrete.	WEATHERED GLACIAL DEPOSITS (GLACIALLY OVERRIDDEN) Moist, brown, slightly gravelly, silty SAND (SM); fine to medium sand.	
5							GLACIAL DEPOSITS (GLACIALLY OVERRIDDEN) Moist, gray, gravelly, silty SAND (SM); fine to medium sand.	5
75			DP-22-6.0		Sheen= None Odor= None PID= < 1		Bottom of exploration at 6 ft. bgs. Note: Refusal encountered at 6 ft bgs.	
10								10
70								
15								15
65								

Legend

Continuous core 1.85" ID

No Water Encountered

See Exploration Log Key for explanation of symbols

Logged by: FK
Approved by: DHM 1/11/2018

Exploration Log DP-22

Sheet 1 of 1

APPENDIX G

2017 VI Modeling Results

INDOOR AIR SIMULATION RESULTS**Screening-Level Johnson and Ettinger Model**

Site Name: Mt. Baker-Belshaw
 Report Date: Tue Nov 28 17:43:37 PST 2017
 Report Generated From: https://www3.epa.gov/ceampubl/learn2model/part-two/onsite/JnE_lite_forward.htm
 Type of sample: SOIL GAS Concentration = 65 [$\mu\text{g}/\text{m}^3$]
 Depth of soil gas sample: 5ft +/- 0ft
 Average soil/ground water temperature: 47F

CHEMICAL PROPERTIES

Chemical of Concern: Benzene CAS Number: 71432
 Molecular Weight: 78.11 [g/mole] Henrys Constant: 0.1062747 [unitless]
 Diffusivity in Air: 8.800e-2 [cm^2/sec] Diffusivity in Water: 9.800e-6 [cm^2/sec]
 Unit Risk Factor: 0.0000078 [$(\mu\text{g}/\text{m}^3)^{-1}$] Reference Concentration: 0 [mg/m^3]

SOIL PROPERTIES

Soil Type: Sand Total Porosity: 0.375
 Unsaturated Zone Moisture Content:
 low= 0.053 best estimate= 0.054 high= 0.055
 Capillary Zone Moisture Content: 0.253 Height of Capillary Rise: 0.17 [m]
 Soil-Gas Flow Rate into Building: 5 [L/min]

BUILDING PROPERTIES

Building Type: Basement Air Exchange Rate: 0.25 [hr^{-1}]
 Building Mixing Height: 3.66[m] Building Footprint Area: 4700 [m^2]
 Subsurface Foundation Area: 765 [m^2] Building Crack Ratio: 0.0002 [unitless]
 Foundation Slab Thickness: 0.1[m]

EXPOSURE PARAMETERS

Exposure Duration: carcinogens 30 [years] non-carcinogens: 30 [years]
 Exposure Frequency: carcinogens 350 [days/year] non-carcinogens: 365 [days/year]
 Averaging Time: carcinogens 70 [years] non-carcinogens: 30 [years]

JOHNSON & ETTINGER SIMULATION RESULTS

Effective Diffusion Coefficient (D_{eff}): 0.01423 [cm^2/s]
 Soil Gas to Indoor Air Attenuation Factor (α_{SG}) = 0.00006247

¹Low Indoor Air Prediction: 0.004056 [$\mu\text{g}/\text{m}^3$] or 0.001270 [ppbv]
 Cancer Risk of this concentration: 1.300e-8 Hazard Risk of this concentration: 0.

Best Estimate Indoor Air Prediction: 0.004061 [$\mu\text{g}/\text{m}^3$] or 0.001272 [ppbv]
 Cancer Risk of this concentration: 1.302e-8 Hazard Risk of this concentration: 0.

²High Indoor Air Prediction: 0.004065 [$\mu\text{g}/\text{m}^3$] or 0.001273 [ppbv]
 Cancer Risk of this concentration: 1.303e-8 Hazard Risk of this concentration: 0.

Based on parameter analysis: Advection is the dominant mechanism across foundation.

¹"Low Prediction" concentrations produced with HIGHEST moisture content.

²"High Prediction" concentrations produced with LOWEST moisture content.

Building Footprint Area is outside the recommended range for this building type.
 Subsurface Foundation Area is outside the recommended range for this building type.

INDOOR AIR SIMULATION RESULTS**Screening-Level Johnson and Ettinger Model**

Site Name: Mt. Baker-Belshaw
 Report Date: Tue Nov 28 17:43:10 PST 2017
 Report Generated From: https://www3.epa.gov/ceampubl/learn2model/part-two/onsite/JnE_lite_forward.htm
 Type of sample: SOIL GAS Concentration = 2000[$\mu\text{g}/\text{m}^3$]
 Depth of soil gas sample: 5ft +/- 0ft
 Average soil/ground water temperature: 47F

CHEMICAL PROPERTIES

Chemical of Concern: m-Xylene CAS Number: 108383
 Molecular Weight: 106.17 [g/mole] Henrys Constant: 0.1135389 [unitless]
 Diffusivity in Air: 7.000e-2 [cm^2/sec] Diffusivity in Water: 7.800e-6 [cm^2/sec]
 Unit Risk Factor: 0 [$\{\mu\text{g}/\text{m}^3\}^{-1}$] Reference Concentration: 7 [mg/m^3]

SOIL PROPERTIES

Soil Type: Sand Total Porosity: 0.375
 Unsaturated Zone Moisture Content:
 low= 0.053 best estimate= 0.054 high= 0.055
 Capillary Zone Moisture Content: 0.253 Height of Capillary Rise: 0.17 [m]
 Soil-Gas Flow Rate into Building: 5 [L/min]

BUILDING PROPERTIES

Building Type: Basement Air Exchange Rate: 0.25[hr^{-1}]
 Building Mixing Height: 3.66[m] Building Footprint Area: 4700[m^2]
 Subsurface Foundation Area: 765[m^2] Building Crack Ratio: 0.0002[unitless]
 Foundation Slab Thickness: 0.1[m]

EXPOSURE PARAMETERS

Exposure Duration: carcinogens 30 [years] non-carcinogens: 30 [years]
 Exposure Frequency: carcinogens 350 [days/year] non-carcinogens: 365 [days/year]
 Averaging Time: carcinogens 70 [years] non-carcinogens: 30 [years]

JOHNSON & ETTINGER SIMULATION RESULTS

Effective Diffusion Coefficient (D_{eff}): 0.01132[cm^2/s]
 Soil Gas to Indoor Air Attenuation Factor (α_{SG}) = 0.00006083

¹Low Indoor Air Prediction: 0.1215 [$\mu\text{g}/\text{m}^3$] or 0.02800 [ppbv]
 Cancer Risk of this concentration: 0. Hazard Risk of this concentration: 1.736e-5

Best Estimate Indoor Air Prediction: 0.1217[$\mu\text{g}/\text{m}^3$] or 0.02804 [ppbv]
 Cancer Risk of this concentration: 0. Hazard Risk of this concentration: 1.738e-5

²High Indoor Air Prediction: 0.1218[$\mu\text{g}/\text{m}^3$] or 0.02807 [ppbv]
 Cancer Risk of this concentration: 0. Hazard Risk of this concentration: 1.740e-5

Based on parameter analysis: Advection is the dominant mechanism across foundation.

¹"Low Prediction" concentrations produced with HIGHEST moisture content.

²"High Prediction" concentrations produced with LOWEST moisture content.

Building Footprint Area is outside the recommended range for this building type.
 Subsurface Foundation Area is outside the recommended range for this building type.

INDOOR AIR SIMULATION RESULTS

Screening-Level Johnson and Ettinger Model



Site Name: Mt. Baker-Belshaw
 Report Date: Tue Nov 28 17:42:42 PST 2017
 Report Generated From: https://www3.epa.gov/ceampubl/learn2model/part-two/onsite/JnE_lite_forward.htm
 Type of sample: SOIL GAS Concentration = 10[$\mu\text{g}/\text{m}^3$]
 Depth of soil gas sample: 5ft +/- 0ft
 Average soil/ground water temperature: 47F

CHEMICAL PROPERTIES

Chemical of Concern: Naphthalene CAS Number: 91203
 Molecular Weight: 128.18 [g/mole] Henrys Constant: 0.005729999 [unitless]
 Diffusivity in Air: 5.900e-2 [cm^2/sec] Diffusivity in Water: 7.500e-6 [cm^2/sec]
 Unit Risk Factor: 0 [($\mu\text{g}/\text{m}^3$)⁻¹] Reference Concentration: 0.003 [mg/m^3]

SOIL PROPERTIES

Soil Type: Sand Total Porosity: 0.375
 Unsaturated Zone Moisture Content:
 low= 0.053 best estimate= 0.054 high= 0.055
 Capillary Zone Moisture Content: 0.253 Height of Capillary Rise: 0.17 [m]
 Soil-Gas Flow Rate into Building: 5 [L/min]

BUILDING PROPERTIES

Building Type: Basement Air Exchange Rate: 0.25[hr^{-1}]
 Building Mixing Height: 3.66[m] Building Footprint Area: 4700[m^2]
 Subsurface Foundation Area: 765[m^2] Building Crack Ratio: 0.0002[unitless]
 Foundation Slab Thickness: 0.1[m]

EXPOSURE PARAMETERS

Exposure Duration: carcinogens 30 [years] non-carcinogens: 30 [years]
 Exposure Frequency: carcinogens 350 [days/year] non-carcinogens: 365 [days/year]
 Averaging Time: carcinogens 70 [years] non-carcinogens: 30 [years]

JOHNSON & ETTINGER SIMULATION RESULTS

Effective Diffusion Coefficient (D_{eff}): 0.009538[cm^2/s]
 Soil Gas to Indoor Air Attenuation Factor (α_{SG}) = 0.00005942

¹Low Indoor Air Prediction: 5.933e-4 [$\mu\text{g}/\text{m}^3$] or 1.132e-4 [ppbv]
 Cancer Risk of this concentration: 0. Hazard Risk of this concentration: 1.978e-4

Best Estimate Indoor Air Prediction: 5.942e-4 [$\mu\text{g}/\text{m}^3$] or 1.134e-4 [ppbv]
 Cancer Risk of this concentration: 0. Hazard Risk of this concentration: 1.981e-4

²High Indoor Air Prediction: 5.951e-4 [$\mu\text{g}/\text{m}^3$] or 1.136e-4 [ppbv]
 Cancer Risk of this concentration: 0. Hazard Risk of this concentration: 1.984e-4

Based on parameter analysis: Advection is the dominant mechanism across foundation.

¹"Low Prediction" concentrations produced with HIGHEST moisture content.

²"High Prediction" concentrations produced with LOWEST moisture content.

Building Footprint Area is outside the recommended range for this building type.
 Subsurface Foundation Area is outside the recommended range for this building type.

INDOOR AIR SIMULATION RESULTS**Screening-Level Johnson and Ettinger Model**

Site Name: Mt. Baker-Belshaw
 Report Date: Tue Nov 28 17:42:00 PST 2017
 Report Generated From: https://www3.epa.gov/ceampubl/learn2model/part-two/onsite/JnE_lite_forward.htm
 Type of sample: SOIL GAS Concentration = 330[$\mu\text{g}/\text{m}^3$]
 Depth of soil gas sample: 5ft +/- 0ft
 Average soil/ground water temperature: 47F

CHEMICAL PROPERTIES

Chemical of Concern: Trichloroethylene CAS Number: 79016
 Molecular Weight: 131.39 [g/mole] Henrys Constant: 0.188779 [unitless]
 Diffusivity in Air: 7.900e-2 [cm^2/sec] Diffusivity in Water: 9.100e-6 [cm^2/sec]
 Unit Risk Factor: 0.00011 [$(\mu\text{g}/\text{m}^3)^{-1}$] Reference Concentration: 0.04 [mg/m^3]

SOIL PROPERTIES

Soil Type: Sand Total Porosity: 0.375
 Unsaturated Zone Moisture Content:
 low= 0.053 best estimate= 0.054 high= 0.055
 Capillary Zone Moisture Content: 0.253 Height of Capillary Rise: 0.17 [m]
 Soil-Gas Flow Rate into Building: 5 [L/min]

BUILDING PROPERTIES

Building Type: Basement Air Exchange Rate: 0.25[hr^{-1}]
 Building Mixing Height: 3.66[m] Building Footprint Area: 4700[m^2]
 Subsurface Foundation Area: 765[m^2] Building Crack Ratio: 0.0002[unitless]
 Foundation Slab Thickness: 0.1[m]

EXPOSURE PARAMETERS

Exposure Duration: carcinogens 30 [years] non-carcinogens: 30 [years]
 Exposure Frequency: carcinogens 350 [days/year] non-carcinogens: 365 [days/year]
 Averaging Time: carcinogens 70 [years] non-carcinogens: 30 [years]

JOHNSON & ETTINGER SIMULATION RESULTS

Effective Diffusion Coefficient (D_{eff}): 0.01277[cm^2/s]
 Soil Gas to Indoor Air Attenuation Factor (α_{SG}) = 0.00006173

¹Low Indoor Air Prediction: 0.02035 [$\mu\text{g}/\text{m}^3$] or 0.003789 [ppbv]
 Cancer Risk of this concentration: 9.198e-7 Hazard Risk of this concentration: 5.087e-4

Best Estimate Indoor Air Prediction: 0.02037 [$\mu\text{g}/\text{m}^3$] or 0.003793 [ppbv]
 Cancer Risk of this concentration: 9.209e-7 Hazard Risk of this concentration: 5.093e-4

²High Indoor Air Prediction: 0.02040 [$\mu\text{g}/\text{m}^3$] or 0.003798 [ppbv]
 Cancer Risk of this concentration: 9.220e-7 Hazard Risk of this concentration: 5.099e-4

Based on parameter analysis: Advection is the dominant mechanism across foundation.

¹"Low Prediction" concentrations produced with HIGHEST moisture content.

²"High Prediction" concentrations produced with LOWEST moisture content.

Building Footprint Area is outside the recommended range for this building type.
 Subsurface Foundation Area is outside the recommended range for this building type.

INDOOR AIR SIMULATION RESULTS

Screening-Level Johnson and Ettinger Model



Site Name: Mt. Baker-Belshaw
 Report Date: Tue Nov 28 17:41:26 PST 2017
 Report Generated From: https://www3.epa.gov/ceampubl/learn2model/part-two/onsite/JnE_lite_forward.htm
 Type of sample: SOIL GAS Concentration = 9.6[$\mu\text{g}/\text{m}^3$]
 Depth of soil gas sample: 5ft +/- 0ft
 Average soil/ground water temperature: 47F

CHEMICAL PROPERTIES

Chemical of Concern: Vinyl chloride (chloroethene) CAS Number: 75014
 Molecular Weight: 62.5 [g/mole] Henrys Constant: 0.7062388 [unitless]
 Diffusivity in Air: 0.1060 [cm^2/sec] Diffusivity in Water: 1.230e-5 [cm^2/sec]
 Unit Risk Factor: 0.0000088 [$(\mu\text{g}/\text{m}^3)^{-1}$] Reference Concentration: 0.1 [mg/m^3]

SOIL PROPERTIES

Soil Type: Sand Total Porosity: 0.375
 Unsaturated Zone Moisture Content:
 low= 0.053 best estimate= 0.054 high= 0.055
 Capillary Zone Moisture Content: 0.253 Height of Capillary Rise: 0.17 [m]
 Soil-Gas Flow Rate into Building: 5 [L/min]

BUILDING PROPERTIES

Building Type: Basement Air Exchange Rate: 0.25[hr^{-1}]
 Building Mixing Height: 3.66[m] Building Footprint Area: 4700[m^2]
 Subsurface Foundation Area: 765[m^2] Building Crack Ratio: 0.0002[unitless]
 Foundation Slab Thickness: 0.1[m]

EXPOSURE PARAMETERS

Exposure Duration: carcinogens 30 [years] non-carcinogens: 30 [years]
 Exposure Frequency: carcinogens 350 [days/year] non-carcinogens: 365 [days/year]
 Averaging Time: carcinogens 70 [years] non-carcinogens: 30 [years]

JOHNSON & ETTINGER SIMULATION RESULTS

Effective Diffusion Coefficient (D_{eff}): 0.01714[cm^2/s]
 Soil Gas to Indoor Air Attenuation Factor (α_{SG}) = 0.0000636

¹Low Indoor Air Prediction: 6.100e-4 [$\mu\text{g}/\text{m}^3$] or 2.388e-4 [ppbv]
 Cancer Risk of this concentration: 2.206e-9 Hazard Risk of this concentration: 6.100e-6

Best Estimate Indoor Air Prediction: 6.105e-4 [$\mu\text{g}/\text{m}^3$] or 2.390e-4 [ppbv]
 Cancer Risk of this concentration: 2.208e-9 Hazard Risk of this concentration: 6.105e-6

²High Indoor Air Prediction: 6.111e-4 [$\mu\text{g}/\text{m}^3$] or 2.392e-4 [ppbv]
 Cancer Risk of this concentration: 2.210e-9 Hazard Risk of this concentration: 6.111e-6

Based on parameter analysis: Advection is the dominant mechanism across foundation. Advection through foundation is the overall rate-limiting process for the subsurface to indoor-air pathway.

¹"Low Prediction" concentrations produced with HIGHEST moisture content.

²"High Prediction" concentrations produced with LOWEST moisture content.

Building Footprint Area is outside the recommended range for this building type.
 Subsurface Foundation Area is outside the recommended range for this building type.

INDOOR AIR SIMULATION RESULTS**Screening-Level Johnson and Ettinger Model**

Site Name: Mt. Baker-Belshaw
 Report Date: Tue Nov 28 17:27:29 PST 2017
 Report Generated From: https://www3.epa.gov/ceampubl/learn2model/part-two/onsite/JnE_lite_forward.htm
 Type of sample: SOIL GAS Concentration = 65[$\mu\text{g}/\text{m}^3$]
 Depth of soil gas sample: 5ft +/- 0ft
 Average soil/ground water temperature: 47F

CHEMICAL PROPERTIES

Chemical of Concern: Benzene CAS Number: 71432
 Molecular Weight: 78.11 [g/mole] Henrys Constant: 0.1062747 [unitless]
 Diffusivity in Air: 8.800e-2 [cm^2/sec] Diffusivity in Water: 9.800e-6 [cm^2/sec]
 Unit Risk Factor: 0.0000078 [$(\mu\text{g}/\text{m}^3)^{-1}$] Reference Concentration: 0 [mg/m^3]

SOIL PROPERTIES

Soil Type: Sand Total Porosity: 0.375
 Unsaturated Zone Moisture Content:
 low= 0.053 best estimate= 0.054 high= 0.055
 Capillary Zone Moisture Content: 0.253 Height of Capillary Rise: 0.17 [m]
 Soil-Gas Flow Rate into Building: 5 [L/min]

BUILDING PROPERTIES

Building Type: Basement Air Exchange Rate: 0.25[hr^{-1}]
 Building Mixing Height: 3.66[m] Building Footprint Area: 4050[m^2]
 Subsurface Foundation Area: 595[m^2] Building Crack Ratio: 0.0002[unitless]
 Foundation Slab Thickness: 0.1[m]

EXPOSURE PARAMETERS

Exposure Duration: carcinogens 30 [years] non-carcinogens: 30 [years]
 Exposure Frequency: carcinogens 350 [days/year] non-carcinogens: 365 [days/year]
 Averaging Time: carcinogens 70 [years] non-carcinogens: 30 [years]

JOHNSON & ETTINGER SIMULATION RESULTS

Effective Diffusion Coefficient (D_{eff}): 0.01423[cm^2/s]
 Soil Gas to Indoor Air Attenuation Factor (α_{SG}) = 0.00007039

¹Low Indoor Air Prediction: 0.004569 [$\mu\text{g}/\text{m}^3$] or 0.001431 [ppbv]
 Cancer Risk of this concentration: 1.465e-8 Hazard Risk of this concentration: 0.

Best Estimate Indoor Air Prediction: 0.004576[$\mu\text{g}/\text{m}^3$] or 0.001433 [ppbv]
 Cancer Risk of this concentration: 1.467e-8 Hazard Risk of this concentration: 0.

²High Indoor Air Prediction: 0.004582[$\mu\text{g}/\text{m}^3$] or 0.001435 [ppbv]
 Cancer Risk of this concentration: 1.469e-8 Hazard Risk of this concentration: 0.

Based on parameter analysis: Advection is the dominant mechanism across foundation.

¹"Low Prediction" concentrations produced with HIGHEST moisture content.

²"High Prediction" concentrations produced with LOWEST moisture content.

Building Footprint Area is outside the recommended range for this building type.
 Subsurface Foundation Area is outside the recommended range for this building type.

INDOOR AIR SIMULATION RESULTS



Screening-Level Johnson and Ettinger Model

Site Name: Mt. Baker-Belshaw
 Report Date: Tue Nov 28 17:29:16 PST 2017
 Report Generated From: https://www3.epa.gov/ceampubl/learn2model/part-two/onsite/JnE_lite_forward.htm
 Type of sample: SOIL GAS Concentration = 2000[$\mu\text{g}/\text{m}^3$]
 Depth of soil gas sample: 5ft +/- 0ft
 Average soil/ground water temperature: 47F

CHEMICAL PROPERTIES

Chemical of Concern: m-Xylene CAS Number: 108383
 Molecular Weight: 106.17 [g/mole] Henrys Constant: 0.1135389 [unitless]
 Diffusivity in Air: 7.000e-2 [cm^2/sec] Diffusivity in Water: 7.800e-6 [cm^2/sec]
 Unit Risk Factor: 0 [$(\mu\text{g}/\text{m}^3)^{-1}$] Reference Concentration: 7 [mg/m^3]

SOIL PROPERTIES

Soil Type: Sand Total Porosity: 0.375
 Unsaturated Zone Moisture Content:
 low= 0.053 best estimate= 0.054 high= 0.055
 Capillary Zone Moisture Content: 0.253 Height of Capillary Rise: 0.17 [m]
 Soil-Gas Flow Rate into Building: 5 [L/min]

BUILDING PROPERTIES

Building Type: Basement Air Exchange Rate: 0.25[hr^{-1}]
 Building Mixing Height: 3.66[m] Building Footprint Area: 4050[m^2]
 Subsurface Foundation Area: 595[m^2] Building Crack Ratio: 0.0002[unitless]
 Foundation Slab Thickness: 0.1[m]

EXPOSURE PARAMETERS

Exposure Duration: carcinogens 30 [years] non-carcinogens: 30 [years]
 Exposure Frequency: carcinogens 350 [days/year] non-carcinogens: 365 [days/year]
 Averaging Time: carcinogens 70 [years] non-carcinogens: 30 [years]

JOHNSON & ETTINGER SIMULATION RESULTS

Effective Diffusion Coefficient (D_{eff}): 0.01132[cm^2/s]
 Soil Gas to Indoor Air Attenuation Factor (α_{SG}) = 0.00006811

¹Low Indoor Air Prediction: 0.1360 [$\mu\text{g}/\text{m}^3$] or 0.03134 [ppbv]
 Cancer Risk of this concentration: 0. Hazard Risk of this concentration: 1.943e-5

Best Estimate Indoor Air Prediction: 0.1362[$\mu\text{g}/\text{m}^3$] or 0.03139 [ppbv]
 Cancer Risk of this concentration: 0. Hazard Risk of this concentration: 1.946e-5

²High Indoor Air Prediction: 0.1364[$\mu\text{g}/\text{m}^3$] or 0.03144 [ppbv]
 Cancer Risk of this concentration: 0. Hazard Risk of this concentration: 1.949e-5

Based on parameter analysis: Advection is the dominant mechanism across foundation.

¹"Low Prediction" concentrations produced with HIGHEST moisture content.
²"High Prediction" concentrations produced with LOWEST moisture content.

Building Footprint Area is outside the recommended range for this building type.
 Subsurface Foundation Area is outside the recommended range for this building type.

INDOOR AIR SIMULATION RESULTS**Screening-Level Johnson and Ettinger Model**

Site Name: Mt. Baker-Belshaw
 Report Date: Tue Nov 28 17:29:59 PST 2017
 Report Generated From: https://www3.epa.gov/ceampubl/learn2model/part-two/onsite/JnE_lite_forward.htm
 Type of sample: SOIL GAS Concentration = 10[$\mu\text{g}/\text{m}^3$]
 Depth of soil gas sample: 5ft +/- 0ft
 Average soil/ground water temperature: 47F

CHEMICAL PROPERTIES

Chemical of Concern: Naphthalene CAS Number: 91203
 Molecular Weight: 128.18 [g/mole] Henrys Constant: 0.005729999 [unitless]
 Diffusivity in Air: 5.900e-2 [cm^2/sec] Diffusivity in Water: 7.500e-6 [cm^2/sec]
 Unit Risk Factor: 0 [$(\mu\text{g}/\text{m}^3)^{-1}$] Reference Concentration: 0.003 [mg/m^3]

SOIL PROPERTIES

Soil Type: Sand Total Porosity: 0.375
 Unsaturated Zone Moisture Content:
 low= 0.053 best estimate= 0.054 high= 0.055
 Capillary Zone Moisture Content: 0.253 Height of Capillary Rise: 0.17 [m]
 Soil-Gas Flow Rate into Building: 5 [L/min]

BUILDING PROPERTIES

Building Type: Basement Air Exchange Rate: 0.25[hr^{-1}]
 Building Mixing Height: 3.66[m] Building Footprint Area: 4050[m^2]
 Subsurface Foundation Area: 595[m^2] Building Crack Ratio: 0.0002[unitless]
 Foundation Slab Thickness: 0.1[m]

EXPOSURE PARAMETERS

Exposure Duration: carcinogens 30 [years] non-carcinogens: 30 [years]
 Exposure Frequency: carcinogens 350 [days/year] non-carcinogens: 365 [days/year]
 Averaging Time: carcinogens 70 [years] non-carcinogens: 30 [years]

JOHNSON & ETTINGER SIMULATION RESULTS

Effective Diffusion Coefficient (D_{eff}): 0.009538[cm^2/s]
 Soil Gas to Indoor Air Attenuation Factor (α_{SG}) = 0.00006615

¹Low Indoor Air Prediction: 6.603e-4 [$\mu\text{g}/\text{m}^3$] or 1.260e-4 [ppbv]
 Cancer Risk of this concentration: 0. Hazard Risk of this concentration: 2.201e-4

Best Estimate Indoor Air Prediction: 6.615e-4 [$\mu\text{g}/\text{m}^3$] or 1.263e-4 [ppbv]
 Cancer Risk of this concentration: 0. Hazard Risk of this concentration: 2.205e-4

²High Indoor Air Prediction: 6.628e-4 [$\mu\text{g}/\text{m}^3$] or 1.265e-4 [ppbv]
 Cancer Risk of this concentration: 0. Hazard Risk of this concentration: 2.209e-4

Based on parameter analysis: Advection is the dominant mechanism across foundation.

¹"Low Prediction" concentrations produced with HIGHEST moisture content.

²"High Prediction" concentrations produced with LOWEST moisture content.

Building Footprint Area is outside the recommended range for this building type.
 Subsurface Foundation Area is outside the recommended range for this building type.

INDOOR AIR SIMULATION RESULTS**Screening-Level Johnson and Ettinger Model**

Site Name: Mt. Baker-Belshaw
 Report Date: Tue Nov 28 17:31:07 PST 2017
 Report Generated From: https://www3.epa.gov/ceampubl/learn2model/part-two/onsite/JnE_lite_forward.htm
 Type of sample: SOIL GAS Concentration = 330[$\mu\text{g}/\text{m}^3$]
 Depth of soil gas sample: 5ft +/- 0ft
 Average soil/ground water temperature: 47F

CHEMICAL PROPERTIES

Chemical of Concern: Trichloroethylene CAS Number: 79016
 Molecular Weight: 131.39 [g/mole] Henrys Constant: 0.188779 [unitless]
 Diffusivity in Air: 7.900e-2 [cm^2/sec] Diffusivity in Water: 9.100e-6 [cm^2/sec]
 Unit Risk Factor: 0.00011 [($\mu\text{g}/\text{m}^3$)⁻¹] Reference Concentration: 0.04 [mg/m^3]

SOIL PROPERTIES

Soil Type: Sand Total Porosity: 0.375
 Unsaturated Zone Moisture Content:
 low= 0.053 best estimate= 0.054 high= 0.055
 Capillary Zone Moisture Content: 0.253 Height of Capillary Rise: 0.17 [m]
 Soil-Gas Flow Rate into Building: 5 [L/min]

BUILDING PROPERTIES

Building Type: Basement Air Exchange Rate: 0.25[hr^{-1}]
 Building Mixing Height: 3.66[m] Building Footprint Area: 4050[m^2]
 Subsurface Foundation Area: 595[m^2] Building Crack Ratio: 0.0002[unitless]
 Foundation Slab Thickness: 0.1[m]

EXPOSURE PARAMETERS

Exposure Duration: carcinogens 30 [years] non-carcinogens: 30 [years]
 Exposure Frequency: carcinogens 350 [days/year] non-carcinogens: 365 [days/year]
 Averaging Time: carcinogens 70 [years] non-carcinogens: 30 [years]

JOHNSON & ETTINGER SIMULATION RESULTS

Effective Diffusion Coefficient (D_{eff}): 0.01277[cm^2/s]
 Soil Gas to Indoor Air Attenuation Factor (α_{SG}) = 0.00006936

¹Low Indoor Air Prediction: 0.02286 [$\mu\text{g}/\text{m}^3$] or 0.004256 [ppbv]
 Cancer Risk of this concentration: 1.033e-6 Hazard Risk of this concentration: 5.714e-4

Best Estimate Indoor Air Prediction: 0.02289[$\mu\text{g}/\text{m}^3$] or 0.004262 [ppbv]
 Cancer Risk of this concentration: 1.035e-6 Hazard Risk of this concentration: 5.722e-4

²High Indoor Air Prediction: 0.02292[$\mu\text{g}/\text{m}^3$] or 0.004269 [ppbv]
 Cancer Risk of this concentration: 1.036e-6 Hazard Risk of this concentration: 5.731e-4

Based on parameter analysis: Advection is the dominant mechanism across foundation.

¹"Low Prediction" concentrations produced with HIGHEST moisture content.

²"High Prediction" concentrations produced with LOWEST moisture content.

Building Footprint Area is outside the recommended range for this building type.
 Subsurface Foundation Area is outside the recommended range for this building type.

INDOOR AIR SIMULATION RESULTS**Screening-Level Johnson and Ettinger Model**

Site Name: Mt. Baker-Belshaw
 Report Date: Tue Nov 28 17:32:38 PST 2017
 Report Generated From: https://www3.epa.gov/ceampubl/learn2model/part-two/onsite/JnE_lite_forward.htm
 Type of sample: SOIL GAS Concentration = 9.6[$\mu\text{g}/\text{m}^3$]
 Depth of soil gas sample: 5ft +/- 0ft
 Average soil/ground water temperature: 47F

CHEMICAL PROPERTIES

Chemical of Concern: Vinyl chloride (chloroethene) CAS Number: 75014
 Molecular Weight: 62.5 [g/mole] Henrys Constant: 0.7062388 [unitless]
 Diffusivity in Air: 0.1060 [cm^2/sec] Diffusivity in Water: 1.230e-5 [cm^2/sec]
 Unit Risk Factor: 0.0000088 [$(\mu\text{g}/\text{m}^3)^{-1}$] Reference Concentration: 0.1 [mg/m^3]

SOIL PROPERTIES

Soil Type: Sand Total Porosity: 0.375
 Unsaturated Zone Moisture Content:
 low= 0.053 best estimate= 0.054 high= 0.055
 Capillary Zone Moisture Content: 0.253 Height of Capillary Rise: 0.17 [m]
 Soil-Gas Flow Rate into Building: 5 [L/min]

BUILDING PROPERTIES

Building Type: Basement Air Exchange Rate: 0.25[hr^{-1}]
 Building Mixing Height: 3.66[m] Building Footprint Area: 4050[m^2]
 Subsurface Foundation Area: 595[m^2] Building Crack Ratio: 0.0002[unitless]
 Foundation Slab Thickness: 0.1[m]

EXPOSURE PARAMETERS

Exposure Duration: carcinogens 30 [years] non-carcinogens: 30 [years]
 Exposure Frequency: carcinogens 350 [days/year] non-carcinogens: 365 [days/year]
 Averaging Time: carcinogens 70 [years] non-carcinogens: 30 [years]

JOHNSON & ETTINGER SIMULATION RESULTS

Effective Diffusion Coefficient (D_{eff}): 0.01714[cm^2/s]
 Soil Gas to Indoor Air Attenuation Factor (α_{SG}) = 0.00007199

¹Low Indoor Air Prediction: 6.903e-4 [$\mu\text{g}/\text{m}^3$] or 2.702e-4 [ppbv]
 Cancer Risk of this concentration: 2.496e-9 Hazard Risk of this concentration: 6.903e-6

Best Estimate Indoor Air Prediction: 6.911e-4 [$\mu\text{g}/\text{m}^3$] or 2.705e-4 [ppbv]
 Cancer Risk of this concentration: 2.499e-9 Hazard Risk of this concentration: 6.911e-6

²High Indoor Air Prediction: 6.919e-4 [$\mu\text{g}/\text{m}^3$] or 2.708e-4 [ppbv]
 Cancer Risk of this concentration: 2.502e-9 Hazard Risk of this concentration: 6.919e-6

Based on parameter analysis: Advection is the dominant mechanism across foundation.

¹"Low Prediction" concentrations produced with HIGHEST moisture content.

²"High Prediction" concentrations produced with LOWEST moisture content.

Building Footprint Area is outside the recommended range for this building type.
 Subsurface Foundation Area is outside the recommended range for this building type.

APPENDIX H

Subject Property Photos - Photos of Unsafe Buildings



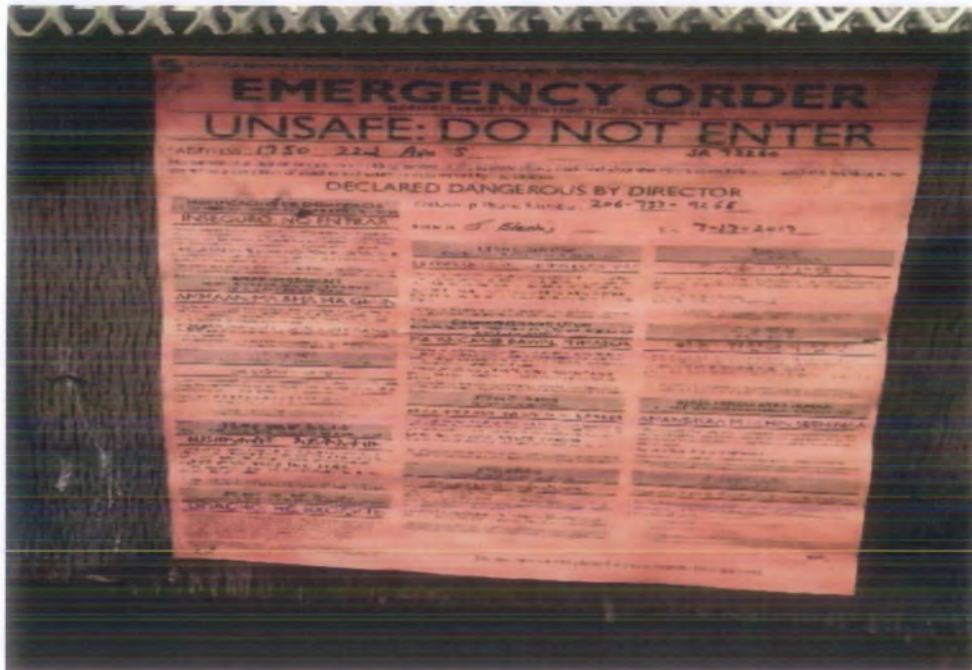
Photograph 1. Overview of the Buildings 1 and 2 exterior – Looking Northeast



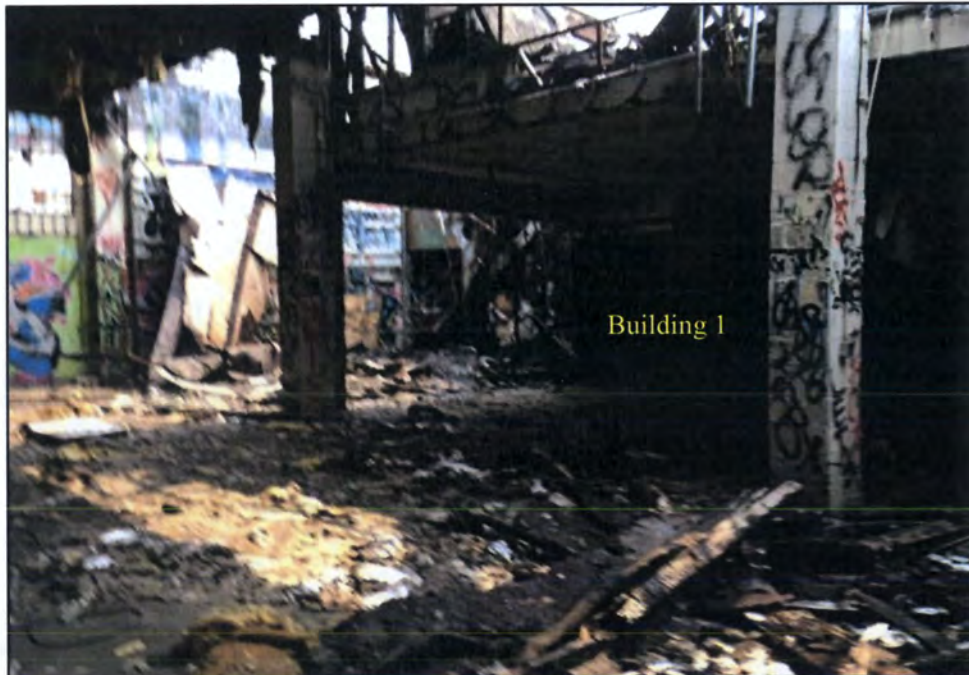
Photograph 2. View of SDCI Emergency Order on west wall of Building 1 – Looking Northeast



Photograph 3. View of SDCI Emergency Order on south wall of Building 2 – Looking North



Photograph 4. Close-up of the SDCI Emergency Order



Photograph 5. Fire damaged Building 1 – Looking West



Photograph 6. Fire damaged Building 1 – Looking Southeast



Photograph 7. Fire damaged Building 1 – Looking South



Photograph 8. Proximity of Building 1 (south wall) to the Building 2 (north wall) – Looking East



Photograph 9. Illegal campers near the south wall of the Building 2 – Looking West



Photograph 10. Damaged roof and evidence of unsafe occupancy inside Building 3 – Looking North



Photograph 13. Proximity of Building 1 (east wall) and the Building 3 (west wall) – Looking North



Photograph 14. Overview of the Building 4 – Looking Northwest



Photograph 15. Another view of the Building 4 – Looking East



Photograph 16. Illegal encampments south of Building 4 – Looking South

APPENDIX I

Report Limitations and Guidelines for Use

REPORT LIMITATIONS AND USE GUIDELINES

Reliance Conditions for Third Parties

This report was prepared for the exclusive use of the Client. No other party may rely on this report or the product of our services without the express written consent of Aspect Consulting, LLC (Aspect). This limitation is to provide our firm with reasonable protection against liability claims by third parties with whom there would otherwise be no contractual conditions or limitations and guidelines governing their use of the report. Within the limitations of scope, schedule and budget, our services have been executed in accordance with our Agreement with the Client and recognized standards of professionals in the same locality and involving similar conditions.

Services for Specific Purposes, Persons and Projects

Aspect has performed the services in general accordance with the scope and limitations of our Agreement. This report has been prepared for the exclusive use of the Client and their authorized third parties, approved in writing by Aspect. This report is not intended for use by others, and the information contained herein is not applicable to other properties.

This report is not, and should not, be construed as a warranty or guarantee regarding the presence or absence of hazardous substances or petroleum products that may affect the subject property. The report is not intended to make any representation concerning title or ownership to the subject property. If real property records were reviewed, they were reviewed for the sole purpose of determining the subject property's historical uses. All findings, conclusions, and recommendations stated in this report are based on the data and information provided to Aspect, current use of the subject property, and observations and conditions that existed on the date and time of the report.

Aspect structures its services to meet the specific needs of our clients. Because each environmental study is unique, each environmental report is unique, prepared solely for the specific client and subject property. This report should not be applied for any purpose or project except the purpose described in the Agreement.

This Report Is Project-Specific

Aspect considered a number of unique, project-specific factors when establishing the Scope of Work for this project and report. You should not rely on this report if it was:

- Not prepared for you
- Not prepared for the specific purpose identified in the Agreement
- Not prepared for the specific real property assessed
- Completed before important changes occurred concerning the subject property, project or governmental regulatory actions

If changes are made to the project or subject property after the date of this report, Aspect should be retained to assess the impact of the changes with respect to the conclusions contained in the report.

Geoscience Interpretations

The geoscience practices (geotechnical engineering, geology, and environmental science) require interpretation of spatial information that can make them less exact than other engineering and natural science disciplines. It is important to recognize this limitation in evaluating the content of the report. If you are unclear how these "Report Limitations and Use Guidelines" apply to your project or site, you should contact Aspect.

Discipline-Specific Reports Are Not Interchangeable

The equipment, techniques and personnel used to perform an environmental study differ significantly from those used to perform a geotechnical or geologic study and vice versa. For that reason, a geotechnical engineering or geologic report does not usually address any environmental findings, conclusions or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. Similarly, environmental reports are not used to address geotechnical or geologic concerns regarding the subject property.

Environmental Regulations Are Not Static

Some hazardous substances or petroleum products may be present near the subject property in quantities or under conditions that may have led, or may lead, to contamination of the subject property, but are not included in current local, state or federal regulatory definitions of hazardous substances or petroleum products or do not otherwise present potential liability. Changes may occur in the standards for appropriate inquiry or regulatory definitions of hazardous substance and petroleum products; therefore, this report has a limited useful life.

Property Conditions Change Over Time

This report is based on conditions that existed at the time the study was performed. The findings and conclusions of this report may be affected by the passage of time (for example, Phase I ESA reports are applicable for 180 days), by events such as a change in property use or occupancy, or by natural events, such as floods, earthquakes, slope failure or groundwater fluctuations. If more than six months have passed since issuance of our report, or if any of the described events may have occurred following the issuance of the report, you should contact Aspect so that we may evaluate whether changed conditions affect the continued reliability or applicability of our conclusions and recommendations.

Phase I ESAs – Uncertainty Remains After Completion

Aspect has performed the services in general accordance with the scope and limitations of our Agreement and the current version of the “Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process”, ASTM E1527, and U.S. Environmental Protection Agency (EPA)'s Federal Standard 40 CFR Part 312 "Innocent Landowners, Standards for Conducting All Appropriate Inquiries".

No ESA can wholly eliminate uncertainty regarding the potential for recognized environmental conditions in connection with subject property. Performance of an ESA study is intended to reduce, but not eliminate, uncertainty regarding the potential for environmental conditions affecting the subject property. There is always a potential that areas with contamination that were not identified during this ESA exist at the subject property or in the study area. Further evaluation of such potential would require additional research, subsurface exploration, sampling and/or testing.

Historical Information Provided by Others

Aspect has relied upon information provided by others in our description of historical conditions and in our review of regulatory databases and files. The available data does not provide definitive information with regard to all past uses, operations or incidents affecting the subject property or adjacent properties. Aspect makes no warranties or guarantees regarding the accuracy or completeness of information provided or compiled by others.

Exclusion of Mold, Fungus, Radon, Lead, and HBM

Aspect's services do not include the investigation, detection, prevention or assessment of the presence of molds, fungi, spores, bacteria, and viruses, and/or any of their byproducts. Accordingly, this report does not include any interpretations, recommendations, findings, or conclusions regarding the detection, assessment, prevention or abatement of molds, fungi, spores, bacteria, and viruses, and/or any of their byproducts. Aspect's services also do not include the investigation or assessment of hazardous building materials (HBM) such as asbestos, polychlorinated biphenyls (PCBs) in light ballasts, lead based paint, asbestos-containing building materials, urea-formaldehyde insulation in on-site structures or debris or any other HBMs. Aspect's services do not include an evaluation of radon or lead in drinking water, unless specifically requested.

