

**REMEDIAL INVESTIGATION/FOCUSED FEASIBILITY  
STUDY**

**BLOCK 38 WEST SITE  
500 THROUGH 536 WESTLAKE AVENUE NORTH  
SEATTLE, WASHINGTON**

**Agreed Order No. DE 17963  
Facility Site Identification No. 62773  
Cleanup Site Identification No. 15008**

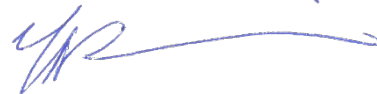
**Farallon PN: 397-019**

**December 20, 2024**

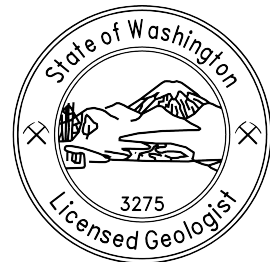
Prepared by:



**Greg Peters**  
Project Scientist



**Yusuf Pehlivan, L.G.**  
Associate Geologist



**Yusuf Pehlivan**

Reviewed by:



**Suzy Stumpf, P.E.**  
Principal Engineer



For:

**City Investors IX LLC  
505 5<sup>th</sup> Avenue South  
Seattle, Washington 98104**

Submitted by:

**Farallon Consulting, L.L.C.  
13555 Southeast 36<sup>th</sup> Street, Suite 320  
Bellevue, Washington 98006**



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## ACRONYMS AND ABBREVIATIONS

1999 EA Update	Letter regarding Preliminary Environmental Assessment Update, Westlake Avenue Property (428, 500, 510, and 520 Westlake Avenue North), Seattle, Washington dated April 5, 1999, from Rob Roberts and Julie K.W. Wukelic of Hart Crowser to City Investors VI LLC c/o Joe Delaney, Foster Pepper & Shefelman.
2018 Geotechnical Report	Draft <i>Geotechnical Engineering Services, Block 38, Seattle, Washington</i> dated October 17, 2018, prepared by GeoEngineers, Inc.
2019 Ecology Letter	Letter regarding Early Notice of Release of Hazardous Substances and Preliminary Determination of Liability for Release at the Block 38 West Contaminated Site dated August 13, 2019, from Tamara Cardona of Ecology to City Investors IX LLC.
2019 IAWP	<i>Interim Action Work Plan, Block 38 West Property, 500 through 536 Westlake Avenue North, Seattle, Washington</i> dated November 8, 2019, prepared by Farallon Consulting, L.L.C.
2019 Phase I Report	Draft <i>Phase I Environmental Site Assessment Report, South Lake Union Block 38 West Property, 500 through 536 Westlake Avenue North, Seattle, Washington</i> dated August, 9, 2019, prepared by Farallon Consulting, L.L.C.
2020 Subsurface Investigation Results letter report	Letter Regarding Subsurface Investigation Results, Block 38 West Property, 500 through 536 Westlake Avenue North, Seattle, Washington dated January 22, 2020, from Suzy Stumpf and Clifford T. Schmitt of Farallon Consulting, L.L.C. to Tena Seeds of the Washington State Department of Ecology.
AEC	Andersen Environmental Contracting LLC of Kelso, Washington



Alley IAWP	<i>Interim Action Work Plan, Alley Area of Block 38 West Site between Republican Street and Mercer Street, Seattle, Washington</i> dated February 3, 2021 prepared by Farallon Consulting, L.L.C.
AO	Agreed Order No. DE 17963 between the Washington State Department of Ecology and City Investors IX, L.L.C.
bgs	below ground surface
Block 38 West Property	500 through 536 Westlake Avenue North in Seattle, Washington
Block 38 West Site	The area generally located at 500 through 536 Westlake Avenue North in Seattle, Washington, where a hazardous substance, other than a consumer product in consumer use, has been deposited, stored, disposed of, placed, or otherwise come to be located.
BTEX	benzene, toluene, ethylbenzene, and total xylenes
cDCE	cis-1,2- dichloroethene
CGI	Construction Group International of Woodinville, Washington
City Investors IX	City Investors IX, L.L.C.
COC	constituent of concern
COPC	constituent of potential concern
cPAH	carcinogenic polycyclic aromatic hydrocarbon
CSM	Conceptual Site Model
CVOC	chlorinated volatile organic compound
DCE	dichloroethene
Draft RIWP	<i>Agency Review Draft Remedial Investigation Work Plan, 500 through 536 Westlake Avenue North, Seattle, Washington</i> dated July 20, 2020, prepared by Farallon Consulting, L.L.C. for City Investors IX LLC.
DRO	diesel-range organics
Ecology	Washington State Department of Ecology





Ecology Climate Guidance	<i>Sustainable Remediation: Climate Change Resiliency and Green Remediation</i> dated November 2017, revised January 2023, prepared by the Washington State Department of Ecology
Ecology PCS Guidance	<i>Guidance for Remediation of Petroleum Contaminated Sites</i> dated September 2011, revised June 2016, prepared by the Washington State Department of Ecology
Ecology UST Guidance	<i>Guidance for Site Checks and Site Assessments for Underground Storage Tanks</i> dated February 1991, revised April 2003, prepared by the Washington State Department of Ecology
Ecology Silica Gel Guidance	<i>Guidance for Silica Gel Cleanup in Washington State</i> dated November 2023, prepared by the Washington State Department of Ecology
EHD Map	Washington State Department of Health Environmental Health Disparities Map
EJ Screening Tool	U.S. Environmental Protection Agency Environmental Justice Screening and Mapping Tool
EPA	U.S. Environmental Protection Agency
Farallon	Farallon Consulting, L.L.C.
FEMA	Federal Emergency Management Agency
FFS	focused feasibility study
Final RI/FS Work Plan	<i>Final Remedial Investigation/Feasibility Study Work Plan, American Linen Supply Co – Dexter Avenue Site, 700 Dexter Avenue North, Seattle, Washington</i> dated December 4, 2019, prepared by PES Environmental, Inc.
Former American Linen Property	Former American Linen Supply Co. facility at 700 Dexter Avenue North in Seattle, Washington (King County Parcel No. 224900-0285) currently owned by BMR-Dexter LLC
ft/ft	feet per foot
GLY	GLY Construction



GRO	gasoline-range organics
Hos Bros.	Hos Bros. of Woodinville, Washington
Implementation Memorandum No. 25	<i>Implementation Memorandum No. 25: Identifying Likely Vulnerable Populations and Overburdened Communities under the Cleanup Regulations</i> dated January 2024, prepared by the Washington State Department of Ecology
KCIW	King County Industrial Waste
LNAPL	light nonaqueous-phase liquid
µg/kg	micrograms per kilogram
µg/L	micrograms per liter
MCL	maximum contaminant level
mg/kg	milligrams per kilogram
MTBE	methyl tertiary-butyl ether
MTCA	Washington State Model Toxics Control Act
NAVD88	North American Vertical Datum of 1988
NPDES	National Pollutant Discharge Elimination System
OnSite	OnSite Environmental, Inc. of Redmond, Washington
ORO	oil-range organics
ORP	oxidation-reduction potential
PAH	polycyclic aromatic hydrocarbon
PCB	polychlorinated biphenyl
PCE	tetrachloroethene
PID	photoionization detector
PLP	potentially liable person
PQL	practical quantitation limit
PVC	polyvinyl chloride
QA/QC	quality assurance/quality control



RCW	Revised Code of Washington
Republican Street Drain	72-inch-diameter King County sewer main line in the Republican Street right-of-way and its backfill
RI	remedial investigation
RI/FFS	Remedial Investigation Report and Focused Feasibility Study
RI Work Plan	<i>Remedial Investigation Work Plan, 500 through 536 Westlake Avenue North, Seattle, Washington</i> dated April 26, 2023, prepared by Farallon Consulting, L.L.C.
SVOC	semivolatile organic compound
TCE	trichloroethene
TEC	toxic equivalent concentration
TEE	Terrestrial Ecological Evaluation
TOC	total organic carbon
UST	underground storage tank
VOC	volatile organic compound
WAC	Washington Administrative Code



## 1.0 INTRODUCTION

Farallon Consulting, L.L.C. (Farallon) has prepared this Remedial Investigation Report and Focused Feasibility Study (collectively herein RI/FFS Report) on behalf of City Investors IX L.L.C. (City Investors IX). The purpose of the RI/FFS is to summarize the remedial investigation (RI) and focused feasibility study (FFS) completed for the Block 38 West Site and identify a preferred cleanup action for the Block 38 West Site. This RI/FFS was prepared in accordance with the requirements of Section VII.A, Work to be Performed, under Agreed Order No. DE 17963 (AO) between the Washington State Department of Ecology (Ecology) and City Investors IX and in accordance with the requirements of the Washington State Model Toxics Control Act Cleanup Regulation (MTCA) as codified in Chapters 173-340-350 and 173-340-351 of the Washington Administrative Code (WAC) (WAC 173-340-350 and 173-340-351).

The Block 38 West Site, as defined under the AO, is where a hazardous substance, other than a consumer product in consumer use, has been deposited, stored, disposed of, placed, or otherwise come to be located. The Site is generally located at 500 through 536 Westlake Avenue North in Seattle, Washington (Block 38 West Property) (Figures 1 through 3). The Block 38 West Property comprises the western half of the block bounded by Mercer Street to the north, Westlake Avenue North to the west, Republican Street to the south, and a north-south-trending alley (City of Seattle public right-of-way) that bisects the block to the east. The eastern half of the same block is referred to as the Block 38 East Property; the whole block comprising the Block 38 West and Block 38 East Properties and the alley is referred to as Block 38.<sup>1</sup>

This RI/FFS Report (i) summarizes the results from the RI, the results from an independent interim action that began during negotiations for the AO, and results from an Ecology-approved alley interim action conducted at the Block 38 West Site, and (ii) presents the results from the FFS conducted to evaluate technically feasible cleanup action alternatives for the remaining affected media of concern. The independent interim action completed at the Block 38 West Property was conducted in accordance with the *Interim Action Work Plan, Block 38 West Property, 500 through 536 Westlake Avenue North, Seattle, Washington* dated November 8, 2019, prepared by Farallon (2019c) (2019 IAWP). Once the AO became effective, the independent interim action was conducted under the auspices of the AO. The

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<sup>1</sup> “Block 38” and other block numbers used in this document were assigned for property development planning purposes and do not correspond to the block numbers designated by the City of Seattle (e.g., the property on which Block 38 is located is known as Block 94 by the City of Seattle).



interim action completed at the alley area of the Block 38 West Site was conducted in accordance with the Ecology-approved *Interim Action Work Plan, Alley Area of Block 38 West Site between Republican Street and Mercer Street, Seattle, Washington* dated February 3, 2021 prepared by Farallon (2021a) (Alley IAWP). The RI activities completed at the Block 38 West Site were conducted in accordance with the Ecology-approved *Remedial Investigation Work Plan, 500 through 536 Westlake Avenue North, Seattle, Washington* dated April 26, 2023, prepared by Farallon (2023) (RI Work Plan).

Farallon and others conducted a comprehensive RI that included multiple phases of characterization between 1994 and 2024. These RI activities were performed to assess the Block 38 West Site for constituents of potential concern (COPCs) in soil and groundwater associated with historical operations at the Block 38 West Property, historical fill known to have been placed in this area, and potential contaminant migration from adjacent and nearby properties. COPCs retained for the Block 38 West Site consisted of those hazardous substances which were detected in soil and/or groundwater samples collected from the Block 38 West Site and surrounding areas at concentrations exceeding regulatory screening levels and included petroleum hydrocarbons, polycyclic aromatic hydrocarbons (PAHs), and metals (as barium and mercury).

Substantial cleanup of the Block 38 West Site was performed through interim actions from October 2019 through July 2021 in conjunction with redevelopment of the Block 38 West Property. Based on the results from the RI and interim actions, isolated areas of petroleum hydrocarbons and PAHs remain at concentrations exceeding regulatory screening levels in soil at the Block 38 West Site.

The interim actions, conducted concurrently with redevelopment, permanently removed soil with concentrations of hazardous substances that exceeded screening levels and resulted in the removal of the Shallow Water-Bearing Zone and the upper portion of the Intermediate Water-Bearing Zone<sup>2</sup> beneath the Block 38 West Property. In addition, soil with concentrations of hazardous substances that exceeded screening levels encountered during construction activities was removed during improvements made to the alley. The new building foundation design on the Block 38 West Property also included the installation of a chemical resistant vapor barrier around the entire perimeter and beneath the building foundation to mitigate the potential vapor intrusion exposure pathway. Based on the results from the remedial investigation and interim actions sufficient data have been obtained to

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<sup>2</sup> These water-bearing zones are defined in Section 2.6, Geology and Hydrogeology.



demonstrate that the interim actions completed at the Block 38 West Site constitute a permanent cleanup action to the maximum extent practicable in accordance with MTCA and current and future land use.

## 1.1 PURPOSE AND OBJECTIVE

In accordance with WAC 173-340-350, the purpose of the RI was to collect the data necessary to adequately characterize the Block 38 West Site to establish cleanup standards, and develop and evaluate cleanup alternatives. The results from the RI and interim actions have provided sufficient data to identify and evaluate feasible cleanup alternatives.

In accordance with WAC 173-340-351, the purpose of the FFS was to develop and evaluate cleanup action alternatives to enable selection of a cleanup action that meets the requirements of WAC 173-340-360 and conforms, as appropriate, to the expectations of WAC 173-340-370.

## 1.2 REPORT ORGANIZATION

The report has been organized into the following sections:

- **Section 2, Block 38 West Site Description and Background**, provides the Block 38 West Property description and history, a summary of current and historical uses of adjacent and surrounding lands, potential off-Property sources of contamination, regulatory history, and the geology and hydrogeology of the South Lake Union region.
- **Section 3, Summary of Previous Investigations and Remedial Actions**, provides a summary of previous investigations and interim actions performed at the Block 38 West Site.
- **Section 4, Independent Interim Action**, describes the implementation of the independent interim action, results from performance and confirmation soil samples and groundwater monitoring, foundation elements, unanticipated conditions, installation of dewatering wells, dewatering and treatment activities, contaminated soil excavation, and waterproof concrete construction and vapor barrier installation.
- **Section 5, Alley Area Interim Action**, describes the implementation of the Ecology-approved Alley Area Interim Action performed in conjunction with improvements to the alley associated with the redevelopment of the Block 38 West Property and the results from performance and confirmation soil samples.



- **Section 6, Remedial Investigation**, presents a summary of the RI conducted at the Block 38 West Site, development of preliminary screening levels, constituents and media of potential concern, data gaps identified in the RI Work Plan, and results from the RI.
- **Section 7, Nature and Extent of Contamination**, presents a discussion of the nature and extent of COPCs in soil and groundwater based on results from the RI, previous investigations, and interim actions conducted at the Block 38 West Site.
- **Section 8, Conceptual Site Model**, discusses the proposed constituents of concern (COCs), media of concern, and proposed cleanup levels for the cleanup action, confirmed and suspected source areas, nature and extent of contamination, and contaminant fate and transport at the Block 38 West Site.
- **Section 9, Focused Feasibility Study**, presents a summary of the technical elements for the FFS to select a preferred cleanup alternative for soil and groundwater at the Block 38 West Site.
- **Section 10, References**, provides a list of the documents cited in this report.
- **Section 11, Limitations**, provides Farallon's standard limitations associated with this report.



## 2.0 BLOCK 38 WEST SITE DESCRIPTION AND BACKGROUND

This section provides the Block 38 West Site description and regulatory history, a summary of current and historical uses of the Block 38 West Property, adjacent and surrounding lands and potential off-Site sources, the regulatory history, and the geology and hydrogeology of the South Lake Union region.

### 2.1 BLOCK 38 WEST PROPERTY DESCRIPTION

The Block 38 West Property is in a commercial and light industrial area zoned as mixed residential and commercial in the South Lake Union area (SM-SLU 175/85-280) approximately 1 mile north of downtown Seattle. According to the King County GIS Center (2018), the Block 38 West Property comprises King County Parcel No. 1983200196 on the northern portion of the Block 38 West Property (534 and 536 Westlake Avenue North), King County Parcel No. 1983200180 on the central portion of the Block 38 West Property (520 Westlake Avenue North), and King County Parcel No. 1983200170 on the southern portion of the Block 38 West Property (500 and 510 Westlake Avenue North) (Figure 2).

The Block 38 West Property totals approximately 1.06 acres of land that previously was developed with structures formerly used for retail, temporary office space, storage, and parking. The former Block 38 West Property structures were demolished as part of the recent redevelopment. The Block 38 West Property redevelopment included construction of a multi-story mixed-use building, with 12 stories above street level and four levels of underground parking.

Adjacent street elevations vary from an approximate elevation of 41 feet North American Vertical Datum of 1988 (NAVD88) on Republican Street, adjoining the southern portion of the Block 38 West Property, to an approximate elevation of 31 feet NAVD88 on Mercer Street, adjoining the northern portion of the Block 38 West Property (Figure 2). The alley bisecting Block 38 is accessed from either Republican Street or Mercer Street and descends from street level to an approximate elevation of 25 feet NAVD88, and is used for vehicle access to parking garages on the Block 38 West Property and Block 38 East Property. A historical timber-framed trestle previously extended north from Republican Street into the alley approximately 120 feet; its constructed height was approximately 18 feet higher than the ground surface of the southern portion of the alley and was removed during the independent interim action (Figure 2). The trestle was constructed for support of the rail spur that extended out to the former southern shoreline of Lake Union (Farallon 2018). As





discussed below, the northern portion of the Block 38 West Property historically was marshland along the southern shore of Lake Union.

## **2.2 BLOCK 38 WEST PROPERTY HISTORY**

The Block 38 West Property historically was undeveloped marshland that extended along the southern shore of Lake Union and onto the north-adjacent property in the late 1880s, as detailed in the draft Phase I Environmental Site Assessment Report prepared by Farallon (2019b) (2019 Phase I Report) and the Preliminary Environmental Assessment Update letter (Hart Crowser, Inc. 1999) (1999 EA Update). Historical operations at the Block 38 West Property have included the following:

- A lumber storage yard across the majority of the Block 38 West Property from the 1890s until approximately 1920;
- Small commercial operations (e.g., a blacksmith shop, a wagon shop) in pile-supported buildings on the southern parcel in the early 1900s, which were replaced in 1919 by a two-story masonry building with a basement level at 500 and 510 Westlake Avenue North;
- Retail and commercial operations (i.e., auto parts, appliances, school and office supplies, furniture storage, clothing, and outdoor equipment) at 500 and 510 Westlake Avenue North from the 1920s to 2019;
- Commercial operations (i.e., a horse stable and wagon house, a blacksmith shop, a wagon shop, an auto repair facility, and a veterinary hospital) from the early 1900s until 1950s on the central parcel at 520 Westlake Avenue North, which were replaced in 1964 with a two-story building with rooftop parking through 2019;
- Retail operations at 520 Westlake Avenue from 1964 to 2019; and
- Warehouse storage starting in the early 1920s and transitioning into commercial and retail operations, including a commercial printer, on the northern parcel at 534 and 536 Westlake Avenue North to 2019.

The structures on the Block 38 West Property that were used as retail, temporary office space, storage, and parking remained unchanged from 1969 through August 2019. The structures were demolished in late 2019 and early 2020 as part of the redevelopment of the Block 38 West Property.



Historical operations resulted in the release of hazardous substances that caused contamination of soil and/or groundwater at the Block 38 West Property. Ecology listed the Block 38 West Site (includes the Block 38 West Property) as a contaminated site with Facility Site ID No. 62773 and Cleanup Site ID No. 15008 in 2019.

### **2.3 BLOCK 38 WEST PROPERTY CURRENT LAND USE**

The Block 38 West Property redevelopment included construction of a multi-story mixed-use building, with 12 stories above street level and four levels of underground parking. The finished floor elevation of the lowest level of parking is -3.25 feet NAVD88, with the bottom of footing elevation for the majority of the foundation at approximately -6.5 feet NAVD88. The excavation extended deeper in areas for footings or elevator pits. The mass excavation and installation of building superstructure has been completed. On May 6, 2022, the City of Seattle issued a certificate of occupancy for the new building.

### **2.4 ADJACENT AND SURROUNDING LAND USES**

This section summarizes the current and historical uses of the properties that surround the Block 38 West Property.

#### **2.4.1 North – Block 37 Property**

The Block 37 Property at 600 through 630 Westlake Avenue North is located one block north of the Block 38 West Property across Mercer Street (Figure 2). The Block 37 Property has primarily been used for commercial and industrial purposes since 1885. Historical operations included a lumber mill, a planing mill, lumber storage, two gasoline service stations, a creamery, a brewery, a restaurant, and auto service and detailing. The Block 37 Property was developed with numerous commercial buildings until 2006 and all structures were removed by 2009. Currently, the Block 37 Property is an asphalt-paved vacant lot.

Historical operations resulted in releases of hazardous substances that caused contamination of soil and groundwater at the Block 37 Property and surrounding public rights-of-way. This property is currently associated with the Block 37 Site listed in Ecology's contaminated sites database as Facility Site ID No. 46445353 and Cleanup Site ID 6134. The Block 37 Site includes two sites previously identified by Ecology as the TOSCO 25535330857 Site (associated with a former gas station at 600 Westlake Avenue North) and the Auto Service Company Site (associated with a former gasoline station and auto maintenance facility at 630 Westlake Avenue North).



Cleanup actions at the Block 37 Site are being performed under Agreed Order No. DE 19430, effective May 4, 2021, between Ecology, Phillips 66 Company, and City Investors XI, L.L.C. Based on confirmed releases to soil and groundwater at the Block 37 Site and surrounding public rights-of-way, the Block 37 Site is a potential source of contamination at or near the Block 38 West Property.

#### **2.4.2 East – Block 38 East Property**

The Block 38 East Property at 535 Terry Avenue North and 960 Republican Street is east-adjacent to and separated by an alley from the Block 38 West Property (Figure 2). The Block 38 East Property totals approximately 1.08 acres of land that have primarily been used for commercial and light industrial purposes since the late 1800s and comprises King County Parcel Nos. 1983200150 and 1983200160.

Historical operations on the northern portion of the property (535 Terry Avenue North) included a lumber mill and yard, gasoline service station, and fuel yard associated with coal storage through the 1950s. By the late 1960s, the northern portion of the property was a parking lot until redeveloped in 2009 with a five-story commercial office building known as the Interurban Exchange 2 Building.

Historical operations on the southern portion of the property (960 Republican Street) included lumber storage until the late 1920s when a three-story commercial office building was built. The building, known as the Rosen Building, was used as a warehouse for electrical appliances and general storage through the 1960s and currently is a medical and dental office. Figure 2 shows the location of historical features and lot configuration on the Block 38 East Property.

Historical operations resulted in releases of hazardous substances that caused contamination of soil and groundwater at the Block 38 East Property. This property is currently associated with the Rosen Property Site, also known as the Interurban Exchange 2 Site, listed in Ecology's contaminated sites database as Facility Site ID No. 2500 and Cleanup Site ID 5123.

On May 28, 2009, the Rosen Property Site received a property-specific No Further Action determination from Ecology. Based on confirmed releases to soil and groundwater at the Rosen Property Site and residual soil contamination with detections of petroleum hydrocarbons, carcinogenic polycyclic aromatic hydrocarbons (cPAHs), and metals exceeding regulatory screening levels at the western boundary of the Block 38 East Property, the



Rosen Property Site is a potential source of contamination at or near the Block 38 West Property. Figure 2 shows the location of historical features and lot configuration on the Block 38 East Property.

#### **2.4.3 South – 428 Westlake LLC and Firestone Tire & Rubber Co. Properties**

The 428 Westlake LLC Property at 428 Westlake Avenue North is one block south of the Block 38 West Site and occupies the northern half of the block (Figure 2). The 428 Westlake LLC Property totals approximately 0.44 acre of land that has primarily been used for commercial and light industrial purposes since the 1960s and is comprised of King County Parcel No. 1983200245.

The 428 Westlake LLC Property was undeveloped prior to the 1960s and occupied by a used car dealership until the 1980s, and then a commercial parking lot into the early 2000s. The 428 Westlake LLC Property was redeveloped in 2003 to 2004 with a six-story commercial office building with four levels of below grade parking.

Historical operations resulted in releases of hazardous substances that caused contamination of soil at the 428 Westlake LLC Site, and 428 Westlake LLC Site being listed in Ecology's contaminated sites database as Facility Site ID No. 861982 and Cleanup Site ID No. 485. On May 23, 2005, the 428 Westlake LLC Site received a No Further Action determination from Ecology and a restrictive covenant was recorded for petroleum-contaminated soil that was left in-place on the southwestern portion of the 428 Westlake LLC Site and a 2-foot-wide zone that extends into the City of Seattle right-of-way. Based on a localized release to soil and no documented impacts to groundwater, the 428 Westlake LLC Site is not considered a potential source of contamination at or near the Block 38 West Property.

The Firestone Tire & Rubber Co. Property at 400 Westlake Avenue North is one block south of the Block 38 West Site and occupies the southern half of the block (Figure 2). The Firestone Tire & Rubber Co. Property totals approximately 0.44 acre of land that has primarily been used for commercial and light industrial purposes since the 1950s and is comprised of King County Parcel No. 1983200230.

The Firestone vehicle service building and former gasoline retail station reportedly was constructed in 1929 and remained a tire and vehicle service station until approximately 2017. In its original configuration, the Firestone vehicle service building's southwestern corner was reportedly open to vehicular traffic and contained fuel dispensers. The Firestone



Tire & Rubber Co. Property was redeveloped with a 15-story commercial office building with a one-story underground parking garage from 2020 to 2022.

Concurrent with redevelopment, an independent cleanup was completed at the Firestone Tire & Rubber Co. Property, which included the mass excavation of soil for a subgrade parking garage and associated construction dewatering system that reportedly operated from December 2020 through September 2021.

Historical operations resulted in releases of hazardous substances that caused contamination of soil and suspected contamination of groundwater at the Firestone Tire & Rubber Co. Property, and the Firestone Tire & Rubber Co. Property being listed in Ecology's contaminated sites database as Facility Site ID No. 32145888 and Cleanup Site ID No. 12005. Based on the confirmed groundwater flow direction in the Shallow Water-Bearing Zone (described in Section 2.6) from north to south at the Block 38 West Site, releases to soil and/or groundwater at the Firestone Tire & Rubber Co. Property are not considered a potential source of contamination at or near the Block 38 West Property.

#### **2.4.4 West – Amazon VI Property**

The Amazon VI Property at 515 Westlake Avenue North is one block west of the Block 38 West Site and occupies the majority of the block (Figure 2). The Amazon VI Property totals approximately 1.91 acres of land that has primarily been used for commercial and light industrial purposes since the 1950s and is comprised of King County Parcel Nos. 1983200065 and 1983200075.

A 2,500-gallon heating oil underground storage tank (UST) was removed along with petroleum-contaminated soil in March 2013. The Amazon VI Property was redeveloped in 2013 with a six-story commercial office building with a parking garage.

Historical operations resulted in releases of hazardous substances that caused contamination of soil at the Amazon VI Property, and the Amazon VI Property being listed in Ecology's contaminated sites database as Facility Site ID No. 7811 and Cleanup Site ID No. 12471. On October 16, 2014, the Amazon VI Site received a No Further Action determination from Ecology. Based on a localized release to soil and no documented impacts to groundwater, the Amazon VI Property is not considered a potential source of contamination at or near the Block 38 West Property.



#### **2.4.5 Former American Linen Supply Co – Former American Linen Property**

The former American Linen Supply Co. facility is located approximately two blocks northwest of Block 38 West at 700 Dexter Avenue North in Seattle, Washington (King County Parcel No. 224900-0285) and is currently owned by BMR-Dexter LLC (Former American Linen Property). The Former American Linen Property has documented releases of chlorinated volatile organic compounds (CVOCs) and petroleum hydrocarbons to soil and groundwater, with impacts to local groundwater quality in the South Lake Union area. The American Linen CVOc Plume comprises groundwater contaminated with CVOcs emanating from and down-gradient of the Former American Linen Property.

Historical operations at the Former American Linen Property included operation of a commercial laundry and dry cleaner businesses from approximately 1946 through the mid-1990s. The Former American Linen Property was redeveloped in 2019 to 2020 with a 14-story commercial office and life science building with three levels of below grade parking. Releases that occurred on the Former American Linen Property during the period of operation contaminated soil and groundwater with CVOcs, including tetrachloroethene (PCE); trichloroethene (TCE); isomers of dichloroethene (DCE), primarily cis-1,2-dichloroethene (cDCE); and vinyl chloride to depths greater than 100 feet below ground surface (bgs).

The area encompassing contaminated soil and groundwater on and off property at 700 Dexter Avenue North, including the American Linen CVOc Plume, is referred to as the American Linen Supply Co. Dexter Avenue Site, listed in Ecology's contaminated sites database as Facility Site ID No. 3573 and Cleanup Site ID No. 12004. The cleanup of the American Linen Supply Co. Dexter Avenue Site (herein referred to as the American Linen Site) is being conducted under Agreed Order No. DE 14302, effective October 24, 2017, between Ecology and BMR-Dexter LLC.

Based on the confirmed presence of the American Linen CVOc Plume extending onto down-gradient properties, including the Westlake Avenue North and Mercer Street rights-of-way, the American Linen Site is considered a potential source of groundwater contamination at or near the Block 38 West Property.

### **2.5 REGULATORY HISTORY**

Based on the letter regarding Early Notice of Release of Hazardous Substances and Preliminary Determination of Liability for Release at the Block 38 West Contaminated Site



dated August 13, 2019, from Ecology to City Investors IX (2019 Ecology Letter), regulatory interaction, reporting, and concurrence from all parties involved are required to support the regulatory closure process. City Investors IX executed a PLP Waiver on August 30, 2019 that accepted its status as a potentially liable person subject to a reservation of rights with respect to what is currently referred to as the American Linen CVOC Plume. Ecology listed the Block 38 West Site (which includes the Block 38 West Property) as a contaminated site with Facility Site ID No. 62773 and Cleanup Site ID No. 15008 in August 2019. Ecology and City Investors IX executed the AO for the Block 38 West Site on April 20, 2020. The AO requires City Investors IX to, among other things, prepare a work plan to conduct an RI, conduct an RI and feasibility study, and prepare a draft Cleanup Action Plan for the Block 38 West Site. In addition, and as noted above, the remaining elements of the independent interim action described in the 2019 IAWP at the time the AO was issued were performed under the auspices of the AO.

On December 9, 2019, City Investors IX notified Ecology of a newly discovered release at the Block 38 West Site. The general contractor for the redevelopment, GLY Construction (GLY), notified Farallon on November 22, 2019 regarding the discovery of a black liquid discharging from a side sewer line at the Block 38 West Property while inspecting side sewer utilities in the alley (Figure 3). The side sewer line where the liquid was observed extended west onto the Block 38 West Property<sup>3</sup> and was not documented on Seattle Public Utilities maps. The side sewer line was encountered at an approximate elevation of 23 feet NAVD88. Sample results indicated the presence of total petroleum hydrocarbons as gasoline-, diesel-, and oil-range organics (GRO, DRO, and ORO) in the liquid, with ORO identified as the main component. The side sewer line was capped at the eastern Block 38 West Property boundary and the length of the line was inspected to the maximum extent practicable. Additionally, several test pits were advanced after building demolition, but no source of the petroleum hydrocarbons encountered in the side sewer line was identified. No further evidence of a release associated with the side sewer line was encountered during the independent interim action.

In February 2020, Ecology was notified through email correspondence that two previously unknown USTs (identified as UST01 and UST02) and an associated product fuel line had been discovered in the northwestern corner of the Block 38 West Property. Email correspondence included a description of the decommissioning and removal of UST01,

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<sup>3</sup> This side sewer extended onto King County Parcel No. 1983200170 on the southern portion of the Block 38 West Property (500 and 510 Westlake Avenue North).



UST02, and the product fuel line, a summary of soil laboratory analytical results, and UST site assessment. The removal of UST01, UST02, and product fuel line is discussed in further detail in Section 4.6, UST Decommissioning.

A Technical Memorandum was submitted to Ecology on June 15, 2020, describing proposed subsurface investigation activities to support the implementation of the Alley Area Interim Action and remedial investigation for the Block 38 West Site. On August 21, 2020, Ecology met with City Investors IX and Farallon to discuss and approve the proposed scope of work. Subsurface investigation activities in the alley area were completed in September 2020. The scope of work for the supplemental subsurface investigation is discussed in further detail in Section 3.3, Subsurface Investigations.

On February 11, 2021, Ecology provided email approval of the Sampling and Analysis Plan (Farallon 2021b) and approval to proceed with the scope of work described in the Alley IAWP (Farallon 2021a). Implementation of the Alley IAWP is discussed in Section 5, Alley Area Interim Action.

Ecology worked with City Investors IX and provided approvals for portions of the RI scope of work between June 2020 and February 2022. A Technical Memorandum was submitted to Ecology on May 22, 2020, requesting approval for the installation of monitoring wells within the building foundation. On June 18, 2020, City Investors IX requested approval<sup>4</sup> of a portion of the RI scope of work from Ecology for the installation of four monitoring wells, FMW-150 through FMW-153, screened within the Intermediate Water-Bearing Zone (described in Section 2.6) through the building foundation. Ecology granted approval via email correspondence on June 22, 2020. Installation of these wells is discussed in further detail in Section 3.3, Subsurface Investigations.

On July 20, 2021, City Investors IX requested approval from Ecology to use water resource protection wells (construction dewatering observation wells) OW-1 through OW-5, screened within the Intermediate Water-Bearing Zone (see Section 4.2), for ongoing water level elevation measurements and future compliance groundwater monitoring activities.<sup>5</sup> City Investors IX also requested approval from Ecology to install proposed monitoring wells in the Shallow and Intermediate Water-Bearing Zones within the alley. In email correspondence on

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<sup>4</sup> Approval of portions of the scope of work presented in the Agency Review Draft Remedial Investigation Work Plan was granted.

<sup>5</sup> City Investors IX requested that the existing “OW” wells be used to complete remedial investigation activities instead of using other wells that were proposed in the Agency Review Draft Remedial Investigation Work Plan scope of work.





July 27, 2021 and a letter dated September 14, 2021, Ecology approved the use of observation monitoring wells OW-1 through OW-5 as groundwater monitoring wells for the RI once properly converted and developed, and granted the authorization to proceed with the installation of three monitoring wells in the Shallow Water-Bearing Zone and one monitoring well in the Intermediate Water-Bearing Zone (FMW-154 through FMW-157 in the alley; see Section 3.3, Subsurface Investigations for more details).

On November 19, 2021, Ecology approved via email the advancement and sampling of borings FB-18 and FB-19 west of test pit location TP-12, and borings FB-17 and FB-20 west and north of the former UST fuel product line. On February 3, 2022, Ecology approved via email the installation of boring FB-21 north of the alley; see Section 3.3, Subsurface Investigations.

In a letter dated May 3, 2022, Ecology clarified the final scope of work for the RI, including boring and monitoring well locations and the proposed analytes for soil and groundwater samples.

On April 26, 2023, the RI Work Plan was finalized and the remaining remedial investigation activities and groundwater monitoring were planned to occur from May 2023 through February 2024. Ecology issued final approval of the RI Work Plan in a letter dated May 1, 2023.

On June 28 and October 11, 2023, City Investors IX and Ecology participated in Key Project Meetings to review the draft RI data set; review updates to COPCs, media of concern, and screening levels; discuss combining the RI and FFS into a single report; and review the content and organization of the Draft RI/FFS Report in accordance with the AO.

Between November 2023 and January 2024, City Investors IX and Ecology participated in multiple meetings to discuss how to incorporate Ecology's Guidance for Silica Gel Cleanup in Washington State (Ecology 2023) into the RI groundwater data evaluation. Based on meetings with Ecology, background monitoring wells FMW-158 and FMW-159 were selected to support evaluation of background polar organic fractions (see Section 6.5.3 for more detail).

## **2.6 GEOLOGY AND HYDROGEOLOGY**

The Puget Sound region is underlain by Quaternary sediments deposited by a number of glacial episodes. Deposition occurred prior to, during, and following glacial advances and



retreats, creating the existing subsurface conditions. The naturally occurring sediments in the South Lake Union area consist primarily of interlayered and/or sequential deposits of alluvial clays, silts, and sands that typically are situated over deposits of glacial till that consist of silty sand to sandy silt with gravel. Outwash sediments consisting of sands, silts, clays, and gravels were deposited by rivers, streams, and post-glacial lakes during glacial advances and recessions. Advance outwash sediments have been largely over-consolidated by the overriding ice sheets. These advance outwash sediments are overlain by a till-like layer and/or recessional outwash sediments that are less consolidated (Galster and Laprade 1991).

The Block 38 West Property is approximately 600 feet south of Lake Union. According to a U.S. Geological Survey (1909) Seattle Special quadrangle map, the original shoreline of Lake Union extended farther south than its current location, to as far as the current location of Mercer Street. In the late 1800s and the early 1900s, the southern end of Lake Union was filled with sawdust and wood waste generated by lumber mill operations and with other fill materials. The historical use of Block 38 as a lumber mill and for lumber storage resulted in deposition of wood waste across Block 38. Field observations made during subsurface investigations conducted by Farallon and others confirmed a wood debris layer was present beneath the Block 38 West Property prior to the redevelopment excavation.

Cross sections depicting the general lithology and hydrogeology of the Block 38 West Property are presented on Figures 17 through 21, which are based on field observations made during the subsurface investigations conducted by Farallon and others and documented in boring logs (Appendix A). The locations of the cross sections are shown on Figure 3 along with sampling locations from the subsurface investigations. According to Farallon observations made during subsurface investigations conducted on adjacent properties and at the Block 38 West Property and a review of boring logs from geotechnical drilling (GeoEngineers, Inc. [GeoEngineers] 2018), three general stratigraphic units were present at the Block 38 West Property and immediate vicinity prior to excavation:

- The shallowest unit consists of fill material with recent deposits, including lacustrine sediments, and comprises silt, sandy silt, and sand with variable gravel content. In some areas, this shallowest unit includes wood waste, peat, and organic silt. The shallowest unit was present across the Block 38 West Property prior to remedial and mass excavations conducted as part of redevelopment activities.
- The fill and recent deposits are underlain by a dense stratum of heterogeneous glacially consolidated deposits comprising dense sand and variable silt and gravel



content and very stiff to hard silt with variable sand and gravel content. According to GeoEngineers (2018), the recent glacially consolidated soil contact typically slopes down to the north toward Lake Union. Prior to remedial and mass excavations conducted as part of redevelopment activities at the Block 38 West Property, the contact occurred between approximate elevations of 11 to -6 feet NAVD88.

- A poorly graded dense advance glacial outwash sand with minor silt is encountered below the intermediate unit of glacially consolidated soil at elevations ranging from -30 to -40 feet NAVD88. The sand and gravel layer that was observed in the boring for monitoring well FMW-130 at an elevation of -22 feet NAVD88 is likely the transition zone between the intermediate unit of glacially consolidated soil and the poorly graded dense advance glacial outwash sand. In some areas where the intermediate glacially consolidated unit is thin or absent, the top of the outwash sand is encountered at shallower depths. The glacial outwash has been noted to be underlain by very dense fine-grained soil during drilling of borings several hundred feet northwest of the Block 38 West Property.

Three general water-bearing zones are present at the Block 38 West Property:

- The uppermost water-bearing zone encountered in the fill and underlying recent deposits is referred to as the Shallow Water-Bearing Zone. The Shallow Water-Bearing Zone at the Block 38 West Property varies in thickness from approximately 5 to 15 feet and was encountered at depths ranging from approximately 5 to 8 feet bgs. Monitoring wells formerly located at the Block 38 West Property were screened within the Shallow Water-Bearing Zone, with the exception of monitoring wells FMW-130, FMW-136, FMW-144 through FMW-147, and FMW-149, which were screened in glacially consolidated deposits comprising the Intermediate Water-Bearing Zone described below, and monitoring wells FMW-137 and FMW-138, which are screened in the outwash sand deposits comprising the Deep Outwash Aquifer that is also described below.
- A deeper water-bearing zone below the Shallow Water-Bearing Zone, referred to as the Intermediate Water-Bearing Zone, is present in the glacially consolidated soil at the Block 38 West Property encountered at approximate elevations of 5 to 10 feet NAVD88 (at depths of approximately 15 to 20 feet bgs). The Intermediate Water-Bearing Zone is continuous across the Block 38 West Property. Based on previous subsurface investigations, the Shallow Water-Bearing Zone at the Block 38 West



Property is in direct communication with the Intermediate Water-Bearing Zone (i.e., there is no aquitard separating these groundwater-bearing zones).

- The third water-bearing zone is referred to as the Deep Outwash Aquifer, the top of which is present at approximate elevations of -30 and -40 feet NAVD88 (approximately 55 to 65 feet bgs) in dense advance outwash sand deposits consisting of sand with minor silt. The Deep Outwash Aquifer is continuous across the Block 38 West Property. The thickness of the Deep Outwash Aquifer at the Block 38 West Site is not known. Based on previous subsurface investigations, the Intermediate Water-Bearing Zone at the Block 38 West Property is in direct communication with the Deep Outwash Aquifer (i.e., there is no aquitard separating these groundwater-bearing zones).

## 2.7 VULNERABLE POPULATIONS AND OVERBURDENED COMMUNITIES

Farallon conducted an evaluation of potential impacts to likely vulnerable populations and overburdened communities in the vicinity of the Block 38 West Site in accordance with *Implementation Memorandum No. 25: Identifying Likely Vulnerable Populations and Overburdened Communities under the Cleanup Regulations* dated January 2024, prepared by Ecology (2024) (Implementation Memorandum No. 25). The purpose of this evaluation is to identify and reduce the impact of environmental and health disparities in Washington State and improve the health of Washington State residents, and to support Ecology's determinations regarding site prioritization, cleanup decisions, and site hazard rankings. Farallon has performed the assessment required by MTCA and Implementation Memorandum No. 25 and, as more fully discussed below, has determined that vulnerable populations and overburdened communities in the vicinity of the Block 38 West Site are not more susceptible for exposure to contamination at this Site compared to the general population, and that interim actions completed to date have mitigated potential exposure to environmental harms.

Implementation Memorandum No. 25 states that the potentially exposed population includes a likely vulnerable population or overburdened community if the population meets any of the following criteria:

- The potentially exposed population is located in a census tract that ranks a 9 or 10 on the Environmental Health Disparities Index from the Washington State Department of Health's Environmental Health Disparities Map (EHD Map);



- The potentially exposed population is located in a census tract that is at or above the 80<sup>th</sup> Washington State percentile of the Demographic Index from the U.S. Environmental Protection Agency’s (EPA) Environmental Justice Screening and Mapping Tool (EJ Screening Tool); or
- The potentially exposed population is located in a census tract that is at or above the 80<sup>th</sup> Washington State percentile of the Supplemental Demographic Index from the EJ Screening Tool.

For the purposes of the RI, City Investors IX must assess all populations threatened by the Block 38 West Site. This includes all populations residing either on-Site or off-Site who are reasonably likely to be exposed or potentially exposed to hazardous substances based on their land and resource uses at the Site (WAC 173-340-350(6)(h)(i)).

Farallon used the EPA EJ Screening Tool<sup>6</sup> and the EHD Map<sup>7</sup> to evaluate whether vulnerable populations are present in the vicinity of the Block 38 West Site.

The EJ Screening Tool considers 13 environmental justice indexes and supplemental indexes reflecting 13 environmental indicators. According to the EPA guidance regarding use of the EJ Screening Tool, areas with index scores exceeding the 80<sup>th</sup> percentile nationally should be considered as potential candidates for further review, including considering other factors and sources of information such as health-based information, local knowledge, proximity and exposure to environmental hazards, susceptible populations, unique exposure pathways, or other environmental and socioeconomic information. Farallon used the EJ Screening Tool to evaluate the primary census sub-tract (53033007303) that comprises the Block 38 West Site and surrounding city blocks to the north, south, and east, and the secondary census sub-tract (53033007203) that comprises city blocks to the west. These two census sub-tracts comprise portions of the primary and secondary census tracts evaluated by the EHD Map and represent a total population of approximately 5,620 residents. Results from the EJ Screening Tool for communities in the vicinity of the Block 38 West Site indicate that environmental justice index scores met or exceeded the 80<sup>th</sup> percentile nationally for 3 of the 13 indexes: diesel particulate matter; air toxics cancer risk; and air toxics respiratory hazard index. Environmental justice indexes exceeded the statewide 80<sup>th</sup> percentile for 8 of the 13 indexes, including diesel particulate matter, air

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<sup>6</sup> EPA. 2024. EJ Screen Mapping Tool. <<https://ejscreen.epa.gov/mapper/>>. (May 23, 2024).

<sup>7</sup> Washington State Department of Health. 2024. Washington Environmental Health Disparities Map. <<https://fortress.wa.gov/doh/wtnibl/WTNIBL/>>. (May 23, 2024).



toxics cancer risk, air toxics respiratory hazard index, toxic releases to air, traffic proximity, proximity to Superfund sites, proximity to hazardous waste facilities, and proximity to UST facilities. The EJ Screening Tool community reports for the primary and secondary sub-tracts comprising the area in the vicinity of the Block 38 West Site are included in Appendix B.

The EJ Screening Tool also includes seven socioeconomic indicators for factors including demographics, income, employment, language barriers, education, percentage of population under age 5, and percentage of population over age 64. These indicators provide additional information on whether a community may be more vulnerable to environmental harms. These socioeconomic indicators are scored in the EJ Screening tool as a Demographic Index and a Supplemental Demographic Index, and index scores exceeding the 80<sup>th</sup> Washington State percentile for each index should be considered for further review. According to the EJ Screen Community Reports the Demographic Index score is 66 for both the primary and secondary sub-tracts, and the Supplemental Demographic Index scores are 40 and 50 for the primary and secondary sub-tracts, respectively. These results indicate that, according to the EJ Screening Tool, the community in the vicinity of the Block 38 West Site is not more susceptible to environmental harms than the general population.

The EHD Map is an interactive mapping tool that compares communities across the state for environmental health disparities. It shows pollution assessments such as diesel emissions and ozone, proximity to hazardous waste sites, and measures like poverty and cardiovascular disease. The EHD Map was used to evaluate two census tracts comprising the Block 38 West Site and surrounding area (Appendix B). The primary census tract (53033007300) comprises the Block 38 West Site and city blocks to the north, south, and east, and includes the primary sub-tract (53033007303) evaluated using the EJ Screening Tool. The secondary census tract (53033007200) comprises city blocks to the west and includes the secondary sub-tract (53033007203) evaluated using the EJ Screening Tool. Results from the EHD Map indicate that the primary and secondary census tracts comprising the Block 38 West Site and surrounding area are ranked 10 out of 10 and 8 out of 10, respectively, for potential environmental health disparities, evaluated based on environmental exposures, environmental effects, socioeconomic factors, and sensitive populations. However, the EHD Map indicates that these same census tracts score 5 out of 10 and 3 out of 10 for environmental risk due to socioeconomic factors, indicating that communities in the vicinity of the Block 38 West Site generally are at low to moderate risk of environmental harms due to factors such as education, income, housing costs, unemployment, and transportation expenses. The elevated scores for these census tracts



are primarily attributed to the potential for environmental exposures as a result of proximity to diesel exhaust emissions, proximity to heavy traffic roadways, and proximity to hazardous waste facilities and cleanup sites.

Based on the above analysis, the Block 38 West Site appears likely to be in proximity to vulnerable populations and overburdened communities. Based on the index scores determined by the EJ Screening Tool and EHD Map, the likely presence of vulnerable populations and overburdened communities in the vicinity of the Block 38 West Site is primarily attributed to the potential for environmental exposures, and less attributed to socioeconomic or demographic factors. Significantly, the highest index scores for potentially exposed populations proximate to the Block 38 West Site are attributable to emissions from heavy vehicle traffic due to the location of the Block 38 West Site in a highly developed urban area proximate to major roadways. Based on the results from the EJ Screening Tool and EHD Map evaluation, the nature and extent of contamination at the Block 38 West Site, interim cleanup actions, and the completed redevelopment, vulnerable populations and overburdened communities are not more susceptible to exposure to contaminated media associated with the Block 38 West Site than the general population. The land resource use for vulnerable populations and overburdened communities in the vicinity of the Block 38 West Site is primarily commercial and/or residential with no current or future planned use of groundwater, which is consistent with the land resource use for the general population.

Although the potentially impacted population in the vicinity of Block 38 West Site contamination includes a likely vulnerable population or overburdened community, redevelopment and interim cleanup activities at the Block 38 West Site have protected human health and the environment and eliminated the potential exposure of hazardous substances attributed to the Block 38 West Site to all human receptors, including vulnerable populations and overburdened communities. This is further discussed in Section 8.3, Potential Receptors and Exposure Pathways.

## **2.8 CLIMATE CHANGE**

In accordance with WAC 173-340-350(6)(f), Farallon evaluated current and projected local and regional climatological characteristics to determine whether these characteristics could affect the migration of hazardous substances or the resilience of cleanup action alternatives for the Block 38 West Site. According to Ecology's *Sustainable Remediation: Climate Change Resiliency and Green Remediation* dated November 2017, revised January 2023 (Ecology 2017) (Ecology Climate Guidance), sea level rise, flooding, extreme precipitation, wildfires,



landslides and erosion, and drought are the climate-related impacts that generally pose the highest potential risk for upland cleanup sites.

Based on this evaluation and the location of the Block 38 West Site in a highly developed area in Seattle, current and projected local and regional climatological characteristics are not anticipated to affect the migration of hazardous substances or the resilience of cleanup action alternatives at the Block 38 West Site. A summary of this evaluation is presented in the following sections.

### **2.8.1 Sea Level Rise**

The Block 38 West Site is located at an elevation of approximately 31 feet NAVD88, proximate to the southern shore of Lake Union. According to the Ecology Climate Guidance, high projections estimate up to 4 feet of sea level rise by the year 2100. The water level of Lake Union is controlled at an elevation of approximately 20 to 22 feet above sea level, and the high projections for sea level rise would remain less than the height of the dam that regulates the water level of Lake Union. Sea level rise likely would not affect the surface elevation of Lake Union, and as a result is not likely to affect the migration of hazardous substances or the resilience of cleanup action alternatives at the Block 38 West Site

### **2.8.2 Flooding**

Farallon reviewed Federal Emergency Management Agency (FEMA) flood maps for the area in the vicinity of the Block 38 West Site, which indicated that the Block 38 West Site is in an area of minimal flood hazard. As described above, sea level rise is not anticipated to affect the Block 38 West Site, and inundation due to sea level rise is not a concern. In addition, the water level of Lake Union is maintained at a consistent elevation by a dam and spillway, and is unlikely to cause flooding in the surrounding area. The completed redevelopment of the Block 38 West Site consists of a building that covers almost the entire ground surface, and incorporates a stormwater drainage system that prevents surface water from accumulating. Based on these conditions, flooding is not likely to affect the migration of hazardous substances or the resilience of cleanup action alternatives at the Block 38 West Site.

### **2.8.3 Wildfires**

The Ecology Climate Guidance indicates that increased risk of wildfires is a potential climate-related hazard in areas proximate to fuel sources such as forests or grasslands. Due to the location of the Block 38 West Site in a highly developed area of Seattle, fuel sources for wildfires are not present, and risk of wildfires is unlikely.





#### **2.8.4 Landslides and Erosion**

The Block 38 West Property is located in a relatively flat and highly developed area of Seattle, with minimal exposed ground surface that could create a landslide or erosion hazard. Due to local topography and extensive development covering much of the ground surface in the vicinity of the Block 38 Site, the risk of landslides and erosion is extremely low.

#### **2.8.5 Drought**

The Ecology Climate Guidance indicates that cleanup sites vulnerable to drought include groundwater sites vulnerable to a lowered water table, sediment sites in drought-prone waterbodies, and mines and landfills reliant on rain to maintain vegetative cover for slope stability. Due to proximity to Lake Union, groundwater elevations beneath the Block 38 West Property are not significantly impacted by precipitation. The remaining drought concerns are not applicable to the Block 38 West Site. Based on the conditions of the Block 38 West Property, drought is not considered to be a potential climate-related impact for the Block 38 West Site.



### **3.0 SUMMARY OF PREVIOUS INVESTIGATIONS AND REMEDIAL ACTIONS**

Subsurface investigations and/or remedial actions have been conducted at the Block 38 West Site since 1994. This section summarizes the activities and results from previous investigations and remedial actions conducted at the Block 38 West Site. Results from the subsurface investigations conducted at the Block 38 West Site are summarized below. The objectives of the subsurface investigations were to obtain lithologic, hydrogeologic, and analytical data to characterize environmental conditions.

Boring locations associated with these investigations are shown on Figure 3. Soil and groundwater data are summarized on Figures 4 through 21, presented in Tables 1 through 11, and discussed below. Copies of boring logs are provided in Appendix A and laboratory analytical reports are provided in Appendix C.

Results from subsurface investigations and remedial actions conducted on adjacent properties that may impact the Block 38 West Site are summarized in Section 3.4.

#### **3.1 PHASE II SOIL INVESTIGATION – DAMES & MOORE, 1994**

The 1999 EA Update referenced previous work performed, including a Phase II soil investigation performed by Dames & Moore on the Block 38 West Property in 1994. The 1994 soil investigation reportedly was performed in the area where a 1,500-gallon heating oil UST was removed in 1989 from the sidewalk north-adjacent to Republican Street, along the southern portion of the Block 38 West Property (Figure 2). The results from the 1994 soil investigation indicated that no petroleum-affected soil was present beneath the former heating oil UST; groundwater reportedly was not encountered. Information regarding the sample locations during that investigation was not provided in the documents available for review.

#### **3.2 GEOTECHNICAL INVESTIGATION – GEOENGINEERS, 2018**

GeoEngineers performed geotechnical engineering services at the Block 38 West Property in August 2018. The results from the geotechnical investigation were summarized in the draft *Geotechnical Engineering Services, Block 38, Seattle, Washington* dated October 17, 2018, prepared by GeoEngineers (2018) (2018 Geotechnical Report).

The 2018 Geotechnical Report summarized the subsurface conditions that were observed during the advancement of borings FB-01 through FB-06 and borings for monitoring wells FMW-132 through FMW-136 (Figure 3; further discussed in Section 3.3). The borings were



completed to depths ranging from 10.0 to 51.5 feet bgs. Soil samples collected during the advancement of the borings were evaluated for moisture content, fines content, organic content, and Atterberg limits. Based on the evaluation of the geotechnical data collected for the Block 38 West Property, the following soil conditions were identified by GeoEngineers:

- **Fill:** Fill generally consisted of very loose to medium dense silty sand with variable gravel, rubble (brick) and wood fragments, and soft to medium stiff silt and sandy silt. Wood waste was present in the lower portion of the fill soil from approximate elevation 24 to 1 feet NAVD88. The thickness of fill at the Block 38 West Property was observed to be up to approximately 17 feet.
- **Peat/Organic Silt Layer:** A layer of organic material was encountered below the fill and generally consisted of very soft to stiff peat, organic silt, and organic clay. The peat/organic silt layer was observed to be up to 9 feet thick and generally did not extend below an approximate elevation of 5 to 10 feet NAVD88.
- **Recent Deposits:** Recent deposits were encountered below the peat/organic silt layer and generally consisted of medium dense sand with variable silt and gravel content and medium stiff to very stiff silt with variable sand content. The thickness of the recent deposits was observed to be up to approximately 18 feet.
- **Glacially Consolidated Soil:** Glacially consolidated soil was encountered below the recent deposits and generally consisted of dense to very dense sand with variable silt and gravel content and very stiff to hard silt with variable sand and gravel content. Glacially consolidated soil represents competent foundation-bearing soil. The contact to glacially consolidated soil typically slopes down to the north toward Lake Union. The contact elevation to glacially consolidated soil ranges from approximate elevations of -6 to -11 feet NAVD88.

According to the 2018 Geotechnical Report, GeoEngineers estimated the regional water table at an elevation of 20 feet NAVD88 based on observed groundwater conditions in monitoring wells installed on adjacent properties and GeoEngineers' experience in the South Lake Union area. GeoEngineers further stated that the regional water table in the vicinity of the Block 38 West Property is influenced by recharge from Queen Anne Hill and Capitol Hill, infiltration of surface water, temporary dewatering activities, and changes in the water level in Lake Union. The 2018 Geotechnical Report also states that the 72-inch-diameter King County sewer main line in the Republican Street right-of-way and its backfill (Republican Street Drain), south of the Block 38 West Property, influence groundwater levels locally through leakage into the drain (Figures 19 and 20).



### 3.3 SUBSURFACE INVESTIGATIONS

Farallon conducted various subsurface investigations at and adjacent to the Block 38 West Site between 2014 and 2022. The objectives of the subsurface investigations were to obtain lithologic, hydrogeologic, and analytical data to characterize environmental conditions at the Block 38 West Site, and, in part, to facilitate implementation of the independent interim action conducted during the planned redevelopment project. These activities are summarized below.

- **2014 Subsurface Investigation**

The 2014 subsurface investigation included the installation of a single boring completed as monitoring well FMW-130 in the Intermediate Water-Bearing Zone (Figure 3). Monitoring well FMW-130 was installed in July 2014 using a sonic drill rig operated by Cascade Drilling, L.P. of Woodinville, Washington. Monitoring well FMW-130 was installed to a depth of 60 feet bgs. A reconnaissance groundwater sample was collected from the Shallow Water-Bearing Zone during the advancement of the boring for monitoring well FMW-130. A temporary well screen was set at a depth of 15 to 20 feet bgs (elevation 6.9 to -3.1 feet NAVD88) prior to collection of the reconnaissance groundwater sample. The permanent well screen for monitoring well FMW-130 was set at a depth of 45 to 55 feet bgs (elevation -22.8 to -32.8 feet NAVD88). Following installation of monitoring well FMW-130, development activities were conducted that included purging of approximately 255 gallons of water from the monitoring well casing. Select soil, reconnaissance groundwater, and groundwater samples were submitted for laboratory analysis for one or more of the following: GRO, DRO, and ORO; benzene, toluene, ethylbenzene, and xylenes (BTEX); PAHs and other semivolatile organic compounds (SVOCs); and volatile organic compounds (VOCs), including CVOCs. Additional information regarding this subsurface investigation is provided in the 2019 IAWP (Farallon 2019b).

- **2017 Groundwater Monitoring**

Monitoring well FMW-130 was sampled on July 3, 2017 using EPA low-flow groundwater sampling procedures. The groundwater sample analytical methods are described in the 2017 Groundwater Monitoring event summarized in the 2019 IAWP (Farallon 2019b) and the sample was analyzed for the following constituents: GRO; BTEX; and CVOCs.



- **2018 Subsurface Investigations and Groundwater Monitoring**

Subsurface investigation activities conducted in 2018 included advancement of six borings (FB-01 through FB-06); collection of reconnaissance groundwater samples from borings FB-01, FB-03, and FB-05; and installation and development of five monitoring wells (FMW-132 through FMW-136) in August 2018; installation of monitoring wells FMW-137 and FMW-138 in November 2018; and groundwater monitoring activities in August and December 2018. The methodology for the 2018 subsurface investigation of the Shallow and Intermediate Water-Bearing Zones is summarized in the 2019 IAWP (Farallon 2019b).

In August 2018, borings FB-01 through FB-06 and monitoring wells FMW-132 through FMW-135 were installed to assess soil and groundwater conditions in the Shallow Water-Bearing Zone, and FMW-136 was installed to assess soil and groundwater conditions in the Intermediate Water-Bearing Zone (Figure 3). The 11 borings were drilled to depths ranging from 10 to 51.5 feet bgs. Monitoring wells FMW-132 through FMW-135 were screened in the Shallow Water-Bearing Zone at depths ranging from approximately 5 to 17 feet bgs (elevations between 20.7 and 8.4 feet NAVD88), and monitoring well FMW-136 was screened in the Intermediate Water-Bearing Zone at a depth of 30 to 40 feet bgs (elevation of -5 to -15 feet NAVD88).

Select soil samples were analyzed for the following constituents: GRO; DRO and ORO; BTEX; CVOCs; PAHs and other SVOCs; and arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver.

In November 2018, Deep Outwash Aquifer monitoring wells FMW-137 and FMW-138 were installed proximate to the northeastern and southeastern corners of the Block 38 West Property to evaluate groundwater quality in the Deep Outwash Aquifer (Figure 3). Monitoring well FMW-137 was screened at a depth of 72 to 85 feet bgs (elevation of -42 to -55 feet NAVD88) and monitoring well FMW-138 was screened at a depth of 90 to 100 feet bgs (elevation of -50 to -60 feet NAVD88). The methodology for the 2018 subsurface investigation and groundwater monitoring of the Deep Outwash Aquifer is summarized in the 2019 IAWP (Farallon 2019b).

Monitoring wells FMW-130 and FMW-132 through FMW-136 were sampled on August 30 and December 28, 2018, and monitoring wells FMW-137 and FMW-138 were sampled on November 20 and December 28, 2018. All of the wells were



sampled using EPA low-flow groundwater sampling procedures. Reconnaissance groundwater samples and the groundwater samples collected from monitoring wells FMW-130 and FMW-132 through FMW-136 were analyzed for GRO, DRO, ORO, BTEX, PAHs and other SVOCs, and CVOCs; the samples from monitoring wells FMW-137 and FMW-138 were only analyzed for CVOCs.

- **2019 Subsurface Investigations and Groundwater Monitoring**

Supplemental subsurface investigation activities conducted in 2019 included advancement of 10 utility potholes (NGas-1, NGas-2, PH-1, PH-2, PH-4, PH-11, PH-11A, PH-12, PH-13, and PH-13A) in January 2019; three borings (FB-07 through FB-09) and installation of five monitoring wells (FMW-144 through FMW-147 and FMW-149) in December 2019; and groundwater monitoring activities (Figure 3).

Monitoring well FMW-148 was damaged during installation and was not developed or sampled prior to being properly decommissioned in accordance with WAC 173-160, *Minimum Standards for Construction and Maintenance of Wells*. The methodologies for the 2019 subsurface investigations and groundwater monitoring are summarized in the 2019 IAWP (Farallon 2019b) and the Subsurface Investigation Results letter report for the Block 38 West Property dated January 22, 2020 (Farallon 2020b) (2020 Subsurface Investigation Results letter report).

Select soil samples collected during the January 2019 subsurface investigation were submitted for analysis from utility potholes PH-4, PH-11A, PH-12, and PH-13 for one or more of the following based on field observations (visual and olfactory evidence of contamination, and volatile organic vapor concentrations as measured using a photoionization detector): GRO; DRO and ORO; BTEX; and PAHs, including cPAHs and naphthalene. Select soil samples (FB-07 through FB-09, FMW-144 through FMW-149) and groundwater samples (FMW-144 through FMW-147 and FMW-149) from the December 2019 subsurface investigation were submitted for analysis for one or more of the following constituents: GRO; DRO and ORO; BTEX; CVOCs; and PAHs and other SVOCs.

Groundwater monitoring events were conducted in March, May, July, October, November, and December 2019. Groundwater monitoring events were conducted at monitoring wells FMW-130 and FMW-132 through FMW-136 in March 2019, at monitoring wells FMW-137 and FMW-138 in May and July 2019, and at monitoring wells FMW-144 through FMW-147 and FMW-149 in December 2019. Groundwater



monitoring events were conducted at monitoring wells FMW-137 and FMW-138 in October and November 2019. Groundwater sampling was conducted using EPA low-flow groundwater sampling procedures. Samples were analyzed for one or more of the following constituents: GRO; DRO and ORO; BTEX; CVOCs; and cPAHs and other SVOCs.

- **2019 to 2020 Test Pit Investigation**

Between October 2019 and February 2020, test pits TP-1 through TP-18 were advanced at the Block 38 West Property to support and update the existing conceptual site model, support soil profiles for disposal, and collect performance or confirmation soil samples during the independent interim action (Figure 3). The test pits were advanced by Hos Bros. of Woodinville, Washington (Hos Bros.) using the bucket of an excavator. Soil samples were collected from test pits TP-2, TP-3, TP-7, and TP-10 through TP-18 based on visual and olfactory field observations and submitted for laboratory analysis for one or more of the following constituents: GRO; DRO and ORO; VOCs, including CVOCs and/or BTEX; PAHs, including cPAHs and total naphthalenes; total lead; 1,2-dibromoethane and 1,2-dichloroethane; polychlorinated biphenyls (PCBs); and methyl tertiary-butyl ether (MTBE). The methodology and results for the test pit investigation are summarized in the 2020 Subsurface Investigation Results letter report (Farallon 2020b) and in general accordance with the Agency Review Draft Remedial Investigation Work Plan dated July 20, 2020 (Draft RIWP; Farallon 2020e).

- **2020 and 2021 Subsurface Investigations and Monitoring Well Installation**

Between June and July 2020, four new monitoring wells, FMW-150 through FMW-153, were installed at the Block 38 West Property (Figure 3) in general accordance with the scope of work presented in Farallon's technical memorandum regarding Monitoring Well Installation, Block 38 West Property dated May 22, 2020 (Farallon 2020c) and related discussions with Ecology. The monitoring wells were installed through the basement slab of the P4 parking garage level concurrent with the redevelopment of the Block 38 West Property. Monitoring wells FMW-150 through FMW-153 were screened in the Intermediate Water-Bearing Zone at depths of approximately 2 to 7 feet below the P4 parking garage slab (approximate elevations between -8.5 and -14.3 feet NAVD88). The monitoring well casings for FMW-150 through FMW-153 were extended up to the P1 parking garage level, above the pre-redevelopment static water elevation of the Intermediate Water-Bearing Zone. Soil



samples were not retained during the well installation and no groundwater was present at the time of installation to allow for well development. The monitoring wells were developed on February 21 and 24, 2022 prior to initiating compliance groundwater monitoring.

On September 12 and 13, 2020, seven borings (FB-10 through FB-16) were advanced within the alley east of the Block 38 West Property in preparation for the Alley Area Interim Action. The borings were advanced in general accordance with the scope of work presented in Farallon's technical memorandum regarding Supplemental Subsurface Investigation and Foundation Elements, Block 38 West Property dated June 15, 2020 (Farallon 2020d) and related discussions with Ecology. All of the borings were advanced to an approximate depth of 15 feet bgs, except for FB-16, which was advanced to an approximate depth of 20 feet bgs, corresponding to elevations ranging from 9.9 to 7.8 feet NAVD88. Soil samples were collected from various depths corresponding to elevations ranging between 15 and 22.5 feet NAVD88 for laboratory analysis for one or more of the following: GRO; DRO and ORO; BTEX; naphthalenes; cPAHs; and metals (i.e., arsenic, cadmium, chromium, mercury, and lead). Groundwater was not encountered and therefore groundwater samples were not collected. The methodology and results for the alley area subsurface investigation are summarized in the *Final Interim Action Report, Alley Area of Block 38 West Site, between Republican Steet and Mercer Street, 500 through 536 Westlake Avenue North, Seattle, Washington* dated January 5, 2024, prepared by Farallon (Farallon 2024).

On November 24, 2021, borings FB-18 and FB-19 were advanced west of former soil sample location TP-12 along the western sidewalk at the Block 38 West Property (Figure 3) in general accordance with the Draft RIWP (Farallon 2020e) and related discussions with Ecology. Borings FB-18 and FB-19 were advanced to a depth of 25 feet bgs (elevation 10.0 feet NAVD88). Select soil samples from borings FB-18 and FB-19 were submitted for analysis for cPAHs.

- **2022 Subsurface Investigation and Monitoring Well Installation**

On February 5 and 6, 2022, Shallow Water-Bearing Zone monitoring wells FMW-154 through FMW-156 and Intermediate Water-Bearing Zone monitoring well FMW-157 were installed and developed in the alley east of and adjacent to the Block 38 West Property. In addition to the monitoring well installation, boring FB-20 was advanced north of mass excavation grid N1 and boring FB-21 was advanced north of the alley





(Figure 3). These locations were installed in general accordance with the Draft RIWP (Farallon 2020e) and related discussions with Ecology. Monitoring wells FMW-154 through FMW-157 were screened at the following depths:

- FMW-154: 10 to 15 feet bgs (elevation 12.8 to 7.8 feet NAVD88);
- FMW-155: 10 to 15 feet bgs (elevation 13.9 to 8.9 feet NAVD88);
- FMW-156: 15 to 20 feet bgs (elevation 10.7 to 5.7 feet NAVD88); and
- FMW-157: 30 to 40 feet bgs (elevation -4.1 to -14.1 feet NAVD88).

Borings FB-20 and FB-21 were advanced to depths of 25 and 10 feet bgs (elevations 21.0 and 7.0 feet NAVD88), respectively.

Select soil samples from borings FB-20 and/or FB-21 were submitted for analysis for DRO, ORO, and/or cPAHs. Groundwater samples were not collected from monitoring wells FMW-154 through FMW-157.

The results from these investigations confirmed the presence of GRO, DRO, ORO, BTEX, and PAHs (including cPAHs) in soil at the Block 38 West Site, primarily within the upper 15 feet of fill material. Detected concentrations of ORO, total naphthalenes, and cPAHs appeared to be the most prominent throughout the Block 38 West Site, with maximum concentrations of ORO at 9,000 milligrams per kilogram (mg/kg), total naphthalenes at 14.3 mg/kg, and toxic equivalent concentrations of cPAHs at 21 mg/kg. Other compounds were detected in soil, but at a lower frequency and at relatively low concentrations. The lateral distribution of concentrations is illustrated on Figures 4 through 10 and vertical distribution is illustrated on Figures 17 through 21.

Groundwater level measurements and corresponding elevations from the monitoring events are presented in Table 6, and interpreted groundwater elevation contours and flow direction in the Shallow Water-Bearing Zone, Intermediate Water-Bearing Zone, and Deep Outwash Aquifer are shown on Figures 11A through 11C. These investigations also confirmed detectable petroleum hydrocarbons in groundwater within the Shallow and Intermediate Water-Bearing Zones beneath the Block 38 West Site. The lateral distribution of detected compounds is illustrated on Figures 12 through 16 and vertical distribution is illustrated on Figures 17 through 21.



### **3.4 SUPPORTING DATA FROM ADJACENT PROPERTY INVESTIGATIONS**

The properties discussed in more detail below have documented releases and remedial actions that abut or are within 100 feet of the Block 38 West Site.

Boring locations associated with these investigations are shown on Figure 3. Soil and groundwater data are summarized on Figures 4 through 21, presented in Tables 1 through 11, and discussed below.

#### **3.4.1 North - Block 37 Property**

Historical operations on the Block 37 Property resulted in the release of hazardous substances to soil and groundwater beneath the Block 37 Property, adjacent rights-of-way, and some adjacent properties. The Westlake 76 Station facility was present on the southwestern portion of the Block 37 Property (Figure 2). The Westlake 76 Station facility was constructed in 1965 and comprised four 10,000-gallon fuel USTs, a waste oil UST, a heating oil UST, four hydraulic hoists, two pump islands, product dispensers, and an associated station building. The USTs were permanently decommissioned and removed from the Block 37 Property when the Westlake 76 Station facility was demolished in September 2008 (Stantec 2008).

A release of approximately 80,000 gallons of premium leaded gasoline from the Westlake 76 Station facility was reported in May 1980. A release of approximately 600 gallons of gasoline was reported from a product line that was broken by a contractor during the removal of waste oil and heating oil USTs from the Westlake 76 Station facility in May 2001.

Releases from the Westlake 76 Station facility have impacted soil and groundwater on the southern portion of the Block 37 Property, adjacent rights-of-way, and adjacent properties (ATC 2018) (Appendix D). Based on subsurface investigations completed, GRO, benzene, ethylbenzene, total xylenes, and/or total naphthalenes were detected at concentrations exceeding MTCA screening levels in soil samples collected from the borings advanced for monitoring wells MW-71 through MW-73 at elevations ranging from 20.4 to 10.4 feet NAVD88 in 2005 (Figures 4 through 9; Tables 1 and 2). Based on subsurface investigations, GRO, ORO, total DRO+ORO, benzene, total naphthalenes, and/or MTBE were detected at concentrations exceeding MTCA Method A and/or Method B screening levels in groundwater samples collected from monitoring wells MW-41 and/or MW-95 from 1991 to 2006 and monitoring wells MW-71 through MW-173 from 2005 to 2010 (Figures 12 through 16; Tables 7 through 9). Impacts to soil and groundwater from the Westlake 76 Station facility



were documented under and south of Mercer Street adjacent to the north and northwest Block 38 West Property boundary as early as 1991, with groundwater impacts documented through 2010 (ATC 2018).

Based on the results of previous investigations and remedial actions conducted by others (ATC 2018), the Block 37 Site COPCs for soil and groundwater include GRO; BTEX; and lead. However, in an opinion letter dated August 21, 2018, Ecology (2018) identified the following COPCs for the Westlake 76 Station Site:

- GRO, DRO, ORO, BTEX, naphthalene, cPAHs, and lead in soil; and
- GRO, DRO, ORO, BTEX, MTBE, naphthalene, and lead in groundwater.

Ecology (2018) determined that further action was necessary to evaluate COPCs in soil in the rights-of-way and that additional soil and groundwater data were necessary to define the full horizontal and vertical extent of contamination.

### **3.4.2 East – Block 38 East Property**

Historical operations on the Block 38 East Property resulted in the release of hazardous substances to soil and groundwater beneath the Block 38 East Property, adjacent rights-of-way, and adjacent properties (Figure 2). Documented releases are associated with the former Jenks Service Station facility (Lot 1) and a former fuel yard that consisted of coal storage and distribution (Lots 2 through 5), where the Interurban Exchange 2 Building is currently located. A reported release from a former heating oil UST (Lot 6) also occurred at the Rosen Building (Lots 6 and 7). Figure 2 shows the location of historical features on the Block 38 East Property and lot configuration. A summary of environmental investigations and remedial actions completed (GeoEngineers 1999, 2008) follows.

Due to the significant amount of data associated with the Rosen Property Site, only select analytical results for soil samples collected from the western sidewall of the remedial excavation that occurred on Lots 1 through 5 (i.e., adjacent to the alley) are summarized on Figures 4 through 10, presented in Tables 1 through 3, and discussed below.

#### **3.4.2.1 Block 38 East Property – Lots 1 through 5**

Releases of petroleum hydrocarbons, metals (lead and cadmium), and PAHs, including naphthalenes and cPAHs, were confirmed prior to development and construction of the Interurban Exchange 2 Building. Farallon understands that an interim action was conducted in conjunction with redevelopment of the northern and central portions of the Block 38 East



Property in 2008, which resulted in the removal of impacted soil and groundwater at Lots 1 through 5. Based on the results from the interim action confirmation soil sampling, GRO, DRO, and ORO were detected at concentrations exceeding MTCA Method A cleanup levels in soil samples collected from the northern sidewall of the excavation on Lot 1, and cPAHs were detected at concentrations exceeding the MTCA Method A cleanup level on the western and southern sidewalls of the excavation on Lots 3 through 5 (GeoEngineers 2008, Appendix E). GRO and BTEX were detected at concentrations exceeding MTCA Method A cleanup levels in groundwater samples collected from dewatering wells on the northern shoring wall during the remedial excavation. No information regarding additional groundwater monitoring on or off the Block 38 East Property post-interim action was available.

The interim action was limited to the area of redevelopment and construction on Lots 1 through 5 of the Block 38 East Property, and impacted soil remained in the adjacent rights-of-way to the north and west, and potentially at Lot 6 (discussed below) on the southern portion of the Block 38 East Property. Based on confirmation samples from the excavation, GRO remained in the western sidewall near the northern end of the alley at a concentration of 11 mg/kg (sidewall sample EX-11-W21) (Figure 4; Table 1) and cPAHs remained in the western sidewall along the central portion of the alley at total toxic equivalent concentrations ranging from 0.07 to 6 mg/kg (EX-19-W5, EX-20-W1.5, EX-40-EL22, and EX-41-EL22) (Figure 10; Table 2). Lead also remained in the western sidewall along the central portion of the alley at concentrations ranging from 64 to 1,800 mg/kg (EX-19-W5, EX-20-W1.5, EX-39-EL23, EX-40-EL22, and EX-41-EL22) (Table 5).

GeoEngineers (2008) observed that three distinct stratigraphic layers had existed under Lots 3 through 5, and that soil samples with PAHs or metals detected at concentrations exceeding MTCA Method A cleanup levels had been within the upper soil fill layer. The three layers were described as follows:

- An upper fill layer consisting of sand, silt, wood chips, and coal fragments from the ground surface to a depth of 4 to 6 feet bgs (approximate elevation of 25 to 21 feet NAVD88);
- Underlying wood debris consisting of wood chips and logs that ranged from 7 to 10 feet thick (approximate elevation of 21 to 14 feet NAVD88); and
- Native silt and sand encountered beneath the wood debris layer (elevations deeper than an approximate elevation of 14 feet NAVD88).



Ecology (2009) issued a property-specific No Further Action determination based upon the results of the 2008 remedial action conducted by GeoEngineers (2008) at Lots 1 through 5 on the East property. The No Further Action determination was property-specific to Lots 1 through 5 (the portion of the East property containing the Interurban Exchange 2 Building) and Ecology had indicated that “further remedial action is still necessary elsewhere at the Site.”

#### **3.4.2.2 Block 38 East Property – Lots 6 and 7**

A release from a heating oil UST on Lot 6 associated with the Rosen Building was confirmed during the permanent decommissioning and removal of the UST in 1994 (GeoEngineers 1999). Residual DRO and ORO were detected in soil samples collected north of the former heating oil UST excavation area at concentrations exceeding MTCA cleanup levels established in 1994 but less than current MTCA Method A cleanup levels. The volume of soil associated with the former heating oil UST release that was excavated and disposed of off the Rosen Property Site was not documented. Petroleum hydrocarbons were reported as non-detect in a groundwater sample collected from a monitoring well north of the former heating oil UST excavation area. Based on the information available, it is not clear whether the monitoring well was down-gradient of the UST excavation area. No other information pertaining to this UST release was available for review.

#### **3.4.3 Former American Linen Property**

The American Linen CVOC Plume comprises groundwater contaminated with CVOCs emanating from and down-gradient of the Former American Linen Property. The site encompassing contaminated soil and groundwater on and off property at 700 Dexter Avenue North, including the American Linen CVOC Plume, is referred to as the American Linen Supply Co. – Dexter Avenue Site (American Linen Site). As described in the *Final Remedial Investigation/Feasibility Study Work Plan, American Linen Supply Co – Dexter Avenue Site, 700 Dexter Avenue North, Seattle, Washington* dated December 4, 2019, prepared by PES Environmental, Inc. (2019) (Final RI/FS Work Plan), commercial laundry and dry cleaning businesses operated on the Former American Linen Property beginning in approximately 1946 and continued through the mid-1990s. Releases that occurred on the Former American Linen Property during the period of operation contaminated soil with CVOC concentrations as PCE, TCE, isomers of DCE, and vinyl chloride that exceed the site-specific screening levels for the American Linen Site to depths greater than 100 feet bgs.



Under static conditions, contaminated groundwater from the Shallow Water-Bearing Zone, Intermediate Water-Bearing Zone, and Deep Outwash Aquifer flows from the Former American Linen Property to the east and southeast with a downward vertical gradient and then to the south at the distal end of the American Linen CVOC Plume over an approximate distance of 1,100 linear feet. The lateral and vertical extent of the American Linen CVOC Plume has not been fully characterized, but exceeds 500 feet in width and approximately 100 feet in vertical thickness at areas down-gradient of the Former American Linen Property. The areal extent of the American Linen CVOC Plume that exceeds site-specific screening levels for the American Linen Site encompasses the majority of the Former American Linen Property and extends east-northeast past 8<sup>th</sup> and 9<sup>th</sup> Avenues onto Blocks 77 (900 Roy Street to 731 Westlake Avenue) and 79 (701, 721, 739, and 753 9<sup>th</sup> Avenue North), south and southeast across Roy Street onto Blocks 49 and 84,<sup>8</sup> and east across Westlake Avenue North beyond the Block 43 Property and onto the western portion of the Block 37 Property.

Impacts from the American Linen CVOC Plume to the lower portion of the Intermediate Water-Bearing Zone and Deep Outwash Aquifer groundwater that are at concentrations less than MTCA screening levels extend as far south as the Block 38 West Property; however, the full extent of groundwater impacts at concentrations less than MTCA screening levels has not been identified. A temporary increase in CVOC concentrations was observed in dewatering wells located off property and adjacent to the northwestern corner of the Block 38 West Property, likely due to construction dewatering events that occurred on the Block 38 West Property and at least one other property that underwent redevelopment in the nearby South Lake Union area.

cDCE and/or vinyl chloride associated with the American Linen CVOC Plume were detected at concentrations exceeding MTCA screening levels in Deep Outwash Aquifer groundwater samples collected from monitoring wells MW128 and FMW-131 on the Block 37 Property,<sup>9</sup> north-adjacent to the Block 38 West Property, during groundwater monitoring events conducted between 2014 and 2018 (Final RI/FS Work Plan Figure 37; Table 14). cDCE was detected at concentrations less than the MTCA Method B cleanup level in Deep Outwash Aquifer groundwater samples collected from monitoring wells FMW-137 and FMW-138 during groundwater sampling events performed from November 2018 through July 2019 on

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<sup>8</sup> Block 77 is located at 900 Roy Street to 731 Westlake Avenue North, and Block 79 is located at 701 through 753 9<sup>th</sup> Avenue North. Block 49 is located at 801 Roy Street, and Block 84 is located at 800 Mercer Street.

<sup>9</sup> Concentrations of cDCE and vinyl chloride were also detected in groundwater samples collected from monitoring well GEI-2, which is screened from the Intermediate Water-Bearing Zone into the top of the Deep Outwash Aquifer.



the Block 38 West Property (Appendix F). Historical groundwater sampling of the Shallow Water-Bearing Zone on the Block 37 and Block 38 West Properties (including monitoring wells FMW-130 and FMW-132 through FMW-135) (Table 9) indicates that no sources of CVOCs to groundwater existed on the Block 38 West Property. Available analytical data for groundwater samples collected from the lower portion of the Intermediate Water-Bearing Zone indicate that cDCE impacts are likely associated with the American Linen CVOC Plume.



## 4.0 INDEPENDENT INTERIM ACTION

Investigations conducted at the Block 38 West Property have identified hazardous substances in soil and groundwater at concentrations exceeding applicable screening levels. Screening levels were established as a conservative basis for defining the extent of contamination for each hazardous substance exceeding concentrations of potentially applicable cleanup levels and affected media at the Block 38 West Site. Hazardous substances targeted for this independent interim action were selected based on the compounds detected in soil or groundwater samples collected from the Block 38 West Property at concentrations exceeding the screening levels. The hazardous substances identified for soil were GRO, DRO, ORO, benzene, total naphthalenes, and cPAHs. The hazardous substances identified for groundwater were DRO, ORO, benzene, and total naphthalenes. Screening levels and COPCs are discussed in further detail under Section 6.0, Remedial Investigation.

The independent interim action reduced the threat to human health and the environment by removal of impacted soil, the Shallow Water-Bearing Zone, and the upper portion of the Intermediate Water-Bearing Zone from within the property boundary as part of the Block 38 West Property redevelopment project. Components of the independent interim action included excavation of impacted soil to eliminate source material, construction dewatering and treatment of contaminated groundwater, installation of a vapor barrier around the entire perimeter and below the building foundation, and construction of the exterior walls and floor slab for the underground portion of the building using waterproof concrete.

Redevelopment of the Block 38 West Property began in late October 2019 and entailed construction of a multi-story mixed-use building with 12 stories above street level and 4 levels of underground parking. The finished floor elevation of the lowest level of parking is -3.25 feet NAVD88. Construction of the new building required mass excavation across the entire Block 38 West Property to approximate elevation -6.5 feet NAVD88 or approximately 30 to 35 feet below existing grade. Excavation for elevator cores and deeper structural features extended below the mass excavation subgrade. The excavation sidewalls were retained using soldier pile and lagging shoring methods in conjunction with four rows of tiebacks.

This section summarizes the results of the independent interim action conducted at the Block 38 West Site between October 2019 and July 2021. Additional details regarding the implementation of the independent interim action are summarized in the *Final Interim*





*Action Report for the Block 38 West Site, 500 through 536 Westlake Avenue North, Seattle, Washington* dated December 28, 2023, prepared by Farallon and approved by Ecology on January 4, 2024.

#### **4.1 INDEPENDENT INTERIM ACTION OBJECTIVES**

The objective of the independent interim action was to reduce the threat to human health and the environment at the Block 38 West Property. Impacted soil was transported off the Block 38 West Property for disposal at permitted treatment, storage, and disposal facilities. The independent interim action removed the Shallow Water-Bearing Zone and the upper portion of the Intermediate Water-Bearing Zone beneath the Block 38 West Property. The extraction and treatment of contaminated groundwater was designed to prevent impacted groundwater from entering the Block 38 West Property and to remove contaminant mass from groundwater with dissolved hazardous substances withdrawn by permitted construction dewatering. The new building foundation design included the installation of a vapor barrier around the entire perimeter and beneath the building foundation to mitigate the potential vapor intrusion exposure pathway.

The independent interim action was conducted to meet the requirements of MTCA as defined in WAC 173-340-430. The scope of work for the independent interim action was developed in accordance with Ecology requirements and guidance, including MTCA. The independent interim action will be part of the final cleanup action, and did not foreclose reasonable alternatives for the final cleanup action at the Block 38 West Site.

#### **4.2 CONSTRUCTION DEWATERING AND TREATMENT**

To facilitate redevelopment of the Block 38 West Property, construction dewatering was required. The construction dewatering system was implemented per the Middour Consulting LLC (2018) groundwater control plan and specifications to draw groundwater below the maximum excavation depth required for the redevelopment design (Appendix G). The final groundwater control plan design included nineteen 12-inch-diameter dewatering wells (DW-1 through DW-17), and two 6-inch-diameter dewatering wells (DW-18A and DW-18B) (Figure 3). The dewatering wells were installed in 30- to 36-inch-diameter boreholes drilled around the perimeter of the Block 38 West Property and screened from an elevation of 10 to -30 feet NAVD88 to extract groundwater at a combined rate of about 800 gallons per minute after approximately 1 week of pumping, tapering to approximately 540 gallons per minute after a period of approximately 1 month of operation. Each well was equipped with a pump



capable of initially discharging up to 100 gallons per minute under 70 feet of total dynamic head.

The construction dewatering wells were installed during December 2019 and January 2020. The construction dewatering wells on the northern and western portions of the Block 38 West Property started pumping in early January 2020 and the dewatering wells on the eastern and southern portions of the Block 38 West Property started pumping in late January 2020. Initially the system produced approximately 650 to 700 gallons per minute, which was reduced to approximately 350 gallons per minute in May 2020 before being shut down in March 2021.

The construction dewatering system was able to achieve drawdown to an approximate elevation of -10 feet NAVD88 across the Block 38 West Property, within the Intermediate Water-Bearing Zone, for a period of approximately 12 to 15 months. The groundwater elevation was monitored around the perimeter of the building by a geotechnical engineer through a series of five observation wells (OW-1 through OW-5) (Figure 3) that are generally screened from elevation -10 to -20 feet NAVD88 (Table 6). The dewatering system operated continuously until the excavation was completed and sufficient structural weight of the building or other measures to secure the building were in place to counteract buoyancy. The exterior walls and the floor slab were constructed with a vapor barrier around the entire building envelope and waterproof concrete below the water table,

The water treatment system was constructed per plans and specifications provided by WaterTectonics of Everett, Washington and is present on the Block 37 Property (Appendix H). The water treatment system was connected to the dewatering wells via headers and conveyance lines under Mercer Street. The construction dewatering system had three separate water conveyance lines: a west conveyance line associated with dewatering wells on the western and northern Block 38 West Property boundaries; an east conveyance line associated with dewatering wells on the eastern and southern Block 38 West Property boundaries; and a stormwater conveyance line. The water treatment system was comprised of baffled sedimentation tanks, an air stripper and associated vapor-phase granular activated carbon and potassium permanganate zeolite vessels, liquid-phase granular activated carbon vessels, and contingency measures for pH balancing to treat the groundwater extracted from the Block 38 West Property.

The water treatment system treated groundwater extracted from the Shallow and Intermediate Water-Bearing Zones and the Deep Outwash Aquifer, and any stormwater



generated during construction activities, sufficient to achieve permit requirements prior to discharge to Lake Union or, alternatively, to meet criteria for discharge to the municipal sanitary sewer. Compliance discharge water samples were collected in accordance with Ecology's Administrative Order Docket No. 16629 for National Pollutant Discharge Elimination System (NPDES) Construction Stormwater General Permit and King County Industrial Waste (KCIW) Discharge Authorization No. 4493-02. The COPCs listed in the NPDES Construction Stormwater General Permit or KCIW discharge limits were reported either non-detect at the laboratory practical quantitation limit (PQL) or less than the established NPDES or KCIW discharge limits, as applicable, in effluent water samples collected from the combined outfall of the water treatment systems.

The construction dewatering and treatment system was shut down on March 24, 2021. The 19 dewatering wells (DW-1 through DW-17, DW-18A, and DW-18B) associated with the construction dewatering system were decommissioned on April 26, 2021. During the system operation between January 2020 and March 2021, a total of approximately 186,500,000 gallons of water from the construction dewatering system and stormwater were collected, treated, and discharged via a private stormwater lateral to the City of Seattle stormwater system and approximately 2,545,000 gallons of water from the construction dewatering system and stormwater were collected, treated, and discharged via the municipal sanitary sewer. Compliance discharge water samples were routinely collected in accordance with the NPDES Construction Stormwater General Permit and KCIW Discharge Authorization.

As part of the independent interim action and as presented in the 2019 IAWP, performance groundwater monitoring was conducted during construction dewatering activities at, and in the vicinity of, the Block 38 West Property for the Deep Outwash Aquifer. The purpose of the performance groundwater monitoring was to monitor concentrations of CVOCs in groundwater associated with the American Linen CVOC Plume and further described in the Technical Memorandum regarding Groundwater Monitoring Program, South Lake Union Block 38 West Property dated January 13, 2020 (Farallon 2020a) and provided in Appendix F. The data collected during the groundwater monitoring program was also used to assess treatment options for extracted groundwater and make any necessary modifications to the dewatering treatment system to ensure permit compliance. Groundwater performance monitoring continued throughout construction dewatering operations with the last performance monitoring event conducted in February 2021 (Appendix F).

Following the performance groundwater monitoring program, groundwater elevations continued to be monitored at the Block 38 West Property to determine when static



conditions would return following dewatering. The elevation monitoring data indicated that static conditions were not achieved at the Block 38 West Property until December 2021, which was a few months after construction dewatering ceased on the Firestone Tire & Rubber Co, property to the south.

#### **4.3 MONITORING WELL DECOMMISSIONING**

The monitoring wells installed on the Block 38 West Property during the subsurface investigations were decommissioned by a licensed well driller in accordance with the Washington State Water Well Construction Act (RCW 18.104) and WAC 173-160-460. Malcolm Drilling of Kent, Washington decommissioned monitoring wells FMW-130, FMW-132, and FMW-133 on November 4, 2019, and FMW-134 and FMW-136 on February 13, 2020. Anderson Environmental Contracting, LLC of Kelso, Washington decommissioned monitoring well FMW-148 on December 23, 2019 and decommissioned monitoring wells FMW-135, FMW-144 through FMW-147, and FMW-149 on January 8, 2020. A summary of monitoring well construction details is provided in Table 6.

#### **4.4 EXCAVATION AND OFF-PROPERTY DISPOSAL OF CONTAMINATED SOIL**

Based on previous investigations and performance soil samples collected during the independent interim action, soil with detectable concentrations of hazardous substances extended to an approximate elevation of 0 feet NAVD88 for the northern half of the Block 38 West Property and 5 to 10 feet NAVD88 across the majority of the Block 38 West Property. Soil encountered with detectable concentrations of hazardous substances, whether the concentrations exceeding or were less than screening levels, was managed and disposed of off the Block 38 West Property as a nonhazardous waste at a permitted landfill.

Installation of shoring piles started in November 2019 and was completed in January 2020. Mass excavation activities started in January 2020 and were completed in June 2020. Approximately 64,200 tons of soil containing detectable concentrations of hazardous substances and wood and organic debris was removed from the Block 38 West Property through June 26, 2020. Of this total, approximately 44,000 tons of soil contained hazardous substances at concentrations exceeding the screening levels. Approximately 50 percent of the 44,000 tons (23,000 tons) of soil with hazardous substances at concentrations exceeding the screening levels was associated with wood and organic debris encountered across the Block 38 West Property.



Excavation of soil with detectable concentrations of hazardous substances removed during construction of the building required special handling and disposal measures beyond those used for handling and disposing of clean soil. Soil with detectable concentrations of hazardous substances was excavated, segregated, stored temporarily, and disposed of off the Block 38 West Property in accordance with Washington State Solid Waste Management Laws and Regulations (RCW 70A.205 and WAC 173-351 and 173-304) and the *Guidance for Remediation of Petroleum Contaminated Sites* revised June 2016 (Ecology 2011) (Ecology PCS Guidance). Management of soil with detectable concentrations of hazardous substances was conducted concurrently with other construction activities such as shoring, dewatering, and excavation of clean soil that met criteria for reuse as clean fill or other acceptance criteria for disposal at an off-Property facility; and was conducted in accordance with the procedures described in the 2019 IAWP (Farallon 2019b).

Performance soil samples were collected by Farallon at the Block 38 West Property during previous investigations and during the independent interim action. Performance soil sampling points were used as confirmation soil sampling points where analytical results for performance soil samples confirmed that screening levels were attained above or at the final limits of the excavation.

#### **4.5 UTILITY DECOMMISSIONING – SIDE SEWER LINE**

A side sewer line on the southeastern portion of the Block 38 West Property was encountered at an approximate elevation of 23 feet NAVD88 during demolition and utility capping activities by GLY in November 2019 (Figure 3). GLY notified Farallon regarding the discovery of a black liquid discharging from a side sewer line at the Block 38 West Property while inspecting side sewer utilities in the east-adjacent alley. The side sewer line where the liquid was observed extended west onto the Block 38 West Property<sup>10</sup> and was not documented on Seattle Public Utilities maps. When GLY exposed the side sewer line on the Block 38 West Property, the side sewer line was breached and Farallon personnel collected a sample of the liquid for laboratory analysis. The sample result indicated the presence of total petroleum hydrocarbons in the liquid.

GLY capped the side sewer line at the eastern Block 38 West Property boundary and inspected the length of the line to the maximum extent practicable. The side sewer was approximately 45 feet north of the southeastern boundary of the Block 38 West Property

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<sup>10</sup> This side sewer extended onto King County Parcel No. 1983200170 on the southern portion of the Block 38 West Property (500 and 510 Westlake Avenue North).



and traced approximately 35 feet to the west until an obstruction in the side sewer line was encountered or the line had previously collapsed. Test pits were advanced in the vicinity in December 2019 to evaluate the source of separate-phase petroleum hydrocarbons that were observed in the side sewer line. Test pits TP-4 through TP-6 were advanced to evaluate the extent of the sanitary sewer line to the west. No obvious signs of contamination were observed based on field screening and no soil samples were submitted for analysis. No source of the separate-phase hydrocarbons contained within the side sewer line was observed. Test pit TP-7 was advanced adjacent to the area where the sanitary sewer line was plugged with bentonite and previous field screening indicated a sheen on soil proximate to where the side sewer line had collapsed when exposed. The analytical results for COPCs in soil were less than screening levels (Figures 3 through 10; Tables 1 through 5). No source of the petroleum hydrocarbons contained within the side sewer line was identified during subsequent demolition and excavation activities. Additional field screening in the southeastern portion of the Block 38 West Property did not indicate a release of petroleum hydrocarbons to soil or groundwater.

#### **4.6 UST DECOMMISSIONING**

As noted in Section 2.5, Regulatory History, two previously unidentified USTs containing bunker oil and a fuel product line were encountered in the northwestern corner of the Block 38 West Property and were associated with the former mechanical equipment area located west-adjacent to the former building and in the Westlake Avenue North right-of-way (Figures 3 and 22). The mechanical equipment area dimensions were approximately 60 feet north-south by 15 feet east-west, and the concrete subgrade structure was located beneath the Westlake Avenue North sidewalk and connected to the basement of the former building, which housed mechanical equipment servicing the former building utilities. As part of the Block 38 West Property redevelopment, the mechanical equipment was decommissioned and removed, and in February 2020 the mechanical equipment area was backfilled with controlled density fill. UST01 was discovered on January 21, 2020 during the removal of the concrete foundation and was approximately 1,200 gallons in volume. UST02 was discovered on February 5, 2020 during mass excavation activities in the northwestern corner and approximately 10 feet west of UST01 along the western shoring wall and located approximately 5 feet below the former concrete foundation. UST02 was approximately 2,200 gallons in volume.

A product sample was collected from UST01 and UST02 and submitted to OnSite Environmental, Inc. of Redmond, Washington (OnSite) for evaluation of total petroleum



hydrocarbons to assist with UST decommissioning activities. The product in UST01 and UST02 was confirmed as bunker fuel oil by OnSite. City Investors IX selected a specialty subcontractor to conduct the UST decommissioning and removal activities, which included inerting and rinsing the interior of the USTs, as necessary, and removing the USTs from the Property for recycling. The UST decommissioning services were provided by Construction Group International of Woodinville, Washington (CGI) and both USTs were permanently decommissioned by excavation and removal in accordance with Washington State *Underground Storage Tank Regulations* (WAC 173-360A) and Ecology PCS Guidance.

Mr. Brad Reilly served as the Washington State UST Decommissioning Supervisor (Certification No.8289423). Mr. Reilly confirmed that USTs containing bunker fuel oil were exempt from filing a 30-day UST Closure Notice with Ecology. Mr. Greg Peters (Certification No. 8883066) and Ms. Anastasia Burns (Certification No. 8456246) of Farallon served as the Washington State UST Site Assessors and conducted the site assessments in accordance with the *Ecology Guidance for Site Checks and Site Assessments for Underground Storage Tanks* dated February 1991, revised April 2003 (Ecology UST Guidance). The UST decommissioning process included the following activities:

- Flushing the product lines to transfer any residual fuel in the lines back into the UST;
- Cleaning and triple-rinsing the UST interior and transporting the wash water off the Property for disposal;
- Obtaining a Decommissioning Permit from the Seattle Fire Department and arranging for Seattle Fire Department inspection to authorize removal of the UST;
- Testing the internal atmosphere of the UST by a Marine Chemist in preparation for removal;
- Uncovering the UST and excavating around the sides of the UST, and lifting the UST from the excavation for inspection;
- Collecting site assessment soil samples from the four sidewalls of the UST excavation and from the bottom of the excavation; and
- Over-excavating and collecting additional soil samples from the sidewalls and/or bottom of the excavation where applicable.

A description of the site assessment activities and observations are presented below. A copy of UST decommissioning records provided by CGI are included in Appendix I.



#### 4.6.1 UST01

UST01 was discovered on January 21, 2020 in the northwestern portion of the Block 38 West Property (Figures 3 and 22) during removal of the concrete foundation and the start of excavation activities. At the time of discovery Farallon staff observed black liquid in soil following the removal of the overlying concrete slab.

Farallon observed the decommissioning and removal of the approximately 1,200-gallon UST on January 27, 2020. Farallon completed a UST Site Assessment and holes were observed on the western and eastern ends of the UST01. Field screening indicated localized impacts to soil below and adjacent to the western and eastern sides of the UST01. One soil sample was collected directly beneath the UST and four sidewall samples from the final limits of the UST excavation (Figures 3 and 22). In-place soil observed during the UST excavation was generally poorly graded sand with gravel. Groundwater was not encountered to the maximum depth of the excavation during removal of the tank at approximately elevation 17 feet NAVD88.

Site assessment soil samples were submitted to OnSite for laboratory analysis. Samples were analyzed for one or more of the following constituents using the previously identified analytical methods, unless indicated otherwise: GRO, DRO, ORO, BTEX, cPAHs, naphthalenes, select VOCs, PCBs, and lead. The analytical results for UST01 are summarized in Tables 1 through 5 and Figure 22.

As part of the site assessment, soil adjacent to UST01 was field screened for indications of a release. Based on field observations a soil sample, M1-TANK-24.5, was collected from the area adjacent to UST01 to evaluate COCs and other required analyses per the Ecology UST Guidance associated with unknown UST contents. The results from the product sample confirmed the contents of UST01 as bunker fuel oil and the remaining site assessment compliance soil samples collected from below and all four sides of the UST01 excavation were focused on heavy end petroleum hydrocarbons, DRO, ORO, PAHs, PCBs, and lead. Total DRO+ORO, DRO, ORO, naphthalenes, PCBs, and lead were detected at concentrations less than the screening levels in the bottom sample and were reported at the laboratory PQL in the remaining sidewall soil samples collected from UST01 excavation. 1-Methylnaphthalene was detected at a concentration exceeding the screening level in the bottom sample and reported at the PQL in the other sidewall soil samples collected from the UST01 excavation. cPAHs were detected at concentrations less than the screening level in soil samples collected from the bottom of the excavation, eastern sidewall, and southern sidewall and





reported at the PQL in the other sidewall soil samples collected from the UST01 excavation. The cPAH impacts in soil detected between elevations 25 and 15 feet NAVD88 adjacent to UST01 were similarly observed over the majority of the northern portion of the Block 38 West Property and are associated with fill material. Accordingly, Farallon does not attribute cPAH concentrations detected in soil adjacent to UST01 to be solely related to the release of bunker fuel oil.

#### **4.6.2 Fuel Product Line**

A product line apparently associated with UST01 and UST02 was discovered on January 31, 2020 in the western sidewall of the excavation directly west of UST01. The line extended north to the northwestern corner of the former building foundation (Figures 3 and 22). When the western sidewall was exposed for the installation of wood timber lagging, Farallon staff observed that shoring piles (W50 through W54) and the casing for dewatering well DW-17 had intersected and damaged the product fuel line during installation. In addition to the section where the product line was damaged with the dewatering well installation, Farallon staff observed minor staining around the joints and connection fittings. The piping in the western sidewall was removed on February 3, 2020 to the extent practicable by Hos Bros. and performance soil samples were collected to meet the site assessment requirements in the Ecology UST Guidance. Soil sidewall samples from mass excavation soil sampling grids N1, M1, and L1 and soil samples collected from boring FB-20 north of soil sampling grid N1 defined soil impacted to the north and south and vertically in the western sidewall for DRO, ORO, total DRO+ORO, naphthalene, 2-methylnaphthalene. The western extent of impacts associated with the UST product line was defined in mass excavation soil sampling grid N1-WSW3 approximately 2 feet west of the Block 38 West Property boundary. Impacts documented around the UST product line in mass excavation soil sampling grid N1 western sidewall indicate that the releases associated with the product line are localized. The extent of impacted soil associated with the UST product line to the west of soil sidewall sample M1-WSW at elevation 20 and 15 feet NAVD88 was bounded by FB-17 to the west and FB-20 to the north (Figure 22).

#### **4.6.3 UST02**

UST02 was discovered on February 5, 2020 by Hos Bros. during excavation activities in the northwestern corner of the Block 38 West Property approximately 10 feet west of the UST01 location, and the top of UST02 was encountered at approximately elevation 19 feet NAVD88 (Figures 3 and 22). A section of the UST was damaged during excavation activities resulting in a thick, black oily liquid with strong petroleum-like odors flowing out from UST02. The area



around UST02 was bermed to contain the product release, excavated, and stockpiled for off-Property disposal. Farallon collected a sample of the product from UST02 and submitted it to OnSite for hydrocarbon identification. OnSite confirmed the product was bunker fuel oil. Farallon also collected soil samples around UST02 to evaluate for the previously unidentified petroleum release.

Farallon observed the decommissioning and removal of the 2,200-gallon UST02 on February 7, 2020. Farallon completed a UST site assessment and holes were observed on all sides of the UST after removal. Field screening indicated localized impacts to soil below and adjacent to the northern, western, and eastern sides of the UST. Two soil samples were collected directly beneath the UST and four sidewall samples from the final limits of the UST excavation. In-place soil observed during the UST02 excavation was generally layers of silty sand and organic peat-like material. Groundwater was not encountered to the maximum depth of the excavation during removal of the tank at approximate elevation 14 feet NAVD88.

UST site assessment soil samples were submitted to OnSite for laboratory analysis. Soil samples were analyzed for one or more of the following constituents, GRO, DRO, ORO, BTEX, cPAHs, naphthalenes, and PCBs. The analytical results for UST02 are summarized in Tables 1 through 5 and Figure 22.

Based on field observations, performance soil samples were collected adjacent to UST02 to evaluate COCs and other required analyses per the Ecology UST Guidance associated with bunker fuel oil. PCBs were not detected at a concentration exceeding the laboratory PQLs, and BTEX, DRO, ORO, and total DRO+ORO were detected at concentrations less than screening levels in performance and confirmation samples collected from beneath and along all four sides of UST02. GRO was detected at a concentration exceeding the screening level in a performance soil sample collected from the eastern side of UST02; however, the sample was flagged by the laboratory as the hydrocarbon range being indicative of heavier fuels being present in the sample impacting the gasoline result. GRO was not detected at a concentration exceeding the laboratory PQL in the other performance soil sample collected from UST02 excavation. Naphthalenes were detected at concentrations exceeding the screening levels in one of two bottom soil samples and in soil samples collected from the northern, eastern, and western sidewalls of the UST02 excavation. cPAHs were detected at concentrations exceeding the screening levels in one of two bottom soil samples and in soil samples collected from the northern, eastern, and western sidewalls of the UST02 excavation. The cPAH impacts in soil detected between elevations 25 and 15 feet NAVD88



adjacent to UST02 were similarly observed over the majority of the northern portion of the Block 38 West Property and are associated with fill material. Accordingly, Farallon does not attribute cPAH concentrations detected in soil adjacent to UST02 to be solely related to the release of bunker fuel oil.

#### **4.7 VAPOR BARRIER INSTALLATION AND WATERPROOF FOUNDATION**

A chemical resistant vapor barrier was installed around the entire building perimeter from the top of the shoring wall to the base of the mat slab foundation and horizontally across the entire building foundation, which was placed prior to the mat slab foundation concrete pour (Figure 23). The exterior foundation walls and floor slab of the underground portion of the building were constructed of waterproof concrete below the water table. No provisions for drainage were needed. The vapor barrier will prevent exposure to contaminated groundwater and associated soil vapor, if present, from properties adjacent to or in the vicinity of the Block 38 West Property. In addition to the vapor barrier, the thickness of the mat slab foundation and high-performance waterproof concrete that reduces water vapor transmissivity will augment the attenuation of soil vapor, if present.

The vapor barrier specified for the Block 38 West Property building construction was Drago Wrap from Stego Industries, LLC of San Clemente, California (Appendix J).<sup>11</sup> Drago Wrap is specifically engineered to mitigate environmental contaminants and is rated for the identified hazardous substances for the Block 38 West Site and for CVOCs that are migrating from off-Property sources in deeper groundwater. Drago Wrap is a 20 mil, multi-layered plastic extrusion that meets the standards of ASTM E1745 for water vapor retarders in contact with soil or granular fill under concrete slabs, meets standard methane and radon gas specifications, and is rated for environmental contaminants such as petroleum hydrocarbons and CVOCs (Appendix J). Drago Wrap was installed per the manufacturer's specifications and the installer detailed penetrations and terminations per the manufacturer's specifications.

In general, the mat slab is a minimum of 48 inches thick with the top 12 inches being comprised of high-performance waterproof concrete (Hycrete) across the entire Block 38 West Property. The mat slab increases in thickness for various foundation elements up to 63 to 75 inches in the central and northern portions of the foundation. Vertical foundation walls have a 16-inch-thick foundation wall comprised of Hycrete that extends to an elevation of

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<sup>11</sup> The vapor barrier and Hycrete specifications were provided to Ecology in the Technical Memorandum regarding Supplemental Subsurface Investigation and Foundation Elements (Farallon 2020d).



20 feet NAVD88, which is approximately 2 feet above the water table elevation at approximately 18 feet NAVD88. Above the water table, the foundation materials transitioned from waterproof concrete to concrete with drainage board and bentonite waterproof panels in certain below-grade garage walls where occupied space occurs such as mechanical, electrical, and storage rooms. The drainage board extends 4 feet below the water table to an elevation of 14 feet NAVD88.

The waterproofing product installed for the Block 38 West Property building foundation was the Hycrete Endure WP (formerly W1000) System from Hycrete of Seattle, Washington (Appendix J). Hycrete is an admixture that is combined with cement to create a hydrophobic concrete by combining the metallic ions in the cement with the Hycrete admixture, forming water-insoluble polymers blocking water from concrete pore space. The Hycrete Endure WP System has less than 1 percent capillary absorption in concrete, which is the main water transport mechanism in concrete, and it also bonds to steel reinforcement within concrete, providing a protective covering to prevent corrosion.



## 5.0 ALLEY AREA INTERIM ACTION

Investigations conducted at the alley identified hazardous substances in soil at concentrations exceeding applicable screening levels. The objective of the Ecology-approved alley interim action was to reduce the threat to human health and the environment and to correct a problem that would likely have cost substantially more to address if not completed during the alley improvements. In accordance with the AO, this work was conducted as a formal interim action under Ecology oversight and consistent with the Alley IAWP.

This section summarizes the results from the alley interim action conducted at the Block 38 West Site between February and July 2021. Additional details regarding the implementation of the alley interim action are summarized in the *Final Interim Action Report, Alley Area of Block 38 West Site, between Republican Street and Mercer Street, 500 through 536 Westlake Avenue North, Seattle, Washington* dated January 5, 2024, prepared by Farallon and approved by Ecology on January 10, 2024.

### 5.1 EXCAVATION AND OFF-PROPERTY DISPOSAL OF CONTAMINATED SOIL

Based on previous investigations and performance soil samples collected during the independent interim action, soil containing detectable concentrations of hazardous substances extended to an approximate elevation of 17.5 to 15 feet NAVD88 at the alley (Figure 21). The construction excavation activities within the alley extended to a depth of approximately 5 feet bgs or an elevation of 25 to 18 feet NAVD88 (north to south) in order to place structural backfill to support the new concrete road surface and access utilities. Groundwater was not encountered during the alley excavation activities.

Performance soil samples were collected by Farallon at the alley during previous investigations and during the alley interim action. Performance soil sampling points were used as confirmation soil sampling points where analytical results for performance soil samples confirmed that screening levels were attained before or at the final limits of the excavation.

Construction excavation activities started in February 2021 and were completed in July 2021. Approximately 2,400 tons of soil containing detectable concentrations of hazardous substances and wood and organic debris was removed from the alley through July 23, 2021.

Excavation soil with detectable concentrations of hazardous substances removed during alley improvements required special handling and disposal measures beyond those used for



handling and disposing of clean soil. Soil with detectable concentrations of hazardous substances was excavated, segregated, stored temporarily, and disposed of off the Property in accordance with Washington State Solid Waste Management Laws and Regulations (RCW 70A.205 and WAC 173-351 and 173-304) and Ecology PCS Guidance. Management of soil with detectable concentrations of hazardous substances was conducted concurrently with other construction activities such as shoring, dewatering, and excavation of clean soil that met criteria for reuse as clean fill or other acceptance criteria for disposal at an off-Property facility; and was conducted in accordance with the procedures described in the Alley IAWP.

## **5.2 UTILITY AND STRUCTURAL IMPROVEMENTS**

The alley improvements occurred over six phases to limit disruptions to operating businesses on the Block 38 East Property. Phases 1 and 2 involved connecting the sewer line from the Block 38 West Property to the existing 6-inch-diameter sewer line that runs south in the alley toward Republican Street. During Phases 1 and 2 of construction activities, 30-inch-diameter rigid inclusions (structural columns) were installed in a grid pattern to a minimum elevation of 4 feet NAVD88 to support construction of a ramp to connect the alley to Republican Street. Phases 3 through 6 involved minor improvements that required excavation of soil to a depth of approximately 5 feet bgs. Structural fill was imported and was finished with a 6-inch-thick concrete surface.



## 6.0 REMEDIAL INVESTIGATION

The RI was conducted for the Block 38 West Site to collect the data necessary to adequately characterize the distribution of COPCs after interim actions in order to establish cleanup standards and support the evaluation of technically feasible cleanup alternatives in accordance with the provisions of WAC 173-340-350.

Based on the results from the subsurface investigations performed by Farallon from 2014 through 2019, and the results from the interim actions, the nature and extent of soil and groundwater with concentrations exceeding screening levels within the Block 38 West Property have been defined; however, additional investigation was required under the RI to define the nature and extent of soil and groundwater with concentrations exceeding screening levels for the Block 38 West Site, including areas beyond the Block 38 West Property boundary.

To support completion of the RI, additional investigation was conducted to evaluate the nature and extent of shallow fill soil contamination and/or groundwater impacts to the north, west, south, and east of the Block 38 West Property and to evaluate groundwater quality in the Shallow and Intermediate Water-Bearing Zones following the interim actions.

This section summarizes the results from the RI activities conducted at the Block 38 West Site between May and February 2024. Soil and groundwater analytical results are presented in Tables 1 through 12. The RI activities were conducted in accordance with the RI Work Plan (Farallon 2023), which was approved by Ecology on May 1, 2023.

### 6.1 PRELIMINARY CLEANUP LEVEL DEVELOPMENT

Ecology calculated South Lake Union Preliminary Cleanup Levels (screening levels), which are applied to upland sites in Ecology's Northwest Region that may have complete transport pathways for contamination to reach fresh surface water (Ecology 2022b). Screening levels are established based on the potential transport and exposure pathways to provide a conservative basis for defining the extent of contamination for each hazardous substance and medium of concern at the Block 38 West Site. The screening levels were used to conduct an initial screening of existing chemical concentrations in soil and groundwater to identify COPCs and transport and exposure pathways of potential concern for the Block 38 West Site.



Table 13 provides a summary of potential exposure pathways and applicable screening levels established using MTCA Method B for hazardous substances detected in soil and/or groundwater at the Block 38 West Site. Consistent with MTCA, Method A values are used as a surrogate for Method B for compounds that do not have established Method B values; this generally applies to petroleum hydrocarbon mixtures (GRO, DRO, and ORO).

The screening levels for compounds detected in groundwater at the Block 38 West Site are based on exposure pathways that include groundwater as drinking water (for all compounds) and groundwater protective of the vapor intrusion pathway (for volatile compounds). Where applicable, some of the groundwater screening level values are based on the applicable federal maximum contaminant level (MCL) for drinking water and adjusted to a cancer risk that does not exceed one in one hundred thousand (WAC 173-340-720[7][b]). The risk-based groundwater screening level for arsenic is also adjusted up to natural background<sup>12</sup> in accordance with WAC 173-340-720(7)(c).

The screening levels for compounds detected in soil at the Block 38 West Site are based on exposure pathways that include direct contact (dermal absorption, ingestion) and leaching from vadose zone soil and saturated soil to groundwater for protection of drinking water. In accordance with WAC 173-340-740(5)(c), the risk-based soil screening levels for arsenic and cadmium are adjusted up to natural background<sup>13</sup> and the risk-based soil screening level for mercury is adjusted up to the laboratory PQL.

## 6.2 CONSTITUENTS OF POTENTIAL CONCERN

COPCs were selected based on the known historical uses of the Block 38 West Site and surrounding historical land use, historical fill known to have been placed in this area, USTs encountered during redevelopment and interim actions that were completed, and the potential for releases of contaminants at concentrations exceeding screening levels.

COPCs retained for the Block 38 West Site consist of those hazardous substances that were detected in soil or groundwater samples collected from the Block 38 West Site and

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<sup>12</sup> Based on Puget Sound Lowland natural background concentration for arsenic from *Natural Background Groundwater Arsenic Concentrations in Washington State, Study Results* dated January 2022, prepared by Ecology, Publication No. 14-09-044 (Ecology 2022a).

<sup>13</sup> Based on natural background concentrations for the Puget Sound region provided in *Natural Background Soil Metals Concentrations in Washington State* dated October 1994, prepared by Ecology, Publication No. 94-115 (Ecology 1994).





surrounding areas at concentrations exceeding the screening levels summarized in Table 13.

The COPCs for soil at the Block 38 West Site are:

- GRO;
- Total DRO+ORO;
- Benzene;
- Naphthalene;
- 1-Methylnaphthalene;
- 2-Methylnaphthalene;
- Benzo(a)pyrene;
- Total cPAHs toxic equivalent concentration (TEC); and
- Metals as barium and mercury.

The COPCs for groundwater at the Block 38 West Site are:

- GRO;
- Total DRO+ORO;
- Benzene;
- Naphthalene;
- 1-Methylnaphthalene; and
- Metals as barium and mercury.

Other compounds were detected in soil and/or groundwater at concentrations that exceed their respective screening levels but were not retained as COPCs for the Block 38 West Site. These include chloroform, cDCE, cadmium, lead, and arsenic; the reasons for not retaining these hazardous substances for further consideration are discussed below.

Chloroform was detected at a concentration exceeding the screening level in a groundwater sample collected from monitoring well FMW-136 on August 30, 2018. Chloroform was



detected in two other groundwater samples<sup>14</sup> and in the water sample collected from the potable water supply, which was used during drilling (Farallon 2018). Potable water was introduced to the subsurface during drilling to help control heaving sands and was subsequently recovered during well development. Potable water also can be introduced to the subsurface from leaking water supply and/or sewer lines. Chloroform is a by-product of the treatment of municipal water supplies and a common contaminant in analytical laboratories; therefore, chloroform was not retained as a COPC for groundwater for the Block 38 West Site.

cDCE and other CVOCs were detected at concentrations exceeding the screening levels in groundwater in the Intermediate Water-Bearing Zone and Deep Outwash Aquifer on the north-adjacent property and other surrounding properties, but were less than the screening levels beneath the Block 38 West Property prior to startup of the construction dewatering system. Available information indicates no known sources of CVOCs existed on the Block 38 West Property, and laboratory analytical results for soil and historical groundwater sampling of the Shallow Water-Bearing Zone indicate that no releases of CVOCs to soil or groundwater occurred on the Block 38 West Property (Tables 3 and 9). Available analytical data for groundwater samples collected from the lower portion of the Intermediate Water-Bearing Zone and/or Deep Outwash Aquifer indicate that cDCE and other CVOCs impacts are likely associated with the American Linen CVOC Plume or another off-Property source. Furthermore, there is no evidence of commingling of cDCE or other CVOCs with other Block 38 West Site COPCs in groundwater; therefore, cDCE and other CVOCs were not retained as COPCs for groundwater for the Block 38 West Site.

Cadmium and/or lead were detected at concentrations exceeding screening levels in a single test pit in the alley (TP-10-4), in soil samples collected from the eastern sidewall from the alley interim action (G/A5-ESW, H/A5-ESW, I/A5-ESW, and J/A5-ESW), and in soil samples collected from the western sidewall of the Block 38 East Property mass excavation (i.e., the western sidewall of the remedial excavation previously conducted by others on the Rosen Property Site Lots 1 through 5) (EX-40-EL22, EX-41-EL22, and P-4-3.5). Cadmium and lead were either reported non-detect at the laboratory PQLs or were detected at concentrations less than the screening levels in all of the soil samples analyzed for metals from the Block 38 West Property. Arsenic was detected at a concentration exceeding a

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<sup>14</sup> Chloroform was detected in FMW-130 in July 2014 and FMW-135 in August 2018. Both concentrations were less than screening levels protective of drinking water and vapor intrusion to indoor air, and subsequent results were reported non-detect.



screening level in a single boring in the alley (FB-14) but was reported non-detect at the laboratory PQLs or less than the screening level in the remaining soil samples analyzed for metals from the Block 38 West Property. The laboratory analytical results for soil for the Block 38 West Property indicate that no shallow releases of metals occurred on the Block 38 West Property (Table 5).

Given the available analytical data for soil samples collected from the Rosen Property Site Lots 1 through 5 (Table 5) and the localized distribution of arsenic, cadmium, and lead exceedances in soil along the western boundary of the Block 38 East Property, these metals impacts appear to be associated with the Rosen Property Site and are not retained as COPCs for the Block 38 West Site.

### **6.3 2023 TO 2024 REMEDIAL INVESTIGATION OBJECTIVES**

The previous subsurface investigations and interim actions conducted at the Block 38 West Site defined the lateral and vertical extent of COPCs in soil and groundwater within the Block 38 West Property boundary. The 2023 to 2024 RI activities addressed remaining data gaps and included evaluating groundwater conditions in the Shallow and Intermediate Water-Bearing Zones following the interim actions and characterizing residual soil and groundwater contamination that may remain at the Block 38 West Site beyond the Block 38 West Property boundary. Soil and groundwater data gaps that were addressed during the 2023 to 2024 RI activities are discussed below.

#### **6.3.1 Soil**

Additional investigation was required during the RI to define the nature and extent of COPCs in shallow fill soil contamination to the north, west, and south of the Block 38 West Property. This included the area adjacent to the UST product line near the northwestern property corner and the area adjacent to historical shallow COPC exceedances near the southwestern property corner.

##### **6.3.1.1 UST Product Line Area**

Based on review of soil analytical data associated with the decommissioning and removal of UST01 and UST02 and removal of the associated fuel product line from the northwestern corner of the Block 38 West Property, the lateral extent of COPC exceedances in soil was not defined to the west and north. This included:

- The western extent of total DRO+ORO in soil at an elevation of 15 feet NAVD88;



- The western extent of cPAHs in soil at an elevation of 20 feet NAVD88; and
- The western and northern extent of 1-methylnaphthalene in soil at an elevation of 20 to 15 feet NAVD88.

#### **6.3.1.2 Southwestern Property Corner**

Data gaps existed near the southwestern corner of the Block 38 West Property for total DRO+ORO, naphthalenes, and cPAHs in shallow soil prior to conducting the 2023 to 2024 RI activities. These were based on the following pre-excavation conditions identified in 2018:

- Total DRO+ORO was detected at a concentration exceeding the screening level in a soil sample collected from former monitoring well FMW-134 at an elevation of 20.4 feet NAVD88 (Figure 8; Table 1). Naphthalenes and cPAHs were not analyzed in the soil sample from that elevation, but were analyzed in a deeper sample collected from former monitoring well FMW-134 at an elevation of 10.4 feet NAVD88.
- 1-Methylnaphthalene was detected at a concentration exceeding the screening level in a soil sample collected from former monitoring well FMW-134 at an elevation of 10.4 feet NAVD88 (Figure 9; Table 2).
- The lateral extent of total DRO+ORO, naphthalenes, and cPAHs in soil was not defined to the west and south of former monitoring well FMW-134.

#### **6.3.2 Groundwater**

Previous subsurface investigations documented localized petroleum hydrocarbon impacts to the Shallow and Intermediate Water-Bearing Zones at the Block 38 West Site. Additional investigation was required during the RI to define the nature and extent of COPCs in these water-bearing zones to the north, south, west, and east of the Block 38 West Property and in the Intermediate Water-Bearing Zone remaining beneath the recently constructed building on Block 38 West Property.

##### **6.3.2.1 Shallow Water-Bearing Zone**

Data gaps existed near the southwestern corner of the Block 38 West Property and to the west and east of the Block 38 West Property for one or more COPCs in the Shallow Water-



Bearing Zone prior to conducting the 2023 to 2024 RI activities. These were based on the following pre-excavation conditions identified in 2018:

- The lateral extent of total DRO+ORO at concentrations exceeding the screening level was not bounded west of boring FB-03 or south and west of former monitoring well FMW-134 (Figure 14).
- The lateral extent of naphthalenes at concentrations exceeding screening levels was not bounded south and west of former monitoring well FMW-134 or east of former monitoring well FMW-130 (Figure 15).
- Benzene was detected at a concentration exceeding the groundwater screening level protective of indoor air in the reconnaissance groundwater sample collected from former monitoring well FMW-130 (Figure 13).

Monitoring wells screened in the Shallow Water-Bearing Zone were not installed outside of the Block 38 West Property during the pre-redevelopment subsurface investigations and independent interim action performed by Farallon. The independent interim action removed the Shallow Water-Bearing Zone within the Block 38 West Property boundary. However, additional monitoring wells were required to evaluate groundwater quality in the Shallow Water-Bearing Zone beyond the Block 38 West Property to the west, south, and east. As discussed in Section 3.3, monitoring wells FMW-154, FMW-155, and FMW-156 were installed in 2022 within the alley east of the Block 38 West Property to facilitate RI data collection within the Shallow Water-Bearing Zone to the east.

#### **6.3.2.2 Intermediate Water-Bearing Zone**

Previous investigations indicated total DRO+ORO concentrations exceeding the screening level in groundwater samples collected from former monitoring wells FMW-145, FMW-146, and FMW-147, which were screened in the Intermediate Water-Bearing Zone beneath the building footprint (Figures 14 and 20). 1-Methylnaphthalene also was detected at concentrations exceeding the groundwater screening levels in a groundwater sample collected from former monitoring well FMW-146 (Figure 15). Data gaps existed for this area of impacted groundwater prior to the 2023 to 2024 RI activities, primarily to the east of the Block 38 West Property. In addition, post-excavation conditions needed to be evaluated beneath the new building.

As discussed in Section 3.3, five monitoring wells, FMW-150 through FMW-153 and FMW-157, were installed at the Site for the purpose of evaluating the potential impacts north,



west, southwest, and northeast of former monitoring wells FMW-146 and FMW-147 (Figure 27). Monitoring wells FMW-150 through FMW-153 were installed in 2020 within the building foundation concurrent with redevelopment of the Block 38 West Property, and monitoring well FMW-157 was installed in 2022 in the alley to the east of the Block 38 West Property.

The RI required installation of additional monitoring wells to evaluate groundwater quality in the Intermediate Water-Bearing Zone beyond the Block 38 West Property to the west, south, and east.

#### **6.4 REMEDIAL INVESTIGATION FIELD PROGRAM**

The RI field program performed between May 2023 and February 2024 was conducted to collect data necessary to adequately characterize the Block 38 West Site for the purpose of developing and evaluating cleanup action alternatives by addressing the data gaps identified in Section 6.3. The field program included the following elements:

- Permitting for activities in the right-of-way;
- Locating utilities and potential utilities prior to subsurface work and to evaluate potential preferential pathways for COPC fate and transport;
- Advancing nine borings (FB-17 and FMW-158 through FMW-165) and collecting soil samples to evaluate the Block 38 West Site geology and the lateral and vertical distribution of COPCs in soil;
- Installing four monitoring wells in the Shallow Water-Bearing Zone (FMW-158, FMW-160, FMW-161, FMW-163), three monitoring wells in the Intermediate Water-Bearing Zone (FMW-159, FMW-162, FMW-164), and one monitoring well in the Deep Outwash Aquifer (FMW-165)<sup>15</sup> along the perimeter of the Block 38 West Property to evaluate the hydrogeology and the lateral and vertical distribution of COPCs in groundwater; and
- Performing four quarterly groundwater monitoring events at the monitoring well network, including the eight newly installed wells and 14 existing wells.

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<sup>15</sup> Ecology directed City Investors IX to conduct a groundwater monitoring event in the Deep Outwash Aquifer to assess groundwater conditions post-construction dewatering events that occurred at the Block 38 West Property and at other properties undergoing development in the nearby South Lake Union area. As more fully discussed below, this monitoring event was to determine the presence of CVOCs.



The location and purpose for each boring and monitoring well is provided below (Figure 3).

- Boring FB-17 was advanced within the Westlake Avenue North right-of-way to evaluate the extent of documented concentrations of total DRO+ORO, cPAHs, and 1-methylnaphthalene in soil exceeding screening levels associated with former UST01 and UST02 and the associated fuel product line on the northwestern corner of the Block 38 West Property.
- Boring/monitoring wells FMW-158 and FMW-159 were advanced/installed in the Westlake Avenue North right-of-way to evaluate the extent of COPCs in the Shallow and Intermediate Water-Bearing Zones west of the Block 38 West Property boundary.
- Boring/monitoring wells FMW-160 through FMW-164 were advanced/installed in the Westlake Avenue North and Republican Street rights-of-way to evaluate the extent of COPCs in soil and/or the Shallow and Intermediate Water-Bearing Zones south and southwest of the Block 38 West Property boundary.
- Boring/monitoring well FMW-165 was advanced/installed in the Westlake Avenue North right-of-way to evaluate the extent of CVOCs the Deep Outwash Aquifer.
- Existing monitoring wells FMW-150 through FMW-153, installed beneath the building; monitoring wells FMW-154 through FMW-157, installed in the alley; and converted observation wells OW-1 through OW-3 and OW-5<sup>16</sup> were incorporated into the monitoring well network for evaluating groundwater quality and flow conditions in the Shallow and Intermediate Water-Bearing Zones and the Deep Outwash Aquifer.

A summary of the scope of work conducted for each of the RI work elements is provided in the following sections. Boring and monitoring well locations are shown on Figure 3. The boring logs are provided in Appendix A, and Appendix K summarizes the scope of work and the soil and/or groundwater analyses required under the RI Work Plan (Farallon 2023).

#### **6.4.1 Permitting**

A right-of-way street use permit (Permit Number SUUTIL0006281) was obtained from the City of Seattle Department of Transportation prior to conducting RI activities in the Westlake Avenue North and Republican Street rights-of-way.

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<sup>16</sup> Observation well OW-4 was damaged beyond repair during construction activities and was subsequently decommissioned by a licensed well driller.



## 6.4.2 Subsurface Utility Location

Linescape, LLC of Seattle, Washington conducted private utility location surveys during the RI. Underground utility locations were evaluated in the vicinity of each proposed boring location. The Northwest Utility Notification Center located public utilities in the vicinity of the Block 38 West Site.

## 6.4.3 Boring Advancement and Soil Sampling

A total of nine borings (FB-17 and FMW-158 through FMW-165), including those completed as monitoring wells, were advanced in May 2023. Borings were advanced using a sonic drill rig for collection of soil samples and installation of wells. Drilling services were provided by Andersen Environmental Contracting LLC of Kelso, Washington (AEC). Boring and monitoring well locations are shown in Figure 3.

Prior to beginning drilling activities, each boring was manually cleared for utilities using a vacuum excavator to depths between 3 and 6 feet bgs. Soil samples collected in the utility clearance interval were obtained using a hand auger.

A Farallon geologist observed and logged subsurface conditions, and retained soil samples from selected intervals for laboratory analysis. The information recorded for each boring log included soil types encountered, visual and olfactory observations (e.g., staining, odor), and volatile organic vapor concentrations as measured using a photoionization detector (PID). The boring logs are provided in Appendix A.

Soil samples were selected for laboratory analysis based on the data gaps described in Section 6.3 and evidence of potential contamination such as unusual odor, discoloration, sheen, or elevated PID readings. In the absence of elevated PID readings or other evidence of potential contamination, soil samples were selected for laboratory analysis from depths that correlated with the depths of field or laboratory evidence of contamination in soil noted in nearby borings or in soil samples collected during previous sampling events. Soil samples retained for laboratory analysis were transferred directly into laboratory-prepared containers. Care was taken not to handle the seal or the inside cap of the container when the samples were placed into the containers. Soil sample containers were labeled using a unique sample number and were immediately placed into a cooler on ice. Soil samples were submitted under standard chain-of-custody protocols to Apex Laboratories of Tigard, Oregon for laboratory analyses listed in Section 6.4.6. Appendix K provides a summary of the analyses conducted for each soil sampling location.





#### 6.4.4 Monitoring Well Installation

Monitoring wells FMW-158 through FMW-165 were installed by AEC using a sonic drill rig and were constructed with 2-inch-diameter Schedule 40 polyvinyl chloride (PVC) pipe with 0.010-inch slotted PVC well screen. The borehole annulus surrounding each monitoring well screen was filled with a filter pack consisting of 10/20 silica sand to approximately 1 foot above the top of the screened interval. A bentonite chip seal was emplaced above the sand pack to a depth of approximately 2 feet bgs. A concrete surface seal was placed around the wells from the top of the bentonite, surrounding the flush-grade traffic-rated monument up to the ground surface.

Shallow Water-Bearing Zone monitoring wells FMW-158, FMW-160, FMW-161, and FMW-163 were installed to total depths ranging from 32 to 35 feet bgs (elevation 3.0 to 5.3 feet NAVD88) and were constructed with 15 feet of well screen. Intermediate Water-Bearing Water Zone monitoring wells FMW-159, FMW-162, and FMW-164 were installed to total depths ranging from 51 to 55 feet bgs (elevation -14.8 to -14.9 feet NAVD88) and were constructed with 10 feet of well screen. Deep Outwash Aquifer monitoring well FMW-165 was installed to a total depth of 87 feet bgs (elevation -54.9 feet NAVD88) and was constructed with 10 feet of well screen. Well screen intervals are summarized in Table 6 and locations are shown on Figure 3. Boring logs showing well installation details are provided in Appendix A.

Following installation, each monitoring well was developed to remove fine-grained materials from the screen and sand pack. The monitoring wells were developed using a submersible pump and surge block until the extracted water visibly cleared or was purged dry. If the monitoring well was purged dry, water levels were allowed to recharge before additional purging was conducted. Approximately 50 to 60 gallons of water was purged from each well during development.

Each monitoring well was surveyed by professional surveyors from Apex Engineering of Tacoma, Washington on May 16, 2023. The wells were surveyed for elevation and northing and easting coordinates using the NAVD88 and Washington State Plane Coordinate System of 1983/2011, North Zone. The survey elevation results are shown in Table 6 and provided in Appendix L.



#### 6.4.5 Groundwater Monitoring

Groundwater monitoring events were conducted at the Block 38 West Site in May, August, and November 2023, and February 2024 using the newly installed and existing monitoring wells. The monitoring well network consisted of:

- Seven monitoring wells screened in the Shallow Water-Bearing Zone (FMW-154, FMW-155, FMW-156, FMW-158, FMW-160, FWM-161, and FMW-163),
- 11 monitoring wells screened in the Intermediate Water-Bearing Zone (FMW-150 through FMW-153, FMW-157, FMW-159, FMW-162, FMW-164, OW-1 through OW-3, and OW-5), and
- Three monitoring wells screened in the Deep Outwash Aquifer (FMW-137, FMW-138, and FMW-165).
- The monitoring well network is shown on Figure 3.

Prior to sampling, the depth to groundwater in each monitoring well was measured using an electronic water-level indicator to the nearest 0.01 foot. The monitoring wells were opened, and the water levels were allowed to equilibrate for approximately 30 minutes before measurement. The groundwater level was measured from the surveyed reference point on the top of the well casing to derive the groundwater elevation at each monitoring well.

Groundwater samples were collected in accordance with EPA (1996) low-flow sampling procedures. Purging and sampling of each monitoring well was performed using a peristaltic pump and dedicated silicone and polyethylene tubing, at flow rates ranging from approximately 100 to 300 milliliters per minute. The tubing intake generally was placed in the middle of the screened interval of each monitoring well.

During purging, water quality was monitored using a YSI Pro DSS water-quality system equipped with a flow-through cell. The water-quality parameters temperature, pH, specific conductance, dissolved oxygen, oxidation-reduction potential (ORP), and turbidity were monitored and recorded at 3-minute intervals during purging. Following purging, groundwater samples were collected from the pump outlet tubing located upstream of the flow-through cell and placed directly into laboratory-prepared sample containers. Samples for analysis for dissolved metals were collected through a 0.45-micron field filter that was attached to the pump outlet and removed prior to filling containers for other analyses. Each container was labeled with a unique sample identification number, placed on ice in a cooler, and transported to Apex Laboratories of Tigard, Oregon for laboratory analyses listed in



Section 6.4.6. A summary of the groundwater analyses conducted for each well is included in Appendix K.

#### **6.4.6 Laboratory Analysis**

Select soil samples collected during the RI were analyzed for one or more of the following:

- DRO and ORO by Northwest Method NWTPH-Dx; and
- PAHs, including naphthalenes and cPAHs by EPA Method 8270E/SIM.

Select groundwater samples collected during the RI were analyzed for one or more of the following:

- DRO and ORO by Northwest Method NWTPH-Dx with and without silica gel cleanup;
- GRO by Northwest Method NWTPH-Gx;
- BTEX by EPA Method 8260D;
- CVOCs by EPA Method 8260D;
- PAHs, including naphthalenes by EPA Method 8270E/SIM; and
- Total and dissolved barium and mercury by EPA Method 6020B.

### **6.5 REMEDIAL INVESTIGATION RESULTS**

This section presents a summary of the results from the RI activities conducted at the Block 38 West Site between May and November 2023. Soil and groundwater analytical results are presented in Tables 1 through 12 and on Figures 4 through 10 and 12 through 16. Figures 17 through 21 depict cross sections A-A' through E-E', respectively, and include subsurface lithology and soil and groundwater analytical results. Boring and monitoring well logs are presented in Appendix A. Laboratory analytical reports are presented in Appendix C.

#### **6.5.1 Groundwater Elevations and Flow**

Groundwater elevations at the Block 38 West Site were measured on May 15, August 14, and November 14, 2023, and February 27, 2024. A summary of groundwater elevation measurements is provided in Table 6. Groundwater elevation contour maps for the Shallow Water-Bearing Zone, Intermediate Water-Bearing Zone, and Deep Outwash Aquifer at the Block 38 West Site for the February 2024 event are provided on Figures 11A through 11C along with rose diagrams showing general flow direction and gradient for each of the four quarterly events.



Groundwater elevations measured in the Shallow Water-Bearing Zone at the Block 38 West Site ranged from 19.00 feet NAVD88 to 17.41 feet NAVD88 between May 2023 and February 2024, based on the following observations:

- On May 15, 2023, elevations ranged from 18.72 feet NAVD88 in monitoring well FMW-161 to 17.75 feet NAVD88 in monitoring well FMW-154;
- On August 14, 2023, elevations ranged from 19.00 feet NAVD88 in monitoring well FMW-158 to 17.42 feet NAVD88 in monitoring well FMW-154;
- On November 14, 2023, elevations ranged from 17.72 feet NAVD88 in monitoring well FMW-158 to 17.41 feet NAVD88 in monitoring well FMW-154; and
- On February 27, 2024, elevations ranged from 17.91 feet NAVD88 in monitoring well FMW-158 to 17.51 feet NAVD88 in monitoring well FMW-160.

Groundwater elevations measured in the Intermediate Water-Bearing Zone at the Block 38 West Site ranged from 20.61 feet NAVD88 to 17.25 feet NAVD88 between May 2023 and February 2024, based on the following observations:

- On May 15, 2023, elevations ranged from 20.61 feet NAVD88 in monitoring well OW-5 to 17.57 feet NAVD88 in monitoring well FMW-153;
- On August 14, 2023, elevations ranged from 19.98 feet NAVD88 in monitoring well OW-5 to 17.25 feet NAVD88 in monitoring well FMW-151;
- On November 14, 2023, elevations ranged from 18.07 feet NAVD88 in monitoring well OW-3 to 17.39 feet NAVD88 in monitoring well FMW-164; and
- On February 27, 2024, elevations ranged from 18.07 feet NAVD88 in monitoring well OW-3 to 17.50 feet NAVD88 in monitoring well FMW-153.

Groundwater elevations measured in the Deep Outwash Aquifer at the Block 38 West Site ranged from 18.40 feet NAVD88 to 16.84 feet NAVD88 between May 2023 and February 2024, based on the following observations:

- On May 15, 2023, elevations ranged from 18.40 feet NAVD88 in monitoring well FMW-137 to 17.00 feet NAVD88 in monitoring well FMW-138;
- On August 14, 2023, elevations ranged from 17.80 feet NAVD88 in monitoring well FMW-137 to 16.84 feet NAVD88 in monitoring well FMW-138;
- On November 14, 2023, elevations ranged from 17.48 feet NAVD88 in monitoring well FMW-165 to 16.86 feet NAVD88 in monitoring well FMW-138; and



- On February 27, 2024, elevations ranged from 17.80 feet NAVD88 in monitoring well FMW-137 to 17.04 feet NAVD88 in monitoring well FMW-138.

The groundwater flow direction at the Block 38 West Site in the Shallow Water-Bearing Zone was observed to the south during all four groundwater monitoring events at flow gradients ranging from 0.001 to 0.002 feet per foot (ft/ft) (Figure 11A). Groundwater contour lines are not shown for the Shallow Water-Bearing Zone on the Block 38 West Property because it is no longer present with the current building in place. The groundwater flow direction at the Block 38 West Site in the Intermediate Water-Bearing Zone was observed to the southeast during all four groundwater monitoring events at flow gradients ranging from 0.002 to 0.005 ft/ft (Figure 11B). The groundwater flow direction at the Block 38 West Site in the Deep Outwash Aquifer was observed to the southwest in May and August 2023 and February 2024 at gradients ranging from 0.002 to 0.004 ft/ft and to the southeast during the November 2023 groundwater monitoring event at a gradient of approximately 0.002 ft/ft (Figure 11C).

## 6.5.2 Soil Analytical Results

The following sections present the analytical results from the soil sampling activities conducted during the RI at the Block 38 West Site in May 2023.

### **Boring FB-17**

Soil samples collected from boring FB-17 were analyzed for DRO, ORO, and PAHs including naphthalenes and cPAHs. Total DRO+ORO was either detected at concentrations less than the screening levels or reported as non-detect at laboratory PQLs in the soil samples analyzed from boring FB-17. No soil sample was recoverable at elevation 20 feet NAVD88 due to the presence of CDF. The highest concentration of total DRO+ORO was 1,681 mg/kg, which is less than the screening level of 2,000 mg/kg in the soil sample collected from boring FB-17 at elevation 15 feet NAVD88 (Figures 6 through 8; Table 1).

Naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene were reported as non-detect at laboratory PQLs in the soil sample collected from boring FB-17 at an elevation of 17 feet NAVD88 (Figure 9; Table 2).

The total cPAHs TEC was 0.282 mg/kg, which exceeded the screening level of 0.19 mg/kg in the soil sample collected from boring FB-17 at an elevation of 17 feet NAVD88. The total cPAHs TEC was reported as non-detect at the laboratory PQLs in the remaining soil samples analyzed from boring FB-17 (Figure 10; Table 2).



### **Borings FMW-160, FMW-161, and FMW-163**

Soil samples collected from borings FMW-160, FMW-161, and FMW-163 were analyzed for DRO, ORO, and PAHs including naphthalenes and cPAHs.

Total DRO+ORO was either detected at concentrations less than the screening levels or reported as non-detect at laboratory PQLs in the soil samples analyzed from borings FMW-160, FMW-161, and FMW-163 (Figures 6 through 8; Table 1).

Naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene were either detected at concentrations less than the screening levels or were reported as non-detect at laboratory PQLs in all soil samples analyzed, with the exception of the soil sample analyzed from boring FMW-163 at an elevation of 15 feet NAVD88. Naphthalene and 1-methylnaphthalene were detected at concentrations of 0.340 and 0.00789 mg/kg, respectively, which exceed the screening levels of 0.24 and 0.0042 mg/kg for naphthalene and 1-methylnaphthalene, respectively (Figure 9; Table 2).

The total cPAHs TEC were either less than the screening levels or were reported as non-detect at the laboratory PQLs in the soil samples collected from borings FMW-160, FMW-161 and FMW-163 (Figure 10; Table 2).

### **6.5.3 Groundwater Analytical Results**

The following sections present the results from the groundwater monitoring events conducted at the Block 38 West Site in May, August, and November 2023, and February 2024. Tables 7, 8, 9, 11, and 12 provide the groundwater analytical results and screening levels for groundwater. Figures 12 through 15 present groundwater analytical results for GRO, benzene, total DRO+ORO, and naphthalenes. The laboratory analytical reports for the groundwater sampling events are provided in Appendix C.

#### **Shallow Water Bearing Zone Monitoring Wells**

Groundwater samples collected from the Shallow Water-Bearing Zone monitoring wells were analyzed for GRO, BTEX, total DRO+ORO, and naphthalenes. Groundwater samples collected from the Shallow Water-Bearing Zone monitoring wells were also analyzed for barium and mercury during the May 2023 groundwater monitoring event only.

GRO was not detected at concentrations exceeding the laboratory PQL in all groundwater samples analyzed from the Shallow Water-Bearing Zone monitoring wells during the four groundwater monitoring events (Figure 12; Table 7).



Benzene was either detected at concentrations less than the screening level or were reported as non-detect at the laboratory PQLs in all groundwater samples analyzed from the Shallow Water-Bearing Zone monitoring wells during all four groundwater monitoring events. The highest concentrations of benzene detected were 1.16, 1.22, 0.750, and 0.420 micrograms per liter ( $\mu\text{g}/\text{L}$ ) in groundwater samples analyzed from monitoring well FMW-163 during the May 2023, August 2023, November 2023, and February 2024 monitoring events, respectively (Figure 13; Table 7).

Total DRO+ORO was either detected at concentrations less than the screening level or reported as non-detect at the laboratory PQLs in all groundwater samples analyzed from the Shallow Water-Bearing Zone monitoring wells during the May 2023 monitoring event. Total DRO+ORO was detected at concentrations of 514, 530, and 634  $\mu\text{g}/\text{L}$ , which exceeded the screening level of 500  $\mu\text{g}/\text{L}$  in groundwater samples collected from monitoring wells FMW-154, FMW-155, and FMW-160, respectively, during the August 2023 monitoring event. Total DRO+ORO was detected at concentrations of 791 and 943  $\mu\text{g}/\text{L}$ , which exceeded the screening level of 500  $\mu\text{g}/\text{L}$  in groundwater samples collected from monitoring wells FMW-154 and FMW-155, respectively, during the November 2023 monitoring event. Total DRO+ORO was detected at a concentration of 605  $\mu\text{g}/\text{L}$ , which exceeded the screening level of 500  $\mu\text{g}/\text{L}$  in the groundwater sample collected from monitoring well FMW-155 during the February 2024 monitoring event. Total DRO+ORO was either detected at concentrations less than the screening level or reported as non-detect at laboratory PQLs in groundwater samples collected from the remaining Shallow Water-Bearing Zone monitoring wells during the May 2023, August 2023, November 2023, and February 2024 monitoring events (Figure 14; Table 7).

Based on Ecology's Guidance for Silica Gel Cleanup in Washington State dated November 2023 (Ecology Silica Gel Guidance) and correspondence with Ecology, groundwater samples with total DRO+ORO concentrations that exceeded the screening level in August and November 2023 and February 2024 were further analyzed for DRO and ORO (or total DRO+ORO)<sup>17</sup> with silica gel cleanup to gain additional perspective on biogenic or petroleum metabolite interference. Total DRO+ORO was either detected at a concentration less than the screening level or reported as non-detect at the laboratory PQLs in groundwater samples analyzed with silica gel cleanup (Figure 14; Tables 7 and 12). This suggests that the

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<sup>17</sup> Based on guidance from Ecology, sample results for the February 2024 event were reported as a single NWTPh-Dx concentration for total DRO+ORO. The laboratory reported separate results for DRO and ORO for the three events performed in 2023.



detected concentrations of total DRO+ORO without silica gel cleanup are related to polar organics, either naturally occurring (biogenic) or from the breakdown of petroleum (polar metabolites).

Based on communications with Ecology, Shallow Water-Bearing Zone monitoring well FMW-158 was identified as a potential background well given its apparent up-gradient location and otherwise non-impacted conditions. If suitable as a background well, it can be used to evaluate the contribution of naturally occurring organics in groundwater and determine whether an adjustment to polar organic concentrations within and down-gradient of the groundwater plume are applicable. Consistent with the Ecology Silica Gel Guidance, groundwater from well FMW-158 was analyzed for total organic carbon (TOC) during the February 2024 monitoring event and chromatograms for NWTPH-Dx (with and without silica gel cleanup) were requested from the laboratory to confirm natural background conditions for polar organics. TOC was quantified at 8.8 milligrams per liter (mg/L), or 8,800 µg/L, which is considerably higher than the median TOC for groundwater of 700 µg/L (Thurman 1985) and the typical threshold of 2,000 µg/L TOC for groundwater (Chapman et al. 1996). Review of the chromatograms (Appendix C) indicates NWTPH-Dx patterns are not consistent with the standard pattern for diesel and oil petroleum, suggesting the presence of polar organics. Given the relatively high TOC concentration at well FMW-158, the chromatogram evaluation, and analytical results for NWTPH-Gx and NWTPH-Dx (with silica gel cleanup) showing non-detectable petroleum hydrocarbons, there is strong evidence that the detected NWTPH-Dx results for well FMW-158 without silica gel cleanup is from naturally occurring organics and not petroleum. Therefore, well FMW-158 is suitable as a designated background well for the Shallow Water-Bearing Zone. As such, the detected NWTPH-Dx concentrations at well FMW-158 can be used to adjust the polar organics concentrations in the other shallow wells at the Block 38 West Site to measure compliance for polar metabolites related to the breakdown of petroleum hydrocarbons.

Based on the Ecology Silica Gel Guidance and concurrence from Ecology, an adjusted polar metabolite cleanup level of 700 µg/L was applied since the concentrations reported by NWTPH-Gx and NWTPH-Dx (with silica gel cleanup) analyses were non-detect<sup>18</sup> at the laboratory PQLs during all four of the groundwater monitoring events (Table 12). Using the detected total DRO+ORO concentrations from FMW-158 to adjust polar organics

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<sup>18</sup> As discussed in Section 7.2.3 below, there was one instance of detected ORO post silica gel cleanup, which the laboratory attributed to sediment interference in the silica gel cleanup analysis, as it was not detected in the sample analyzed without silica gel cleanup. The detected concentration is less than the typical PQL of 250 µg/L noted in Ecology's Silica Gel Guidance.





concentrations (i.e., total DRO+ORO without silica gel cleanup) at the other wells to account for naturally occurring organics, all of the adjusted concentrations are less than 700 µg/L.

Naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene were either detected at concentrations less than the screening levels or reported as non-detect at the laboratory PQLs in all groundwater samples analyzed from the Shallow Water-Bearing Zone monitoring wells during the May 2023, August 2023, November 2023, and February 2024 monitoring events (Figure 15; Table 8).

Total and dissolved barium were detected at concentrations less than the screening levels, and total and dissolved mercury were reported as non-detect at laboratory PQLs in groundwater samples analyzed from Shallow Water-Bearing Zone monitoring wells FMW-154 through FMW-156 and FMW-158 during the May 2023 monitoring event (Table 11).

### **Intermediate Water Bearing Zone Monitoring Wells**

Groundwater samples collected from the Intermediate Water Bearing Zone monitoring wells were analyzed for DRO, ORO, and naphthalenes. Total DRO+ORO was detected at concentrations less than the screening levels in groundwater samples analyzed from all Intermediate Water-Bearing Zone monitoring wells during the May and August 2023 monitoring events and the February 2024 monitoring event (Figure 14; Table 7). Total DRO+ORO was detected at a concentration of 628 µg/L, which exceeded the screening level of 500 µg/L in a groundwater sample collected from monitoring well OW-1, during the November 2023 monitoring event. Total DRO+ORO was either detected at concentrations less than the screening level or reported as non-detect at laboratory PQLs in groundwater samples collected from the remaining Intermediate Water-Bearing Zone monitoring wells during the November 2023 monitoring event (Figure 14; Table 7). Based on the Ecology Silica Gel Guidance and correspondence with Ecology, the groundwater sample with a total DRO+ORO concentration that exceeded the screening level in November 2023 was further analyzed for DRO and ORO with silica gel cleanup to gain additional perspective on biogenic or petroleum metabolite interference. In addition, communications with Ecology indicated Intermediate Water-Bearing Zone monitoring well FMW-159, given its apparent up-gradient location and otherwise non-impacted conditions, may be a potential background well. If so, it could be used to evaluate the contribution of naturally occurring organics in groundwater within the Intermediate Water-Bearing Zone and determine whether an adjustment to polar organic concentrations within and down-gradient of the groundwater plume are applicable. Therefore, the groundwater sample from well FMW-159 was also analyzed for total



DRO+ORO with silica gel cleanup during the November 2023 and February 2024 monitoring events and analyzed for TOC during the February 2024 event.

Total DRO+ORO was reported as non-detect at the laboratory PQLs in both of the groundwater samples analyzed with silica gel cleanup (Figure 14; Tables 7 and 12). TOC in well FMW-159 was quantified at 4.2 mg/L, or 4,200 µg/L, which is higher than both the median TOC (700 µg/L) and typical threshold TOC (2,000 µg/L) for groundwater based on literature (Thurman 1985; Chapman et. al. 1996). Associated chromatograms (Appendix C) also indicate NWTPH-Dx patterns are not consistent with the standard pattern for diesel and oil petroleum, suggesting the presence of polar organics. Given the relatively high TOC concentration at well FMW-159, the chromatogram evaluation, and analytical results for NWTPH-Gx and NWTPH-Dx (with silica gel cleanup) showing non-detectable petroleum hydrocarbons, there is strong evidence that the detected NWTPH-Dx results for well FMW-159 without silica gel cleanup is from naturally occurring organics and not petroleum. Therefore, well FMW-159 is suitable as a designated background well for the Intermediate Water-Bearing Zone. As such, the detected NWTPH-Dx concentrations at FMW-159 can be used to adjust the polar organics concentrations in the other intermediate zone wells at the Site to measure compliance for polar metabolites related to the breakdown of petroleum hydrocarbons.

Based on the Ecology Silica Gel Guidance and concurrence from Ecology, an adjusted polar metabolite cleanup level of 700 µg/L was applied since the concentrations reported by NWTPH-Gx and NWTPH-Dx (with silica gel cleanup) analyses were non-detect at the laboratory PQLs during all four of the groundwater monitoring events (Table 12). Using the November 2023 total DRO+ORO concentration detected in well FMW-159 to adjust the November 2023 polar organics concentration (i.e., total DRO+ORO without silica gel cleanup) detected in monitoring well OW-1 to account for naturally occurring organics, the adjusted concentration is less than 700 µg/L.

Naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene were reported as non-detect at the laboratory PQLs<sup>19</sup> in all groundwater samples analyzed from the Intermediate Water

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<sup>19</sup> The laboratory had quality control issues with EPA Method 8270E related to the naphthalenes results for the February 2024 groundwater monitoring event, which the laboratory attributed to equipment issues. A decision was made to report naphthalenes from the EPA Method 8260D analysis due to Method 8270E quality control issues. 1-Methylnaphthalene and 2-methylnaphthalene results are being retained for the samples in the affected delivery groups but are being qualified as estimates (UJ) as shown in Table 8. The non-detect 1-methylnaphthalene and 2-methylnaphthalene results for these sample locations are consistent with the three previous groundwater monitoring rounds conducted in 2023. On April 22, 2024, Ecology



Bearing Zone monitoring wells during all four of the groundwater monitoring events (Figure 15; Table 8).

### **Deep Outwash Aquifer Monitoring Wells**

Groundwater samples collected from the Deep Outwash Aquifer monitoring wells were only analyzed for CVOCs during the May 2023 monitoring event to assess post-construction conditions.

cDCE was detected at a concentration of 20.3 µg/L, which exceeded the screening level of 16 µg/L in the groundwater sample collected from monitoring well FMW-137 during the May 2023 monitoring event. cDCE was either detected at concentrations less than the screening levels or reported as non-detect at the laboratory PQL in the remaining groundwater samples collected from the Deep Outwash Aquifer monitoring wells.

Vinyl chloride was detected at concentrations of 0.320 and 0.880 µg/L, which exceeded the screening level of 0.29 µg/L, in groundwater samples collected from monitoring wells FMW-137 and FMW-165, respectively, during the May 2023 monitoring event. Vinyl chloride was reported as non-detect at the laboratory PQL in the remaining groundwater sample analyzed from Deep Outwash Aquifer monitoring well FMW-138.

PCE, TCE, and trans-1,2-DCE were either detected at concentrations less than the screening levels or were reported as non-detect at the laboratory PQLs in the groundwater samples analyzed from the Deep Outwash Aquifer monitoring wells (Table 9).

## **6.6 DATA VALIDATION**

Farallon conducted a Level I Compliance Screening on all the analytical data collected during the interim actions, and data validation reports were prepared in accordance with the quality assurance/quality control (QA/QC) criteria as recommended in the methods identified in the National Functional Guidelines for Organic and/or Inorganic Methods Data Review (EPA 2020a, 2020b). The data validation reports are included in Appendix M.

A data validation report was prepared for the remaining RI dataset following completion of the February 2024 groundwater monitoring event and is included in Appendix M.

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confirmed that no additional sampling for naphthalenes was required based on the results for the prior three groundwater monitoring events completed in 2023.



## 7.0 NATURE AND EXTENT OF CONTAMINATION

Based on the results from the previous investigations, interim actions, and the RI, the nature and extent of contamination at the Block 38 West Site has been adequately characterized to establish cleanup standards and support the evaluation of technically feasible cleanup action alternatives. This section presents a discussion on the nature and extent of each COPC, the affected media at the Block 38 West Site, and the hazardous substances retained as proposed constituents of concern (COCs) for the FFS.

Figures 4 through 10 show the nature and extent of soil impacts by COPCs and Figures 11A, 11B, and 11C through 16 show groundwater flow direction and the extent of groundwater impacts by COPCs. Figures 17 through 21 show the nature and extent of COPCs exceeding screening levels at the Block 38 West Site in vertical cross sections. Tables 1 through 12 summarize analytical results for COPCs detected in soil and groundwater samples collected at the Block 38 West Property, the alley, and the western sidewall of the Block 38 East Property, and groundwater elevations and monitoring well construction details.

### 7.1 SOIL

The majority of COPCs detected at concentrations exceeding screening levels were encountered from approximate elevations 23 to 15 feet NAVD88, extending deeper to elevation 10 feet NAVD88 in localized areas and within the fill soil and/or organic debris material across the Block 38 West Property. The independent interim action and the alley interim action conducted in conjunction with the redevelopment of the Block 38 West Property has removed the fill soil, wood debris, and soil with COPCs detected at concentrations exceeding screening levels from within the limits of the Block 38 West Property and to the maximum extent practicable in the adjacent alley.

#### 7.1.1 Gasoline-Range Organics

GRO was detected at concentrations exceeding the screening level in performance soil samples collected from two localized areas on the Block 38 West Property during the independent interim action and one localized area during the alley interim action. Confirmation soil samples collected during the interim actions defined the lateral and vertical extent of GRO in soil and confirmed that the three localized areas of GRO-impacted soil were removed from the Block 38 West Site (Figure 4, Table 1). Based on these data, GRO is no longer present in soil at the Block 38 West Site and the soil to groundwater



pathway is incomplete. Therefore, GRO is not retained as a proposed COC for soil at the Block 38 West Site.

### **7.1.2 Benzene**

Benzene was detected at concentrations exceeding the screening level in a single soil sample at the Block 38 West Site. Confirmation soil samples collected during the independent interim action defined the lateral and vertical extent of benzene in soil and confirmed that the localized area of benzene-impacted soil was removed from the Block 38 West Site (Figure 5, Table 1). Based on these data, benzene is no longer present in soil at the Block 38 West Site and the vapor intrusion and soil to groundwater pathways are incomplete for benzene at the Block 38 West Site. Therefore, benzene is not retained as a proposed COC for soil at the Block 38 West Site.

### **7.1.3 Total DRO+ORO**

Total DRO+ORO was detected at concentrations exceeding the screening level in performance soil samples collected from three general areas on the Block 38 West Site during the independent interim action and the alley interim action: the northwestern corner of the Block 38 West Site proximate to UST02 and the fuel product line; east-central portion of Block 38 West Property and the alley; and southwestern portion of the Block 38 West Site. The impacts were generally observed at elevations ranging from 22.5 to 15 feet NAVD88, which are likely associated with the former coal fill layer and impacted fill soil within wood debris documented at elevations ranging from 22 to 15 feet NAVD88. Confirmation soil samples collected during the independent interim action confirmed that the lateral and vertical limits of total DRO+ORO concentrations exceeding the screening level in soil have been defined within the limits of the Block 38 West Property and removed as part of the independent interim action.

Soil samples collected during the RI confirmed that the lateral and vertical extent of total DRO+ORO-impacted soil in the northwestern and southwestern portions of the Block 38 West Site have been defined. The lateral and vertical limits of total DRO+ORO-impacted soil associated with former bunker fuel oil USTs have been defined by borings advanced on the Block 38 West Property boundary and the adjoining rights-of-way, including boring FB-20 and sampling grid N1-NSW to the north, and boring FB-17 and sampling grid N1-WSW3 to the west. Total DRO+ORO was detected at a concentration exceeding the screening level in soil samples collected from former monitoring well FMW-134 in the southwestern portion of the Block 38 West Property at an elevation of 20 feet NAVD88. The lateral and vertical limits



of total DRO+ORO-impacted soil have been defined by borings advanced in the adjoining rights-of-way including monitoring well FMW-160 to the west, and monitoring wells FMW-161 and FMW-163 to the south.

Total DRO+ORO was detected at concentrations exceeding the screening level in soil samples collected at elevations ranging from 22.5 to 17.5 feet NAVD88 in the central portion of the alley (Figures 6 through 8 and 21; Table 1). The lateral extent of total DRO+ORO impacts in soil adjacent to location PH-12 and in the central portion of the alley has been defined (Figures 6 through 8 and 21). The vertical limits at locations PH-12 and G/A5-B are estimated to be approximately 15 feet NAVD88 based on the subsurface investigations and the extent of fill soil observed during the alley interim action (Figures 8 and 21). The vertical limits of total DRO+ORO-impacted soil in the central portion of the alley are defined by borings, FB-11 through FB-16, and alley interim action confirmation samples H/A5-B and I/A5-B, at elevations ranging from 17.5 to 15 feet NAVD88 (Figures 8 and 21). The impacts observed in the central portion of the alley at elevations ranging from 22.5 to 15 feet NAVD88 are likely associated with the former coal fill layer and impacted fill soil within wood debris documented in the alley at elevations ranging from 22 to 15 feet NAVD88 (Figure 21).

Based on these data, residual concentrations of total DRO+ORO are present in fill soil that remains in a wedge of soil west of the former UST product line area on the northwestern portion of the Block 38 West Site and in the alley area of the Block 38 West Site (Figures 24, 26 through 28, Table 2). Total DRO+ORO is retained as a proposed COC for soil at the Block 38 West Site.

#### **7.1.4 Naphthalenes**

Naphthalene, 1-methylnaphthalene, and/or 2-methylnaphthalene were detected at concentrations exceeding the saturated zone soil protective of groundwater screening level in performance soil samples collected from three general areas on the Block 38 West Site during the independent interim action and the alley interim action. These areas include the northwestern corner of the Block 38 West Site proximate to UST02 and the fuel product line, east-central portion of Block 38 Property and the alley, and southwestern portion of the Block 38 West Site. Confirmation soil samples collected during the independent interim action confirmed that naphthalene, 1-methylnaphthalene, and/or 2-methylnaphthalene detected in soil at concentrations exceeding the screening levels were excavated and



removed from within the Block 38 West Property boundary and from within the limits of the alley excavation (Figure 9, Table 2).

Naphthalene, 1-methylnaphthalene, and/or 2-methylnaphthalene were detected at concentrations exceeding the saturated soil screening levels protective of groundwater in soil samples collected from the following locations (Figure 9; Table 2):

- Naphthalene and 1-methylnaphthalene in the soil sample collected from monitoring well FMW-163 in the Republican Street right-of-way at elevation 15 feet NAVD88;
- 1-Methylnaphthalene in the soil sample collected from boring FB-20 in the Mercer Street right-of-way at elevation 15 feet NAVD88;
- 1-Methylnaphthalene in the soil sample collected from boring FB-21 in the Mercer Street right-of-way at elevation 28 feet NAVD88; and
- Naphthalene, 1-methylnaphthalene, and/or 2-methylnaphthalene in soil samples collected along the eastern sidewall of the alley construction excavation.

Naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene were not detected at concentrations exceeding the screening levels in groundwater samples collected from the Shallow and Intermediate Water-Bearing Zones monitoring well network at the Block 38 West Site in May, August, and November 2023, and in February 2024 (Figure 15, Table 8). Therefore, the soil-leaching-to-groundwater pathway is no longer a complete pathway to exposure. Based on the groundwater data collected during the RI and post interim actions, the soil screening levels for protection of the direct contact pathway for naphthalenes are applicable for the Block 38 West Site. Those values were applied to the RI data set to evaluate the extent of naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene that remains in soil exceeding the applicable screening levels post interim actions (Figures 26 through 28, Table 2).

Based on the updated screening levels for soil (i.e., protective of direct contact), none of the remaining concentrations of naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene exceed the screening levels in soil at the Site. Therefore, these compounds are not retained as proposed COCs for soil at the Block 38 West Site.

#### **7.1.5 Carcinogenic Polycyclic Aromatic Hydrocarbons**

cPAHs were detected at concentrations exceeding the screening level in performance soil samples collected from the north-, east-, and west-central portions of the Block 38 West Site



during the independent interim action and the alley interim action. The impacts were generally observed at elevations ranging from 22.5 to 15 feet NAVD88, which are likely associated with the former coal fill layer and impacted fill soil within wood debris documented at elevations ranging from 22 to 15 feet NAVD88. Confirmation soil samples collected during the independent interim action confirmed that cPAHs detected in soil at concentrations exceeding the screening levels were excavated and removed from within the Block 38 West Property boundary and from within the limits of the alley excavation (Figure 10, Table 2).

Soil samples collected during the RI confirmed that the lateral and vertical extent of cPAH-impacted soil in the northwestern, west-central, and southwestern portions of the Block 38 West Site have been defined, as follows:

- The lateral and vertical limits of cPAH-impacted soil associated with former bunker fuel oil USTs have been defined by borings advanced on the Block 38 West Property boundary and the adjoining rights-of-way, including boring FB-20 and sample N1-NSW to the north. The distribution of cPAH concentrations in that area and the data for boring FB-17 suggest that the lateral extent of cPAHs to the west is slightly beyond boring FB-17 within the Westlake Avenue North right-of-way.
- The lateral and vertical limits of cPAH-impacted soil associated with soil samples collected from test pit, TP-12, on the west-central portion have been defined by borings advanced on the Block 38 West Property boundary and the adjoining rights-of-way, including borings FB-18 and FB-19, to the west (Figure 10, Table 2).
- Potential cPAH-impacted soil in the southwestern portion of the Block 38 West Property at an elevation of 20 and 15 feet NAVD88 were evaluated. cPAHs were detected at concentrations less than the screening level or reported non-detect at the laboratory PQL in soil samples collected from borings advanced in the adjoining rights-of-way including monitoring well FMW-160 to the west, and monitoring wells FMW-161 and FMW-163 to the south (Figure 10).
- The vertical extent of cPAHs was defined east of the Block 38 West Property during the alley interim action by borings FB-10 through FB-16 and FB-21 at elevations ranging from 17.5 to 15 feet NAVD88 (Figures 10 and 21). The lateral extent of cPAHs east of the Block 38 West Property were defined to the south by alley interim action soil confirmation sample A/A5-SSW. The distribution of cPAH concentrations in the alley and the data for boring FB-21 suggest that the lateral extent of cPAHs to the





north is slightly beyond boring FB-21 within the Mercer Street right-of-way (Figures 10 and 21).

Based on these data, residual concentrations of cPAHs are present in fill soil that remains in the Westlake Avenue North and Mercer Street rights-of-way and in the alley area of the Block 38 West Site and are retained as proposed COCs for soil at the Block 38 West Site (Figures 25 through 28, Table 3).

#### **7.1.6 Barium and Mercury**

Barium was detected at concentrations exceeding the saturated zone soil screening level for protection of groundwater in soil samples from borings FB-01 through FB-04 and monitoring wells FMW-133 and FMW-135; and mercury was detected at a concentration exceeding the saturated zone soil screening level for protection of groundwater in the sample from boring FB-02 at the Block 38 West Site (Table 5).

Barium and mercury were not detected at concentrations exceeding the screening levels in groundwater samples collected from select Shallow Water-Bearing Zone monitoring wells at the Block 38 West Site in May 2023 (Table 11). Based on the groundwater data collected during the RI and post interim actions, the barium and mercury soil screening levels for protection of the direct contact pathway are applicable for the Block 38 West Site. Those values were applied to the RI data set to evaluate the extent of barium and mercury in soil (Table 5). After applying the revised screening levels for soil (i.e., protective of direct contact), barium and mercury were not detected at concentrations exceeding the applicable screening soil levels at the Block 38 West Site. Therefore, metals as barium and mercury are not retained as proposed COCs for soil for the Block 38 West Site.

## **7.2 GROUNDWATER**

Previous subsurface investigations documented localized petroleum hydrocarbon and naphthalenes impacts to the Shallow and/or Intermediate Water-Bearing Zones at the Block 38 West Property. The nature and extent of groundwater impacts were evaluated post-interim actions to support the evaluation of cleanup alternatives for the Block 38 West Site. Groundwater quality in the Shallow Water-Bearing Zone was evaluated by monitoring a network of seven groundwater monitoring wells, FMW-154, FMW-155, FMW-156, FMW-158, FMW-160, FMW-161, and FMW-163, in the rights-of-way surrounding the Block 38 West Site (Figures 3 and 11A). Groundwater quality in the Intermediate Water-Bearing Zone was evaluated by a monitoring network of eleven groundwater monitoring wells, FMW-150



through FMW-153, FMW-157, FMW-159, FMW-162, FMW-164, and OW-1 through OW-3, within the building foundation and in the rights-of-way surrounding the Block 38 West Site (Figures 3 and 11B).

### **7.2.1 Gasoline-Range Organics**

GRO was reported non-detect at the laboratory PQL in groundwater samples collected from the Shallow Water-Bearing Zone monitoring well network at the Block 38 West Site in May, August, and November 2023, and in February 2024 (Figure 12, Table 7). Based on these data, the soil to groundwater pathway is incomplete for GRO, and GRO is not retained as a proposed COC for groundwater at the Block 38 West Site.

### **7.2.2 Benzene**

Benzene was either detected at concentrations less than the screening levels or reported as non-detect at laboratory PQLs in groundwater samples collected from the Shallow Water-Bearing Zone monitoring well network at the Block 38 West Site in May, August, and November 2023, and in February 2024 (Figure 13, Table 7). Based on these data, the vapor intrusion and soil to groundwater pathways are incomplete for benzene at the Block 38 West Site. Therefore, benzene is not retained as a proposed COC for groundwater at the Block 38 West Site.

### **7.2.3 Total DRO+ORO**

Prior to the independent interim action, total DRO+ORO was detected at concentrations exceeding the screening levels in a reconnaissance groundwater sample collected from boring FB-03 and in a groundwater sample collected from monitoring well FMW-134, both of which were located in the Shallow Water-Bearing Zone. Total DRO+ORO was detected at concentrations exceeding the screening level in groundwater samples collected from former monitoring wells FMW-145, FMW-146, and FMW-147 in the Intermediate Water-Bearing Zone.

The laboratory analytical results for the May 2023 groundwater monitoring event reported total DRO+ORO at concentrations less than the groundwater screening level of 500 µg/L or reported as non-detect at the laboratory PQLs in all seven monitoring wells in the Shallow Water-Bearing Zone (Figure 14, Table 7). The laboratory analytical results for the August 2023 monitoring event detected total DRO+ORO at concentrations exceeding the screening level of 500 µg/L in groundwater samples collected from monitoring wells FMW-154, FMW-155, and FMW-160. The laboratory analytical results for the November 2023 monitoring



event detected total DRO+ORO at concentrations exceeding the screening level of 500 µg/L in groundwater samples collected from monitoring wells FMW-154 and FMW-155. The laboratory analytical results for the February 2024 monitoring event detected total DRO+ORO at a concentration exceeding the screening level of 500 µg/L in the groundwater sample collected from monitoring well FMW-155.

The laboratory analytical results for the May and August 2023 and February 2024 groundwater monitoring events reported total DRO+ORO at concentrations less than the groundwater screening level of 500 µg/L or as non-detect at the laboratory PQLs in all eleven monitoring wells in the Intermediate Water-Bearing Zone (Figure 14, Table 7). The laboratory analytical results for the November 2023 groundwater monitoring event had a detection of total DRO +ORO at a concentration that exceeded the screening level in monitoring well OW-1 (Figure 14, Table 7).

Based on the total DRO+ORO analytical results for August and November 2023 groundwater monitoring events, groundwater samples collected from monitoring wells FMW-154, FMW-155 and/or FMW-160 in the Shallow Water-Bearing Zone and OW-1 in the Intermediate Water-Bearing Zone, were further analyzed for DRO and ORO with silica gel cleanup to gain additional perspective on biogenic or petroleum metabolite interference. The background wells identified in Section 6.5.3 (FMW-158 and FMW-159) were analyzed with silica gel cleanup to evaluate the contribution of naturally occurring organics in groundwater and determine whether an adjustment to polar organic concentrations within and down-gradient of the groundwater plume are applicable for the August and November 2023 groundwater monitoring events.

Total DRO+ORO was reported as non-detect at the laboratory PQLs in all groundwater samples analyzed with silica gel cleanup (Figure 14, Tables 7 and 12). ORO was detected post silica gel cleanup in a groundwater sample collected from monitoring well FMW-154 in August 2023 and Apex Laboratories noted that this detection may be attributed to sediment interference in the silica gel cleanup analysis and is less than Ecology's Silica Gel Guidance reporting limit of 250 µg/L (Table 12).

In accordance with Ecology's Silica Gel Guidance, sites with no detectable concentrations of petroleum hydrocarbons (i.e., no detectable GRO and no detectable DRO+ORO when analyzed with silica gel cleanup) shall use the polar metabolite cleanup level of 700 µg/L to demonstrate compliance under the NWTPH-Dx method. The polar organic concentrations detected in the background monitoring wells, FMW-158 and FMW-159 for the Shallow and



Intermediate Water-Bearing Zones, respectively, were subtracted from the total polar organics detected in monitoring wells, FMW-154, FMW-155, FMW-160, and OW-1 (Table 12). The adjusted concentrations of polar organics were all less than 700 µg/L (Table 12).

Based on these data, the soil to groundwater pathway is incomplete for total DRO+ORO and for petroleum-related polar metabolites. Therefore, total DRO+ORO is not retained as a proposed COC for groundwater at the Block 38 West Site.

#### **7.2.4 Naphthalenes**

Naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene were either detected at concentrations less than the screening levels or were reported as non-detect at laboratory PQLs in groundwater samples collected from the Shallow and Intermediate Water-Bearing Zones monitoring well network at the Block 38 West Site in May, August, and November 2023 and February 2024 (Figure 15, Table 8). Based on these data, the vapor intrusion and soil to groundwater pathways are incomplete for naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene at the Block 38 West Site. Therefore, naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene are not retained as proposed COCs for groundwater at the Block 38 West Site.

#### **7.2.5 Barium and Mercury**

To evaluate the potential soil to groundwater exposure pathway for metals as barium and mercury, groundwater was monitored from Shallow Water-Bearing Zone monitoring wells FMW-154, FMW-155, FMW-156, and FMW-158 (Figure 3). Barium was detected at concentrations less than the groundwater screening level in all four monitoring wells analyzed (Table 11). Mercury was reported as non-detect at the laboratory PQL in a groundwater sample collected from monitoring well FMW-155 (Table 11). Based on these data, the soil to groundwater pathway is incomplete for barium and mercury. Therefore, barium and mercury are not retained as proposed COCs for groundwater at the Block 38 West Site.



## 8.0 CONCEPTUAL SITE MODEL

This section provides a summary of the conceptual site model (CSM) developed for the Block 38 West Site derived from the results from the RI including previous investigations and interim actions conducted at the Block 38 West Site. Included in this section is a discussion of the media of concern, potential receptors and exposure pathways, proposed cleanup levels, proposed COCs, and the confirmed and suspected sources of contamination. The CSM is used as a basis for developing technically feasible cleanup alternatives and selecting a final cleanup action in accordance with MTCA regulations.

### 8.1 CONFIRMED AND SUSPECTED SOURCES OF CONTAMINATION

Based on the results from the RI and the interim actions completed by Farallon and others, the following historical operations and/or features were confirmed as sources of soil and/or groundwater contamination at the Block 38 West Site:

- Historical placement of impacted fill soil;
- Impacted fill soil located within wood debris associated with the former lumber mill operations on Block 38;
- Former timber pilings associated with historical buildings;
- Oil encountered in a sanitary sewer line at the southeastern portion of the Block 38 West Property (efforts to evaluate the sanitary sewer line indicated no specific point of release or former feature to which the sanitary sewer line was connected);
- A coal fill layer ranging in thickness from 4 to 6 inches encountered across the east-central and northern portions of the Block 38 West Property and in the southern and central portions of the alley at approximate elevation 20 feet NAVD88;
- Localized impacts associated with bunker fuel oil USTs encountered in the northwestern portion of the Block 38 West Property; and
- Localized impacts associated with a former railroad trestle and former timber pilings within the alley.

The 1-methylnaphthalene impacts in soil detected at elevations 20 to 15 feet NAVD88 and cPAH impacts in soil detected between elevations 25 and 15 feet NAVD88 adjacent to UST01 and UST02 were similarly observed over the majority of the northern portion of the Block 38 West Property and are associated with fill material. Accordingly, Farallon does not



attribute naphthalenes and/or cPAH concentrations detected in soil adjacent to UST01, the fuel product line, and UST02 to be solely related to the release of bunker fuel oil.

Farallon observed that the fill soil layer varied in thickness from 5 to 10 feet, with a coal fill layer observed during the mass excavation on the Block 38 West Property at shallow depths, in the east-central mass excavation sidewall, and in the adjacent alley. The coal fill layer is likely attributed to former coal storage associated with the former fuel yard on the Block 38 East Property (Lots 2 through 5) as discussed in Section 2.4.2. Beneath the fill soil layer, the wood debris layer varied in thickness from 10 to 20 feet, thickest along the northern and northeastern Block 38 West Property boundaries, and is attributed to former lumber mill operations and lumber storage on Block 38 and former timber pilings associated with historical structures, including the former railroad trestle. Accordingly, silt and underlying silty sand could contain hazardous substances associated with fill and wood debris (Farallon 2018).

CVOCs detected in groundwater in the Deep Outwash Aquifer near the perimeter of the Block 38 West Property appear to be associated with the American Linen Site:

- Data indicate that the portion of the American Linen CVOC Plume within the Deep Outwash Aquifer extends northeast from the 700 Dexter Avenue North Property past Valley Street, south across Roy Street, and east and southeast across Westlake Avenue North onto the western portion of the Block 37 Property and into Mercer Street (PES 2022).
- Prior to construction dewatering at the Block 38 West Property, the American Linen CVOC Plume impacted groundwater near the Block 38 West Property in the lower portion of the Intermediate Water-Bearing Zone and Deep Outwash Aquifer. cDCE was detected at concentrations up to 1.3 µg/L in the Intermediate Water-Bearing Zone and Deep Outwash Aquifer beneath the Block 38 West Property prior to startup of the construction dewatering system. Historical groundwater sampling of the Shallow Water-Bearing Zone on the Block 38 West Property (including monitoring wells FMW-130 [reconnaissance sample] and FMW-132 through FMW-135) (Table 9) indicates that no shallow sources of CVOCs to groundwater were present on the Block 38 West Property.

Performance groundwater monitoring of the Deep Outwash Aquifer during construction dewatering indicated increasing cDCE and vinyl chloride concentrations along the northwestern boundary of the Block 38 West Property, confirming migration of the American



Linen CVOC plume toward the Block 38 West Site. The purpose of the dewatering performance groundwater monitoring was to monitor concentrations of CVOCs in groundwater associated with the American Linen CVOC Plume, as further described in the Technical Memorandum regarding Groundwater Monitoring Program (Farallon 2020a, Appendix F). Additional details and data are provided in Appendix F, and a summary is presented below:

- In May 2023, a single post-construction-dewatering groundwater performance monitoring event was completed to evaluate impacts from the American Linen CVOC Plume in the Deep Outwash Aquifer. The event was performed in general accordance with the Technical Memorandum (Farallon 2020a, Appendix F), as it included Deep Outwash Aquifer monitoring wells FMW-137 and FMW-138 but also included new well FMW-165. The results indicated that cDCE was detected at a concentration exceeding the screening level in the groundwater sample collected from FMW-137 (Table 9). cDCE was reported as non-detect at the laboratory PQLs in the samples collected from wells FMW-138 and FMW-165. Vinyl chloride was detected at concentrations exceeding the screening level in groundwater samples collected from wells FMW-137 and FMW-165, and was reported as non-detect at the laboratory PQL in the sample from well FMW-138. No other CVOCs were detected in the samples from these wells.
- These results indicate that the American Linen CVOC Plume is impacting groundwater along the northern portion of the Block 38 West Site at concentrations exceeding screening levels in the Deep Outwash Aquifer. As noted in Section 2.4.5, investigation and cleanup of the American Linen Site is being conducted by BMR-Dexter LLC under Agreed Order No. DE 14302.

## 8.2 MEDIA OF CONCERN

The confirmed medium of concern at the Block 38 West Site, based on the results from the RI and interim actions, is soil. Groundwater is not retained as a potential medium of concern based on the results from the groundwater monitoring conducted between May 2023 and February 2024, as discussed in Section 7.2.



### 8.3 TRANSPORT PATHWAYS

Hazardous substances in soil at the Block 38 West Site have the potential to migrate through natural mechanisms that may result in exposure to human and ecological receptors. The primary potential migration pathways at the Block 38 West Site are the following:

- **Soil to Groundwater**

Based on the results from the RI and interim actions, the soil to groundwater pathway is incomplete at the Block 38 West Site. The independent interim action and alley interim action conducted at the Block 38 West Site removed soil with proposed COCs detected at concentrations exceeding screening levels from within the limits of the Block 38 West Property and to the maximum extent practicable in the adjacent alley, eliminating the soil to groundwater pathway from the Block 38 West Property.

The RI groundwater monitoring program further evaluated the potential soil to groundwater pathway for proposed COCs detected at concentrations exceeding screening levels in soil beyond the limits of the construction excavation in the alley and the adjacent rights-of-way. Based on the groundwater data collected during the RI, the interim actions have eliminated the soil to groundwater pathway throughout the Block 38 West Site.

- **Soil/Groundwater to Air**

Volatile compounds in soil and shallow groundwater have the potential to volatilize to the vapor phase and intrude into nearby structures. However, based on the soil and groundwater data collected during the RI, the interim actions have eliminated throughout the Block 38 West Site any volatile compounds in soil and/or groundwater with the potential to volatilize to indoor air. The soil/groundwater pathway to air is considered incomplete.

- **Groundwater to Surface Water and Sediment**

Prior to interim actions, COPCs were detected at concentrations exceeding screening levels in groundwater samples collected on the Block 38 West Site. Based on the results from the RI, groundwater is no longer a medium of concern and the confirmed groundwater flow direction to the south, away from Lake Union (Figures 11A through 11C), confirm that the groundwater to surface water and sediment pathway is considered incomplete.





- **Soil to Fugitive Dust**

Transport of soil via fugitive dust is a secondary transport pathway for contaminated soil that was potentially complete during interim actions; however, the final cleanup action includes engineering controls (capping impacted soil with an impervious surface) to mitigate this transport pathway.

## **8.4 POTENTIAL RECEPTORS AND EXPOSURE PATHWAYS**

The potential exposure risks to human health and the environment associated with the presence of hazardous substances in soil and/or groundwater at the Block 38 West Site were evaluated and presented on Figure 29. This subsection presents the evaluation and conclusions pertaining to the potential exposure pathways at the Block 38 West Site.

### **8.4.1 Soil Direct Contact**

Soil containing hazardous substances detected at concentrations exceeding screening levels was removed from within the limits of the Block 38 West Property and within the construction excavation extent in the alley but may be present beyond the limits of the construction excavation in the alley and adjacent rights-of-way. The standard point of compliance for the direct contact exposure pathway for soil is a depth of 15 feet bgs for human health and 6 feet bgs for terrestrial receptors (WAC 173-340-740[6][d] and WAC 173-340-7490[4][b]). Hazardous substances (i.e., total DRO+ORO and cPAHs) at concentrations exceeding screening levels were detected in shallow soil, less than 15 feet bgs, ranging in elevation from 20 to 15 feet NAVD88 (10 to 15 feet bgs) adjacent to the northwestern corner of the Block 38 West Property and beyond the limits of the alley interim action.

Proposed COCs in soil at the Block 38 West Site after completion of the interim actions are covered by the current buildings, pavement, and sidewalks, effectively eliminating the direct contact exposure pathway. Institutional controls such as an Ecology-approved Environmental Covenant will be required to maintain current barriers and prevent potential exposure in the future.

### **8.4.2 Groundwater Ingestion/Drinking Water Beneficial Use**

Based on the results from the RI and interim actions, the contact with and/or ingestion of groundwater exposure pathway is incomplete at the Block 38 West Site. No hazardous substances were detected in groundwater at concentrations exceeding screening levels in



the Shallow or Intermediate Water-Bearing Zones. Therefore, groundwater is not retained as a medium of concern for the Block 38 West Site.

#### **8.4.3 Vapor Inhalation**

Based on the results from the RI and interim actions, the potential for a vapor intrusion risk from hazardous substances is incomplete. Prior to interim actions, naphthalene was detected at concentrations exceeding groundwater screening levels protective of indoor air in Shallow Water-Bearing Zone groundwater samples on the southwestern portion of the Block 38 West Property. The independent interim action removed the Shallow Water-Bearing Zone within the Property boundary and included the installation of a chemical resistant vapor barrier as a preemptive vapor intrusion mitigation measure. The barrier material, which is rated for petroleum hydrocarbons and other VOCs, would eliminate and/or reduce the potential vapor inhalation pathway for future building occupants if volatile hazardous substances were still present beyond the Property boundary. However, post-construction RI sampling at Shallow Water-Bearing Zone monitoring wells surrounding the southwestern corner of the Property indicate that naphthalene is not detectable above laboratory reporting limits. The vapor barrier will also provide protection against potential vapor intrusion of CVOCs proximate to the Block 38 West Property from the American Linen Site.

#### **8.4.4 Potential Receptors**

Based on the results from the RI and interim actions, direct contact with soil, incidental ingestion of soil, and/or inhalation of fugitive dust from the residual shallow soil impacts (less than 15 feet bgs) are the only future potential complete exposure pathways at the Block 38 West Site. The future potential pathways are only complete if the existing cap is removed or breached. Potential receptors that may be exposed to proposed COCs through these pathways would likely include future construction workers excavating in soil less than 15 feet bgs, future workers and patrons of the commercial and retail facilities, and/or local residents. If a risk were present, then the risk to the vulnerable population or overburdened community would be no greater than it would be to the general public.

#### **8.4.5 Terrestrial Ecological Evaluation**

A Terrestrial Ecological Evaluation (TEE) is required by WAC 173-340-7490 at any site where there has been a release of a hazardous substance to soil. The regulation requires that one of the following actions be taken:

- Documenting a TEE exclusion using the criteria presented in WAC 173-340-7491;



- Conducting a simplified TEE in accordance with WAC 173-340-7492; or
- Conducting a site-specific TEE in accordance with WAC 173-340-7493.

Based on the criteria for TEE exclusion in WAC 173-340-7491(1)(c)(i), the Block 38 West Site is excluded from a TEE because there is less than 1.5 acres of contiguous undeveloped land on or within 500 feet of any area of the Block 38 West Site; the Block 38 West Site is not contaminated with the hazardous substances listed in WAC 173-340-7491(1)(c)(ii); and based on the criteria in WAC 173-340-7491(1)(b), all soil contaminated with hazardous substances is, or will be, covered by buildings, paved roads, pavement, or other physical barriers that will prevent plants or wildlife from being exposed to the soil contamination. No further consideration of ecological impacts is required under MTCA. The Ecology Terrestrial Ecological Evaluation Form is provided in Appendix N.

## 8.5 PROPOSED CONSTITUENTS OF CONCERN

COPCs were selected based on the known historical uses of the Block 38 West Property and surrounding historical land use, fill known to have been placed historically in this area of South Lake Union, USTs encountered, and the potential for releases of contaminants at concentrations exceeding screening levels.

Proposed COCs retained for the Block 38 West Site consist of those hazardous substances that were detected in soil and/or groundwater samples collected from the Block 38 West Site and surrounding areas at concentrations exceeding the screening levels identified in Section 6.1 (Table 13). Based on the RI, residual concentrations of total DRO+ORO and/or cPAHs are present in fill soil that remains in the Westlake Avenue North and Mercer Street rights-of-way and in the alley area of the Block 38 West Site (Figures 24 through 28). The results from the RI confirmed that the interim actions completed have eliminated the soil leaching to groundwater pathway at the Block 38 West Site and the applicable soil screening levels were updated to reflect a direct contact exposure pathway (Table 14). Based on the nature and extent of soil contamination remaining at the Block 38 West Site and as described above in Section 7.1, total DRO+ORO and cPAHs are the only COPCs detected at concentrations exceeding the screening levels within 15 feet of the ground surface in the Westlake Avenue North right-of-way, Mercer Street right-of-way, and/or the alley area of the Block 38 West Site. Based on these residual impacts the proposed COCs retained for soil are:

- Total DRO+ORO; and



- Total cPAHs TEC.

As discussed above and in Section 7.2, no COPCs were detected in groundwater at concentrations exceeding the screening levels identified in Section 6.1 (Table 13). Based on the results from the RI, no hazardous substances were retained as proposed COCs for groundwater.

## 8.6 PROPOSED CLEANUP LEVELS

Screening levels were established for the RI based on the potential exposure pathways and receptors (identified in Section 8.3) to identify a conservative basis for defining the extent of contamination for each COPC and medium of potential concern. Proposed cleanup levels for the Block 38 West Site have been developed in accordance with WAC 173-340-700 through 173-340-760 to be protective of human health and the environment, including likely vulnerable populations and/or overburdened communities as identified in Section 2.7. The proposed cleanup levels for the proposed COCs in soil identified above are based on MTCA Method B cleanup levels protective of direct contact. MTCA Method A cleanup levels can be used as a surrogate for Method B for compounds that do not have established Method B cleanup levels. Based on the residual soil contamination present at the Block 38 West Site and the current engineering controls in place, it is unlikely that any human receptors, including those that are part of a vulnerable population or overburdened community, are at risk unless the existing cap is breached or removed as discussed in Section 8.4.4.

The proposed cleanup levels for the proposed COCs in soil at the Block 38 West Site are summarized below and in Table 14:

- Total DRO+ORO: 2,000 mg/kg (based on MTCA Method A, unrestricted land uses);
- Total cPAHs TEC: 0.19 mg/kg (based on MTCA Method B, direct contact).



## 9.0 FOCUSED FEASIBILITY STUDY

This section provides a summary of the technical elements for an FFS to select a preferred cleanup alternative for media of concern or demonstrate that the interim actions completed at the Block 38 West Site constitute a permanent cleanup action and were permanent to the maximum extent practicable in accordance with MTCA and current land use. These technical elements include identifying the cleanup action goals, cleanup technologies, proposed COCs, affected media, and the proposed cleanup levels appropriate for the Block 38 West Site, and identifying a preferred cleanup action.

The former Block 38 West Property structures were demolished as part of the recent redevelopment. The Block 38 West Property redevelopment included construction of a multi-story mixed-use building, with 12 stories above street level and four levels of underground parking.

### 9.1 SUMMARY OF REMAINING CONTAMINATION AND APPLICABLE CLEANUP STANDARDS

The RI identified total DRO+ORO and cPAHs that remain in soil at concentrations greater than proposed cleanup levels on the Block 38 West Site. Based on the results from the RI, subsurface investigations, and interim actions completed to date by Farallon and others, the following historical operations and/or features were confirmed as sources of soil contamination at the Block 38 West Site: historical placement of impacted fill soil; former timber pilings associated with historical buildings; a coal fill layer encountered across the east-central and northern portions of the Block 38 West Property and within the alley; localized impacts associated with former bunker fuel oil USTs encountered in the northwestern portion of the Block 38 West Property; oil encountered in a sanitary sewer line at the southeastern portion of the Block 38 West Property, and localized impacts associated with a former railroad trestle and former timber pilings within the alley as discussed in Section 8.1. The RI also confirmed the presence of CVOCs, specifically cDCE and vinyl chloride associated with the American Linen CVOC Plume, in groundwater along the northwestern portion of the Block 38 West Property at concentrations exceeding American Linen screening levels.

Soil containing total DRO+ORO and cPAHs at concentrations greater than the proposed cleanup levels identified in Section 8.6 remains in localized areas within the alley and near the northwestern boundary of the Block 38 West Property as described in Section 7.1 and shown on Figures 24 and 25. The proposed cleanup levels—2,000 mg/kg for total DRO+ORO and 0.19 mg/kg for total cPAHs TEC—are based on protection of direct soil



contact exposures. As such, the point of compliance where the proposed soil cleanup levels must be met is soil throughout the Site from ground surface to 15 feet bgs, in accordance with WAC 173-340-740(6)(d). The remaining contaminants exceeding the proposed cleanup levels are present in soil at depths ranging from approximately 5 to 15 feet bgs.

## 9.2 CLEANUP ACTION REQUIREMENTS AND GOALS

As part of the focused feasibility study, Farallon evaluated remediation technologies for the Block 38 West Site with respect to the cleanup requirements set forth in MTCA. A cleanup action must satisfy the following general requirements, as specified in WAC 173-340-360(3)(a):

- Protect human health and the environment, including likely vulnerable populations and overburdened communities;
- Comply with cleanup standards;
- Comply with applicable state and federal laws;
- Prevent or minimize present and future releases and migration of hazardous substances in the environment;
- Provide resilience to climate change impacts that have a high likelihood of occurring and severely compromising its long-term effectiveness;
- Provide for compliance monitoring;
- Not rely primarily on institutional controls and monitoring at a site, or a portion thereof, if it is technically possible to implement a more permanent cleanup action;
- Not rely primarily on dilution and dispersion unless the incremental costs of any active remedial measures over the costs of dilution and dispersion grossly exceed the incremental degree of benefits;
- Provide for a reasonable restoration time frame; and
- Use permanent solutions to the maximum extent practicable.

In addition to the general requirements listed above, MTCA requires that cleanup actions be evaluated for action-specific requirements (WAC 173-340-360(3)(b)), media-specific requirements (WAC 173-340-360(3)(c)), and public concerns and tribal rights and interests (WAC 173-340-360(3)(d)).



Block 38 West Site-specific cleanup action goals were also identified in accordance with WAC 173-340-351(6)(a). The cleanup action goals listed below provide additional framework for the proposed cleanup action at the Block 38 West Site:

- Achieve cleanup standards using a permanent solution as defined in WAC 173-340-200 that meets MTCA requirements for cleanup actions per WAC 173-340-360 and WAC 173-340-370;
- Eliminate the exposure pathways for proposed COCs in soil; and
- Protect human health and the environment, including vulnerable populations and overburdened communities located near the Block 38 West Site.

### 9.3 TECHNOLOGY SCREENING AND ASSESSMENT OF INTERIM REMEDIAL ACTIONS

Cleanup actions may consist of multiple general response actions to meet the cleanup action goals for a cleanup site. Typical general response actions that are applicable to most cleanup sites include:

- No action;
- Institutional controls;
- Containment;
- Removal;
- Ex-situ treatment; and
- In-situ treatment.

Of these response actions, the interim actions completed to date at the Block 38 West Site have primarily included removal of affected soil and groundwater. Other general response actions that are applicable to the Block 38 West Site include containment and institutional controls. In-situ and ex-situ treatment options are very limited for addressing the contaminants that remain at the Block 38 West Site, and no action would not be appropriate as it would not achieve cleanup action goals.

Property redevelopment included construction dewatering and mass excavation. A contaminant resistant vapor barrier was installed to prevent potential impacts from soil vapor contamination and/or future migration of CVOCs in soil gas and/or groundwater from the American Linen CVOC Plume onto the Block 38 West Site, if present. Because these technologies were implemented through interim actions at the Block 38 West Site at a scale



sufficient for cleanup, they were identified for the selected cleanup action (in addition to treatment of contaminated groundwater as part of the permitted extraction of groundwater during construction). Based on the results from the RI, subsurface investigations and interim actions, further evaluation of other remedial technologies is not necessary.

The interim actions conducted concurrent with redevelopment achieved the following:

- Permanent removal of soil with concentrations of the proposed COCs that exceed proposed cleanup levels from within the limits of the Block 38 West Property;
- Removal of contaminated soil and groundwater within the Shallow Water-Bearing Zone and the upper portion of the Intermediate Water-Bearing Zone beneath the Block 38 West Property; and
- Permanent removal of soil with concentrations of the proposed COCs that exceed proposed cleanup levels encountered within the limits of the construction excavation during improvements made to the alley.

In addition, the new building foundation design on the Block 38 West Property included the installation of a chemical resistant vapor barrier around the entire perimeter and beneath the building foundation, eliminating the potential for future vapor intrusion into the finished structure. All remaining soil contamination is contained beneath impervious surfaces installed as part of the property improvements.

The potential for continued migration of CVOCs from the American Linen CVOC Plume onto the Block 38 West Site in groundwater remains possible until the CVOC source on the American Linen Site is fully remediated. Any exposure pathway from soil vapor to indoor air associated with potential current and/or future migration of CVOCs in soil gas and/or groundwater from the American Linen CVOC Plume onto the Block 38 West Site will be mitigated by the vapor and groundwater barrier system installed on the below-grade portion of the new structure.

Removal of soil, removal of the Shallow Water Bearing-Zone beneath the Block 38 West Property, installation of a chemical resistant vapor barrier at the Block 38 West Site, and installation of new pavement within the alley and surrounding the Block 38 West Property comprise the cleanup action with the greatest permanence. Although other cleanup alternatives may have been less costly, those alternatives were unlikely to have resulted in a shorter restoration time frame, may not be as permanent, and were incompatible with the planned development of the Block 38 West Site.





#### 9.4 SELECTED CLEANUP ACTION

Sufficient information is presented in this RI/FFS Report to select, design, and implement a permanent cleanup action at the Block 38 West Site that is protective of human health and the environment. As noted in Section 9.2, one of the cleanup action objectives is to achieve cleanup standards using a permanent solution as defined in WAC 173-340-200 that meets MTCA requirements for cleanup actions per WAC 173-340-360 and WAC 173-340-370.

Based on the RI data, completion of interim actions, and the assessment of practical remedial alternatives in light of redevelopment of the Block 38 West Site, the selected cleanup action consists of the following elements:

- Complete removal of affected soil and groundwater by mass excavation to an elevation of -6.5 feet NAVD88 on the Block 38 West Property (completed as a result of the independent interim action);
- Removal of affected soil to the maximum extent practicable in the alley area to an elevation of 25 to 18 feet NAVD88 (completed as a result of the alley interim action);
- Installation of a permanent vapor and groundwater barrier encompassing the entire building envelope for the new structure to eliminate the potential for any future vapor intrusion into indoor air (completed as a result of the independent interim action);
- Installation of a protective cap over remaining soil contamination, consisting of new pavement within the alley and surrounding the new building (completed as a result of the independent and alley interim actions); and
- Implementation of institutional controls to protect and maintain the cap and prevent direct contact with remaining contamination (not yet completed).

In addition to the elements listed above, CVOC-impacted groundwater associated with the American Linen Site was removed during the independent interim action through the temporary construction dewatering treatment system installed to facilitate excavation.

Based on the completed interim actions to date, only implementation of institutional controls remains. This will consist of implementing an environmental covenant that meets the requirements of WAC 173-340-440(8), (9), and (10) and RCW 64.70 (Uniform Environmental Covenants Act). The Environmental Covenant will be prepared in cooperation with Ecology and consistent with the Toxics Cleanup Program Procedure 440A (Establishing Environmental Covenants under the Model Toxics Control Act).



The purpose of the covenant is to impose certain restrictions on the activities and uses of the Block 38 West Property and surrounding right-of-way to protect human health, the environment, and the integrity of the interim actions completed to date at the Block 38 West Site. The covenant will remain in place until concentrations of total DRO+ORO and cPAHs decrease to levels less than the proposed cleanup levels. It is expected that inspections and maintenance of the protective cap will be conducted on an annual basis as part of the covenant, using an Ecology-approved inspection checklist.

## 9.5 EVALUATION OF SELECTED CLEANUP ACTION

The selected cleanup action for the Block 38 West Site satisfies the MTCA general requirements in WAC 173-340-360(3)(a) and meets additional requirements specified in 173-340-360(3)(b), WAC 173-340-360(3)(c), and WAC 173-340-360(3)(d), and expectations specified in WAC 173-340-370. The selected cleanup action will satisfy the following general requirements, as noted above in Section 9.2 and specifically in WAC 173-340-360(3)(a) and WAC 173-340-360(3)(d).

- **Protect human health and the environment.** The selected cleanup action—source removal and engineering and institutional controls—will protect human health and the environment, including vulnerable populations and overburdened communities identified in the vicinity of the Block 38 West Site, by permanently reducing the volume of hazardous substances in soil and eliminating the potential exposure pathway to residual soil contamination at the Site. As discussed above, the interim actions completed to date have mitigated potential exposure to environmental harms.
- **Comply with cleanup standards.** Excavation, removal, and off-Property disposal of soil containing COPCs resulted in the achievement of applicable MTCA cleanup levels (including proposed soil cleanup levels for the proposed COCs) in soil at the Block 38 West Property and to the maximum extent practicable in the northwestern portion and alley area of the Block 38 West Site. These actions have also resulted in the reduction of COPCs in Site groundwater such that all concentrations have achieved compliance with applicable MTCA cleanup levels.
- **Comply with applicable state and federal laws.** Interim actions completed to date complied with applicable state and federal laws, as defined in WAC 173-340-710, and met requirements of other local, state, and federal laws related to environmental protection, health and safety, transportation, and disposal. Pursuant to MTCA, the cleanup action would be exempt from the procedural requirements of Chapters



70A.305.090 of the Revised Code of Washington, and of any laws requiring or authorizing state or local government permits or approvals. However, the cleanup action must still comply with the substantive requirements of such permits or approvals in accordance with WAC 173-340-510(2). The cleanup action must also comply with any applicable federal regulations and obtain any required federal permits as necessary. These requirements are often categorized as location-specific, action-specific, or chemical-specific.

The future cleanup action elements will also comply with all relevant and applicable local, state, and federal laws that are summarized in Table 15.

- **Prevent or minimize present and future releases and migration of hazardous substances in the environment.** Existing engineering controls will contain and eliminate the potential direct contact exposure pathway, and the chemical resistant vapor barrier rated for direct contact with CVOCs will eliminate any potential future migration of soil gas to indoor air on the Block 38 West Site associated with the American Linen Site CVOC Plume.
- **Provide resilience to climate change.** Based on the evaluation above in Section 2.8, the location of the Block 38 West Site in a highly developed area in Seattle, projected local and regional climatological characteristics are not anticipated to affect the migration of hazardous substances or the resilience of cleanup action alternatives at the Block 38 West Site.
- **Provide for compliance monitoring.** Compliance monitoring was performed consistent with WAC 173-340-410 during the interim actions that have already occurred. Implementation of institutional controls will ensure that engineering controls are maintained and allow for long-term compliance monitoring as needed.
- **Provide for a reasonable restoration time frame.** Cleanup of the Block 38 West Property is complete and cleanup of the adjacent alley and rights-of-way at the Block 38 West Site are complete to the maximum extent practicable as a result of the interim actions. The restoration time frame is considered reasonable and consistent with WAC 173-340-360(4)(c) and, based on the RI data, has proven to be effective in the long term by restoring groundwater quality and eliminating the potential exposure pathways to residual soil contamination.
- **Use permanent solutions to the maximum extent practicable.** The selected cleanup action is a permanent solution and has achieved applicable cleanup levels at the



points of compliance for hazardous substances throughout the majority of the Site in the short term. The completed source removal and ongoing engineering and institutional controls will protect human health and the environment by permanently reducing the volume of hazardous substances in soil and eliminating the potential exposure pathway to residual soil contamination at the Block 38 West Site.

- **Consider public concerns and tribal rights and interests.** The interim actions were reviewed during the SEPA process for the independent interim action and a public comment period for the Alley Area Interim Action. Public concerns were taken into consideration with regards to limiting impacts to rush hour traffic and creating through access in the alley to improve access to below grade parking garages from Republican Street. Tribal rights and interests were taken into consideration and notification of the planned development was provided to the Duwamish, Muckleshoot, Snoqualmie, and Suquamish Tribes in 2018 prior to beginning geotechnical work at the Block 38 West Property.

The selected cleanup action will meet action-specific requirements applicable under WAC 173-340-360(3)(b) to allow for use of institutional controls, provide financial assurances, and allow for periodic reviews of annual cap inspections. The selected cleanup action was implemented in conjunction with redevelopment and was highly implementable.



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## 11.0 LIMITATIONS

### 11.1 GENERAL LIMITATIONS

The conclusions contained in this report/assessment are based on professional opinions with regard to the subject matter. These opinions have been arrived at in accordance with currently accepted hydrogeologic and engineering standards and practices applicable to this location. The conclusions contained herein are subject to the following inherent limitations:

- **Accuracy of Information.** Farallon obtained, reviewed, and evaluated certain information used in this report/assessment from sources that were believed to be reliable. Farallon's conclusions, opinions, and recommendations are based in part on such information. Farallon's services did not include verification of its accuracy or authenticity. Should the information upon which Farallon relied prove to be inaccurate or unreliable, Farallon reserves the right to amend or revise its conclusions, opinions, and/or recommendations.
- **Reconnaissance and/or Characterization.** Farallon performed a reconnaissance and/or characterization of the Site that is the subject of this report/assessment to document current conditions. Farallon focused on areas deemed more likely to exhibit hazardous materials conditions. Contamination may exist in other areas of the Site that were not investigated or were inaccessible. Site activities beyond Farallon's control could change at any time after the completion of this report/assessment.

For the foregoing reasons, Farallon cannot and does not warrant or guarantee that the Site is free of hazardous or potentially hazardous substances or conditions, or that latent or undiscovered conditions will not become evident in the future. Farallon's observations, findings, and opinions can be considered valid only as of the date of the report.

This report/assessment has been prepared in accordance with the contract for services between Farallon and City Investors IX LLC, and currently accepted industry standards. No other warranties, representations, or certifications are made.

### 11.2 LIMITATION ON RELIANCE BY THIRD PARTIES

**Reliance by third parties is prohibited.** This report/assessment has been prepared for the exclusive use of City Investors IX LLC to address the unique needs of City Investors IX LLC at the Block 38 West Site at a specific point in time.

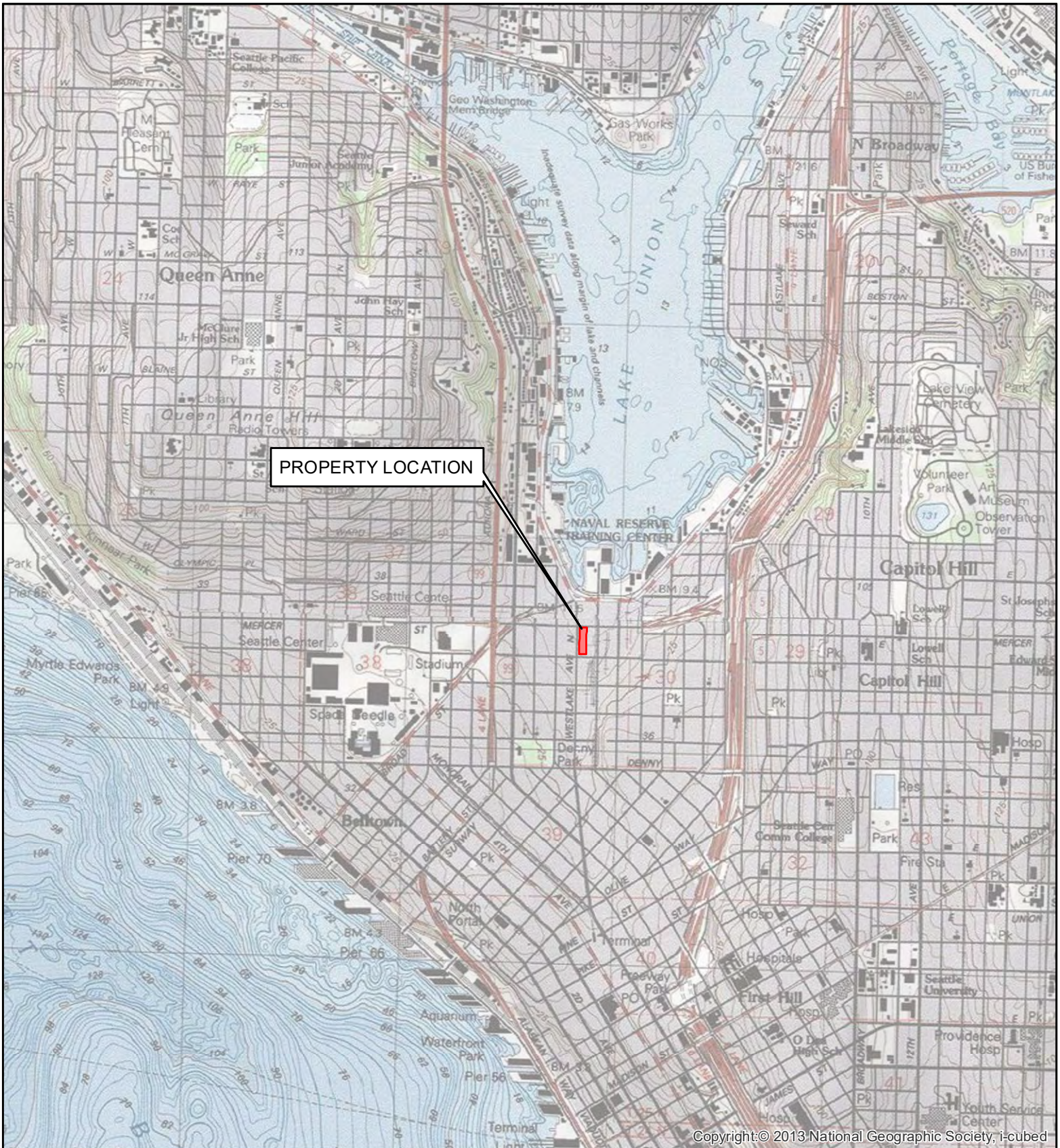


This is not a general grant of reliance. No one other than City Investors IX LLC may rely on this report unless Farallon agrees in advance to such reliance in writing. Any unauthorized use, interpretation, or reliance on this report/assessment is at the sole risk of that party and Farallon will have no liability for such unauthorized use, interpretation, or reliance.

## FIGURES

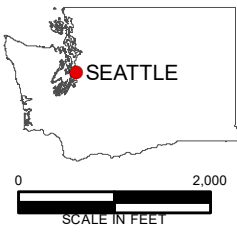
REMEDIAL INVESTIGATION/FOCUSED FEASIBILITY STUDY  
Block 38 West Site  
500 through 536 Westlake Avenue North  
Seattle, Washington

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REFERENCE: 7.5 MINUTE USGS QUADRANGLE SEATTLE NORTH, WASHINGTON, DATED 1983



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**FIGURE 1**  
VICINITY MAP  
BLOCK 38 WEST SITE  
SEATTLE, WASHINGTON

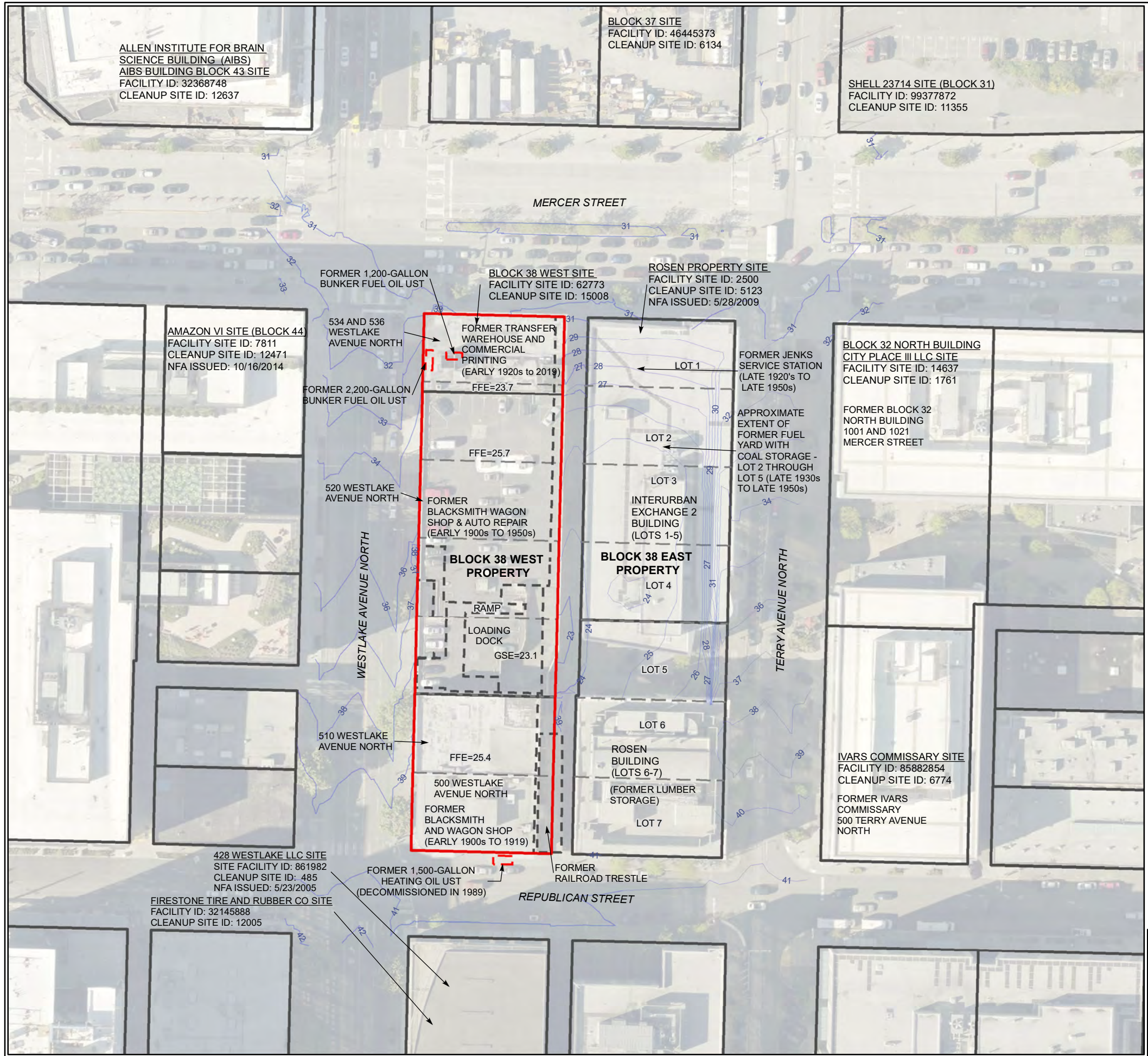
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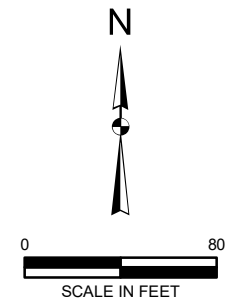


**LEGEND**

- PILE
- - - BUILDING FEATURES (BUILDINGS ON BLOCK 38 WEST PROPERTY DEMOLISHED IN 2019)
- · - · LOT LINE
- 30— GROUND SURFACE ELEVATION CONTOUR
- ▭ PROPERTY BOUNDARY
- ▭ KING COUNTY PARCEL BOUNDARY

NOTES:  
 LOADING DOCK HIGHER THAN GSE  
 ELEVATION SOURCE: BUSH, ROED, & HITCHINGS, INC. (2014)  
 ELEVATION DATA PRESENTED IN FEET ABOVE MEAN SEA LEVEL IN THE NORTH AMERICAN VERTICAL DATUM OF 1988

FFE = APPROXIMATE FINISH FLOOR ELEVATIONS OF GROUND FLOOR OF FORMER BUILDING  
 GSE = APPROXIMATE GROUND SURFACE ELEVATION OF FORMER LOADING DOCK AREA  
 UST = UNDERGROUND STORAGE TANK



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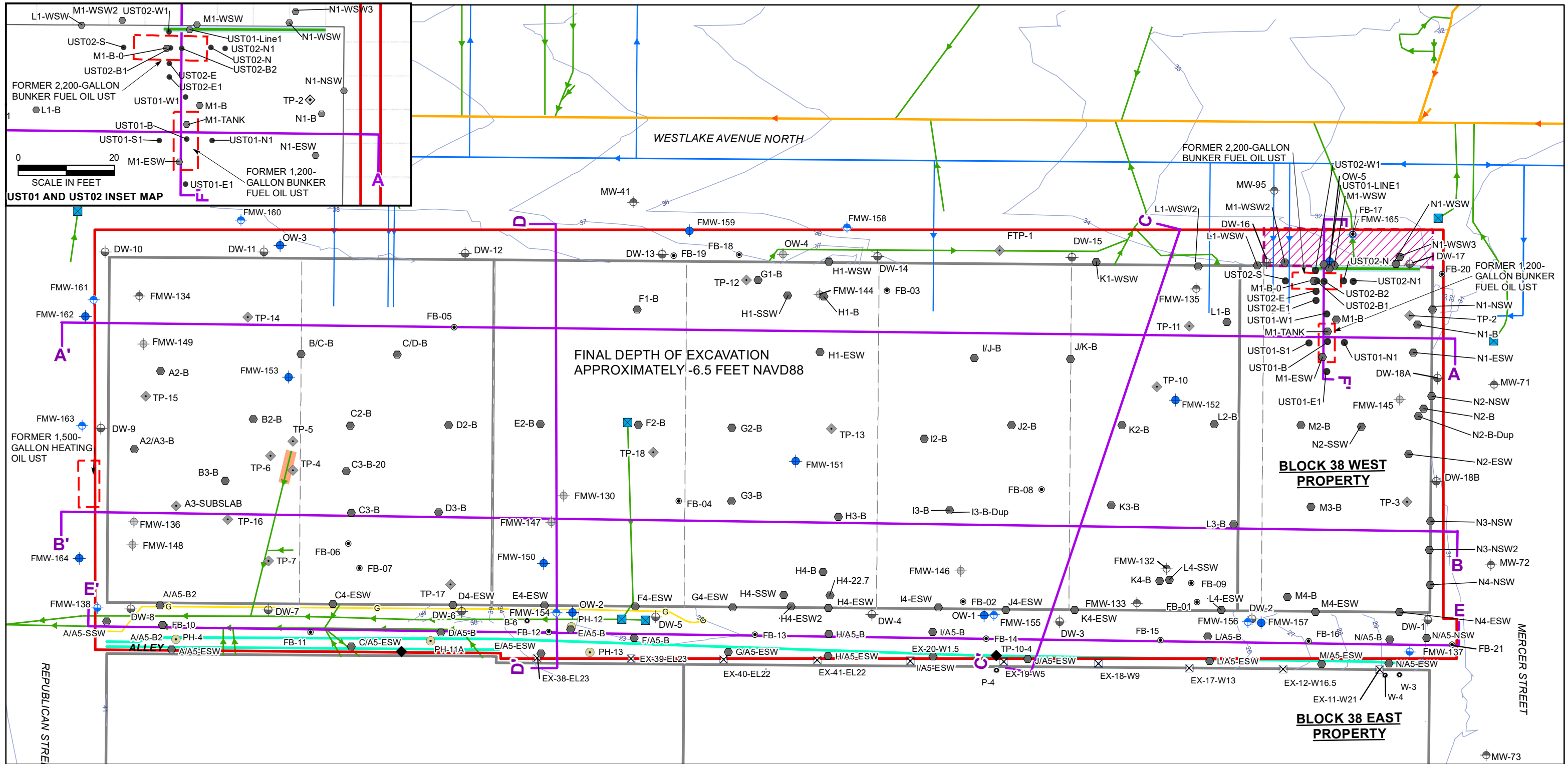
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**FIGURE 2**  
 SITE PLAN WITH  
 HISTORICAL FEATURES  
 BLOCK 38 WEST SITE  
 SEATTLE, WASHINGTON

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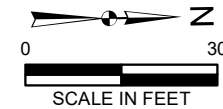
**LEGEND**

- SHALLOW WATER-BEARING ZONE MONITORING WELL
- ⊕ DEWATERING WELL
- ⊕ DEEP OUTWASH AQUIFER WELL
- ⊕ DECOMMISSIONED SHALLOW WATER-BEARING ZONE MONITORING WELL
- ⊕ INTERMEDIATE WATER-BEARING ZONE MONITORING WELL / OBSERVATION WELL
- ⊕ DECOMMISSIONED INTERMEDIATE WATER-BEARING ZONE MONITORING WELL
- BORING (FARALLON)
- BORING (GEOENGINEERS)
- ⊗ EXCAVATION BORING (FARALLON)
- ◆ TEST PIT (GEOENGINEERS)
- POTHOLE (FARALLON)
- UST SAMPLE LOCATION (FARALLON)
- EXCAVATION SAMPLE LOCATION (FARALLON)
- ◆ TEST PIT (FARALLON)

- PIPING DISCOVERED IN SIDEWALL [BELIEVED TO BE ASSOCIATED WITH DISCOVERED USTs]
- MTCA SITE BOUNDARY
- FORMER UNDERGROUND STORAGE TANKS (USTs)
- MECHANICAL EQUIPMENT AREA DECOMMISSIONED AND FILLED WITH CDF
- KING COUNTY PARCELS
- LOT LINE
- LINE OF CROSS SECTION

- ⊠ CATCH BASIN
- APPROXIMATE SECTION OF THE SIDE SEWER WHERE OILY SUBSTANCE OBSERVED
- COMBINED SEWER LATERAL
- WATER LINE
- COMBINED MAIN
- FIBER OPTIC LINE
- NEW GAS LINE

NOTES:  
 1. ALL LOCATIONS ARE APPROXIMATE.  
 2. FIGURES WERE PRODUCED IN COLOR. GRAYSCALE COPIES MAY NOT REPRODUCE ALL ORIGINAL INFORMATION.  
 3. CDF = CONTROLLED DENSITY FILL  
 4. MTCA = WASHINGTON STATE MODEL TOXICS CONTROL ACT CLEANUP REGULATION  
 5. ELEVATION DATA PRESENTED IN FEET ABOVE MEAN SEA LEVEL IN THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) ELEVATION SOURCE: BUSH, ROED, & HITCHINGS, INC. (2014)



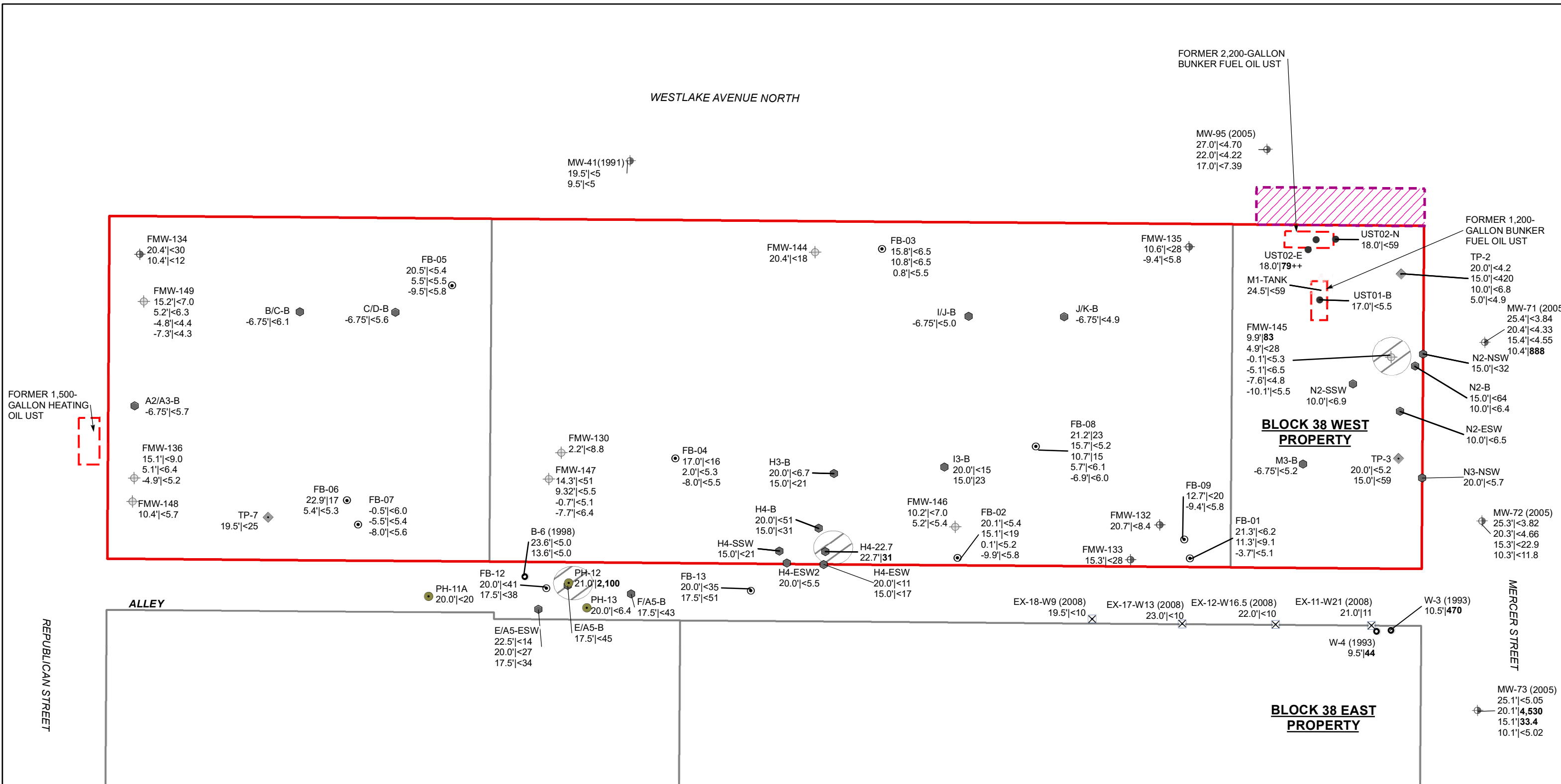
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**FIGURE 3**  
 SITE PLAN WITH SAMPLE LOCATIONS  
 BLOCK 38 WEST SITE  
 SEATTLE, WASHINGTON

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**LEGEND**

- DECOMMISSIONED SHALLOW WATER-BEARING ZONE MONITORING WELL
- DECOMMISSIONED INTERMEDIATE WATER-BEARING ZONE MONITORING WELL
- BORING (FARALLON)
- BORING (GEOENGINEERS)
- EXCAVATION SAMPLE (GEOENGINEERS)
- POTHOLE (FARALLON)
- UST SAMPLE LOCATION (FARALLON)
- EXCAVATION SAMPLE LOCATION (FARALLON)
- TEST PIT (FARALLON)

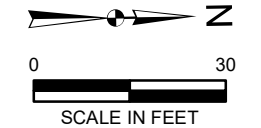
- ESTIMATED EXTENT OF SOIL EXCEEDING THE SCREENING LEVEL THAT WAS EXCAVATED AND REMOVED BY INTERIM ACTIONS
- MECHANICAL EQUIPMENT AREA DECOMMISSIONED AND FILLED WITH CDF
- PROPERTY BOUNDARY
- FORMER UNDERGROUND STORAGE TANKS (USTs)
- KING COUNTY PARCEL BOUNDARY

NOTES:  
 DATA SHOWN ARE FOR SAMPLES COLLECTED BETWEEN 2014 THROUGH 2023 UNLESS OTHERWISE NOTED  
 FOR SOIL SAMPLES:  
 ELEVATION IN FEET NAVD88 | GRO  
 ANALYTICAL RESULTS IN MILLIGRAMS PER KILOGRAM (mg/kg)  
**BOLD** = DENOTES CONCENTRATIONS THAT EXCEED THE SOIL SCREENING LEVEL OF 30 mg/kg  
 < = DENOTES ANALYTE NOT DETECTED AT OR EXCEEDING THE REPORTING LIMIT LISTED  
 ++ = FUEL PATTERN INDICATIVE OF HEAVY OIL; PRODUCT CONFIRMED AS BUNKER C FUEL OIL  
 CDF = CONTROLLED DENSITY FILL  
 GRO = TOTAL PETROLEUM HYDROCARBONS (TPH) AS GASOLINE-RANGE ORGANICS  
 MTCA = WASHINGTON STATE MODEL TOXICS CONTROL ACT CLEANUP REGULATION  
 NAVD88 = NORTH AMERICAN VERTICAL DATUM OF 1988



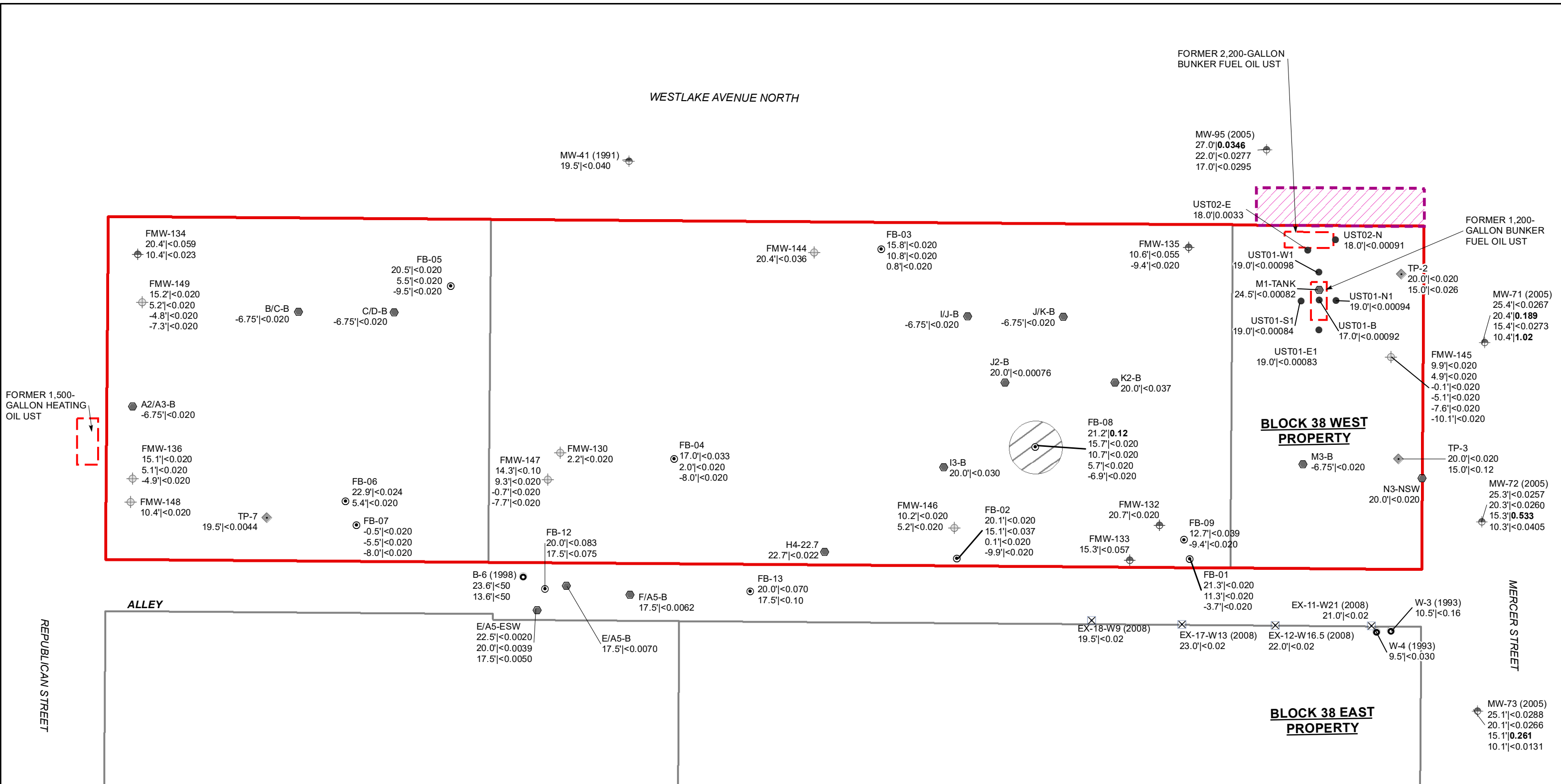
**FIGURE 4**  
 SOIL ANALYTICAL RESULTS FOR GRO  
 BLOCK 38 WEST SITE  
 SEATTLE, WASHINGTON

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- LEGEND**
- ⊕ DECOMMISSIONED SHALLOW WATER-BEARING ZONE MONITORING WELL
  - ⊕ DECOMMISSIONED INTERMEDIATE WATER-BEARING ZONE MONITORING WELL
  - ⊙ BORING (FARALLON)
  - BORING (GEOENGINEERS)
  - ⊗ EXCAVATION SAMPLE (GEOENGINEERS)
  - UST SAMPLE LOCATION (FARALLON)
  - EXCAVATION SAMPLE LOCATION (FARALLON)
  - ◆ TEST PIT (FARALLON)

- ⊕ ESTIMATED EXTENT OF SOIL EXCEEDING THE SCREENING LEVEL THAT WAS EXCAVATED AND REMOVED BY INTERIM ACTIONS
- ▨ MECHANICAL EQUIPMENT AREA DECOMMISSIONED AND FILLED WITH CDF
- ▭ PROPERTY BOUNDARY
- ▭ FORMER UNDERGROUND STORAGE TANKS (USTs)
- ▭ KING COUNTY PARCEL BOUNDARY

**NOTES:**  
 DATA SHOWN ARE FOR SAMPLES COLLECTED BETWEEN 2014 THROUGH 2023 UNLESS OTHERWISE NOTED  
 FOR SOIL SAMPLES:  
 ELEVATION IN FEET NAVD88 | BENZENE  
 ANALYTICAL RESULTS IN MILLIGRAMS PER KILOGRAM (mg/kg)  
**BOLD** = DENOTES CONCENTRATIONS THAT EXCEED THE SOIL SCREENING LEVEL OF 0.027 mg/kg (VAPOSE) / 0.0017 mg/kg (SATURATED)  
 < = DENOTES ANALYTE NOT DETECTED AT OR EXCEEDING THE REPORTING LIMIT LISTED  
 CDF = CONTROLLED DENSITY FILL  
 MTCA = WASHINGTON STATE MODEL TOXICS CONTROL ACT CLEANUP REGULATION  
 NAVD88 = NORTH AMERICAN VERTICAL DATUM OF 1988

SCALE IN FEET

**FIGURE 5**  
 SOIL ANALYTICAL RESULTS  
 FOR BENZENE  
 BLOCK 38 WEST SITE  
 SEATTLE, WASHINGTON

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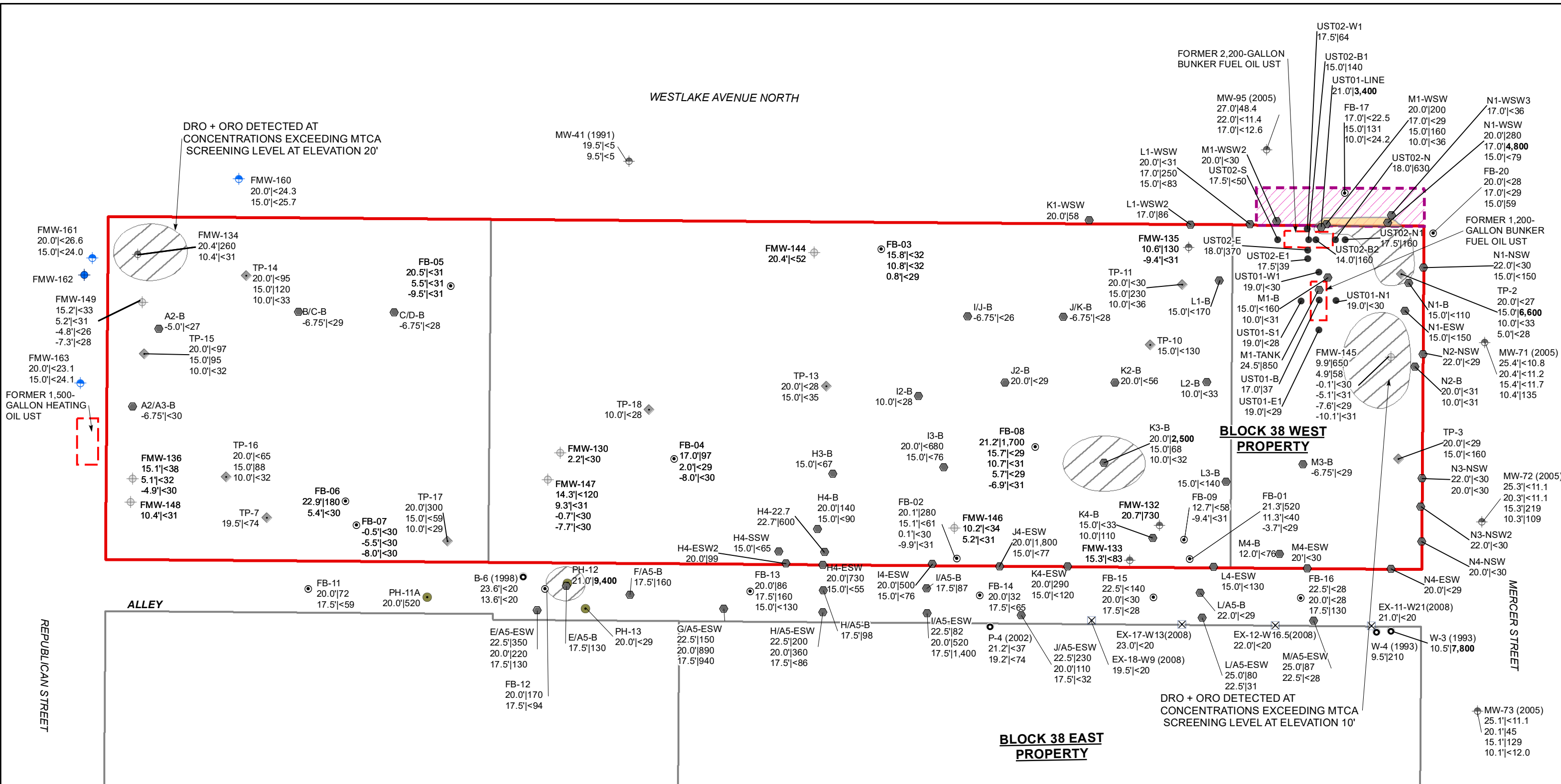
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**LEGEND**

- SHALLOW WATER-BEARING ZONE MONITORING WELL
- INTERMEDIATE WATER-BEARING ZONE MONITORING WELL / OBSERVATION WELL
- DECOMMISSIONED SHALLOW WATER-BEARING ZONE MONITORING WELL
- DECOMMISSIONED INTERMEDIATE WATER-BEARING ZONE MONITORING WELL
- BORING (FARALLON)
- BORING (GEOENGINEERS)
- EXCAVATION SAMPLE (GEOENGINEERS)
- POTHOLE (FARALLON)
- UST SAMPLE LOCATION (FARALLON)
- EXCAVATION SAMPLE LOCATION (FARALLON)
- TEST PIT (FARALLON)

- ESTIMATED EXTENT OF SOIL EXCEEDING THE SCREENING LEVEL REMAINING IN PLACE POST INTERIM ACTIONS OR INACCESSIBLE DUE TO EXISTING UTILITY BANK
- ESTIMATED EXTENT OF SOIL EXCEEDING THE SCREENING LEVEL THAT WAS EXCAVATED AND REMOVED BY INTERIM ACTIONS
- MECHANICAL EQUIPMENT AREA DECOMMISSIONED AND FILLED WITH CDF
- PROPERTY BOUNDARY
- FORMER UNDERGROUND STORAGE TANKS (USTs)
- KING COUNTY PARCEL BOUNDARY

**NOTES:**  
 DATA SHOWN ARE FOR SAMPLES COLLECTED BETWEEN 2014 THROUGH 2023 UNLESS OTHERWISE NOTED

FOR SOIL SAMPLES:  
 ELEVATION IN FEET NAVD88 | DRO ANALYTICAL RESULTS IN MILLIGRAMS PER KILOGRAM (mg/kg)

**BOLD** = DENOTES CONCENTRATIONS THAT EXCEED THE SOIL SCREENING LEVEL OF 2,000 mg/kg  
 < = DENOTES ANALYTE NOT DETECTED AT OR EXCEEDING THE REPORTING LIMIT LISTED

CDF = CONTROLLED DENSITY FILL  
 DRO = TOTAL PETROLEUM HYDROCARBONS (TPH) AS DIESEL-RANGE ORGANICS  
 MTCA = WASHINGTON STATE MODEL TOXICS CONTROL ACT CLEANUP REGULATION  
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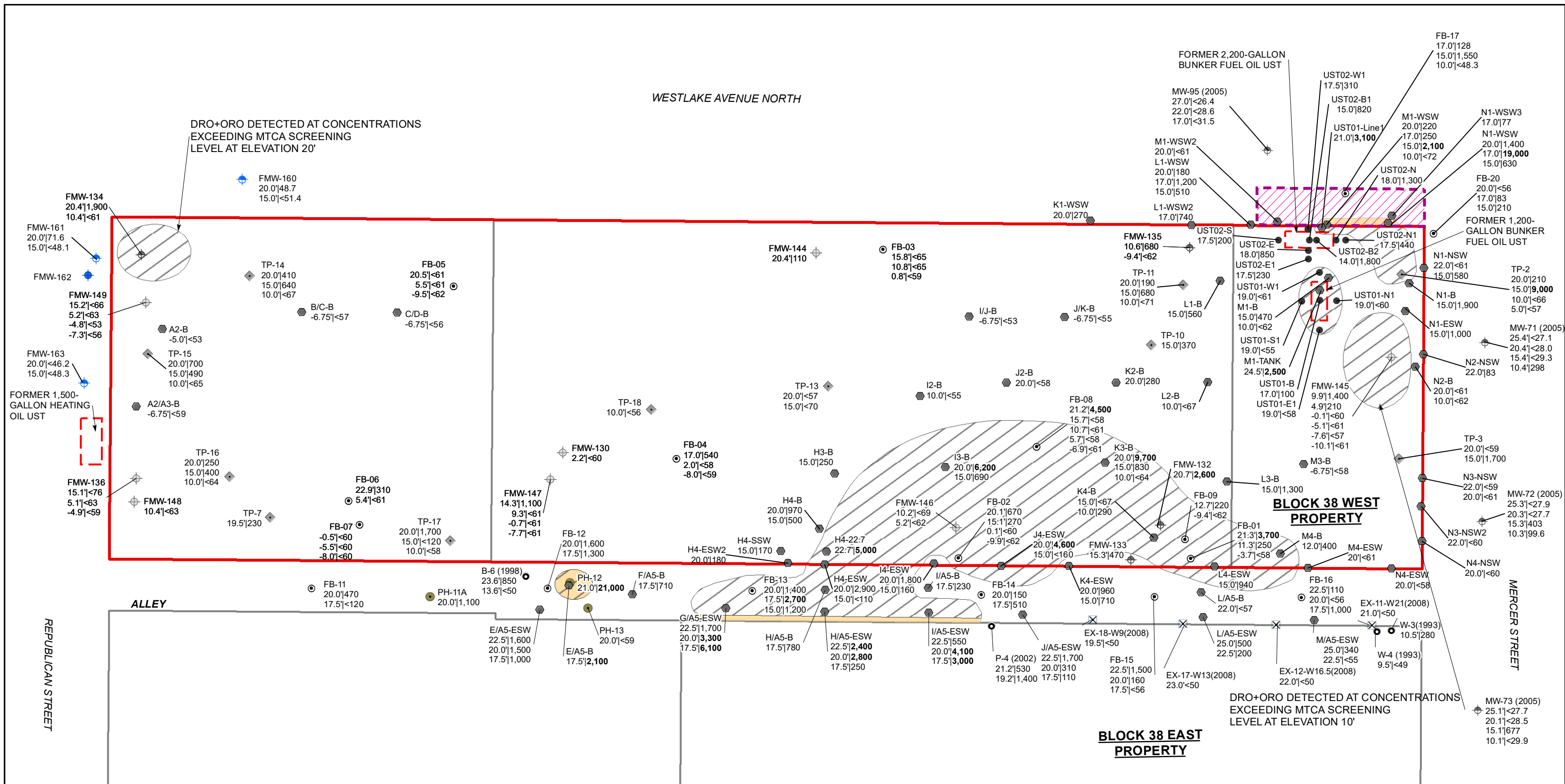
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**FIGURE 6**  
 SOIL ANALYTICAL RESULTS FOR DRO  
 BLOCK 38 WEST SITE  
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**LEGEND**

- SHALLOW WATER-BEARING ZONE MONITORING WELL
- INTERMEDIATE WATER-BEARING ZONE MONITORING WELL / OBSERVATION WELL
- DECOMMISSIONED SHALLOW WATER-BEARING ZONE MONITORING WELL
- DECOMMISSIONED INTERMEDIATE WATER-BEARING ZONE MONITORING WELL
- BORING (FARALLON)
- BORING (GEOENGINEERS)
- EXCAVATION SAMPLE (GEOENGINEERS)
- POTHOLE (FARALLON)
- UST SAMPLE LOCATION (FARALLON)
- EXCAVATION SAMPLE LOCATION (FARALLON)
- TEST PIT (FARALLON)
- ESTIMATED EXTENT OF SOIL EXCEEDING THE SCREENING LEVEL REMAINING IN PLACE POST INTERIM ACTIONS OR INACCESSIBLE DUE TO EXISTING UTILITY BANK
- ESTIMATED EXTENT OF SOIL EXCEEDING THE SCREENING LEVEL THAT WAS EXCAVATED AND REMOVED BY INTERIM ACTIONS
- MECHANICAL EQUIPMENT AREA DECOMMISSIONED AND FILLED WITH CDF
- PROPERTY BOUNDARY
- FORMER UNDERGROUND STORAGE TANKS (USTs)
- KING COUNTY PARCEL BOUNDARY

**NOTES:**  
 DATA SHOWN ARE FOR SAMPLES COLLECTED BETWEEN 2014 THROUGH 2023 UNLESS OTHERWISE NOTED FOR SOIL SAMPLES:  
 ELEVATION IN FEET NAVD88 | ORO  
 ANALYTICAL RESULTS IN MILLIGRAMS PER KILOGRAM (mg/kg)  
**BOLD** = DENOTES CONCENTRATIONS THAT EXCEED THE SOIL SCREENING LEVEL OF 2,000 mg/kg  
 < = DENOTES ANALYTE NOT DETECTED AT OR EXCEEDING THE REPORTING LIMIT LISTED  
 CDF = CONTROLLED DENSITY FILL  
 ORO = TOTAL PETROLEUM HYDROCARBONS (TPH) AS OIL-RANGE ORGANICS  
 MTCA = WASHINGTON STATE MODEL TOXICS CONTROL ACT CLEANUP REGULATION  
 NAVD88 = NORTH AMERICAN VERTICAL DATUM OF 1988

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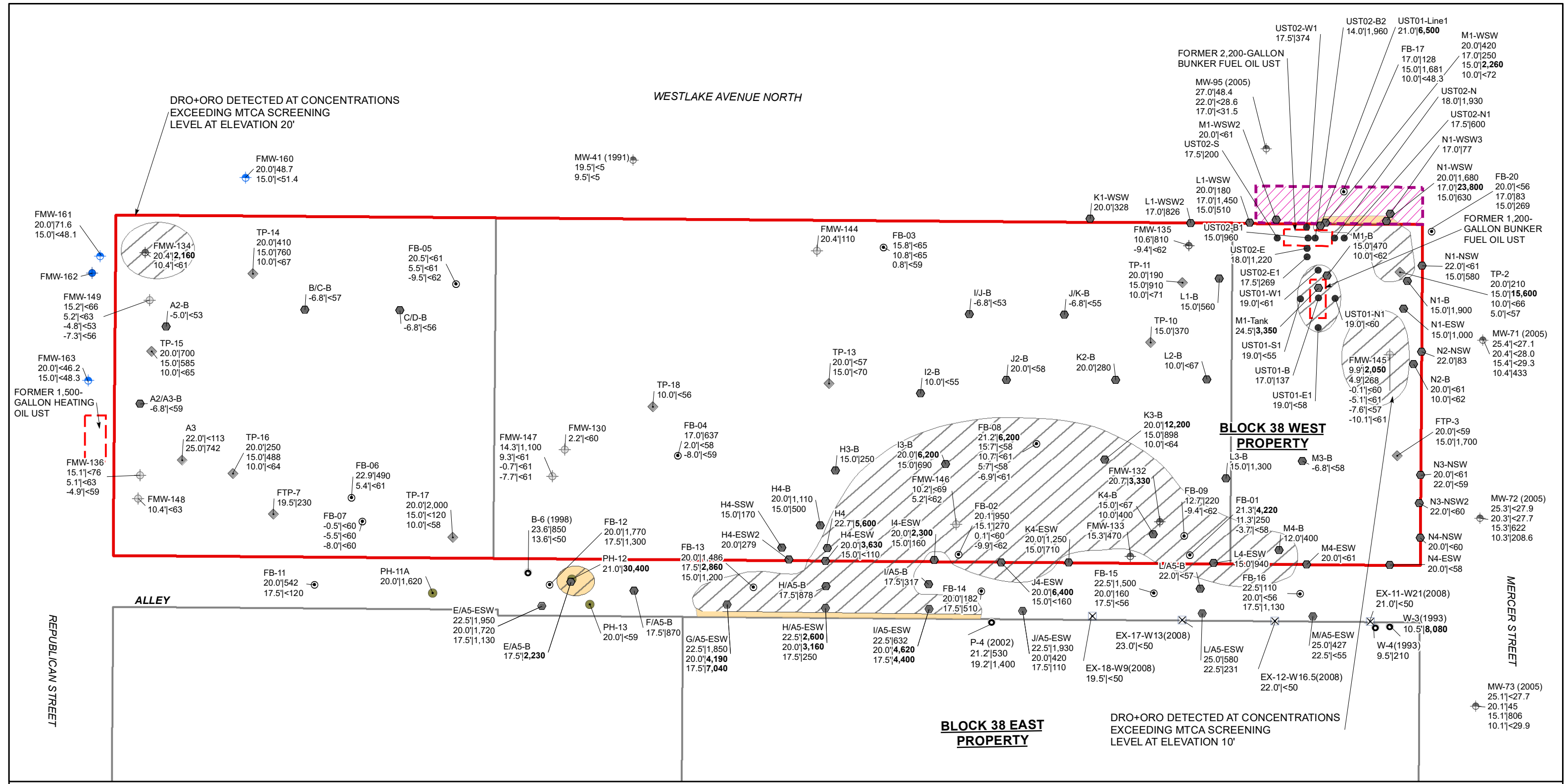
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**FIGURE 7**  
 SOIL ANALYTICAL RESULTS  
 FOR ORO  
 BLOCK 38 WEST SITE  
 SEATTLE, WASHINGTON

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**LEGEND**

- SHALLOW WATER-BEARING ZONE MONITORING WELL
- INTERMEDIATE WATER-BEARING ZONE MONITORING WELL / OBSERVATION WELL
- DECOMMISSIONED SHALLOW WATER-BEARING ZONE MONITORING WELL
- DECOMMISSIONED INTERMEDIATE WATER-BEARING ZONE MONITORING WELL
- BORING (FARALLON)
- BORING (GEOENGINEERS)
- EXCAVATION SAMPLE (GEOENGINEERS)
- POT HOLE (FARALLON)
- UST SAMPLE LOCATION (FARALLON)
- EXCAVATION SAMPLE LOCATION (FARALLON)
- TEST PIT (FARALLON)
- ESTIMATED EXTENT OF SOIL EXCEEDING THE SCREENING LEVEL REMAINING IN PLACE POST INTERIM ACTIONS OR INACCESSIBLE DUE TO EXISTING UTILITY BANK
- ESTIMATED EXTENT OF SOIL EXCEEDING THE SCREENING LEVEL THAT WAS EXCAVATED AND REMOVED BY INTERIM ACTIONS
- MECHANICAL EQUIPMENT AREA DECOMMISSIONED AND FILLED WITH CDF
- PROPERTY BOUNDARY
- FORMER UNDERGROUND STORAGE TANKS (USTs)
- KING COUNTY PARCEL BOUNDARY

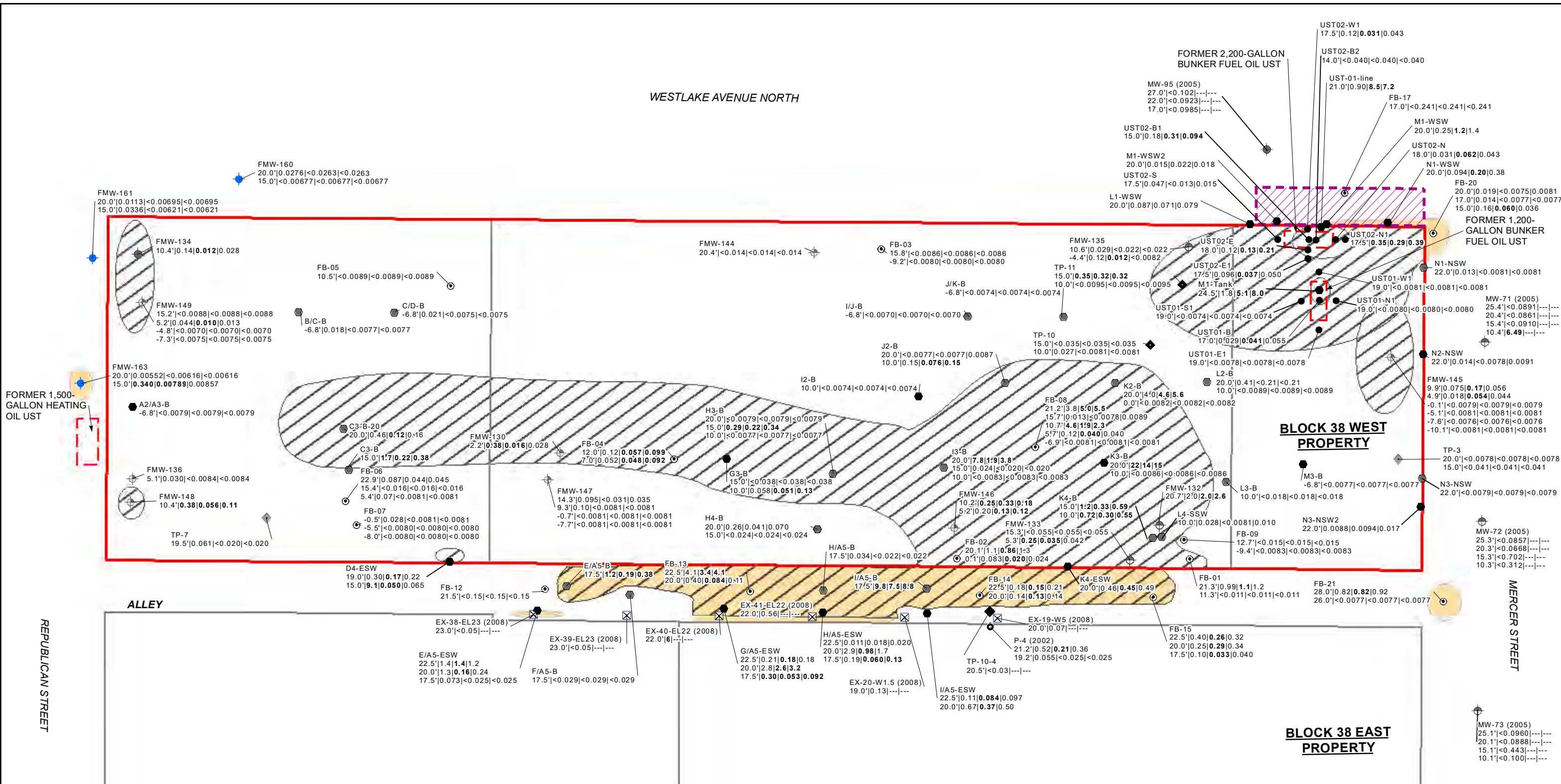
**NOTES:**  
 DATA SHOWN ARE FOR SAMPLES COLLECTED BETWEEN 2014 THROUGH 2023 UNLESS OTHERWISE NOTED  
 FOR SOIL SAMPLES:  
 ELEVATION IN FEET NAVD88 | DRO+ORO  
 ANALYTICAL RESULTS IN MILLIGRAMS PER KILOGRAM (mg/kg)  
**BOLD** = DENOTES CONCENTRATIONS THAT EXCEEDED THE SOIL SCREENING LEVEL OF 2,000 mg/kg  
 < = DENOTES ANALYTE NOT DETECTED AT OR EXCEEDING THE REPORTING LIMIT LISTED  
 CDF = CONTROLLED DENSITY FILL  
 DRO = TOTAL PETROLEUM HYDROCARBONS (TPH) AS DIESEL-RANGE ORGANICS  
 ORO = TPH AS OIL-RANGE ORGANICS  
 MTCA = WASHINGTON STATE MODEL TOXICS CONTROL ACT CLEANUP REGULATION  
 NAVD88 = NORTH AMERICAN VERTICAL DATUM OF 1988

ALL LOCATIONS ARE APPROXIMATE. FIGURES WERE PRODUCED IN COLOR. GRAYSCALE COPIES MAY NOT REPRODUCE ALL ORIGINAL INFORMATION.

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**FIGURE 8**  
 SOIL ANALYTICAL RESULTS FOR DRO + ORO  
 BLOCK 38 WEST SITE  
 SEATTLE, WASHINGTON  
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 Document Path: Q:\Projects\397 VULCAN\019\_Block38\MapFiles\176\_2023-07\2024\_Update\Figure-08\_Soil-DRO+ORO\_.mxd



- LEGEND**
- SHALLOW WATER-BEARING ZONE MONITORING WELL
  - DECOMMISSIONED SHALLOW WATER-BEARING ZONE MONITORING WELL
  - DECOMMISSIONED INTERMEDIATE WATER-BEARING ZONE MONITORING WELL
  - BORING (FARALLON)
  - BORING (GEOENGINEERS)
  - EXCAVATION SAMPLE (GEOENGINEERS)
  - TEST PIT (GEOENGINEERS)
  - UST SAMPLE LOCATION (FARALLON)
  - EXCAVATION SAMPLE LOCATION (FARALLON)
  - TEST PIT (FARALLON)
  - ESTIMATED EXTENT OF SOIL EXCEEDING THE SCREENING LEVELS REMAINING IN PLACE POST INTERIM ACTIONS OR INACCESSIBLE DUE TO EXISTING UTILITY BANK
  - ESTIMATED EXTENT OF SOIL EXCEEDING THE SCREENING LEVELS THAT WAS EXCAVATED AND REMOVED
  - MECHANICAL EQUIPMENT AREA DECOMMISSIONED AND FILLED WITH CDF
  - PROPERTY BOUNDARY
  - FORMER UNDERGROUND STORAGE TANKS (USTs)
  - KING COUNTY PARCEL BOUNDARY

- NOTES:**  
 DATA SHOWN ARE FOR SAMPLES COLLECTED BETWEEN 2014 THROUGH 2023 UNLESS OTHERWISE NOTED FOR SOIL SAMPLES:  
 ELEVATION IN FEET NAVD88 | NAPHTHALENE | 1-METHYLNAPHTHALENE | 2-METHYLNAPHTHALENE  
 ANALYTICAL RESULTS IN MILLIGRAMS PER KILOGRAM (mg/kg)
- BOLD** = DENOTES CONCENTRATIONS THAT EXCEEDED THE SOIL SCREENING LEVEL FOR NAPHTHALENE OF 4.5 mg/kg (VADOSE) / 0.24 mg/kg (SATURATED); FOR 1-METHYLNAPHTHALENE 0.082 mg/kg (VADOSE) / 0.0067 mg/kg (SATURATED); FOR 2-METHYLNAPHTHALENE 1.7 mg/kg (VADOSE) / 0.088 mg/kg (SATURATED)
- < = DENOTES ANALYTE NOT DETECTED AT OR EXCEEDING THE REPORTING LIMIT LISTED
- = DENOTES SAMPLE NOT ANALYZED
- CDF = CONTROLLED DENSITY FILL
- NAVD88 = NORTH AMERICAN VERTICAL DATUM OF 1988
- MTCA = WASHINGTON STATE MODEL TOXICS CONTROL ACT CLEANUP REGULATION

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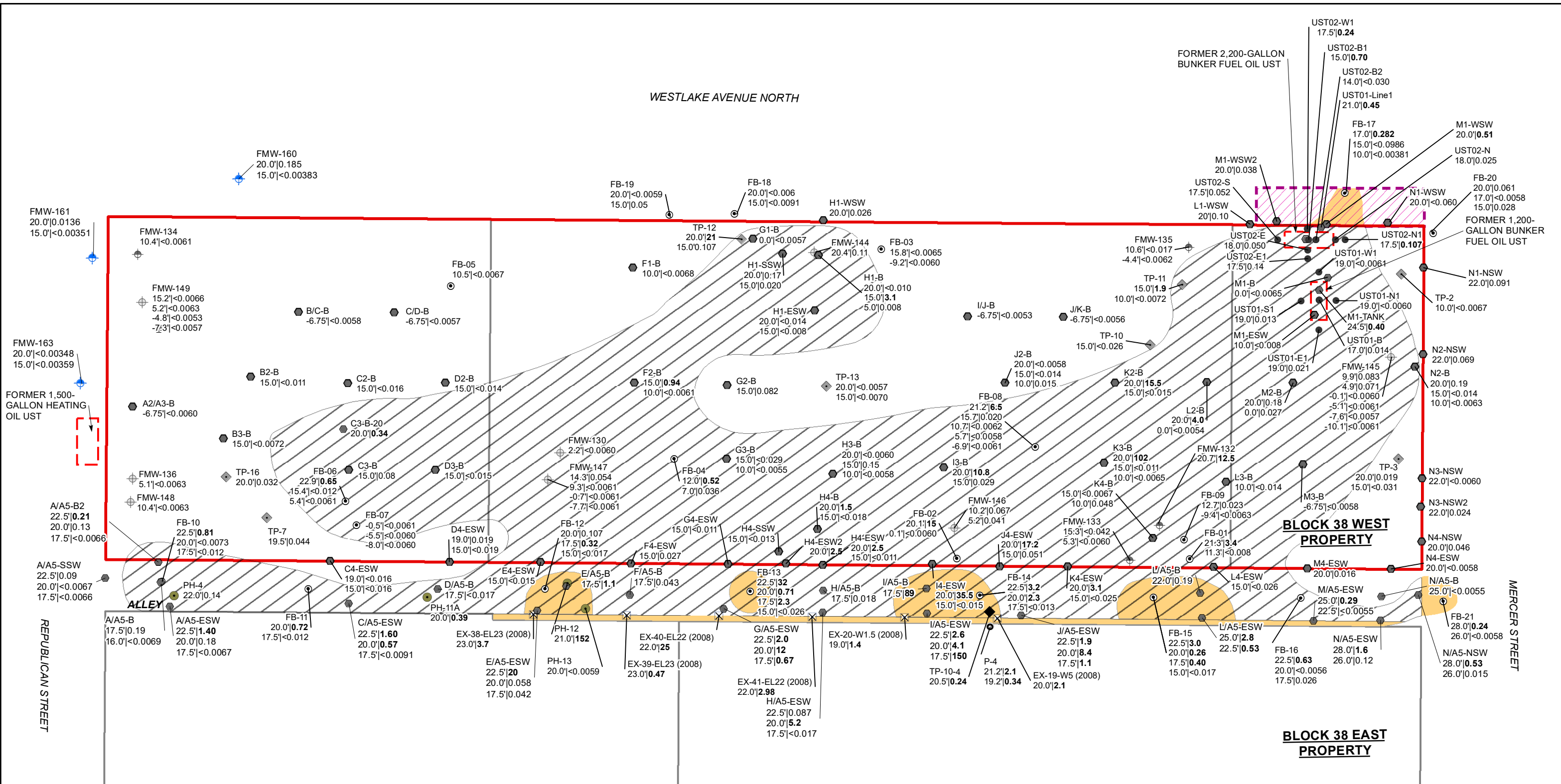
**FIGURE 9**  
 SOIL ANALYTICAL RESULTS FOR NAPHTHALENES  
 BLOCK 38 WEST SITE  
 SEATTLE, WASHINGTON

FARALLON PN: 397-019

Scale: 0 to 30 FEET

North Arrow

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- LEGEND**
- SHALLOW WATER-BEARING ZONE MONITORING WELL
  - DECOMMISSIONED SHALLOW WATER-BEARING ZONE MONITORING WELL
  - DECOMMISSIONED INTERMEDIATE WATER-BEARING ZONE MONITORING WELL
  - BORING (FARALLON)
  - BORING (GEOENGINEERS)
  - EXCAVATION SAMPLE (GEOENGINEERS)
  - TEST PIT (GEOENGINEERS)
  - POTHOLE (FARALLON)
  - UST SAMPLE LOCATION (FARALLON)
  - EXCAVATION SAMPLE LOCATION (FARALLON)
  - TEST PIT (FARALLON)

- ESTIMATED EXTENT OF SOIL EXCEEDING THE SCREENING LEVEL REMAINING IN PLACE POST INTERIM ACTIONS OR INACCESSIBLE DUE TO EXISTING UTILITY BANK
- ESTIMATED EXTENT OF SOIL EXCEEDING THE SCREENING LEVEL THAT WAS EXCAVATED AND REMOVED BY INTERIM ACTIONS
- MECHANICAL EQUIPMENT AREA DECOMMISSIONED AND FILLED WITH CDF
- PROPERTY BOUNDARY
- FORMER UNDERGROUND STORAGE TANKS (USTs)
- KING COUNTY PARCEL BOUNDARY

**NOTES:**  
 DATA SHOWN ARE FOR SAMPLES COLLECTED BETWEEN 2014 THROUGH 2023 UNLESS OTHERWISE NOTED

FOR SOIL SAMPLES:  
 DEPTH AND CONCENTRATIONS REPORTED AS:  
 ELEVATION IN FEET NAVD88 | cPAH TEC  
 ANALYTICAL RESULTS IN MILLIGRAMS PER KILOGRAM (mg/kg)

**BOLD** = DENOTES ELEVATION AND CONCENTRATIONS THAT EXCEED THE SCREENING LEVEL OF 0.19 mg/kg  
 < = DENOTES ANALYTE NOT DETECTED AT OR EXCEEDING THE REPORTING LIMIT LISTED FOR TOTAL TOXIC EQUIVALENT CONCENTRATION OF BENZO(A)PYRENE (mg/kg)

CDF = CONTROLLED DENSITY FILL  
 cPAHs = CARCINOGENIC POLYCYCLIC AROMATIC HYDROCARBONS  
 TEC = TOXIC EQUIVALENT CONCENTRATION OF BENZO(A)PYRENE FOR cPAH MIXTURE  
 MTCA = WASHINGTON STATE MODEL TOXICS CONTROL ACT CLEANUP REGULATION  
 NAVD88 = NORTH AMERICAN VERTICAL DATUM OF 1988

0 30  
SCALE IN FEET

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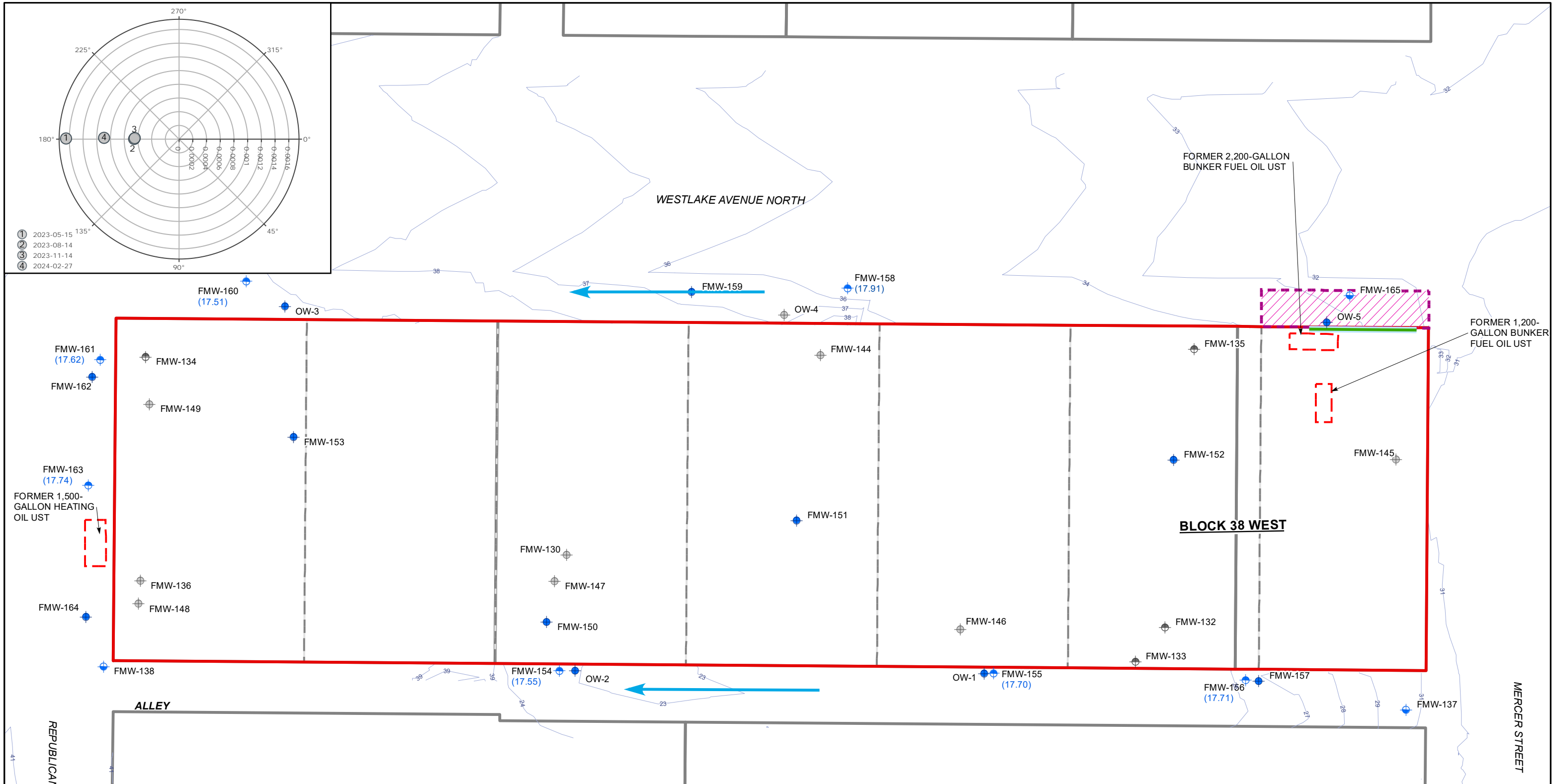
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**FIGURE 10**  
 SOIL ANALYTICAL RESULTS  
 FOR cPAH TEC  
 BLOCK 38 WEST SITE  
 SEATTLE, WASHINGTON

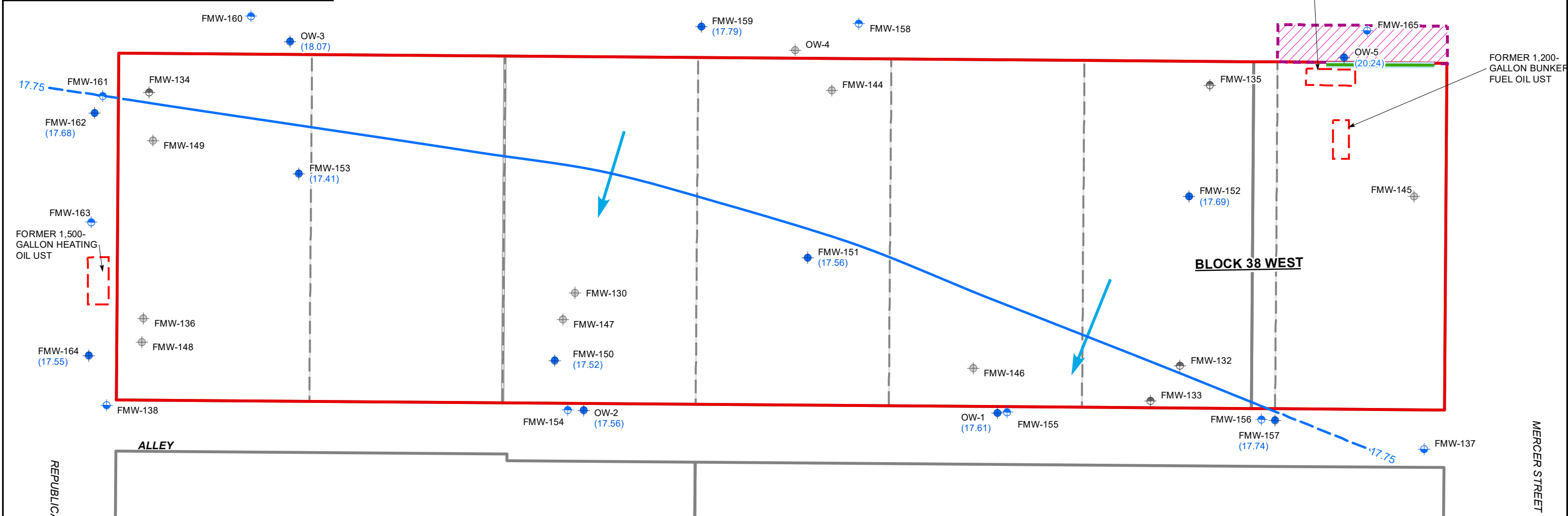
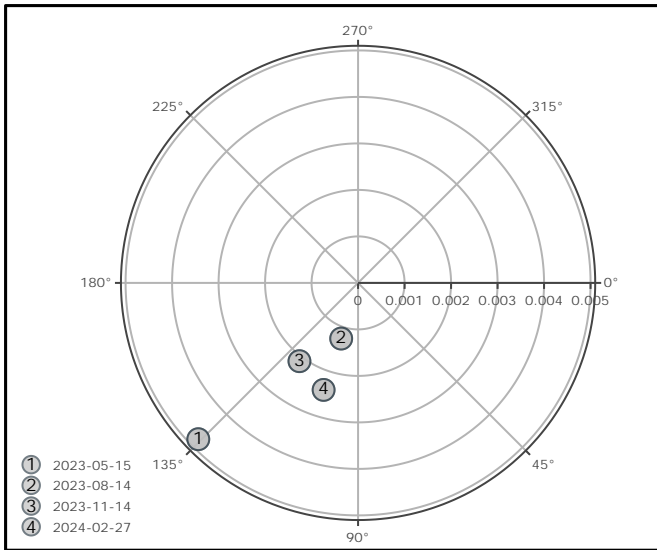
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<p><b>LEGEND</b></p> <ul style="list-style-type: none"> <li> SHALLOW WATER-BEARING ZONE MONITORING</li> <li> DEEP OUTWASH AQUIFER</li> <li> DECOMMISSIONED SHALLOW WATER-BEARING ZONE MONITORING WELL</li> <li> INTERMEDIATE WATER-BEARING ZONE MONITORING WELL / OBSERVATION WELL</li> <li> DECOMMISSIONED INTERMEDIATE WATER-BEARING ZONE MONITORING WELL</li> </ul> <p>NOTE: THE SHALLOW WATER-BEARING ZONE WAS REMOVED FROM THE BLOCK 38 WEST PROPERTY DURING THE INDEPENDENT INTERIM REMEDIAL ACTION AND CONSTRUCTION OF AN UNDERGROUND PARKING GARAGE. THE INFERRED GROUNDWATER FLOW DIRECTION IN THE ADJOINING ALLEY AND WESTLAKE AVENUE NORTH RIGHT-OF-WAY ARE DEPICTED ON THIS FIGURE.</p>	<ul style="list-style-type: none"> <li> PIPING DISCOVERED IN SIDEWALL (BELIEVED TO BE ASSOCIATED WITH DISCOVERED USTs)</li> <li> (17.91) GROUNDWATER ELEVATION (2/27/2024) MEASURED IN FEET RELATIVE TO NAVD 88</li> <li> INFERRED GROUNDWATER FLOW DIRECTION</li> </ul>	<ul style="list-style-type: none"> <li> LOT LINE</li> <li> MECHANICAL EQUIPMENT AREA DECOMMISSIONED AND FILLED WITH CDF</li> <li> UNDERGROUND STORAGE TANK</li> <li> PROPERTY BOUNDARY</li> <li> KING COUNTY PARCELS</li> </ul> <p>CDF = CONTROLLED DENSITY FILL          NAVD88 = NORTH AMERICAN VERTICAL DATUM OF 1988          ELEVATION SOURCE: BUSH, ROED, &amp; HITCHINGS, INC. (2014)</p>	<div style="text-align: center;">     <b>SCALE IN FEET</b> </div> <div style="text-align: center;">   <b>FARALLON CONSULTING</b>  <small>Your Challenges. Our Priority.   farallonconsulting.com</small> </div> <div style="text-align: center;"> <small>Washington Issaquah   Bellingham   Seattle</small>  <small>Oregon Portland   Baker City</small>  <small>California Oakland   Irvine</small> </div>	<p style="text-align: right;">NOTES:          1. ALL LOCATIONS ARE APPROXIMATE.          2. FIGURES WERE PRODUCED IN COLOR. GRAYSCALE COPIES MAY NOT REPRODUCE ALL ORIGINAL INFORMATION.</p> <p style="text-align: center;"><b>FIGURE 11A</b>  <b>GROUNDWATER ELEVATIONS          SHALLOW WATER-BEARING ZONE          FOR FEBRUARY 27, 2024          BLOCK 38 WEST SITE          SEATTLE, WASHINGTON</b></p> <p style="text-align: center;">FARALLON PN: 397-019</p>
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**LEGEND**

	SHALLOW WATER-BEARING ZONE MONITORING WELL
	DEEP OUTWASH AQUIFER WELL
	DECOMMISSIONED SHALLOW WATER-BEARING ZONE MONITORING WELL
	INTERMEDIATE WATER-BEARING ZONE MONITORING WELL / OBSERVATION WELL
	DECOMMISSIONED INTERMEDIATE WATER-BEARING ZONE MONITORING WELL

	PIPING DISCOVERED IN SIDEWALL (BELIEVED TO BE ASSOCIATED WITH DISCOVERED USTs)
	GROUNDWATER ELEVATION (2/27/2024) MEASURED IN FEET RELATIVE TO NAVD 88
	APPROXIMATE GROUNDWATER ELEVATION CONTOUR IN FEET NAVD88 (DASHED WHERE INFERRED)
	INFERRED GROUNDWATER FLOW DIRECTION

	LOT LINE
	MECHANICAL EQUIPMENT AREA DECOMMISSIONED AND FILLED WITH CDF
	UNDERGROUND STORAGE TANK
	PROPERTY BOUNDARY
	KING COUNTY PARCELS

CDF = CONTROLLED DENSITY FILL  
 ELEVATION DATA PRESENTED IN FEET ABOVE MSL  
 IN THE NORTH AMERICAN VERTICAL DATUM OF 1988  
 ELEVATION SOURCE: BUSH, ROED, & HITCHINGS, INC. (2014)

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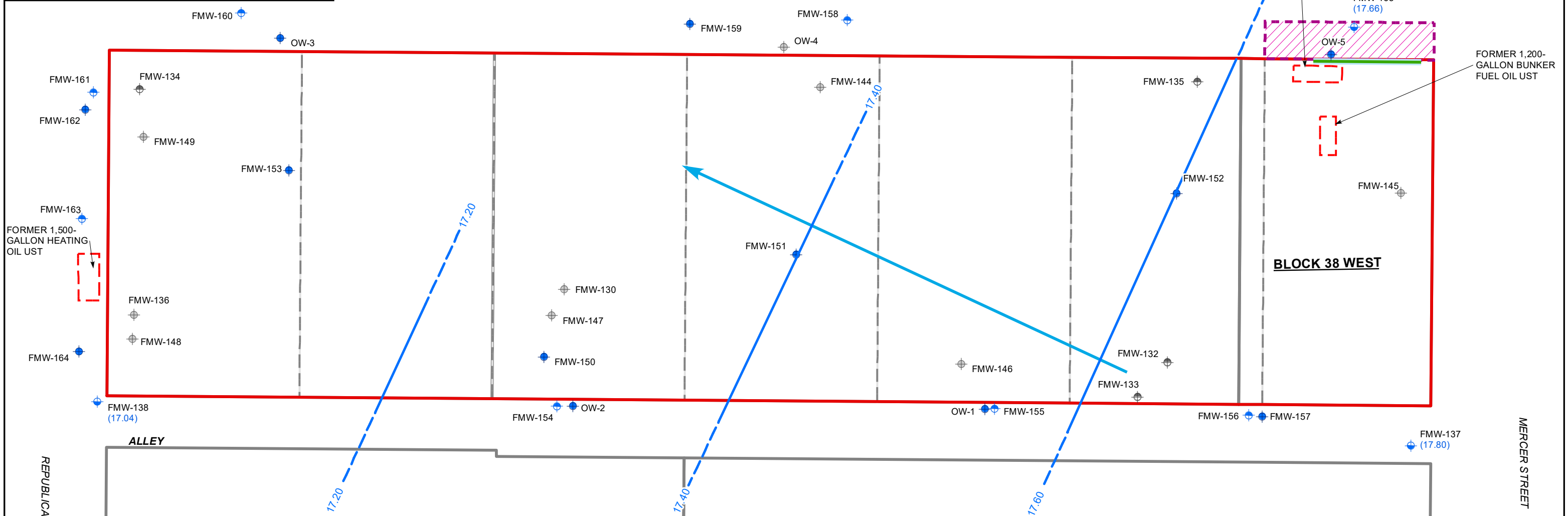
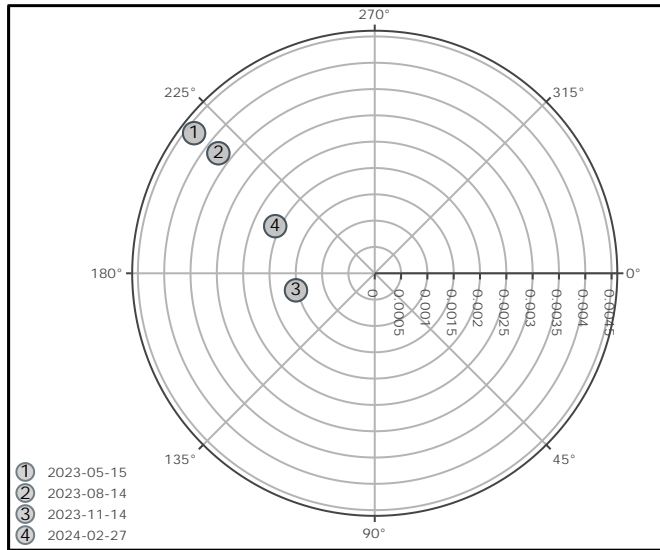
NOTES:  
 1. ALL LOCATIONS ARE APPROXIMATE.  
 2. FIGURES WERE PRODUCED IN COLOR. GRAYSCALE COPIES MAY NOT REPRODUCE ALL ORIGINAL INFORMATION.

**FIGURE 11B**  
 GROUNDWATER ELEVATION CONTOURS  
 INTERMEDIATE WATER-BEARING ZONE  
 FOR FEBRUARY 27, 2024  
 BLOCK 38 WEST SITE  
 SEATTLE, WASHINGTON

FARALLON PN: 397-019

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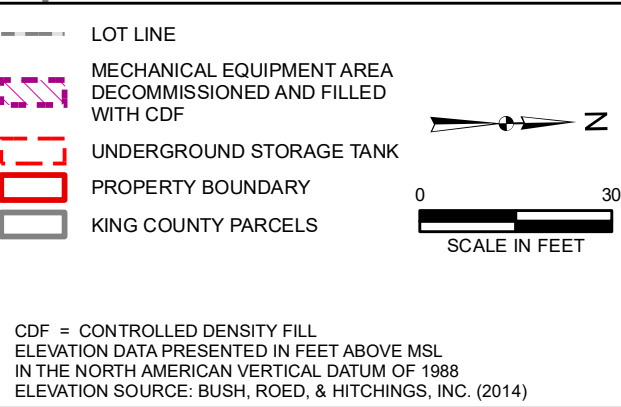




**LEGEND**

- SHALLOW WATER-BEARING ZONE MONITORING WELL
- DEEP OUTWASH AQUIFER
- DECOMMISSIONED SHALLOW WATER-BEARING ZONE MONITORING WELL
- INTERMEDIATE WATER-BEARING ZONE MONITORING WELL / OBSERVATION WELL
- DECOMMISSIONED INTERMEDIATE WATER-BEARING ZONE MONITORING WELL
- PIPING DISCOVERED IN SIDEWALL (BELIEVED TO BE ASSOCIATED WITH DISCOVERED USTs)
- GROUNDWATER ELEVATION (2/27/2024) MEASURED IN FEET RELATIVE TO NAVD 88
- APPROXIMATE GROUNDWATER ELEVATION CONTOUR IN FEET NAVD88 (DASHED WHERE INFERRED)
- INFERRED GROUNDWATER FLOW DIRECTION
- LOT LINE
- MECHANICAL EQUIPMENT AREA DECOMMISSIONED AND FILLED WITH CDF
- UNDERGROUND STORAGE TANK
- PROPERTY BOUNDARY
- KING COUNTY PARCELS

CDF = CONTROLLED DENSITY FILL  
 ELEVATION DATA PRESENTED IN FEET ABOVE MSL  
 IN THE NORTH AMERICAN VERTICAL DATUM OF 1988  
 ELEVATION SOURCE: BUSH, ROED, & HITCHINGS, INC. (2014)



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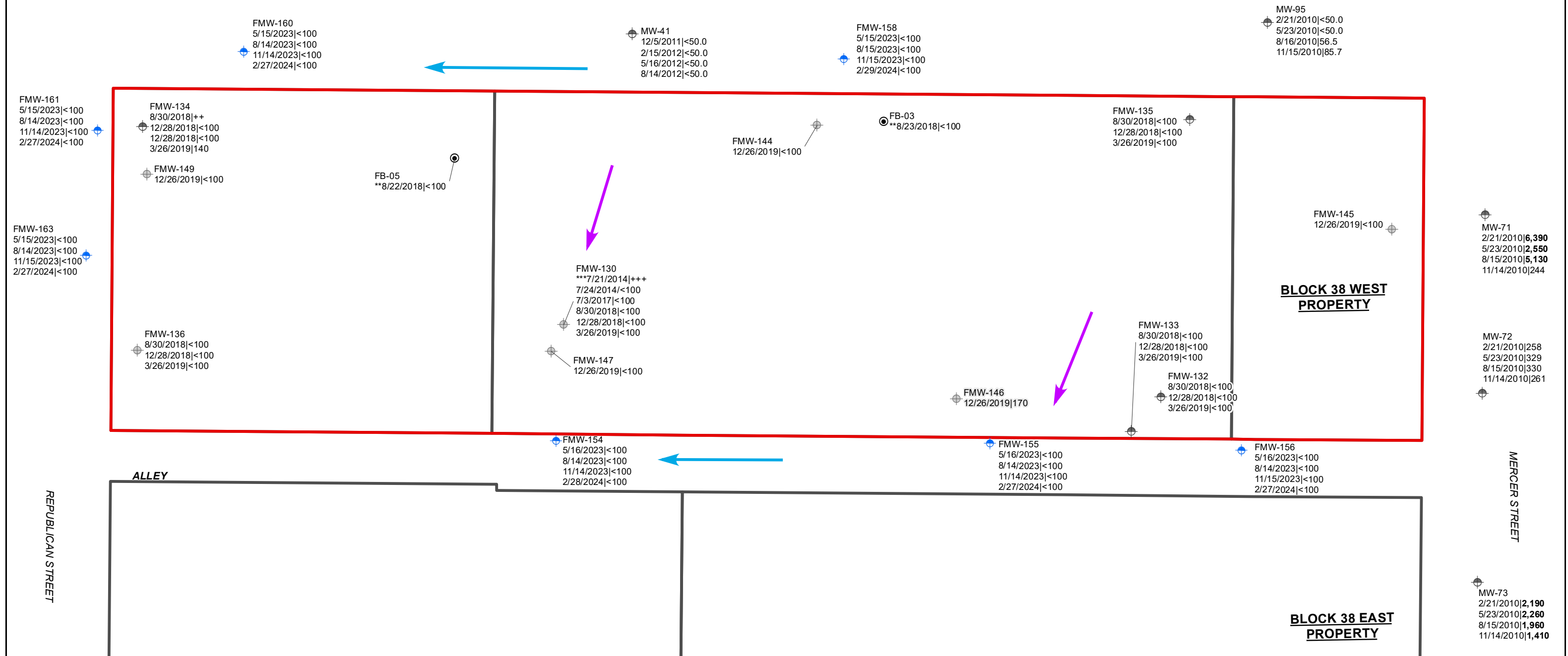
NOTES:  
 1. ALL LOCATIONS ARE APPROXIMATE.  
 2. FIGURES WERE PRODUCED IN COLOR. GRAYSCALE COPIES MAY NOT REPRODUCE ALL ORIGINAL INFORMATION.

**FIGURE 11C**  
 GROUNDWATER ELEVATION CONTOURS  
 DEEP WATER-BEARING ZONE  
 FOR FEBRUARY 27, 2024  
 BLOCK 38 WEST SITE  
 SEATTLE, WASHINGTON

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WESTLAKE AVENUE NORTH



**LEGEND**

- BORING
- DECOMMISSIONED SHALLOW WATER-BEARING ZONE MONITORING WELL
- DECOMMISSIONED INTERMEDIATE WATER-BEARING ZONE MONITORING WELL
- SHALLOW WATER-BEARING ZONE MONITORING WELL
- INFERRED GROUNDWATER FLOW DIRECTION FEBRUARY 2024 (INTERMEDIATE WATER-BEARING ZONE)
- INFERRED GROUNDWATER FLOW DIRECTION FEBRUARY 2024 (SHALLOW WATER-BEARING ZONE)
- PROPERTY BOUNDARY
- KING COUNTY PARCEL BOUNDARY

**NOTES:**

DATE SAMPLED AND CONCENTRATIONS REPORTED AS:  
 SAMPLE DATE | GRO  
 ANALYTICAL RESULTS IN MICROGRAMS PER LITER (µg/l)

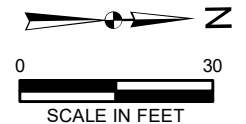
\*\* = INDICATES RESULTS ARE FROM A RECONNAISSANCE GROUNDWATER SAMPLE  
 \*\*\* = INDICATES RESULTS ARE FROM A RECONNAISSANCE GROUNDWATER SAMPLE THAT WAS SCREENED AT AN ELEVATION OF 7.2 TO 2.2 FEET RELATIVE TO THE NAVD88 DATUM.  
 +++ = GRO REPORTED AT A CONCENTRATION OF 2,100 µg/l; HOWEVER, RE-EVALUATION BY THE ANALYTICAL LABORATORY INDICATED THAT THE REPORTED CONCENTRATION WAS NOT SIMILAR TO A TYPICAL GAS.  
 ++ = GRO REPORTED AT A CONCENTRATION OF 1,100 µg/l; HOWEVER, RE-EVALUATION BY THE ANALYTICAL LABORATORY INDICATED THAT THE REPORTED CONCENTRATION GRO WAS ATTRIBUTED TO A SINGLE PEAK ON THE CHROMATOGRAM, WHICH WAS IN THE RANGE OF NAPHTHALENE. NAPHTHALENE WAS QUANTIFIED AT A CONCENTRATION OF 290 µg/l AND TOTAL NAPHTHALENES AT 312 µg/l IN THIS GROUNDWATER SAMPLE.

- BOLD** = CONCENTRATIONS THAT EXCEEDED THE SCREENING LEVEL FOR GRO OF 800 µg/l
- < = ANALYTE NOT DETECTED AT OR EXCEEDING THE REPORTING LIMIT LISTED
- GRO = TOTAL PETROLEUM HYDROCARBONS (TPH) AS GASOLINE-RANGE ORGANICS
- MTCA = WASHINGTON STATE MODEL TOXICS CONTROL ACT CLEANUP REGULATION
- NAVD88 = NORTH AMERICAN VERTICAL DATUM OF 1988

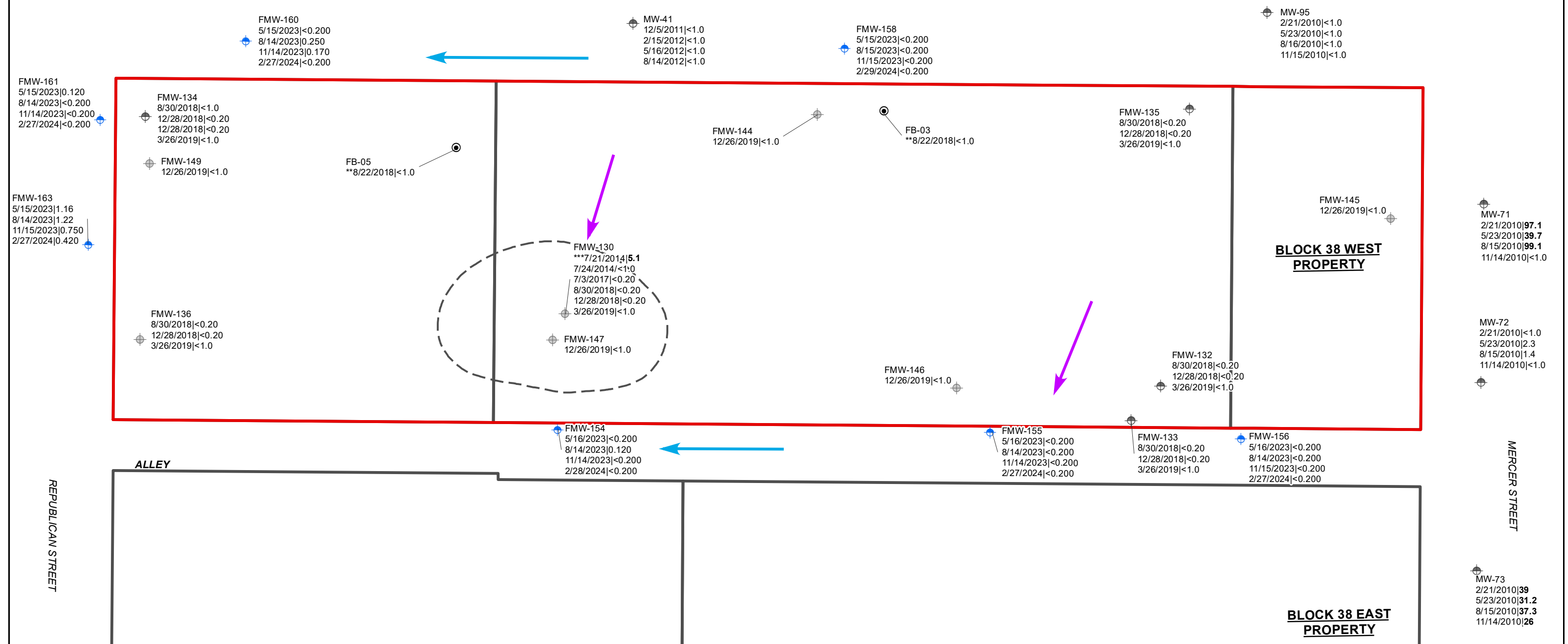
ALL LOCATIONS APPROXIMATE.  
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**FIGURE 12**  
**GROUNDWATER ANALYTICAL RESULTS FOR GRO**  
**BLOCK 38 WEST SITE**  
**SEATTLE, WASHINGTON**  
 FARALLON PN: 397-019



WESTLAKE AVENUE NORTH



FMW-161  
 5/15/2023|0.120  
 8/14/2023|<0.200  
 11/14/2023|<0.200  
 2/27/2024|<0.200

FMW-163  
 5/15/2023|1.16  
 8/14/2023|1.22  
 11/15/2023|0.750  
 2/27/2024|0.420

FMW-134  
 8/30/2018|<1.0  
 12/28/2018|<0.20  
 12/28/2018|<0.20  
 3/26/2019|<1.0

FMW-149  
 12/26/2019|<1.0

FMW-136  
 8/30/2018|<0.20  
 12/28/2018|<0.20  
 3/26/2019|<1.0

FB-05  
 \*\*8/22/2018|<1.0

FMW-130  
 \*\*\*7/21/2014|**5.1**  
 7/24/2014|<1.0  
 7/3/2017|<0.20  
 8/30/2018|<0.20  
 12/28/2018|<0.20  
 3/26/2019|<1.0

FMW-147  
 12/26/2019|<1.0

MW-41  
 12/5/2011|<1.0  
 2/15/2012|<1.0  
 5/16/2012|<1.0  
 8/14/2012|<1.0

FMW-144  
 12/26/2019|<1.0

FMW-158  
 5/15/2023|<0.200  
 8/15/2023|<0.200  
 11/15/2023|<0.200  
 2/29/2024|<0.200

FB-03  
 \*\*8/22/2018|<1.0

FMW-146  
 12/26/2019|<1.0

FMW-155  
 5/16/2023|<0.200  
 8/14/2023|<0.200  
 11/14/2023|<0.200  
 2/27/2024|<0.200

FMW-135  
 8/30/2018|<0.20  
 12/28/2018|<0.20  
 3/26/2019|<1.0

FMW-133  
 8/30/2018|<0.20  
 12/28/2018|<0.20  
 3/26/2019|<1.0

FMW-156  
 5/16/2023|<0.200  
 8/14/2023|<0.200  
 11/15/2023|<0.200  
 2/27/2024|<0.200

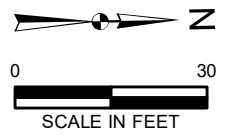
MW-95  
 2/21/2010|<1.0  
 5/23/2010|<1.0  
 8/16/2010|<1.0  
 11/15/2010|<1.0

FMW-145  
 12/26/2019|<1.0

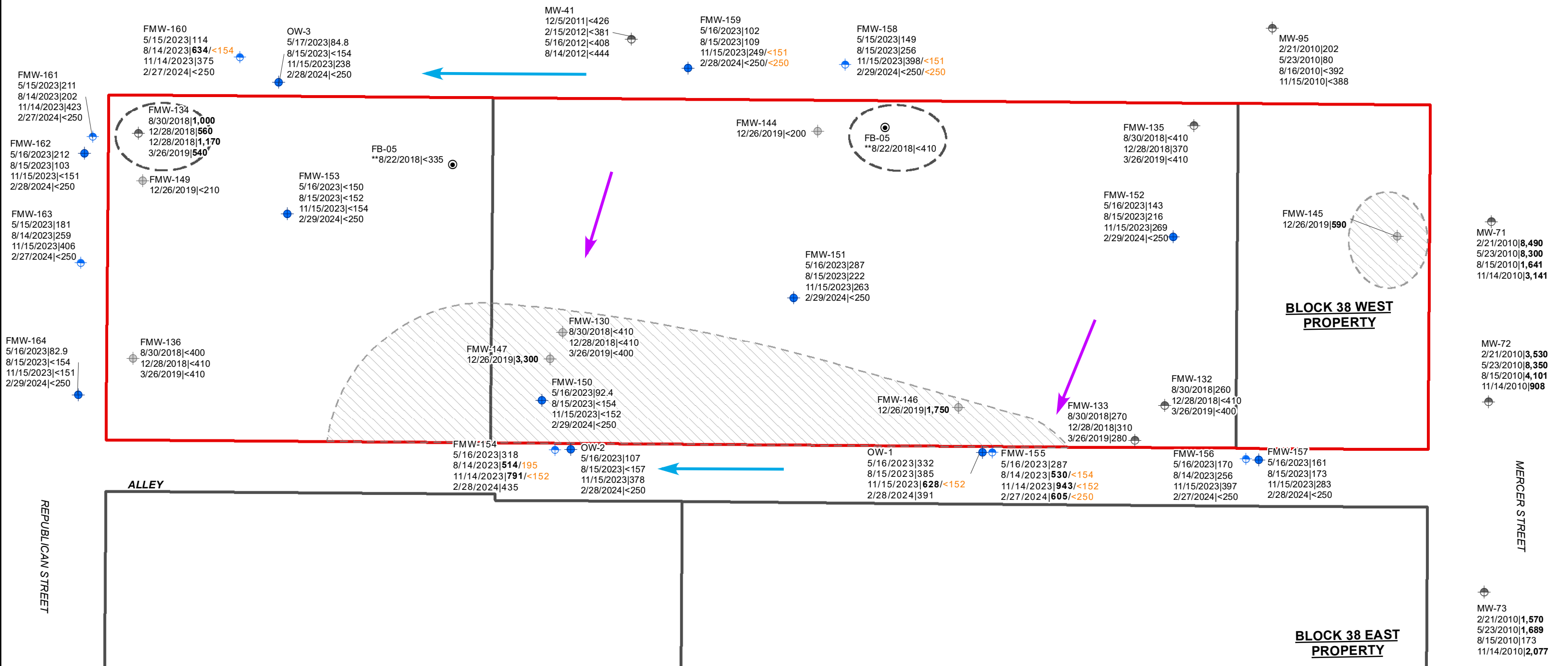
MW-71  
 2/21/2010|**97.1**  
 5/23/2010|**39.7**  
 8/15/2010|**99.1**  
 11/14/2010|<1.0

MW-72  
 2/21/2010|<1.0  
 5/23/2010|2.3  
 8/15/2010|1.4  
 11/14/2010|<1.0

MW-73  
 2/21/2010|**39**  
 5/23/2010|**31.2**  
 8/15/2010|**37.3**  
 11/14/2010|**26**



WESTLAKE AVENUE NORTH



- LEGEND**
- SHALLOW WATER-BEARING ZONE MONITORING WELL
  - INTERMEDIATE WATER-BEARING ZONE MONITORING WELL/OBSERVATION WELL
  - BORING
  - DECOMMISSIONED SHALLOW WATER-BEARING ZONE MONITORING WELL
  - DECOMMISSIONED INTERMEDIATE WATER-BEARING ZONE MONITORING WELL
  - PROPERTY BOUNDARY
  - KING COUNTY PARCEL BOUNDARY

- PRIOR TO INTERIM ACTIONS DRO+ORO DETECTED AT CONCENTRATIONS IN GROUNDWATER EXCEEDING THE SCREENING LEVEL IN THE INTERMEDIATE WATER-BEARING ZONE ( - - - INDICATES ESTIMATED EXTENT INFERRED)
- PRIOR TO INTERIM ACTIONS DRO+ORO DETECTED AT CONCENTRATIONS IN GROUNDWATER EXCEEDING THE SCREENING LEVEL IN SHALLOW WATER-BEARING ZONE ( - - - INDICATES ESTIMATED EXTENT INFERRED) (AREAS THAT EXCEED SCREENING LEVELS IN THE UPPER INTERMEDIATE WATER-BEARING ZONE WAS REMOVED WITHIN THE BLOCK 38 WEST PROPERTY BOUNDARY DURING REDEVELOPMENT)
- INFERRED GROUNDWATER FLOW DIRECTION FEBRUARY 2024 (SHALLOW WATER-BEARING ZONE)
- INFERRED GROUNDWATER FLOW DIRECTION FEBRUARY 2024 (INTERMEDIATE WATER-BEARING ZONE)

**NOTES:**  
 DATE SAMPLED AND CONCENTRATIONS REPORTED AS:  
 SAMPLE DATE | SUM OF DRO+ORO / SUM OF DRO+ORO WITH SILICA GEL CLEANUP WHEN AVAILABLE

ANALYTICAL RESULTS IN MICROGRAMS PER LITER (µg/l)  
 195 = SILICA GEL CELANUP ANALYTICAL RESULTS  
 \*\* = INDICATES RESULTS ARE FROM A RECONNAISSANCE GROUNDWATER SAMPLE  
**BOLD** = CONCENTRATIONS THAT EXCEED THE SCREENING LEVEL FOR DRO+ORO OF 500 µg/l  
 < = ANALYTE NOT DETECTED AT OR EXCEEDING THE REPORTING LIMIT LISTED  
 DRO = TOTAL PETROLEUM HYDROCARBONS (TPH) AS DIESEL-RANGE ORGANICS  
 ORO = TPH AS OIL-RANGE ORGANICS  
 MTCA = WASHINGTON STATE MODEL TOXICS CONTROL ACT CLEANUP REGULATION  
 NAVD88 = NORTH AMERICAN VERTICAL DATUM OF 1988

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0 30  
 SCALE IN FEET

**FIGURE 14**  
 GROUNDWATER ANALYTICAL RESULTS FOR DRO+ORO FOR BLOCK 38 WEST SITE SEATTLE, WASHINGTON

FARALLON PN: 397-019

Drawn By: jjones Checked By: SS Date: 6/6/2024  
 Document Path: Q:\Projects\397 VULCAN\019 Block38\Mapfiles\17G\_2023-07\2024\_Update\Figure-14\_GW\_DRO+ORO.mxd Disc Reference:

FMW-160  
5/15/2023|<0.0755|<0.0755|<0.0755  
8/14/2023|<0.0842|<0.0842|<0.0842  
11/14/2023|<0.0408|<0.0408|<0.0408  
2/27/2024|<5.00|<0.0400|<0.0400

FMW-161  
5/15/2023|0.206|<0.0762|<0.0762  
8/14/2023|0.0692|<0.0769|<0.0769  
11/14/2023|0.0503|<0.0377|<0.0377  
2/27/2024|<5.00|<0.0430|<0.0430

OW-3  
5/17/2023|<0.0755|<0.0755|<0.0755  
8/15/2023|<0.0808|<0.0808|<0.0808  
11/15/2023|<0.0412|<0.0412|<0.0412  
2/28/2024|<5.00|<0.0417|<0.0417

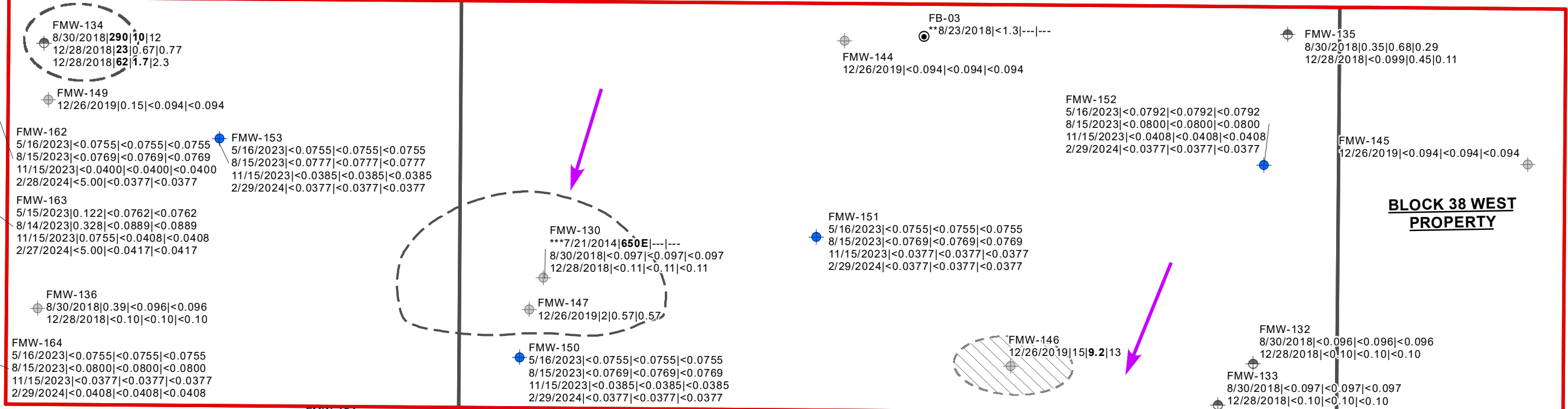
MW-41  
12/5/2011|<10.0|---|---  
2/15/2012|2|---|---  
5/16/2012|<1.0|---|---  
8/14/2012|<1.0|---|---

WESTLAKE AVENUE NORTH

FMW-159  
5/16/2023|<0.0755|<0.0755|<0.0755  
8/15/2023|<0.0769|<0.0769|<0.0769  
11/15/2023|<0.0408|<0.0408|<0.0408  
2/28/2024|<5.00|<0.0400|<0.0400

FMW-158  
5/15/2023|0.316|0.180|<0.0762  
8/15/2023|0.108|0.0902|<0.0816  
11/15/2023|0.0458|0.0693|<0.0400  
2/27/2024|<5.00|<0.0377|<0.0377

MW-95  
2/21/2010|<1.0|---|---  
5/23/2010|<1.0|---|---  
8/16/2010|<1.0|---|---  
11/15/2010|<1.0|---|---



**BLOCK 38 WEST PROPERTY**

**BLOCK 38 EAST PROPERTY**

- LEGEND**
- SHALLOW WATER-BEARING ZONE MONITORING WELL
  - INTERMEDIATE WATER-BEARING ZONE MONITORING WELL/OBSERVATION WELL
  - BORING
  - DECOMMISSIONED SHALLOW WATER-BEARING ZONE MONITORING WELL
  - DECOMMISSIONED INTERMEDIATE WATER-BEARING ZONE MONITORING WELL
  - PROPERTY BOUNDARY
  - KING COUNTY PARCEL BOUNDARY
  - INFERRED GROUNDWATER FLOW DIRECTION FEBRUARY 2024 (INTERMEDIATE WATER-BEARING ZONE)
  - INFERRED GROUNDWATER FLOW DIRECTION FEBRUARY 2024 (SHALLOW WATER-BEARING ZONE)

PRIOR TO INTERIM ACTIONS  
NAPHTHALENES DETECTED AT CONCENTRATIONS IN GROUNDWATER EXCEEDING THE SCREENING LEVEL IN INTERMEDIATE WATER-BEARING ZONE ( - - - INDICATES ESTIMATED EXTENT INFERRED)

PRIOR TO INTERIM ACTIONS  
NAPHTHALENES DETECTED AT CONCENTRATIONS IN GROUNDWATER EXCEEDING THE SCREENING LEVEL IN SHALLOW WATER-BEARING ZONE ( - - - INDICATES ESTIMATED EXTENT INFERRED)

(AREAS THAT EXCEED SCREENING LEVELS IN THE SHALLOW WATER-BEARING ZONE WAS REMOVED WITHIN THE BLOCK 38 WEST PROPERTY BOUNDARY DURING REDEVELOPMENT)

INFERRED GROUNDWATER FLOW DIRECTION FEBRUARY 2024 (SHALLOW WATER-BEARING ZONE)

NOTES:  
DATE SAMPLED AND CONCENTRATIONS REPORTED AS:  
SAMPLE DATE | NAPHTHALENE | 1-METHYLNAPHTHALENE | 2-METHYLNAPHTHALENE  
ANALYTICAL RESULTS IN MICROGRAMS PER LITER (µg/l)  
\*\*\* = INDICATES RESULTS ARE FROM A RECONNAISSANCE GROUNDWATER SAMPLE THAT WAS SCREENED AT AN ELEVATION OF 7.2 TO 2.2 FEET RELATIVE TO THE NAVD88 DATUM.  
\*\* = INDICATES RESULTS ARE FROM A RECONNAISSANCE GROUNDWATER  
**BOLD** = SAMPLE CONCENTRATIONS THAT EXCEEDED THE MTCA METHOD B VAPOR INTRUSION GROUNDWATER SCREENING LEVEL FOR NAPHTHALENES OF 8.9 µg/l AND THE METHOD B SCREENING LEVEL FOR DRINKING WATER IS APPLICABLE FOR THE DEEPER INTERMEDIATE WATER-BEARING ZONE FOR 1-METHYLNAPHTHALENE OF 1.5 µg/l AND FOR 2-METHYLNAPHTHALENE OF 32 µg/l.  
< = ANALYTE NOT DETECTED AT OR EXCEEDING THE REPORTING LIMIT LISTED  
--- = DENOTES SAMPLE NOT ANALYZED  
MTCA = WASHINGTON STATE MODEL TOXICS CONTROL ACT CLEANUP REGULATION  
NAVD88 = NORTH AMERICAN VERTICAL DATUM OF 1988  
E = CONCENTRATION IS ESTIMATED BASED ON THE REPORTED VALUE EXCEEDING THE QUANTITATION RANGE

ALL LOCATIONS ARE APPROXIMATE. FIGURES WERE PRODUCED IN COLOR. GRAYSCALE COPIES MAY NOT REPRODUCE ALL ORIGINAL INFORMATION.

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**FIGURE 15**  
**GROUNDWATER ANALYTICAL RESULTS FOR NAPHTHALENES BLOCK 38 WEST SITE SEATTLE, WASHINGTON**

FARALLON PN: 397-019

0 30  
SCALE IN FEET

WESTLAKE AVENUE NORTH



**BLOCK 38 WEST PROPERTY**

**BLOCK 38 EAST PROPERTY**

REPUBLICAN STREET

MERCER STREET

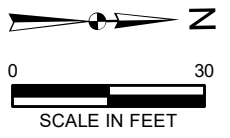
**LEGEND**

- ⊕ DECOMMISSIONED SHALLOW WATER-BEARING ZONE MONITORING WELL
- ⊕ DECOMMISSIONED INTERMEDIATE WATER-BEARING ZONE MONITORING WELL

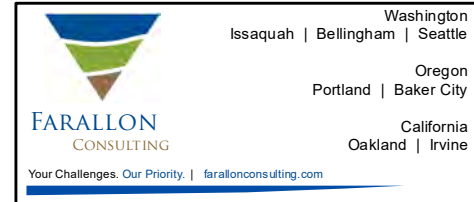
- ➔ INFERRERD GROUNDWATER FLOW DIRECTION FEBRUARY 2024 (INTERMEDIATE WATER-BEARING ZONE)
- ➔ INFERRERD GROUNDWATER FLOW DIRECTION FEBRUARY 2024 (SHALLOW WATER-BEARING ZONE)
- ▭ PROPERTY BOUNDARY
- ▭ KING COUNTY PARCEL BOUNDARY

NOTES:  
 DATE SAMPLED AND CONCENTRATIONS REPORTED AS:  
 SAMPLE DATE | cPAH TEC  
 ANALYTICAL RESULTS IN MICROGRAMS PER LITER (µg/l)

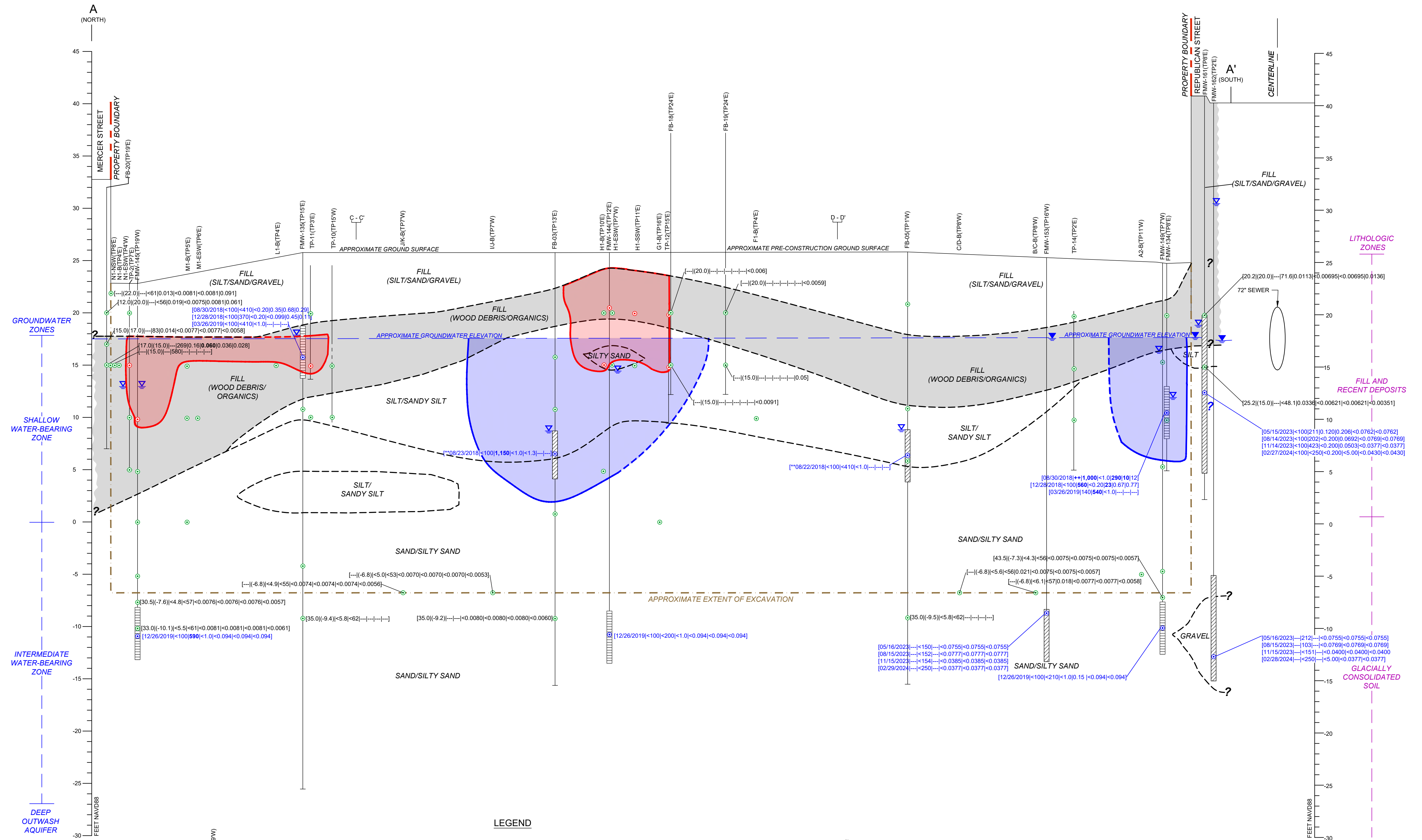
**BOLD** = CONCENTRATIONS THAT EXCEED THE SCREENING LEVEL FOR cPAHs TEC OF 0.2 µg/l  
 < = ANALYTE NOT DETECTED AT OR EXCEEDING THE REPORTING LIMIT LISTED FOR TOTAL TOXIC EQUIVALENT CONCENTRATION OF BENZO(A)PYRENE (µg/l)  
 cPAHs = CARCINOGENIC POLYCYCLIC AROMATIC HYDROCARBONS  
 TEC = TOXIC EQUIVALENT CONCENTRATION OF BENZO(A)PYRENE FOR cPAH MIXTURE  
 MTCA = WASHINGTON STATE MODEL TOXICS CONTROL ACT CLEANUP REGULATION



ALL LOCATIONS ARE APPROXIMATE.  
 FIGURES WERE PRODUCED IN COLOR. GRAYSCALE COPIES MAY NOT REPRODUCE ALL ORIGINAL INFORMATION.



**FIGURE 16**  
 GROUNDWATER ANALYTICAL RESULTS  
 FOR cPAH TEC  
 BLOCK 38 WEST SITE  
 SEATTLE, WASHINGTON



**LEGEND**

**BORING OR MONITORING WELL LOCATION**  
 TRANSPPOSED (TP) IN FEET EAST (E) OR WEST (W), TO CROSS-SECTION LINE

**INDICATES CONCENTRATIONS OF ONE OR MORE COPCS EXCEEDED THE APPLICABLE MTCA SCREENING LEVELS**

**INDICATES CONCENTRATIONS OF COPCS ANALYZED DID NOT EXCEED THE APPLICABLE MTCA SCREENING LEVELS**

**APPROXIMATE GROUNDWATER ELEVATION**

**STRATIGRAPHIC CONTACT**

**BLANK CASING OR BORING**

**STATIC GROUNDWATER ELEVATION (MOST RECENT)**

**GROUNDWATER ELEVATION AT TIME OF DRILLING**

**TEMPORARY SCREEN INTERVAL**

**GROUNDWATER SAMPLE LOCATION**

**WELL SCREEN INTERVAL**

**APPROXIMATE AREA OF WOOD DEBRIS/ORGANICS LAYER PRIOR TO INTERIM ACTIONS**

**ESTIMATED EXTENT OF SOIL EXCEEDING SCREENING LEVELS PRIOR TO INTERIM ACTIONS**

**ESTIMATED EXTENT OF GROUNDWATER EXCEEDING SCREENING LEVELS PRIOR TO INTERIM ACTIONS**

**ALL GROUNDWATER ANALYTICAL RESULTS IN MICROGRAMS PER LITER (µg/l)**

**[08/14/2023]<100|202|<0.200|0.0692|<0.0769|<0.0769|** = GROUNDWATER ANALYTICAL RESULT | SAMPLE DATE | GRO | DRO+ORO | BENZENE | NAPHTHALENE | 1-METHYLNAPHTHALENE | 2-METHYLNAPHTHALENE

**\*\*** = DENOTES SAMPLE IS RECONNAISSANCE GROUNDWATER GRAB SAMPLE

**++** = GRO REPORTED AT A CONCENTRATION OF 1,100 µg/l; HOWEVER, RE-EVALUATION BY THE ANALYTICAL LABORATORY INDICATED THAT THE REPORTED CONCENTRATION OF GRO WAS ATTRIBUTED TO A SINGLE PEAK ON THE CHROMATOGRAM, WHICH WAS IN THE RANGE OF NAPHTHALENE

**ALL SOIL ANALYTICAL RESULTS IN MILLIGRAMS PER KILOGRAM (mg/kg)**

**[43.5|(-7.3)|<4.3|<42|<0.0075|<0.0075|<0.0075|<0.0057|** = SOIL ANALYTICAL RESULTS | DEPTH | (ELEVATION IN FEET NAVD88) | GRO | DRO+ORO | NAPHTHALENE | 1-METHYLNAPHTHALENE | 2-METHYLNAPHTHALENE | cPAH TEC

**GRO** = TOTAL PETROLEUM HYDROCARBONS (TPH) AS GASOLINE-RANGE ORGANICS

**DRO** = TPH AS DIESEL-RANGE ORGANICS

**ORO** = TPH AS OIL-RANGE ORGANICS

**DRO+ORO** = SUM OF DRO AND ORO

**cPAH TEC** = CARCINOGENIC POLYCYCLIC AROMATIC HYDROCARBONS TOXIC EQUIVALENT CONCENTRATION

**BOLD** = DENOTES CONCENTRATIONS THAT EXCEED APPLICABLE SCREENING LEVELS

**-** = SAMPLE NOT ANALYZED OR NOT APPLICABLE

**<** = DENOTES ANALYTE NOT DETECTED AT OR EXCEEDING THE REPORTING LIMIT LISTED

**NAVD88** = NORTH AMERICAN VERTICAL DATUM OF 1988

**COPC** = CONSTITUENT OF POTENTIAL CONCERN

**MTCA** = WASHINGTON STATE MODEL TOXICS CONTROL ACT CLEANUP REGULATION

ANALYTE	SCREENING LEVEL	
	VADOSE	SATURATED
GRO	30	30
DRO+ORO	2,000	2,000
NAPHTHALENE	4.5	0.24
1-METHYLNAPHTHALENE	0.082	0.0057
2-METHYLNAPHTHALENE	1.7	0.098
cPAH TEC	0.19	0.19

ANALYTE	SCREENING LEVEL	
	GRO	DRO+ORO
BENZENE	800	500
NAPHTHALENE	2.4	8.9
1-METHYLNAPHTHALENE	1.5	32
2-METHYLNAPHTHALENE	32	

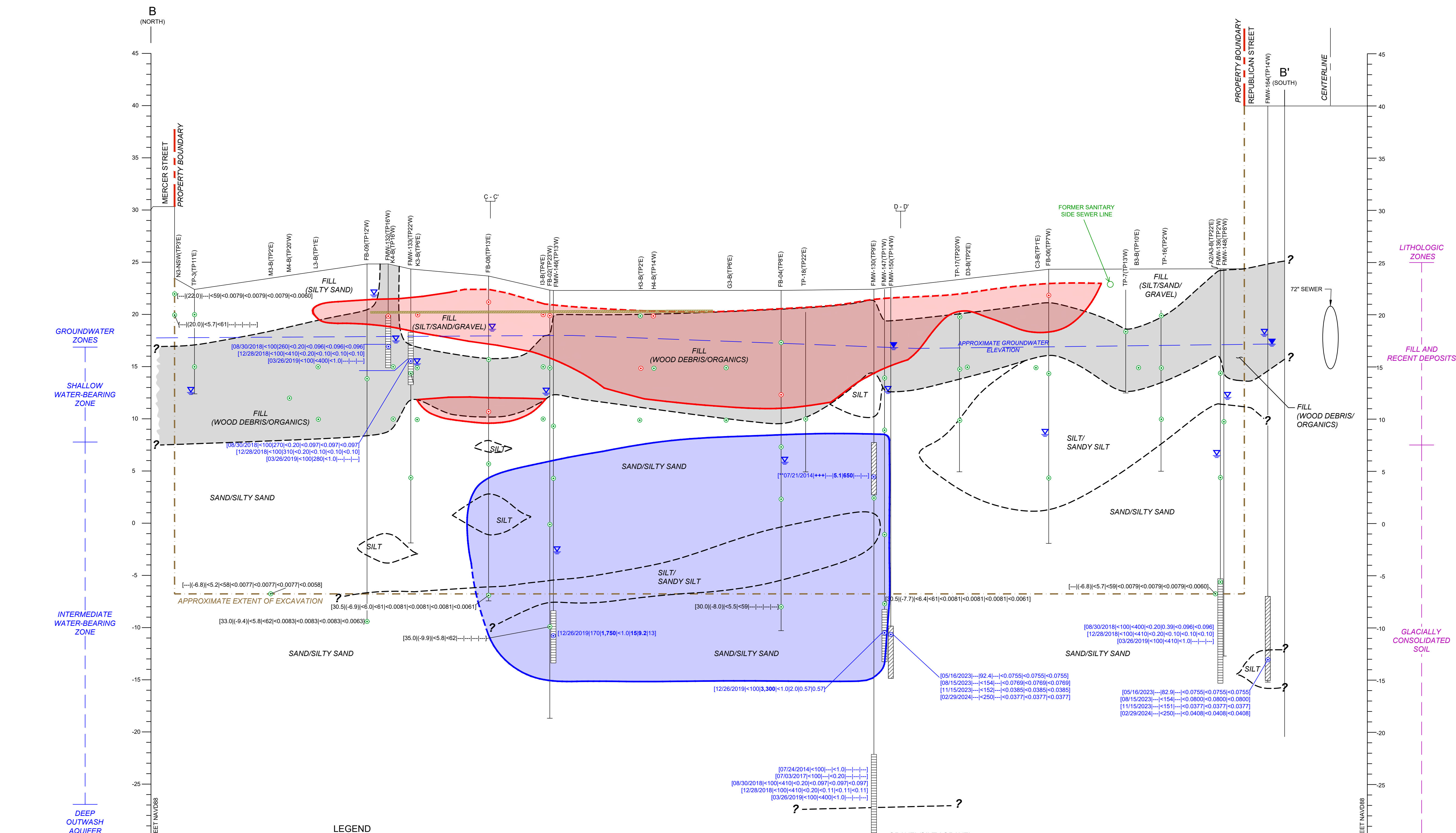
DATA IS ONLY SHOWN FOR PERFORMANCE AND COMPLIANCE SAMPLES THAT REMAIN IN PLACE. NO SOIL DATA STRINGS ARE SHOWN FOR SAMPLES THAT WERE REMOVED.

**FIGURE 17**  
 CROSS SECTION A-A'  
 BLOCK 38 WEST SITE  
 SEATTLE, WASHINGTON

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 Portland | Baker City  
 California Oakland | Irvine

Drawn By: RB Checked By: GP Date: 6/10/2024

FARALLON PN:397-019



- LEGEND**
- TP-3 (TP11E) BORING OR MONITORING WELL LOCATION TRANPOSED (TP) IN FEET, EAST (E) OR WEST (W), TO CROSS-SECTION LINE
  - INDICATES CONCENTRATIONS OF ONE OR MORE COPCS EXCEEDED THE APPLICABLE MTC SCREENING LEVELS
  - INDICATES CONCENTRATIONS OF COPCS ANALYZED DID NOT EXCEED THE APPLICABLE MTC SCREENING LEVELS
  - APPROXIMATE GROUNDWATER ELEVATION
  - STRATIGRAPHIC CONTACT
  - BLANK CASING OR BORING
  - STATIC GROUNDWATER ELEVATION (MOST RECENT)
  - GROUNDWATER ELEVATION AT TIME OF DRILLING
  - TEMPORARY SCREEN INTERVAL
  - GROUNDWATER SAMPLE LOCATION
  - WELL SCREEN INTERVAL

**LEGEND**

ALL GROUNDWATER ANALYTICAL RESULTS IN MICROGRAMS PER LITER (µg/L)

[08/30/2018]<100<325<0.20<0.39<0.096<0.096] = GROUNDWATER ANALYTICAL RESULT [ SAMPLE DATE | GRO | DRO+ORO | BENZENE | NAPHTHALENE | 1-METHYLNAPHTHALENE | 2-METHYLNAPHTHALENE ]

\*\* = DENOTES SAMPLE IS RECONNAISSANCE GROUNDWATER GRAB SAMPLE

++ = GRO REPORTED AT A CONCENTRATION OF 1,100 µg/L; HOWEVER, RE-EVALUATION BY THE ANALYTICAL LABORATORY INDICATED THAT THE REPORTED CONCENTRATION OF GRO WAS ATTRIBUTED TO A SINGLE PEAK ON THE CHROMATOGRAM, WHICH WAS IN THE RANGE OF NAPHTHALENE

+++ = GRO REPORTED AT A CONCENTRATION OF 2,100 µg/L; HOWEVER, RE-EVALUATION BY THE ANALYTICAL LABORATORY INDICATED THAT THE REPORTED CONCENTRATION WAS NOT SIMILAR TO A TYPICAL GAS.

ALL SOIL ANALYTICAL RESULTS IN MILLIGRAMS PER KILOGRAM (mg/kg)

[33.0](-9.4)(<5.8)<46.5<0.0083<0.0083<0.0083<0.0063] = SOIL ANALYTICAL RESULTS [ DEPTH | (ELEVATION IN FEET NAVD88) | GRO | DRO+ORO | NAPHTHALENE | 1-METHYLNAPHTHALENE | 2-METHYLNAPHTHALENE | cPAH TEC ]

GRO = TOTAL PETROLEUM HYDROCARBONS (TPH) AS GASOLINE-RANGE ORGANICS

DRO = TPH AS DIESEL-RANGE ORGANICS

ORO = TPH AS OIL-RANGE ORGANICS

DRO+ORO = SUM OF DRO AND ORO

cPAH TEC = CARCINOGENIC POLYCYCLIC AROMATIC HYDROCARBONS TOXIC EQUIVALENT CONCENTRATION

**BOLD** DENOTES CONCENTRATIONS THAT EXCEED APPLICABLE SCREENING LEVELS

-- = SAMPLE NOT ANALYZED OR NOT APPLICABLE

< = DENOTES ANALYTE NOT DETECTED AT OR EXCEEDING THE REPORTING LIMIT LISTED

NAVD88 = NORTH AMERICAN VERTICAL DATUM OF 1988

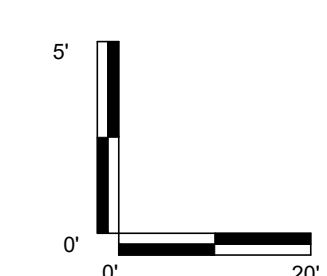
COPC = CONSTITUENT OF POTENTIAL CONCERN

MTC = WASHINGTON STATE MODEL TOXICS CONTROL ACT CLEANUP REGULATION

- APPROXIMATE AREA OF WOOD DEBRIS/ORGANICS LAYER PRIOR TO INTERIM ACTIONS
- ESTIMATED EXTENT OF SOIL EXCEEDING SCREENING LEVELS PRIOR TO INTERIM ACTIONS
- ESTIMATED EXTENT OF GROUNDWATER EXCEEDING SCREENING LEVELS PRIOR TO INTERIM ACTIONS
- ESTIMATED EXTENT OF COAL/CHARCOAL LAYER PRIOR TO INTERIM ACTIONS

SOIL (mg/kg)		GROUNDWATER (µg/L)		
ANALYTE	SCREENING LEVEL	ANALYTE	SCREENING LEVEL	
	VADOSE		SATURATED	GRO
GRO	30	30	800	500
DRO+ORO	2,000	2,000	BENZENE	2.4
			NAPHTHALENE	8.9
			1-METHYLNAPHTHALENE	1.5
			2-METHYLNAPHTHALENE	32
			cPAH TEC	0.19

DATA IS ONLY SHOWN FOR PERFORMANCE AND COMPLIANCE SAMPLES THAT REMAIN IN PLACE. NO SOIL DATA STRINGS ARE SHOWN FOR SAMPLES THAT WERE REMOVED.



Washington  
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Oregon  
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Oakland | Irvine

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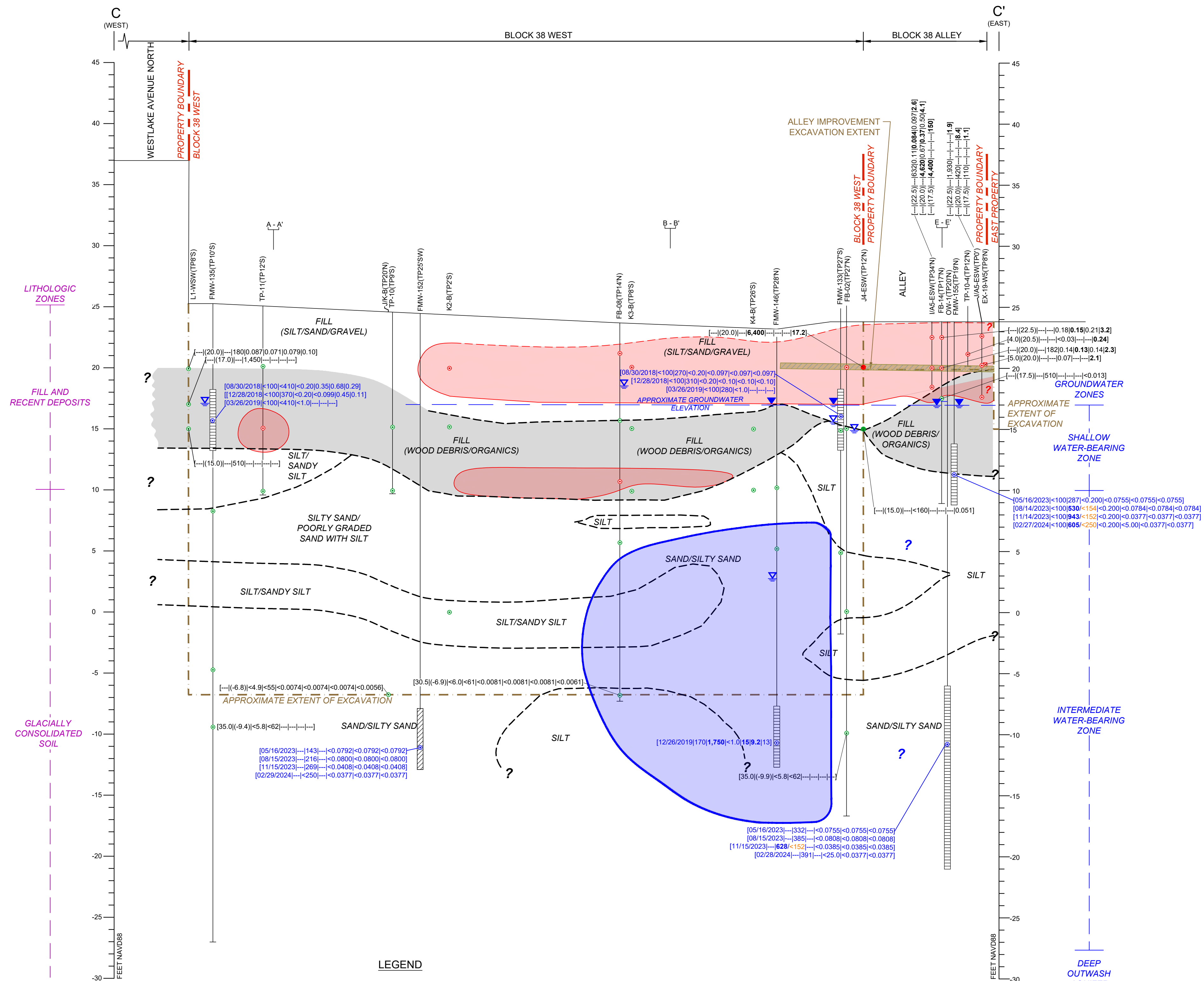
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**FIGURE 18**  
CROSS SECTION B-B'  
BLOCK 38 WEST SITE  
SEATTLE, WASHINGTON

FARALLON PN-397-019





**LEGEND**

- FB-08(TP14N) BORING OR MONITORING WELL LOCATION TRANSPOSED (TP) IN FEET, NORTH (N) OR SOUTH (S), TO CROSS-SECTION LINE
- SOIL SAMPLE LOCATION
- APPROXIMATE GROUNDWATER ELEVATION
- - - STRATIGRAPHIC CONTACT
- BLANK CASING OR BORING
- ▼ STATIC GROUNDWATER ELEVATION (MOST RECENT)
- ▼ GROUNDWATER ELEVATION AT TIME OF DRILLING
- GROUNDWATER SAMPLE LOCATION
- WELL SCREEN INTERVAL

ALL GROUNDWATER ANALYTICAL RESULTS IN MICROGRAMS PER LITER (µg/l)

[02/27/2024]<100[605]<250[<0.200[<5.00[<0.0377[<0.0377] = GROUNDWATER ANALYTICAL RESULT | [SAMPLE DATE] | GRO | DRO+ORO | DRO+ORO WITH SILICA GEL CLEANUP WHEN AVAILABLE | BENZENE | NAPHTHALENE | 1-METHYLNAPHTHALENE | 2-METHYLNAPHTHALENE |

++ DENOTES SAMPLE IS RECONNAISSANCE GROUNDWATER GRAB SAMPLE

++ GRO REPORTED AT A CONCENTRATION OF 1,100 µg/l, HOWEVER, RE-EVALUATION BY THE ANALYTICAL LABORATORY INDICATED THAT THE REPORTED CONCENTRATION OF GRO WAS ATTRIBUTED TO A SINGLE PEAK ON THE CHROMATOGRAM, WHICH WAS IN THE RANGE OF NAPHTHALENE.

ALL SOIL ANALYTICAL RESULTS IN MILLIGRAMS PER KILOGRAM (mg/kg)

[30.5][(-6.9)][<6.0][<6.1][<0.0081][<0.0081][<0.0081][<0.0061] = SOIL ANALYTICAL RESULTS | [DEPTH] | [ELEVATION IN FEET NAVD88] | GRO | DRO+ORO | NAPHTHALENE | 1-METHYLNAPHTHALENE | 2-METHYLNAPHTHALENE | cPAH TEC

GRO = TOTAL PETROLEUM HYDROCARBONS (TPH) AS GASOLINE-RANGE ORGANICS

DRO = TPH AS DIESEL-RANGE ORGANICS

ORO = TPH AS OIL-RANGE ORGANICS

DRO+ORO = SUM OF DRO AND ORO

cPAH TEC = CARCINOGENIC POLYCYCLIC AROMATIC HYDROCARBONS TOXIC EQUIVALENT CONCENTRATION

**BOLD** = DENOTES CONCENTRATIONS THAT EXCEED APPLICABLE SCREENING LEVELS

- - - = SAMPLE NOT ANALYZED OR NOT APPLICABLE

< = DENOTES ANALYTE NOT DETECTED AT OR EXCEEDING THE REPORTING LIMIT LISTED

NAVD88 = NORTH AMERICAN VERTICAL DATUM OF 1988

COPC = CONSTITUENT OF POTENTIAL CONCERN

MTCA = WASHINGTON STATE MODEL TOXICS CONTROL ACT CLEANUP REGULATION

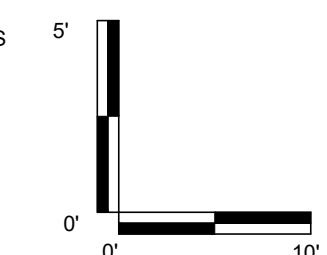
- APPROXIMATE AREA OF WOOD DEBRIS/ORGANICS LAYER PRIOR TO INTERIM ACTIONS
- ESTIMATED EXTENT OF SOIL EXCEEDING SCREENING LEVELS PRIOR TO INTERIM ACTIONS
- ESTIMATED EXTENT OF GROUNDWATER EXCEEDING SCREENING LEVELS PRIOR TO INTERIM ACTIONS
- ESTIMATED EXTENT OF COAL/CHARCOAL LAYER PRIOR TO INTERIM ACTIONS

- ORANGE SILICA GEL CLEANUP ANALYTICAL RESULTS
- RED INDICATES CONCENTRATIONS OF HAZARDOUS SUBSTANCES EXCEEDING THE APPLICABLE MTCA SCREENING LEVELS
- GREEN INDICATES HAZARDOUS SUBSTANCES ANALYZED DID NOT EXCEED THE APPLICABLE MTCA SCREENING LEVELS
- ⊗ EXCAVATION BORING (FARALLON)
- EXCAVATION SAMPLE (FARALLON)

ANALYTE	SCREENING LEVEL	
	VADOSE	SATURATED
GRO	30	30
DRO+ORO	2,000	2,000
NAPHTHALENE	4.5	0.24
1-METHYLNAPHTHALENE	0.082	0.0067
2-METHYLNAPHTHALENE	1.7	0.088
cPAH TEC	0.19	0.19

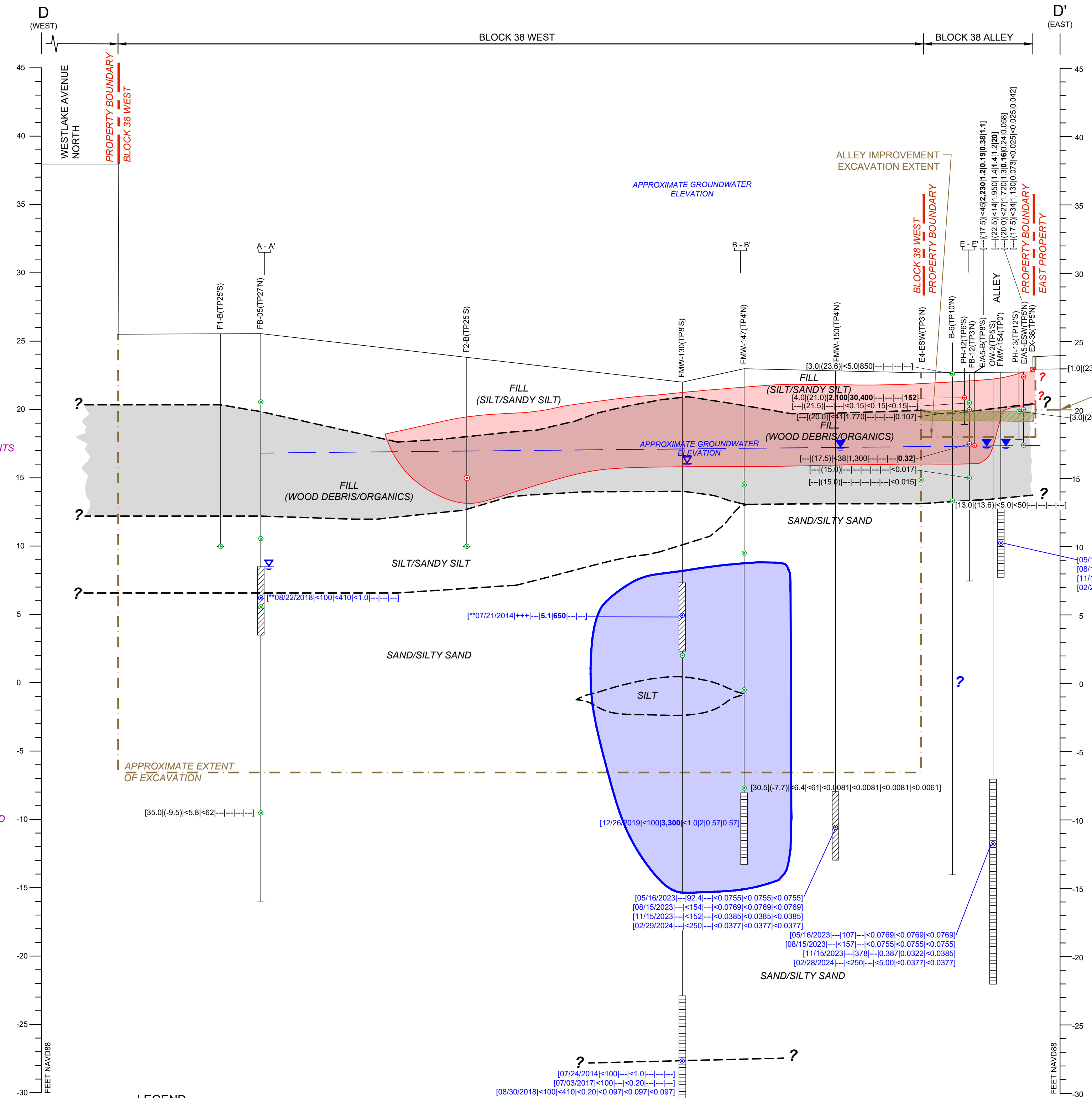
ANALYTE	GROUNDWATER (µg/L)	
	GRO	SCREENING LEVEL
DRO+ORO	500	
BENZENE	2.4	
NAPHTHALENE	8.9	
1-METHYLNAPHTHALENE	1.5	
2-METHYLNAPHTHALENE	32	

DATA IS ONLY SHOWN FOR PERFORMANCE AND COMPLIANCE SAMPLES THAT REMAIN IN PLACE. NO SOIL DATA STRINGS ARE SHOWN FOR SAMPLES THAT WERE REMOVED.



**FIGURE 19**  
CROSS SECTION C-C'  
BLOCK 38 WEST SITE  
SEATTLE, WASHINGTON

C:\Users\rb\OneDrive\Documents\Farallon\397-019\397-019\_01032024\Figure\_19\_Cross\_Section\_C-C'\_Block\_38\_West\_Site\_Seattle\_Washington.dwg



LITHOLOGIC ZONES  
 FILL AND RECENT DEPOSITS  
 GLACIALLY CONSOLIDATED SOIL

APPROXIMATE GROUNDWATER ELEVATION  
 ALLEY IMPROVEMENT EXCAVATION EXTENT  
 PROPERTY BOUNDARY  
 APPROXIMATE LOCATION OF ROSEN BUILDING LIST ON EAST PROPERTY  
 GROUNDWATER ZONES  
 SHALLOW WATER-BEARING ZONE  
 INTERMEDIATE WATER-BEARING ZONE  
 DEEP OUTWASH AQUIFER

**LEGEND**

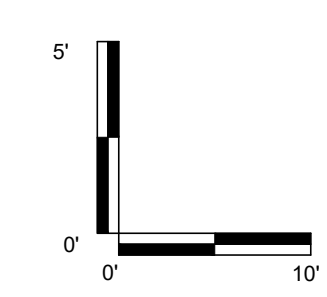
- ALL GROUNDWATER ANALYTICAL RESULTS IN MICROGRAMS PER LITER (µg/l)
- GROUNDWATER ANALYTICAL RESULT [ SAMPLE DATE | GRO | DRO+ORO | DRO+ORO WITH SILICA GEL CLEANUP WHEN AVAILABLE | BENZENE | NAPHTHALENE | 1-METHYLNAPHTHALENE | 2-METHYLNAPHTHALENE ]
- \*\* = DENOTES SAMPLE IS RECONNAISSANCE GROUNDWATER GRAB SAMPLE
- ++ = GRO REPORTED AT A CONCENTRATION OF 1,100 µg/l. HOWEVER, RE-EVALUATION BY THE ANALYTICAL LABORATORY INDICATED THAT THE REPORTED CONCENTRATION OF GRO WAS ATTRIBUTED TO A SINGLE PEAK ON THE CHROMATOGRAM, WHICH WAS IN THE RANGE OF NAPHTHALENE.
- ALL SOIL ANALYTICAL RESULTS IN MILLIGRAMS PER KILOGRAM (mg/kg)
- SOIL ANALYTICAL RESULTS [ DEPTH | ELEVATION IN FEET NAVD88 | GRO | DRO+ORO | NAPHTHALENE | 1-METHYLNAPHTHALENE | 2-METHYLNAPHTHALENE | cPAH TEC ]
- GRO = TOTAL PETROLEUM HYDROCARBONS (TPH) AS GASOLINE-RANGE ORGANICS
- DRO = TPH AS DIESEL-RANGE ORGANICS
- ORO = TPH AS OIL-RANGE ORGANICS
- DRO+ORO = SUM OF DRO AND ORO
- cPAH TEC = CARCINOGENIC POLYCYCLIC AROMATIC HYDROCARBONS TOXIC EQUIVALENT CONCENTRATION
- BOLD** = DENOTES CONCENTRATIONS THAT EXCEED APPLICABLE SCREENING LEVELS
>
- = SAMPLE NOT ANALYZED OR NOT APPLICABLE
- < = DENOTES ANALYTE NOT DETECTED AT OR EXCEEDING THE REPORTING LIMIT LISTED
- NAVD88 = NORTH AMERICAN VERTICAL DATUM OF 1988
- COPC = CONSTITUENT OF POTENTIAL CONCERN
- MTCA = WASHINGTON STATE MODEL TOXICS CONTROL ACT CLEANUP REGULATION
- APPROXIMATE AREA OF WOOD DEBRIS/ORGANICS LAYER PRIOR TO INTERIM ACTIONS
- ESTIMATED EXTENT OF SOIL EXCEEDING SCREENING LEVELS PRIOR TO INTERIM ACTIONS
- ESTIMATED EXTENT OF GROUNDWATER EXCEEDING SCREENING LEVELS PRIOR TO INTERIM ACTIONS
- ESTIMATED EXTENT OF COAL/CHARCOAL LAYER PRIOR TO INTERIM ACTIONS
- ORANGE: SILICA GEL CLEANUP ANALYTICAL RESULTS
- RED: INDICATES CONCENTRATIONS OF HAZARDOUS SUBSTANCES EXCEEDING THE APPLICABLE MTCA SCREENING LEVELS
- GREEN: INDICATES HAZARDOUS SUBSTANCES ANALYZED DID NOT EXCEED THE APPLICABLE MTCA SCREENING LEVELS
- ⊗: EXCAVATION BORING (FARALLON)
- : EXCAVATION SAMPLE (FARALLON)

ANALYTE	SCREENING LEVEL	
	VADOSE	SATURATED
GRO	30	30
DRO+ORO	2,000	2,000
NAPHTHALENE	4.5	0.24
1-METHYLNAPHTHALENE	0.082	0.0057
2-METHYLNAPHTHALENE	1.7	0.098
cPAH TEC	0.19	0.19

ANALYTE	GROUNDWATER (µg/L)	
	GRO	SCREENING LEVEL
DRO+ORO	800	500
BENZENE	2.4	8.9
NAPHTHALENE	8.9	1.5
1-METHYLNAPHTHALENE	1.5	32
2-METHYLNAPHTHALENE	32	

DATA IS ONLY SHOWN FOR PERFORMANCE AND COMPLIANCE SAMPLES THAT REMAIN IN PLACE. NO SOIL DATA STRINGS ARE SHOWN FOR SAMPLES THAT WERE REMOVED.

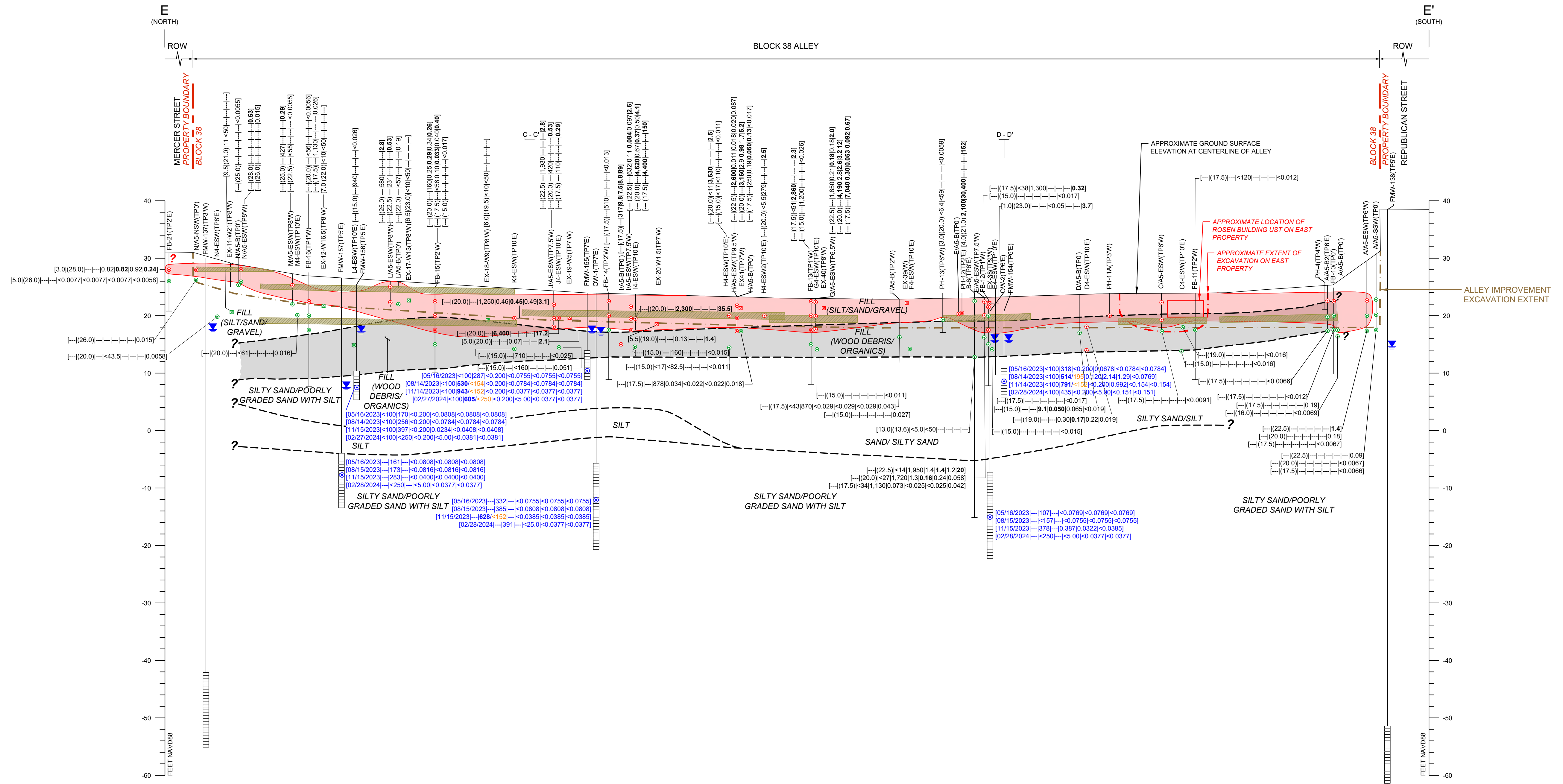
- BORING OR MONITORING WELL LOCATION TRANSPOSED (TP) IN FEET, NORTH (N) OR SOUTH (S), TO CROSS-SECTION LINE
- SOIL SAMPLE LOCATION
- APPROXIMATE GROUNDWATER ELEVATION
- STRATIGRAPHIC CONTACT
- BLANK CASING OR BORING
- STATIC GROUNDWATER ELEVATION (MOST RECENT)
- GROUNDWATER ELEVATION AT TIME OF DRILLING
- TEMPORARY SCREEN INTERVAL
- GROUNDWATER SAMPLE LOCATION
- WELL SCREEN INTERVAL



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Drawn By: RB Checked By: GP Date: 6/10/2024

**FIGURE 20**  
 CROSS SECTION D-D'  
 BLOCK 38 WEST SITE  
 SEATTLE, WASHINGTON  
 FARALLON PN:397-019



**LEGEND**

- BORING OR MONITORING WELL LOCATION TRANSPONDED (TP) IN FEET, EAST (E) OR WEST (W), TO CROSS-SECTION LINE.
- INDICATES CONCENTRATIONS OF ONE OR MORE COPCS EXCEEDED THE APPLICABLE MTCA SCREENING LEVELS
- INDICATES CONCENTRATIONS OF COPCS ANALYZED DID NOT EXCEED THE APPLICABLE MTCA SCREENING LEVELS
- EXCAVATION AREA EXTENT
- APPROXIMATE GROUNDWATER ELEVATION
- STRATIGRAPHIC CONTACT
- BLANK CASING OR BORING
- STATIC GROUNDWATER ELEVATION (MOST RECENT)
- GROUNDWATER SAMPLE LOCATION
- WELL SCREEN INTERVAL

ALL SOIL ANALYTICAL RESULTS IN MILLIGRAMS PER KILOGRAM (mg/kg)  
 [11/14/2023]<100|791|152|<0.200|0.992|<0.154|<0.154| = GROUNDWATER ANALYTICAL RESULT | [SAMPLE DATE] | [GRO] | [DRO+ORO] | [DRO+ORO WITH SILICA GEL CLEANUP WHEN AVAILABLE] | BENZENE | NAPHTHALENE | 1-METHYLNAPHTHALENE | 2-METHYLNAPHTHALENE ]

[15.0]|-|9.1|0.050|0.065|<0.019] = SOIL ANALYTICAL RESULT:  
 [DEPTH] | ELEVATION IN FEET NAVD88 | [GRO] | [DRO+ORO] | [NAPHTHALENE] | 1-METHYLNAPHTHALENE | 2-METHYLNAPHTHALENE | cPAH TEC ]

GRO = TOTAL PETROLEUM HYDROCARBONS (TPH) AS GASOLINE-RANGE ORGANICS  
 DRO = TPH AS DIESEL-RANGE ORGANICS  
 ORO = TPH AS OIL-RANGE ORGANICS  
 DRO+ORO = SUM OF DRO AND ORO  
 cPAH TEC = CARCINOGENIC POLYCYCLIC AROMATIC HYDROCARBONS TOXIC EQUIVALENT CONCENTRATION

**BOLD** = DENOTES CONCENTRATIONS THAT EXCEED APPLICABLE SCREENING LEVELS  
 - = SAMPLE NOT ANALYZED FOR CONSTITUENT  
 < = DENOTES ANALYTE NOT DETECTED AT OR EXCEEDING THE REPORTING LIMIT LISTED  
 NAVD88 = NORTH AMERICAN VERTICAL DATUM OF 1988  
 MTCA = WASHINGTON STATE MODEL TOXICS CONTROL ACT CLEANUP REGULATION

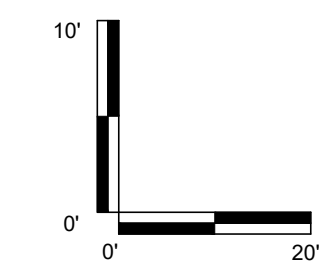
APPROXIMATE AREA OF WOOD DEBRIS/ORGANICS LAYER PRIOR TO INTERIM ACTIONS  
 ESTIMATED EXTENT OF SOIL EXCEEDING MTCA SCREENING LEVELS PRIOR TO INTERIM ACTIONS  
 ESTIMATED EXTENT OF COAL/CHARCOAL LAYER PRIOR TO INTERIM ACTIONS

ANALYTE	SOIL (mg/kg)	
	VAPOUR	SATURATED
GRO	30	30
DRO+ORO	2,000	2,000
NAPHTHALENE	4.5	0.24
1-METHYLNAPHTHALENE	0.082	0.0067
2-METHYLNAPHTHALENE	1.7	0.088
cPAH TEC	0.19	0.19

ANALYTE	GROUNDWATER (µg/L)	
	GRO	SCREENING LEVEL
DRO+ORO	500	
BENZENE	2.4	
NAPHTHALENE	8.9	
1-METHYLNAPHTHALENE	1.5	
2-METHYLNAPHTHALENE	32	

DATA IS ONLY SHOWN FOR PERFORMANCE AND COMPLIANCE SAMPLES THAT REMAIN IN PLACE. NO SOIL DATA STRINGS ARE SHOWN FOR SAMPLES THAT WERE REMOVED.

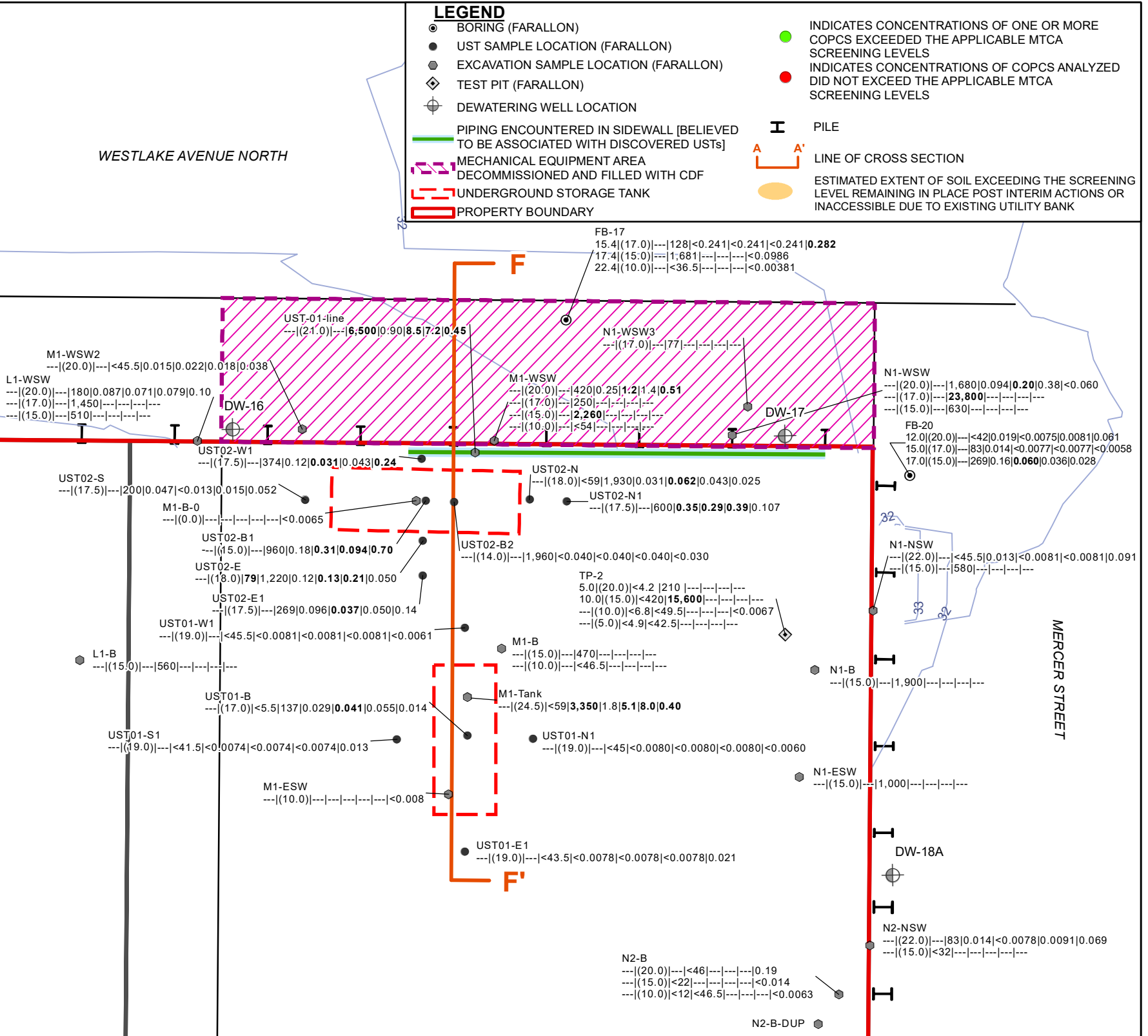
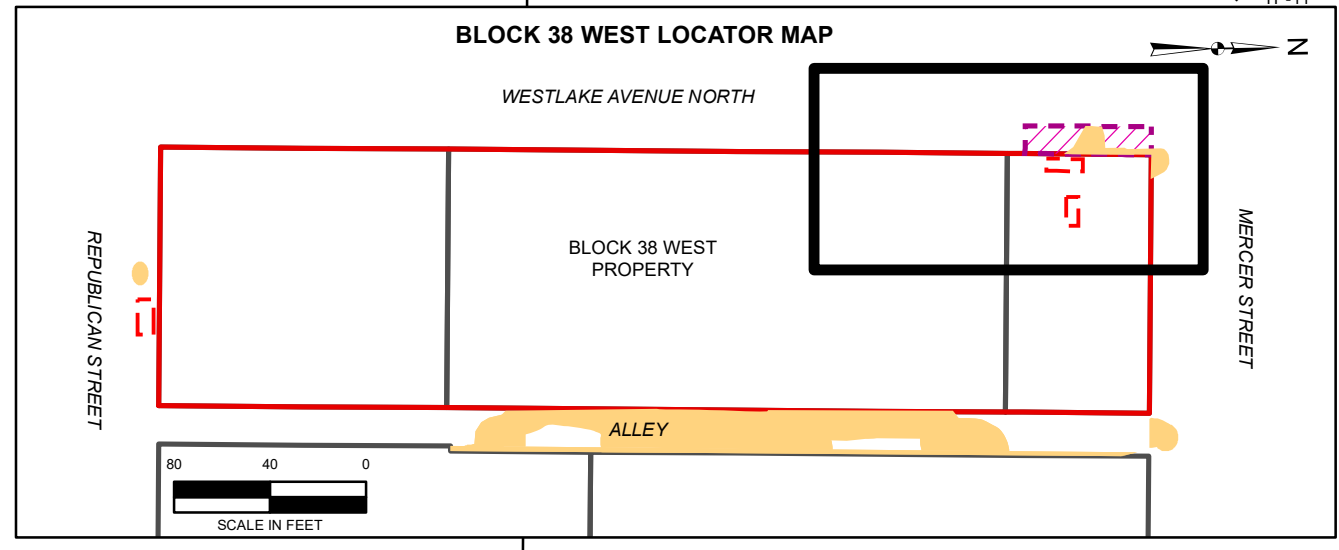
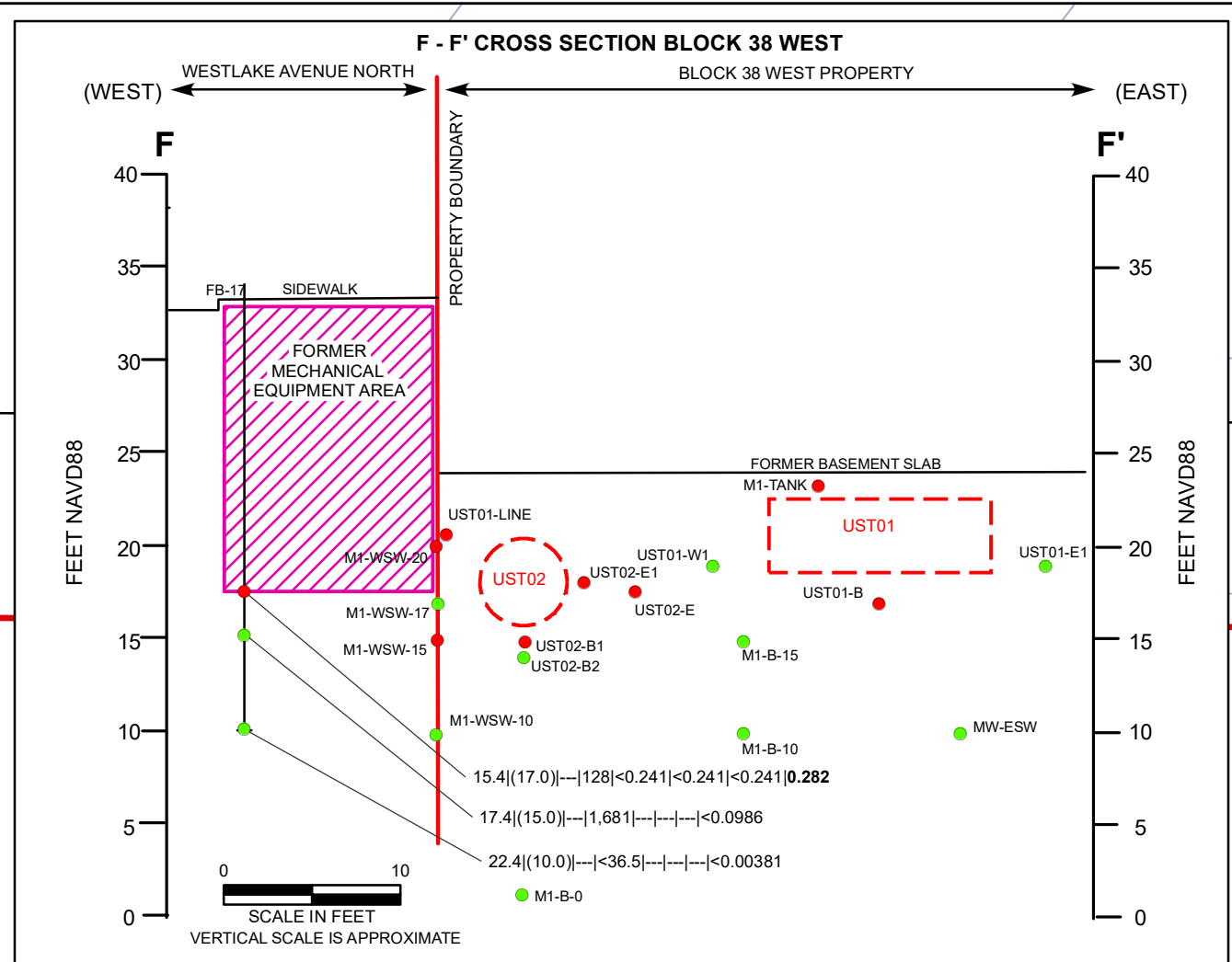
- SILICA GEL CLEANUP ANALYTICAL RESULTS
- INDICATES CONCENTRATIONS OF HAZARDOUS SUBSTANCES EXCEEDING THE APPLICABLE MTCA SCREENING LEVELS
- INDICATES HAZARDOUS SUBSTANCES ANALYZED DID NOT EXCEED THE APPLICABLE MTCA SCREENING LEVELS
- EXCAVATION BORING (FARALLON)
- EXCAVATION SAMPLE (FARALLON)



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**FIGURE 21**  
 CROSS SECTION E-E'  
 BLOCK 38 ALLEY  
 SEATTLE, WASHINGTON

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**NOTES:**  
 ANALYTICAL RESULTS IN MILLIGRAMS PER KILOGRAM (mg/kg)  
 SAMPLE DEPTH AND CONCENTRATIONS REPORTED AS:  
 DEPTH | (ELEVATION IN FEET NAVD88) | GRO | DRO+ORO  
 | NAPHTHALENE | 1-METHYLNAPHTHALENE |  
 2-METHYLNAPHTHALENE | cPAH TEC

ELEVATION DATA PRESENTED IN FEET ABOVE MEAN SEA LEVEL  
 IN THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)  
 ELEVATION SOURCE: BUSH, ROED, & HITCHINGS, INC. (2014)

DATA IS ONLY SHOWN FOR PERFORMANCE AND COMPLIANCE  
 SAMPLES THAT REMAIN IN PLACE. NO SOIL DATA STRINGS ARE  
 SHOWN FOR SAMPLES THAT WERE REMOVED. RED HIGHLIGHTS  
 INDICATE THE SOIL DATA EXCEEDED APPLICABLE RI SCREENING  
 LEVELS AND GREEN HIGHLIGHTS INDICATE THE SOIL DATA WAS  
 LESS THAN THE APPLICABLE RI SCREENING LEVEL.

**BOLD** = DENOTES CONCENTRATIONS THAT EXCEED APPLICABLE SCREENING LEVELS  
 < = DENOTES ANALYTE NOT DETECTED AT OR EXCEEDING THE REPORTING LIMIT LISTED  
 --- = DENOTES SAMPLE NOT ANALYZED OR NOT APPLICABLE

cPAH = CARCINOGENIC POLYCYCLIC AROMATIC HYDROCARBONS  
 TEC = TOXICITY EQUIVALENT CONCENTRATION  
 DRO = TOTAL PETROLEUM HYDROCARBONS (TPH) AS DIESEL-RANGE ORGANICS  
 ORO = TPH AS OIL-RANGE ORGANICS  
 GRO = TPH AS GASOLINE-RANGE ORGANICS  
 DRO+ORO = SUM OF DRO AND ORO  
 MTCA = WASHINGTON STATE MODEL TOXICS CONTROL ACT  
 CLEANUP REGULATION  
 CDF = CONTROLLED DENSITY FILL  
 UST = UNDERGROUND STORAGE TANK

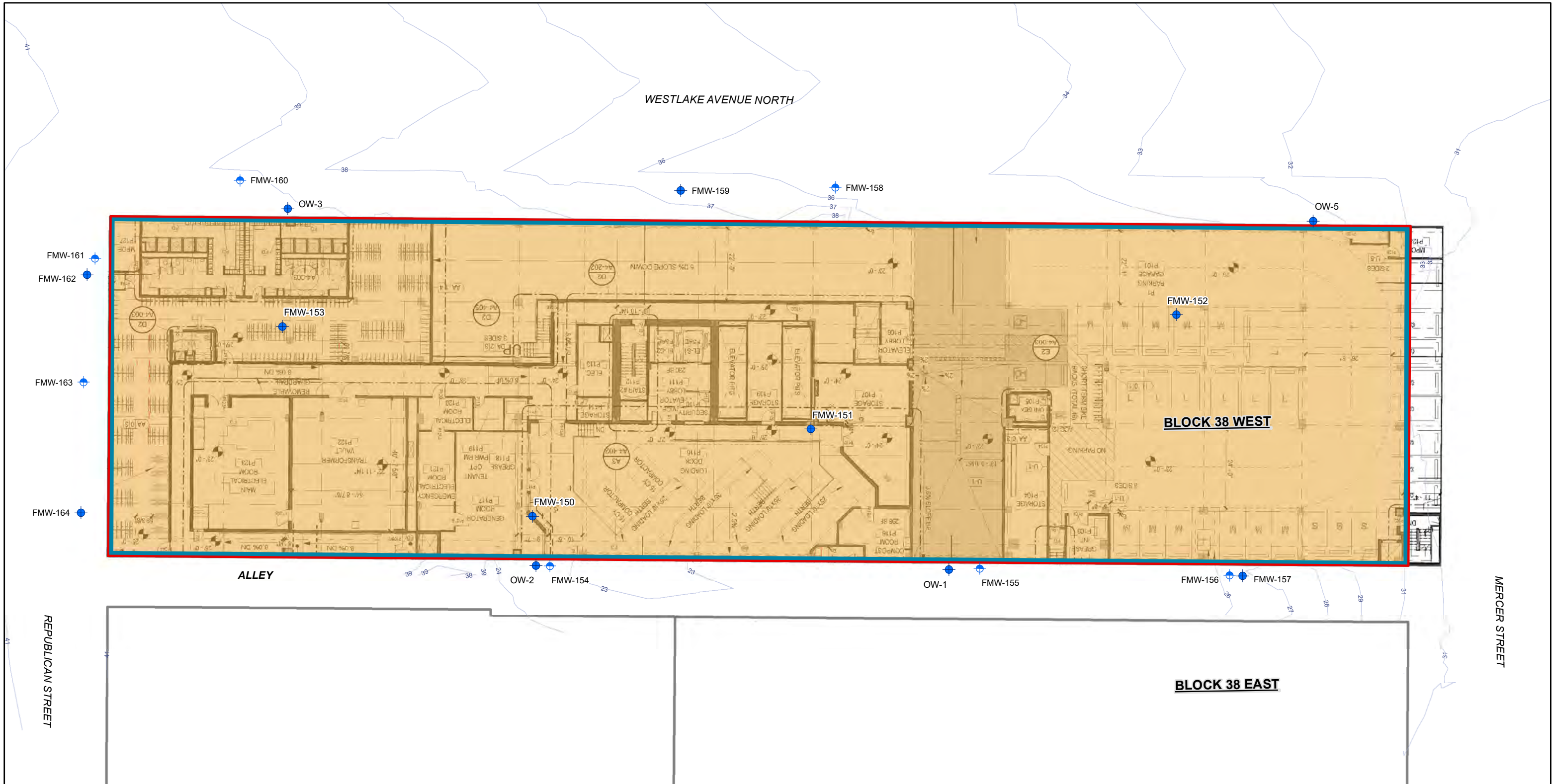
ANALYTE	SOIL (mg/kg)	
	VAPOSE	SATURATED
GRO	30	30
DRO+ORO	2,000	2,000
NAPHTHALENE	4.5	0.24
1-METHYLNAPHTHALENE	0.082	0.0067
2-METHYLNAPHTHALENE	1.7	0.088
cPAH TEC	0.19	0.19

ALL LOCATIONS ARE APPROXIMATE. FIGURES WERE  
 PRODUCED IN COLOR. GRAYSCALE COPIES MAY NOT  
 REPRODUCE ALL ORIGINAL INFORMATION.










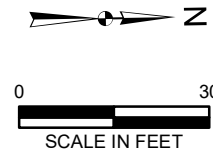
**FIGURE 22**  
 SOIL ANALYTICAL RESULTS FOR  
 UST DECOMMISSIONING  
 BLOCK 38 WEST SITE  
 SEATTLE, WASHINGTON

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**LEGEND**

-  SHALLOW WATER-BEARING ZONE MONITORING WELL
-  INTERMEDIATE WATER-BEARING ZONE MONITORING WELL / OBSERVATION
-  VERTICAL EXTENT OF VAPOR BARRIER INSTALLED, FROM BASE TO TOP OF SHORING WALL; HYCRETE WATERPROOF CONCRETE EXTENDS TO ELEVATION 20.0 FEET NAVD88
-  HORIZONTAL EXTENT OF VAPOR BARRIER INSTALLED ACROSS FOUNDATION; BARRIER PLACED ON TOP OF RAT SLAB FOUNDATION PRIOR TO POURING THE MAT SLAB FOUNDATION WITH TOP 12-INCHES CONSISTING OF HYCRETE WATERPROOF CONCRETE
-  ELEVATION CONTOUR
-  PROPERTY BOUNDARY
-  KING COUNTY PARCEL BOUNDARY



NOTES:  
 1. ALL LOCATIONS ARE APPROXIMATE.  
 2. FIGURES WERE PRODUCED IN COLOR. GRAYSCALE COPIES MAY NOT REPRODUCE ALL ORIGINAL INFORMATION.  
 3. ELEVATION DATA PRESENTED IN FEET ABOVE MEAN SEA LEVEL IN THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) ELEVATION SOURCE: BUSH, ROED, & HITCHINGS, INC. (2014)



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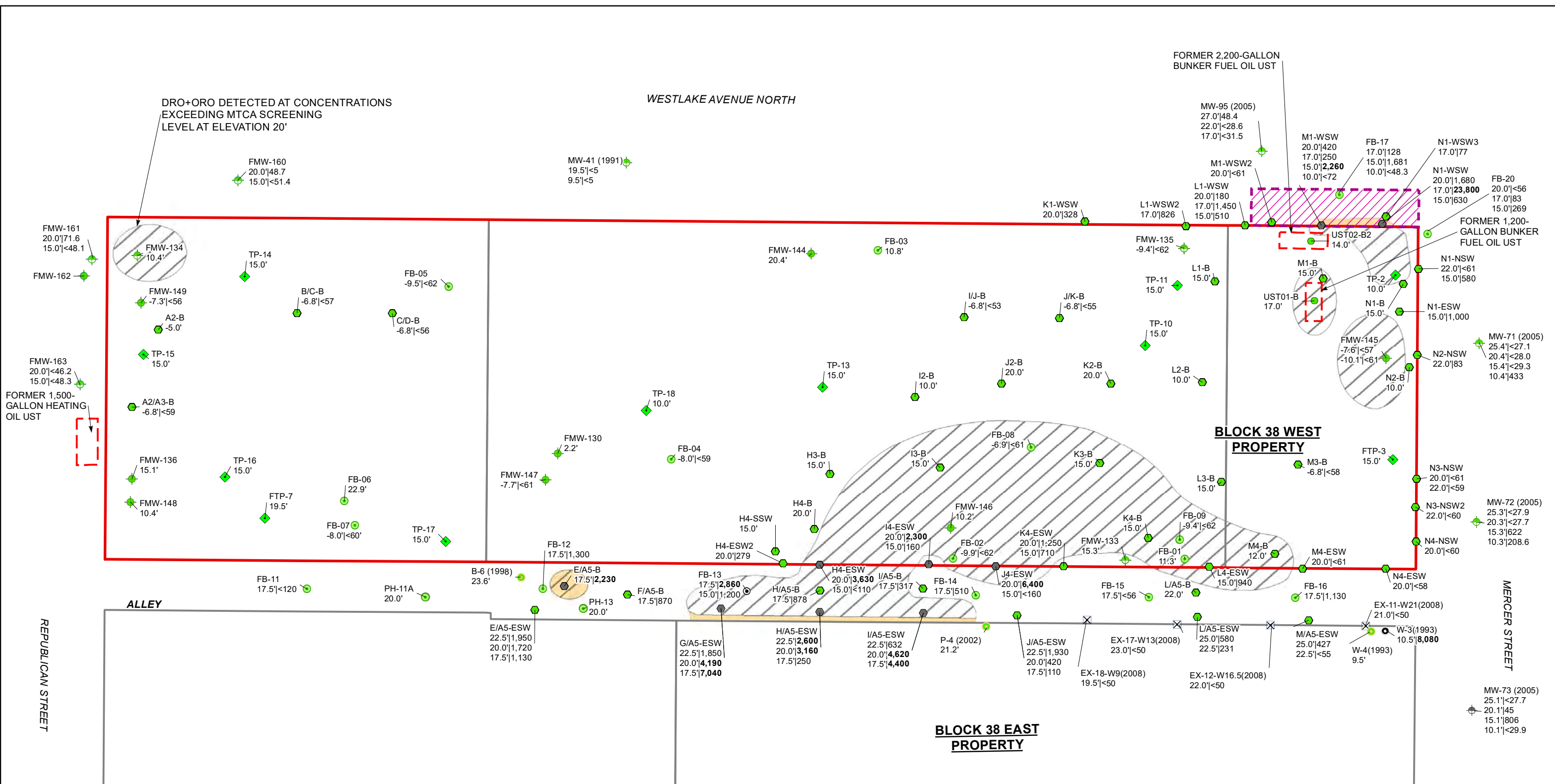
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**FIGURE 23**  
 EXTENT OF VAPOR BARRIER  
 BLOCK 38 WEST SITE  
 SEATTLE, WASHINGTON

DRO+ORO DETECTED AT CONCENTRATIONS EXCEEDING MTCA SCREENING LEVEL AT ELEVATION 20'

WESTLAKE AVENUE NORTH

FORMER 2,200-GALLON BUNKER FUEL OIL UST



**LEGEND**

- SHALLOW WATER-BEARING ZONE MONITORING WELL
- INTERMEDIATE WATER-BEARING ZONE MONITORING WELL / OBSERVATION WELL
- DECOMMISSIONED SHALLOW WATER-BEARING ZONE MONITORING WELL
- DECOMMISSIONED INTERMEDIATE WATER-BEARING ZONE MONITORING WELL
- BORING (FARALLON)
- BORING (GEOENGINEERS)
- EXCAVATION SAMPLE (GEOENGINEERS)
- POTHOLE (FARALLON)
- UST SAMPLE LOCATION (FARALLON)
- EXCAVATION SAMPLE LOCATION (FARALLON)
- TEST PIT (FARALLON)
- DENOTES SAMPLE LOCATION AND ELEVATION IN FEET NAVD88 WHERE DRO+ORO RESULTS ARE LESS THAN THE PROPOSED CLEANUP LEVEL
- ESTIMATED EXTENT OF SOIL EXCEEDING THE PROPOSED CLEANUP LEVEL REMAINING IN PLACE POST INTERIM ACTIONS OR INACCESSIBLE DUE TO EXISTING UTILITY BANK
- ESTIMATED EXTENT OF SOIL EXCEEDING THE SCREENING LEVEL THAT WAS EXCAVATED AND REMOVED BY INTERIM ACTIONS
- MECHANICAL EQUIPMENT AREA DECOMMISSIONED AND FILLED WITH CDF
- PROPERTY BOUNDARY
- FORMER UNDERGROUND STORAGE TANKS (USTs)
- KING COUNTY PARCEL BOUNDARY

**NOTES:**  
 DATA SHOWN ARE FOR SAMPLES COLLECTED BETWEEN 2014 THROUGH 2023 UNLESS OTHERWISE NOTED. DATA IS ONLY SHOWN FOR PERFORMANCE AND COMPLIANCE SAMPLES THAT REMAIN IN PLACE. NO SOIL DATA STRINGS ARE SHOWN FOR SAMPLES THAT WERE REMOVED.  
 FOR SOIL SAMPLES:  
 ELEVATION IN FEET NAVD88 | DRO+ORO  
 ANALYTICAL RESULTS IN MILLIGRAMS PER KILOGRAM (mg/kg)  
**BOLD** = DENOTES CONCENTRATIONS THAT EXCEEDED THE SOIL PROPOSED CLEANUP LEVEL OF 2,000 mg/kg  
 < = DENOTES ANALYTE NOT DETECTED AT OR EXCEEDING THE REPORTING LIMIT LISTED  
 CDF = CONTROLLED DENSITY FILL  
 DRO = TOTAL PETROLEUM HYDROCARBONS (TPH) AS DIESEL-RANGE ORGANICS  
 ORO = TPH AS OIL-RANGE ORGANICS  
 MTCA = WASHINGTON STATE MODEL TOXICS CONTROL ACT CLEANUP REGULATION  
 NAVD88 = NORTH AMERICAN VERTICAL DATUM OF 1988

ALL LOCATIONS ARE APPROXIMATE. FIGURES WERE PRODUCED IN COLOR. GRAYSCALE COPIES MAY NOT REPRODUCE ALL ORIGINAL INFORMATION.

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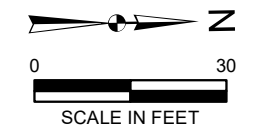
Oregon  
Portland | Baker City

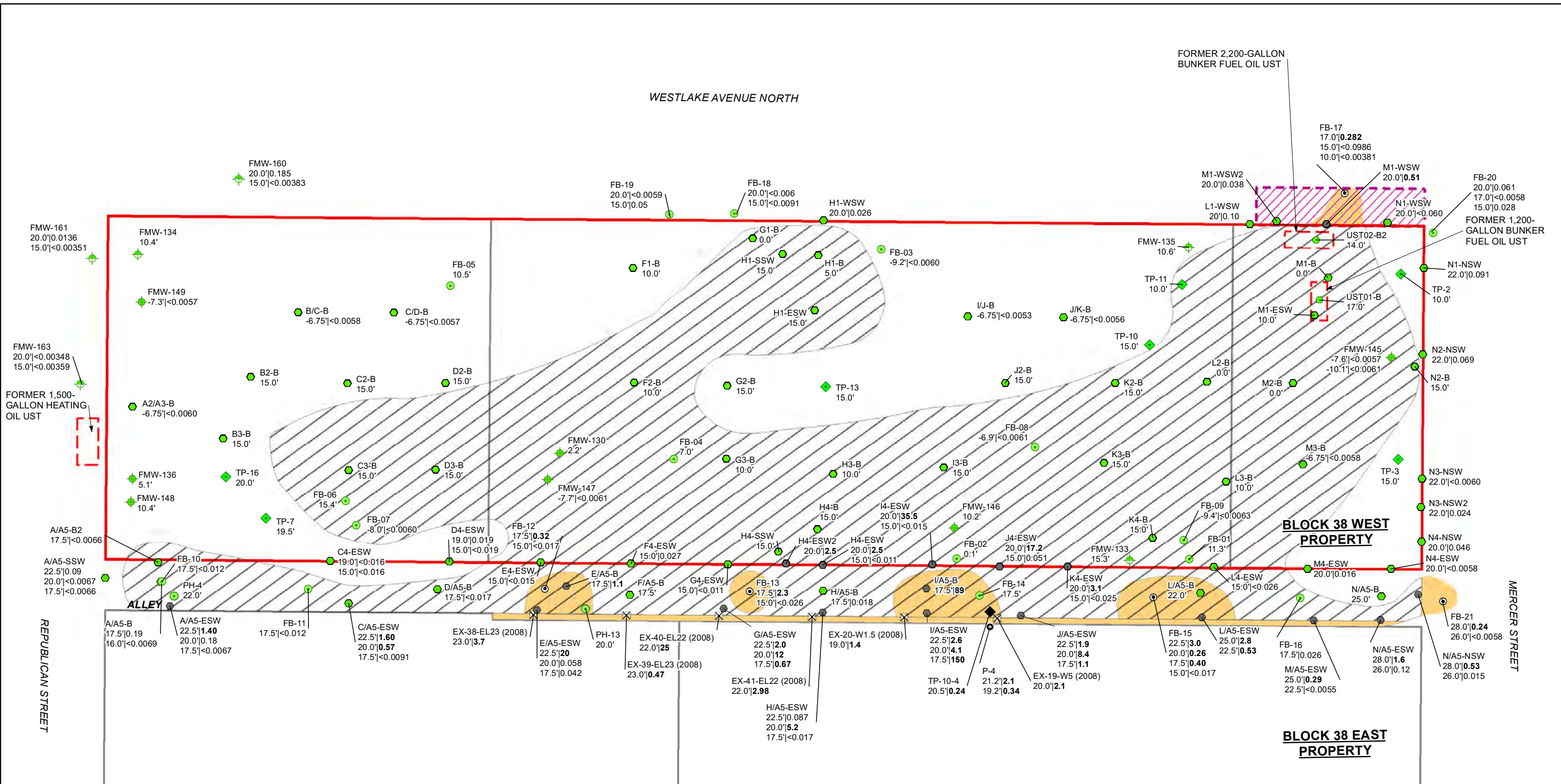
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**FIGURE 24**  
 POST INTERIM ACTION  
 SOIL ANALYTICAL RESULTS  
 FOR DRO + ORO  
 BLOCK 38 WEST SITE  
 SEATTLE, WASHINGTON  
 FARALLON PN: 397-019

Drawn By: j.jones      Checked By: SS      Date: 6/27/2024      Disc Reference:  
 Document Path: Q:\Projects\397\_VULCAN\019\_Block38\Mapfiles\17G\_2023-07\2024\_Update\Figure-24\_PIA\_Soil-DRO+ORO.mxd





- LEGEND**
- SHALLOW WATER-BEARING ZONE MONITORING WELL
  - DECOMMISSIONED SHALLOW WATER-BEARING ZONE MONITORING WELL
  - DECOMMISSIONED INTERMEDIATE WATER-BEARING ZONE MONITORING WELL
  - BORING (FARALLON)
  - BORING (GEOENGINEERS)
  - EXCAVATION SAMPLE (GEOENGINEERS)
  - TEST PIT (GEOENGINEERS)
  - POTHOLE (FARALLON)
  - UST SAMPLE LOCATION (FARALLON)
  - EXCAVATION SAMPLE LOCATION (FARALLON)
  - TEST PIT (FARALLON)
  - DENOTES SAMPLE LOCATION AND ELEVATION IN FEET NAVD88 WHERE cPAHs RESULTS ARE LESS THAN THE PROPOSED CLEANUP LEVEL
  - ESTIMATED EXTENT OF SOIL EXCEEDING THE PROPOSED CLEANUP LEVEL REMAINING IN PLACE POST INTERIM ACTIONS OR INACCESSIBLE DUE TO EXISTING UTILITY BANK
  - ESTIMATED EXTENT OF SOIL EXCEEDING THE SCREENING LEVEL THAT WAS EXCAVATED AND REMOVED BY INTERIM ACTIONS
  - MECHANICAL EQUIPMENT AREA DECOMMISSIONED AND FILLED WITH CDF
  - PROPERTY BOUNDARY
  - FORMER UNDERGROUND STORAGE TANKS (USTs)
  - KING COUNTY PARCEL BOUNDARY

NOTES:  
 DATA SHOWN ARE FOR SAMPLES COLLECTED BETWEEN 2014 THROUGH 2023 UNLESS OTHERWISE NOTED. DATA IS ONLY SHOWN FOR PERFORMANCE AND COMPLIANCE SAMPLES THAT REMAIN IN PLACE. NO SOIL DATA STRINGS ARE SHOWN FOR SAMPLES THAT WERE REMOVED.

FOR SOIL SAMPLES:  
 DEPTH AND CONCENTRATIONS REPORTED AS:  
 ELEVATION IN FEET NAVD88 | cPAH TEC  
 ANALYTICAL RESULTS IN MILLIGRAMS PER KILOGRAM (mg/kg)

**BOLD** = DENOTES ELEVATION AND CONCENTRATIONS THAT EXCEED THE PROPOSED CLEANUP LEVEL OF 0.19 mg/kg  
 < = DENOTES ANALYTE NOT DETECTED AT OR EXCEEDING THE REPORTING LIMIT LISTED FOR TOTAL TOXIC EQUIVALENT CONCENTRATION OF BENZO(A)PYRENE (mg/kg)

CDF = CONTROLLED DENSITY FILL  
 cPAHs = CARCINOGENIC POLYCYCLIC AROMATIC HYDROCARBONS  
 TEC = TOXIC EQUIVALENT CONCENTRATION OF BENZO(A)PYRENE FOR cPAH MIXTURE  
 MTCA = WASHINGTON STATE MODEL TOXICS CONTROL ACT CLEANUP REGULATION  
 NAVD88 = NORTH AMERICAN VERTICAL DATUM OF 1988

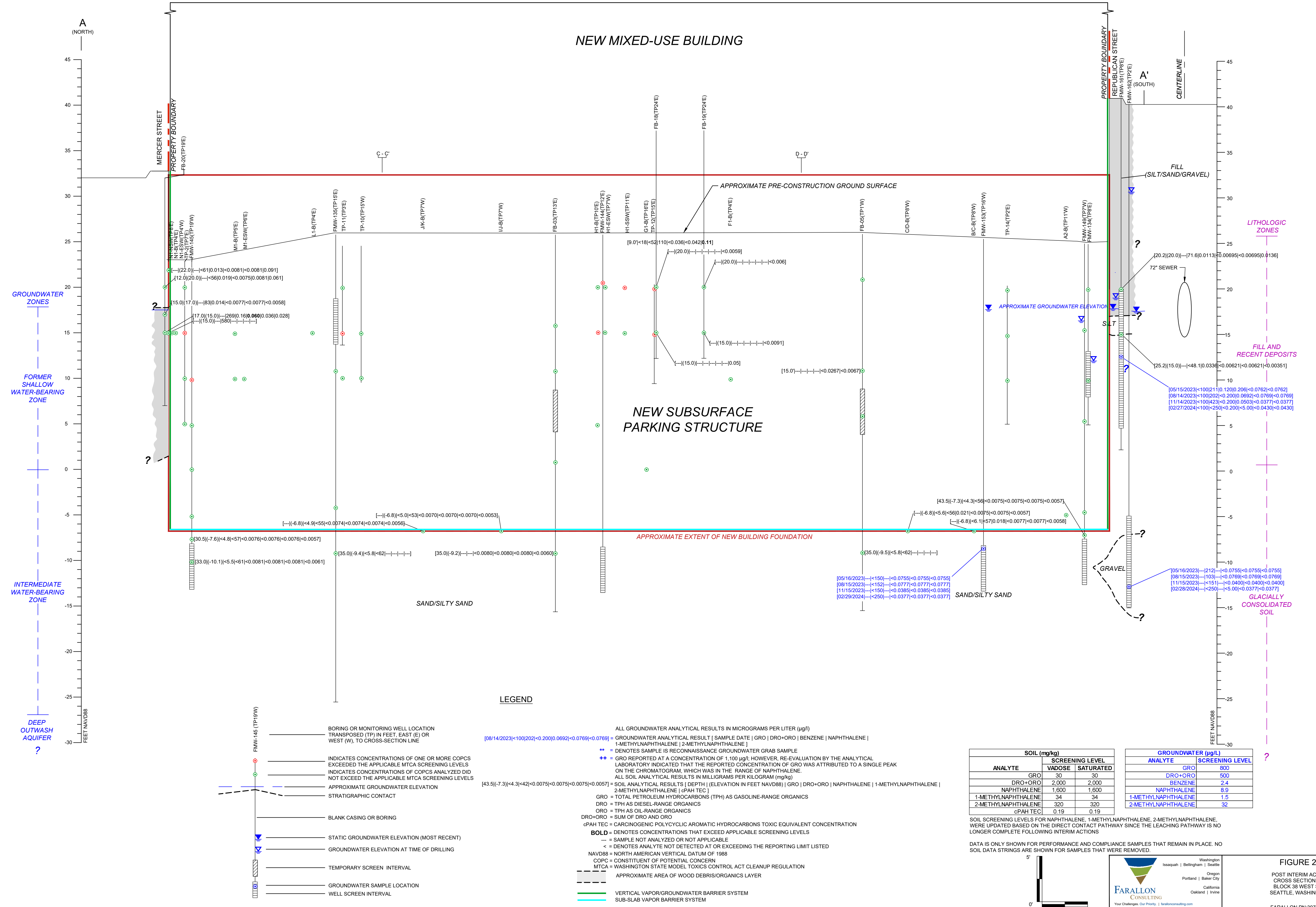
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**FIGURE 25**  
 POST INTERIM ACTION  
 SOIL ANALYTICAL RESULTS  
 FOR cPAH TEC  
 BLOCK 38 WEST SITE  
 SEATTLE, WASHINGTON  
 FARALLON PN: 397-019

NEW MIXED-USE BUILDING



LEGEND

ALL GROUNDWATER ANALYTICAL RESULTS IN MICROGRAMS PER LITER (µg/l)

GROUNDWATER ANALYTICAL RESULT [ SAMPLE DATE ] [ GRO ] [ DRO+ORO ] [ BENZENE ] [ NAPHTHALENE ]

1-METHYLNAPHTHALENE | 2-METHYLNAPHTHALENE

\*\* DENOTES SAMPLE IS RECONNAISSANCE GROUNDWATER GRAB SAMPLE

++ GRO REPORTED AT A CONCENTRATION OF 1,100 µg/l; HOWEVER, RE-EVALUATION BY THE ANALYTICAL LABORATORY INDICATED THAT THE REPORTED CONCENTRATION OF GRO WAS ATTRIBUTED TO A SINGLE PEAK ON THE CHROMATOGRAM, WHICH WAS IN THE RANGE OF NAPHTHALENE.

ALL SOIL ANALYTICAL RESULTS IN MILLIGRAMS PER KILOGRAM (mg/kg)

SOIL ANALYTICAL RESULTS [ DEPTH ] [ ELEVATION IN FEET NAVD88 ] [ GRO ] [ DRO+ORO ] [ NAPHTHALENE ] [ 1-METHYLNAPHTHALENE ] [ 2-METHYLNAPHTHALENE ] [ cPAH TEC ]

GRO = TOTAL PETROLEUM HYDROCARBONS (TPH) AS GASOLINE-RANGE ORGANICS

DRO = TPH AS DIESEL-RANGE ORGANICS

ORO = TPH AS OIL-RANGE ORGANICS

DRO+ORO = SUM OF DRO AND ORO

cPAH TEC = CARCINOGENIC POLYCYCLIC AROMATIC HYDROCARBONS TOXIC EQUIVALENT CONCENTRATION

**BOLD** = DENOTES CONCENTRATIONS THAT EXCEED APPLICABLE SCREENING LEVELS

— = SAMPLE NOT ANALYZED OR NOT APPLICABLE

< = DENOTES ANALYTE NOT DETECTED AT OR EXCEEDING THE REPORTING LIMIT LISTED

NAVD88 = NORTH AMERICAN VERTICAL DATUM OF 1988

COPC = CONSTITUENT OF POTENTIAL CONCERN

MTCA = WASHINGTON STATE MODEL TOXICS CONTROL ACT CLEANUP REGULATION

--- APPROXIMATE AREA OF WOOD DEBRIS/ORGANICS LAYER

--- VERTICAL VAPOR/GROUNDWATER BARRIER SYSTEM

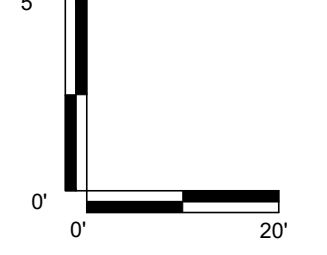
--- SUB-SLAB VAPOR BARRIER SYSTEM

ANALYTE	SCREENING LEVEL	
	VADOSE	SATURATED
GRO	30	30
DRO+ORO	2,000	2,000
NAPHTHALENE	1,600	1,600
1-METHYLNAPHTHALENE	34	34
2-METHYLNAPHTHALENE	320	320
cPAH TEC	0.19	0.19

ANALYTE	SCREENING LEVEL	
	GRO	BENZENE
DRO+ORO	800	500
BENZENE	2.4	2.4
NAPHTHALENE	8.9	8.9
1-METHYLNAPHTHALENE	1.5	1.5
2-METHYLNAPHTHALENE	32	32

SOIL SCREENING LEVELS FOR NAPHTHALENE, 1-METHYLNAPHTHALENE, 2-METHYLNAPHTHALENE, WERE UPDATED BASED ON THE DIRECT CONTACT PATHWAY SINCE THE LEACHING PATHWAY IS NO LONGER COMPLETE FOLLOWING INTERIM ACTIONS

DATA IS ONLY SHOWN FOR PERFORMANCE AND COMPLIANCE SAMPLES THAT REMAIN IN PLACE. NO SOIL DATA STRINGS ARE SHOWN FOR SAMPLES THAT WERE REMOVED.



Washington  
Issaquah | Bellingham | Seattle  
Oregon  
Portland | Baker City  
California  
Oakland | Irvine

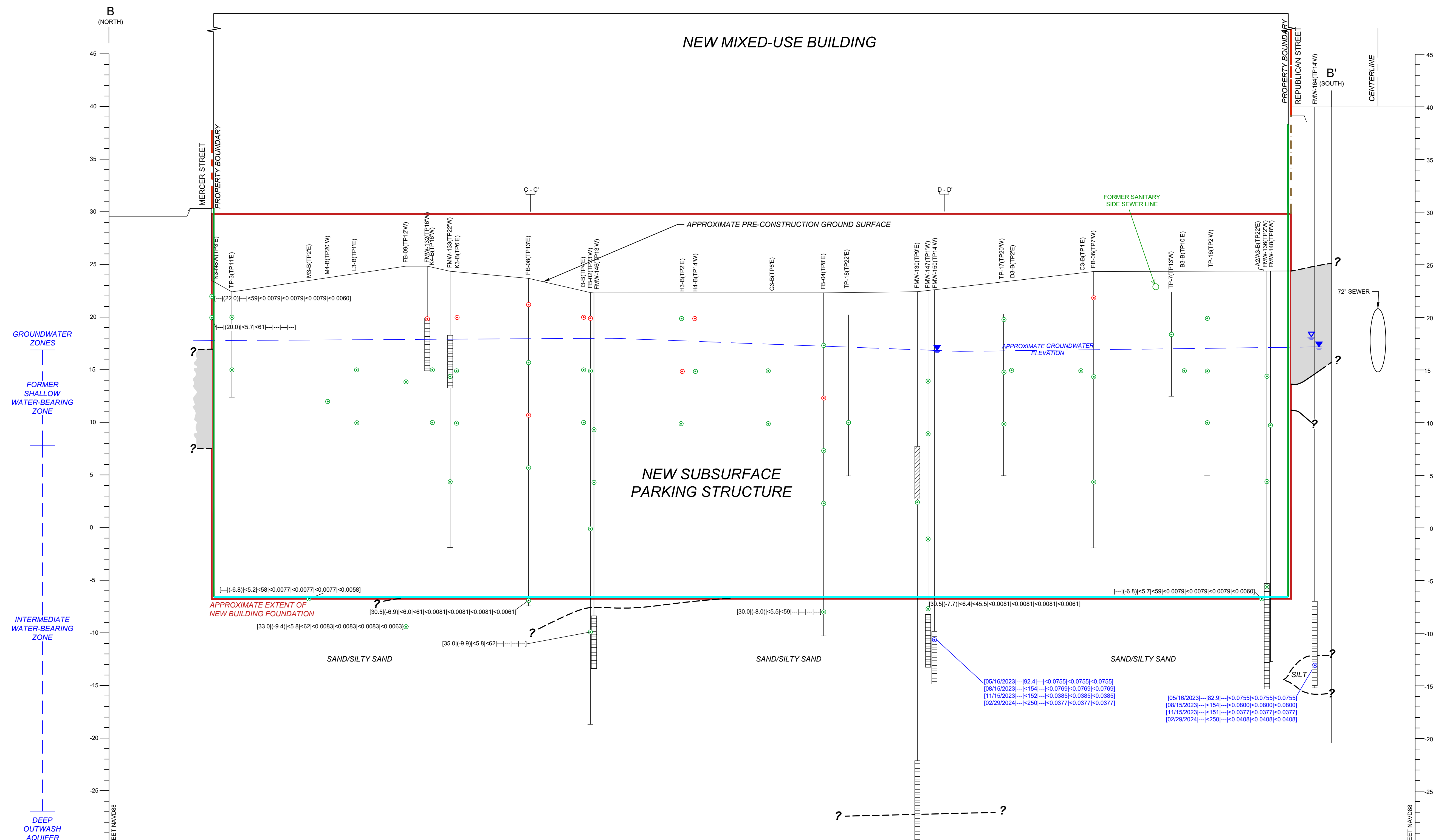
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FIGURE 26  
POST INTERIM ACTION  
CROSS SECTION A-A'  
BLOCK 38 WEST SITE  
SEATTLE, WASHINGTON  
FARALLON PN-397-019





**LEGEND**

ALL GROUNDWATER ANALYTICAL RESULTS IN MICROGRAMS PER LITER (µg/l)

[08/15/2023]--[58.9]--[<0.0769]--[<0.0769]--[<0.0769] = GROUNDWATER ANALYTICAL RESULT | SAMPLE DATE | GRO | DRO+ORO | BENZENE | NAPHTHALENE | 1-METHYLNAPHTHALENE | 2-METHYLNAPHTHALENE

\*\* = DENOTES SAMPLE IS RECONNAISSANCE GROUNDWATER GRAB SAMPLE

++ = GRO REPORTED AT A CONCENTRATION OF 1.100 µg/l; HOWEVER, RE-EVALUATION BY THE ANALYTICAL LABORATORY INDICATED THAT THE REPORTED CONCENTRATION OF GRO WAS ATTRIBUTED TO A SINGLE PEAK ON THE CHROMATOGRAM, WHICH WAS IN THE RANGE OF NAPHTHALENE.

ALL SOIL ANALYTICAL RESULTS IN MILLIGRAMS PER KILOGRAM (mg/kg)

--- = SOIL ANALYTICAL RESULTS | DEPTH | (ELEVATION IN FEET NAVD88) | GRO | DRO+ORO | NAPHTHALENE | 1-METHYLNAPHTHALENE | 2-METHYLNAPHTHALENE | cPAH TEC

GRO = TOTAL PETROLEUM HYDROCARBONS (TPH) AS GASOLINE-RANGE ORGANICS  
 DRO = TPH AS DIESEL-RANGE ORGANICS  
 ORO = TPH AS OIL-RANGE ORGANICS  
 DRO+ORO = SUM OF DRO AND ORO  
 cPAH TEC = CARCINOGENIC POLYCYCLIC AROMATIC HYDROCARBONS TOXIC EQUIVALENT CONCENTRATION

**BOLD** = DENOTES CONCENTRATIONS THAT EXCEED APPLICABLE SCREENING LEVELS  
 --- = SAMPLE NOT ANALYZED OR NOT APPLICABLE  
 < = DENOTES ANALYTE NOT DETECTED AT OR EXCEEDING THE REPORTING LIMIT LISTED

NAVD88 = NORTH AMERICAN VERTICAL DATUM OF 1988  
 COPC = CONSTITUENT OF POTENTIAL CONCERN  
 MTCA = WASHINGTON STATE MODEL TOXICS CONTROL ACT CLEANUP REGULATION

--- APPROXIMATE AREA OF WOOD DEBRIS/ORGANICS LAYER

--- VERTICAL VAPOR/GROUNDWATER BARRIER SYSTEM  
 --- SUB-SLAB VAPOR BARRIER SYSTEM

--- ESTIMATED EXTENT OF COAL/CHARCOAL LAYER

--- BORING OR MONITORING WELL LOCATION TRANSPPOSED (TP) IN FEET, EAST (E) OR WEST (W), TO CROSS-SECTION LINE

--- INDICATES CONCENTRATIONS OF ONE OR MORE COPCS EXCEEDED THE APPLICABLE MTCA SCREENING LEVELS

--- INDICATES CONCENTRATIONS OF COPCS ANALYZED DID NOT EXCEED THE APPLICABLE MTCA SCREENING LEVELS

--- APPROXIMATE GROUNDWATER ELEVATION

--- STRATIGRAPHIC CONTACT

--- BLANK CASING OR BORING

--- STATIC GROUNDWATER ELEVATION (MOST RECENT)

--- GROUNDWATER ELEVATION AT TIME OF DRILLING

--- TEMPORARY SCREEN INTERVAL

--- GROUNDWATER SAMPLE LOCATION

--- WELL SCREEN INTERVAL

ANALYTE	SCREENING LEVEL	
	VADOSE	SATURATED
GRO	30	30
DRO+ORO	2,000	2,000
NAPHTHALENE	1,600	1,600
1-METHYLNAPHTHALENE	34	34
2-METHYLNAPHTHALENE	320	320
cPAH TEC	0.19	0.19

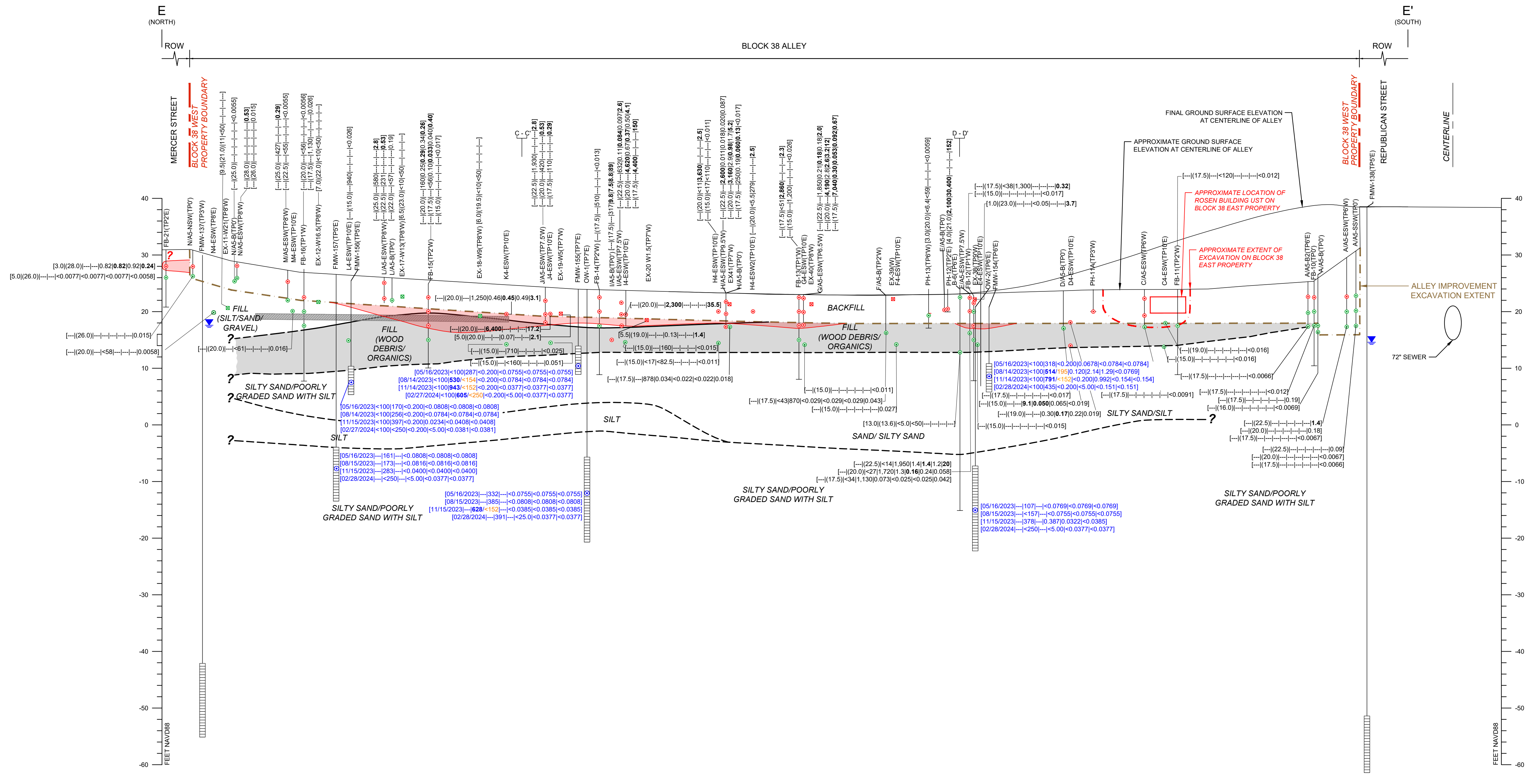
ANALYTE	SCREENING LEVEL	
	GRO	DRO+ORO
BENZENE	800	500
NAPHTHALENE	2.4	8.9
1-METHYLNAPHTHALENE	1.5	1.5
2-METHYLNAPHTHALENE	32	32

SOIL SCREENING LEVELS FOR NAPHTHALENE, 1-METHYLNAPHTHALENE, 2-METHYLNAPHTHALENE, WERE UPDATED BASED ON THE DIRECT CONTACT PATHWAY SINCE THE LEACHING PATHWAY IS NO LONGER COMPLETE FOLLOWING INTERIM ACTIONS

DATA IS ONLY SHOWN FOR PERFORMANCE AND COMPLIANCE SAMPLES THAT REMAIN IN PLACE. NO SOIL DATA STRINGS ARE SHOWN FOR SAMPLES THAT WERE REMOVED.

Scale: 0' to 20'

Drawn By: RB Checked By: GP Date: 6/10/2024



**LEGEND**

- BORING OR MONITORING WELL LOCATION TRANSPONDED (TP) IN FEET, EAST (E) OR WEST (W), TO CROSS-SECTION LINE.
- INDICATES CONCENTRATIONS OF ONE OR MORE COPCS EXCEEDED THE APPLICABLE MTCA SCREENING LEVELS
- INDICATES CONCENTRATIONS OF COPCS ANALYZED DID NOT EXCEED THE APPLICABLE MTCA SCREENING LEVELS
- EXCAVATION AREA EXTENT
- APPROXIMATE GROUNDWATER ELEVATION
- STRATIGRAPHIC CONTACT
- BLANK CASING OR BORING
- STATIC GROUNDWATER ELEVATION (MOST RECENT)
- GROUNDWATER SAMPLE LOCATION
- WELL SCREEN INTERVAL

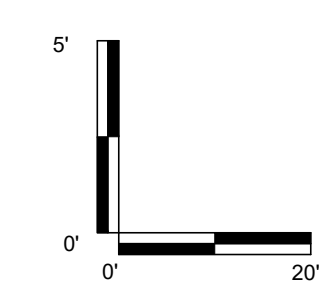
- ALL GROUNDWATER ANALYTICAL RESULTS IN MICROGRAMS PER LITER (µg/L)
- GROUNDWATER ANALYTICAL RESULT | SAMPLE DATE | GRO | DRO+ORO | DRO+ORO WITH SILICA GEL CLEANUP WHEN AVAILABLE | BENZENE | NAPHTHALENE | 1-METHYLNAPHTHALENE | 2-METHYLNAPHTHALENE
- ALL SOIL ANALYTICAL RESULTS IN MILLIGRAMS PER KILOGRAM (mg/kg)
- SOIL ANALYTICAL RESULT: [DEPTH] | (ELEVATION IN FEET NAVD88) | GRO | DRO+ORO | NAPHTHALENE | 1-METHYLNAPHTHALENE | 2-METHYLNAPHTHALENE | cPAH TEC
- GRO = TOTAL PETROLEUM HYDROCARBONS (TPH) AS GASOLINE-RANGE ORGANICS
- DRO = TPH AS DIESEL-RANGE ORGANICS
- ORO = TPH AS OIL-RANGE ORGANICS
- DRO+ORO = SUM OF DRO AND ORO
- cPAH TEC = CARCINOGENIC POLYCYCLIC AROMATIC HYDROCARBONS TOXIC EQUIVALENT CONCENTRATION
- BOLD** = DENOTES CONCENTRATIONS THAT EXCEED APPLICABLE SCREENING LEVELS
- = SAMPLE NOT ANALYZED FOR CONSTITUENT
- < = DENOTES ANALYTE NOT DETECTED AT OR EXCEEDING THE REPORTING LIMIT LISTED
- NAVD88 = NORTH AMERICAN VERTICAL DATUM OF 1988
- MTCA = WASHINGTON STATE MODEL TOXICS CONTROL ACT CLEANUP REGULATION
- APPROXIMATE AREA OF WOOD DEBRIS/ORGANICS LAYER
- ESTIMATED EXTENT OF SOIL EXCEEDING MTCA SCREENING LEVELS
- ESTIMATED EXTENT OF COAL/CHARCOAL LAYER
- EXCAVATION BORING (FARALLON)
- EXCAVATION SAMPLE (FARALLON)

ANALYTE	SCREENING LEVEL	
	VADOSE	SATURATED
GRO	30	30
DRO+ORO	2,000	2,000
NAPHTHALENE	1,500	1,500
1-METHYLNAPHTHALENE	34	34
2-METHYLNAPHTHALENE	320	320
cPAH TEC	0.19	0.19

ANALYTE	SCREENING LEVEL
	µg/L
GRO	800
DRO+ORO	500
BENZENE	2.4
NAPHTHALENE	8.9
1-METHYLNAPHTHALENE	1.5
2-METHYLNAPHTHALENE	32

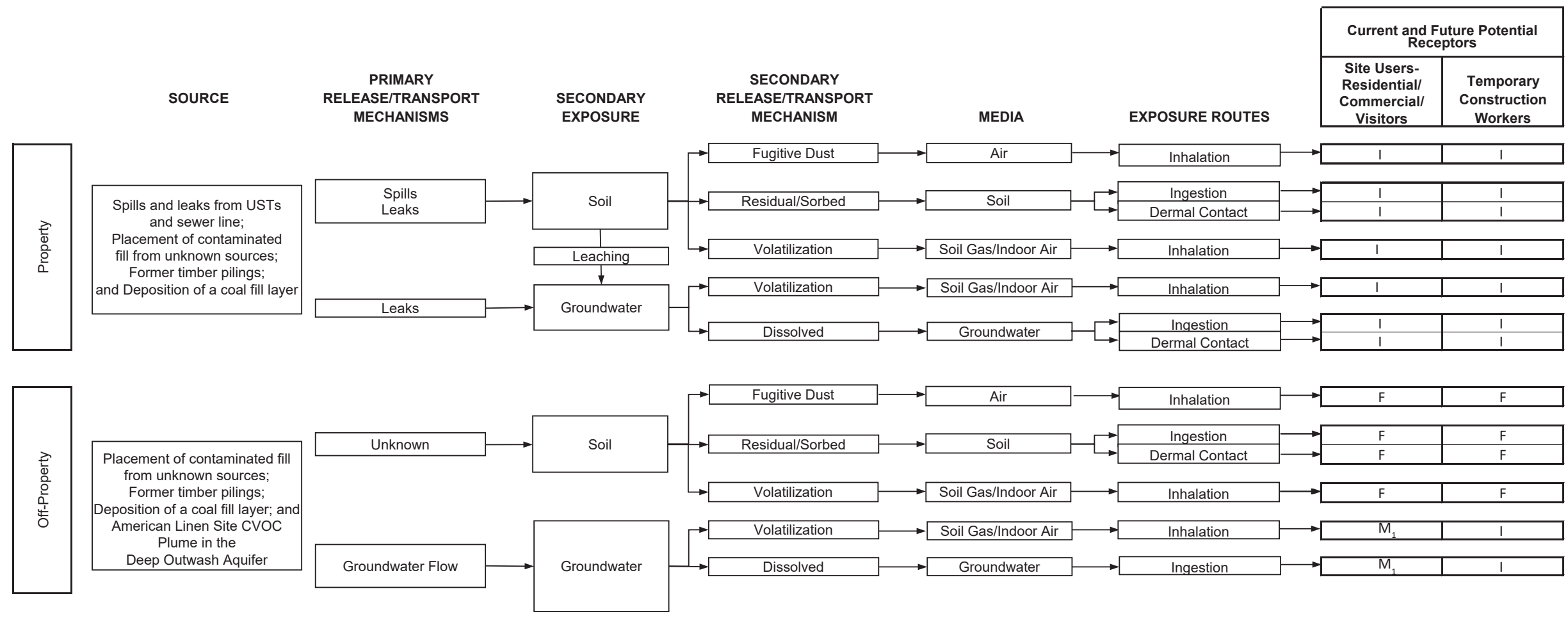
SOIL SCREENING LEVELS FOR NAPHTHALENE, 1-METHYLNAPHTHALENE, 2-METHYLNAPHTHALENE, WERE UPDATED BASED ON THE DIRECT CONTACT PATHWAY SINCE THE LEACHING PATHWAY IS NO LONGER COMPLETE FOLLOWING INTERIM ACTIONS

DATA IS ONLY SHOWN FOR PERFORMANCE AND COMPLIANCE SAMPLES THAT REMAIN IN PLACE. NO SOIL DATA STRINGS ARE SHOWN FOR SAMPLES THAT WERE REMOVED.

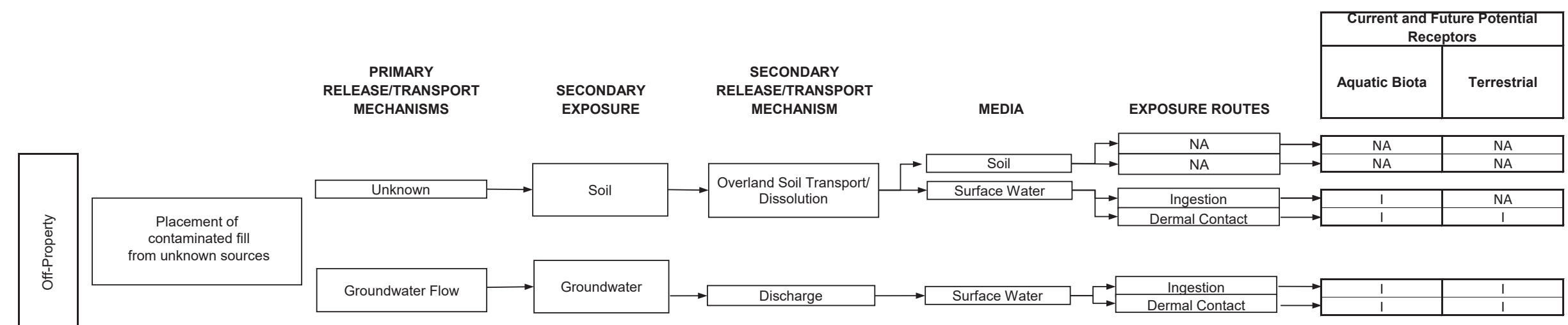


**FIGURE 28**  
POST INTERIM ACTION  
CROSS SECTION E-E'  
BLOCK 38 ALLEY  
SEATTLE, WASHINGTON  
FARALLON PN-397-019  
Date: 6/10/2024

HUMAN HEALTH RISK CONCEPTUAL SITE MODEL



ECOLOGICAL RISK CONCEPTUAL SITE MODEL



I = Incomplete Pathway  
 C = Complete Current Pathway  
 M = Complete pathway currently on Property mitigated by presence of vapor barrier and concrete floor  
 M<sub>1</sub> = Pathway is incomplete based on the COCs for the Block 38 West Site. However the pathway is potentially complete based on the presence of the American Linen Site CVOC Plume adjacent to the Block 38 West Site.  
 F = Currently Incomplete, Potentially Complete Pathway in Future  
 NA = not applicable

Washington  
Issaquah | Bellingham | Seattle

Oregon  
Portland | Baker City

California  
Oakland | Irvine

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**FIGURE 29**

**EXPOSURE PATHWAY ANALYSIS  
BLOCK 38 WEST SITE  
SEATTLE, WASHINGTON**

FARALLON PN: 397-019

## **TABLES**

REMEDIAL INVESTIGATION/FOCUSED FEASIBILITY STUDY  
Block 38 West Site  
500 through 536 Westlake Avenue North  
Seattle, Washington

Farallon PN: 397-019





**Table 1**  
**Soil Analytical Results for TPH and BTEX**  
**Block 38 West Property**  
**Seattle, Washington**  
**Farallon PN: 397-019**

Sample Location	Sample Identification	General Location	Sample Type	Sample Location Disposition	Sample Depth (feet) <sup>1</sup>	Sample Elevation (feet NAVD88) <sup>1</sup>	Zone	Sample Date	Analytical Results (milligrams per kilogram)									
									NWTPH-Dx <sup>2</sup>		Total NWTPH-Dx <sup>3</sup>	NWTPH-Dx with Silica Gel <sup>2</sup>		NWTPH-Gx <sup>4</sup>	EPA Method 8021B/8260 <sup>5</sup>			
									DRO	ORO		DRO	ORO		GRO	Benzene	Toluene	Ethylbenzene
I/J-B	I/J-B(-6.75)	Interior	Confirmation	In Place	---	-6.75	Saturated	6/3/2020	< 26	< 53	< 53	---	---	< 5.0	< 0.020	< 0.050	< 0.050	< 0.100
J2-B	J2-B-20.0	Interior	Confirmation	Removed	---	20.0	Vadose	2/14/2020	< 29	< 58	< 58	---	---	---	< 0.00076	< 0.0038	< 0.00076	< 0.00226
J4-ESW	J4-ESW-20.0	Sidewall	Confirmation	In Place	---	20.0	Vadose	2/4/2020	<b>1,800 N</b>	<b>4,600</b>	<b>6,400</b>	---	---	---	---	---	---	---
	J4-ESW-15.0	Sidewall	Confirmation	In Place	---	15.0	Saturated	2/22/2020	< 77	< 160	< 160	---	---	---	---	---	---	---
J/K-B	J/K-B(-6.75)	Interior	Confirmation	In Place	---	-6.75	Saturated	6/2/2020	< 28	< 55	< 55	---	---	< 4.9	< 0.020	< 0.049	< 0.049	< 0.098
K1-WSW	K1-WSW-20.0	Sidewall	Confirmation	In Place	---	20.0	Vadose	2/4/2020	58 N	270	328	---	---	---	---	---	---	---
K2-B	K2-B-20.0	Interior	Confirmation	Removed	---	20.0	Vadose	2/6/2020	< 56	280	280	---	---	---	< 0.037	< 0.19	< 0.19	< 0.38
K3-B	K3-B-20.0	Interior	Performance	Removed	---	20.0	Vadose	2/13/2020	<b>2,500 N</b>	<b>9,700</b>	<b>12,200</b>	---	---	---	---	---	---	---
	K3-B-15.0	Interior	Confirmation	Removed	---	15.0	Saturated	2/24/2020	68 N	830	898	---	---	---	---	---	---	---
	K3-B-10.0	Interior	Confirmation	Removed	---	10.0	Saturated	2/28/2020	< 32	< 64	< 64	---	---	---	---	---	---	---
K4-B	K4-B-15.0	Interior	Confirmation	Removed	---	15.0	Saturated	2/26/2020	< 33	< 67	< 67	---	---	---	---	---	---	---
	K4-B-10.0	Interior	Confirmation	Removed	---	10.0	Saturated	2/26/2020	110	290	400	---	---	---	---	---	---	---
K4-ESW	K4-ESW-20.0	Sidewall	Confirmation	In Place	---	20.0	Vadose	2/4/2020	290 N	960	1,250	---	---	---	---	---	---	---
	K4-ESW-15.0	Sidewall	Confirmation	In Place	---	15.0	Saturated	2/22/2020	< 120	710	710	---	---	---	---	---	---	---
L1-B	L1-B-15.0	Interior	Confirmation	Removed	---	15.0	Saturated	2/24/2020	< 170	560	560	---	---	---	---	---	---	---
L1-WSW	L1-WSW-20.0	Sidewall	Confirmation	In Place	---	20.0	Vadose	2/3/2020	< 31	180	180	---	---	---	---	---	---	---
	L1-WSW-17.0	Sidewall	Confirmation	In Place	---	17.0	Saturated	2/10/2020	250 N	1,200	1,450	---	---	---	---	---	---	---
	L1-WSW-15.0	Sidewall	Confirmation	In Place	---	15.0	Saturated	2/24/2020	< 83	510	510	---	---	---	---	---	---	---
L1-WSW2	L1-WSW2-17.0	Sidewall	Confirmation	In Place	---	17.0	Saturated	2/10/2020	86 N	740	826	---	---	---	---	---	---	---
L2-B	L2-B-10.0	Interior	Confirmation	Removed	---	10.0	Saturated	2/28/2020	< 33	< 67	< 67	---	---	---	---	---	---	---
L3-B	L3-B-15.0	Interior	Confirmation	Removed	---	15.0	Saturated	2/24/2020	< 140	1,300	1,300	---	---	---	---	---	---	---
L4-ESW	L4-ESW-15.0	Sidewall	Confirmation	In Place	---	15.0	Saturated	2/22/2020	< 130	940	940	---	---	---	---	---	---	---
M1-B	M1-B-15.0	Interior	Confirmation	Removed	---	15.0	Saturated	2/24/2020	< 160	470	470	---	---	---	---	---	---	---
	M1-B-10	Interior	Confirmation	Removed	---	10.0	Saturated	2/25/2020	< 31	< 62	< 62	---	---	---	---	---	---	---
M1-WSW	M1-WSW-20.0	Sidewall	Confirmation	In Place	---	20.0	Vadose	2/3/2020	200	220	420	---	---	---	---	---	---	---
	M1-WSW-17.0	Sidewall	Confirmation	In Place	---	17.0	Saturated	2/10/2020	< 29	250	250	---	---	---	---	---	---	---
	M1-WSW-15.0	Sidewall	Confirmation	In Place	---	15.0	Saturated	2/24/2020	<b>160 N</b>	<b>2,100</b>	<b>2,260</b>	---	---	---	---	---	---	---
	M1-WSW-10	Sidewall	Confirmation	In Place	---	10.0	Saturated	2/25/2020	< 36	< 72	< 72	---	---	---	---	---	---	---
M1-WSW2	M1-WSW2-20.0	Sidewall	Confirmation	In Place	---	20.0	Vadose	2/3/2020	< 30	< 61	< 61	---	---	---	---	---	---	---
M3-B	M3-B(-6.75)	Interior	Confirmation	In Place	---	-6.75	Saturated	5/28/2020	< 29	< 58	< 58	---	---	< 5.2	< 0.020	< 0.052	< 0.052	< 0.104
M4-B	M4-B-12.0	Interior	Confirmation	Removed	---	12.0	Saturated	2/22/2020	< 76	400	400	---	---	---	---	---	---	---
M4-ESW	M4-ESW-20.0	Sidewall	Confirmation	In Place	---	20.0	Vadose	2/6/2020	< 30	< 61	< 61	---	---	---	---	---	---	---
N1-B	N1-B-15.0	Interior	Confirmation	Removed	---	15.0	Saturated	2/22/2020	< 110	1,900	1,900	---	---	---	---	---	---	---
N1-NSW	N1-NSW-22.0	Sidewall	Confirmation	In Place	---	22.0	Vadose	1/31/2020	< 30	< 61	< 61	---	---	---	---	---	---	---
	N1-NSW-15.0	Sidewall	Confirmation	In Place	---	15.0	Saturated	2/24/2020	< 150	580	580	---	---	---	---	---	---	---
N1-ESW	N1-ESW-15.0	Sidewall	Confirmation	In Place	---	15.0	Saturated	2/22/2020	< 150	1,000	1,000	---	---	---	---	---	---	---
N1-WSW	N1-WSW-20.0	Sidewall	Confirmation	In Place	---	20.0	Vadose	2/3/2020	280 N	1,400	1,680	---	---	---	---	---	---	---
	N1-WSW-17.0	Sidewall	Confirmation	In Place	---	17.0	Saturated	2/10/2020	<b>4,800 N</b>	<b>19,000</b>	<b>23,800</b>	---	---	---	---	---	---	---
	N1-WSW-15.0	Sidewall	Confirmation	In Place	---	15.0	Saturated	2/24/2020	< 79	630	630	---	---	---	---	---	---	---
N1-WSW3	N1-WSW3-17.0	Sidewall	Confirmation	In Place	---	17.0	Saturated	2/21/2020	< 36	77	77	---	---	---	---	---	---	---
N2-B	N2-B-20.0	Interior	Confirmation	Removed	---	20.0	Vadose	2/6/2020	< 31	< 61	< 61	---	---	---	---	---	---	---
	N2-B-15.0	Interior	Confirmation	Removed	---	15.0	Saturated	2/23/2020	---	---	---	---	---	< 22 H	---	---	---	---
	N2-B-DUP-15.0	Interior	Confirmation	Removed	---	15.0	Saturated	2/24/2020	---	---	---	---	---	< 64	---	---	---	---
	N2-B-10.0	Interior	Confirmation	Removed	---	10.0	Saturated	2/23/2020	< 31	< 62	< 62	---	---	< 12 H	---	---	---	---
	N2-B-DUP-10.0	Interior	Confirmation	Removed	---	10.0	Saturated	2/24/2020	---	---	---	---	---	< 6.4	---	---	---	---
<b>MTCA Method B Direct Contact<sup>6</sup></b>									<b>NE</b>		<b>NE</b>	<b>NE</b>		<b>1,500<sup>8</sup></b>	<b>18</b>	<b>6,400</b>	<b>8,000</b>	<b>16,000</b>
<b>Screening Levels for Soil Protective of Groundwater - Vadose Zone<sup>6</sup></b>									<b>2,000<sup>7</sup></b>		<b>2,000<sup>7</sup></b>	<b>2,000<sup>7</sup></b>		<b>30<sup>7</sup></b>	<b>0.027</b>	<b>4.5</b>	<b>5.9</b>	<b>14</b>
<b>Screening Levels for Soil Protective of Groundwater - Saturated Zone<sup>6</sup></b>									<b>2,000<sup>7</sup></b>		<b>2,000<sup>7</sup></b>	<b>2,000<sup>7</sup></b>		<b>30<sup>7</sup></b>	<b>0.0017</b>	<b>0.27</b>	<b>0.34</b>	<b>0.83</b>
<b>Laboratory Practical Quantitation Limits<sup>8</sup></b>									<b>75</b>		<b>75</b>	<b>75</b>		<b>5</b>	<b>0.001</b>	<b>0.005</b>	<b>0.001</b>	<b>0.003</b>

**Table 1  
Soil Analytical Results for TPH and BTEX  
Block 38 West Property  
Seattle, Washington  
Farallon PN: 397-019**

Sample Location	Sample Identification	General Location	Sample Type	Sample Location Disposition	Sample Depth (feet) <sup>1</sup>	Sample Elevation (feet NAVD88) <sup>1</sup>	Zone	Sample Date	Analytical Results (milligrams per kilogram)										
									NWTPH-Dx <sup>2</sup>		Total NWTPH-Dx <sup>3</sup>	NWTPH-Dx with Silica Gel <sup>2</sup>		NWTPH-Gx <sup>4</sup>	EPA Method 8021B/8260 <sup>5</sup>				
									DRO	ORO		DRO	ORO		GRO	Benzene	Toluene	Ethylbenzene	Xylenes
N2-NSW	N2-NSW-22.0	Sidewall	Confirmation	In Place	---	22.0	Vadose	1/31/2020	< 29	83	83	---	---	---	---	---	---	---	---
	N2-NSW-15.0	Sidewall	Confirmation	In Place	---	15.0	Saturated	2/24/2020	---	---	---	---	---	< 32	---	---	---	---	---
N2-ESW	N2-ESW-10	Interior	Confirmation	Removed	---	10.0	Saturated	2/25/2020	---	---	---	---	---	< 6.5	---	---	---	---	---
N2-SSW	N2-SSW-10	Interior	Confirmation	Removed	---	10.0	Saturated	2/25/2020	---	---	---	---	---	< 6.9	---	---	---	---	---
N3-NSW	N3-NSW-20.0-121019	Sidewall	Confirmation	In Place	---	20.0	Vadose	12/10/2019	< 30 H	< 61 H	< 61	---	---	< 5.7 H	< 0.020 H	< 0.057 H	< 0.057 H	< 0.114 H	< 0.114 H
	N3-NSW-22.0	Sidewall	Confirmation	In Place	---	22.0	Vadose	1/31/2020	< 30	< 59	< 59	---	---	---	---	---	---	---	---
N3-NSW2	N3-NSW2-22.0	Sidewall	Confirmation	In Place	---	22.0	Vadose	1/31/2020	< 30	< 60	< 60	---	---	---	---	---	---	---	---
N4-NSW	N4-NSW-20.0	Sidewall	Confirmation	In Place	---	20.0	Vadose	2/6/2020	< 30	< 60	< 60	---	---	---	---	---	---	---	---
N4-ESW	N4-ESW-20.0	Sidewall	Confirmation	In Place	---	20.0	Vadose	2/6/2020	< 29	< 58	< 58	---	---	---	---	---	---	---	---
TP-2	TP-2-20.0-121919	Interior	Confirmation	Removed	5.0	20.0	Vadose	12/19/2019	< 27	210	210	---	---	< 4.2	< 0.020	< 0.042	< 0.042	< 0.084	< 0.084
	TP-2-15.0-121919	Interior	Confirmation	Removed	10.0	15.0	Saturated	12/19/2019	<b>6,600</b>	<b>9,000</b>	<b>15,600</b>	---	---	< 420 U1	< 0.026	< 0.13	< 0.13	< 0.26	< 0.26
	TP-2-10.0	Interior	Confirmation	Removed	---	10.0	Saturated	2/13/2020	< 33	< 66	< 66	---	---	< 6.8	---	---	---	---	---
	TP-2-5.0	Interior	Confirmation	Removed	---	5.0	Saturated	2/13/2020	< 28	< 57	< 57	---	---	< 4.9	---	---	---	---	---
TP-3	TP-3-20.0-121919	Interior	Confirmation	Removed	5.0	20.0	Vadose	12/19/2019	< 29	< 59	< 59	---	---	< 5.2	< 0.020	< 0.052	< 0.052	< 0.104	< 0.104
	TP-3-15.0-121919	Interior	Confirmation	Removed	10.0	15.0	Saturated	12/19/2019	< 160	1,700	1,700	---	---	< 59	< 0.12	< 0.59	< 0.59	< 1.18	< 1.18
TP-7	TP-7-4.0	Interior	Confirmation	Removed	4.0	19.5	Vadose	12/23/2019	< 74	230	230	---	---	< 25	< 0.0044	< 0.022	< 0.0044	< 0.0132	< 0.0132
TP-10	TP-10-15.0	Interior	Confirmation	Removed	---	15.0	Saturated	2/4/2020	< 130	370	370	---	---	---	---	---	---	---	---
TP-11	TP-11-20.0	Interior	Confirmation	Removed	---	20.0	Vadose	2/4/2020	< 30	190	190	---	---	---	---	---	---	---	---
	TP-11-15.0	Interior	Confirmation	Removed	---	15.0	Saturated	2/4/2020	230	680	910	---	---	---	---	---	---	---	---
	TP-11-10.0	Interior	Confirmation	Removed	---	10.0	Saturated	2/4/2020	< 36	< 71	< 71	---	---	---	---	---	---	---	---
TP-13	TP-13-20.0	Interior	Confirmation	Removed	---	20.0	Vadose	2/7/2020	< 28	< 57	< 57	---	---	---	---	---	---	---	---
	TP-13-15.0	Interior	Confirmation	Removed	---	15.0	Saturated	2/7/2020	< 35	< 70	< 70	---	---	---	---	---	---	---	---
TP-14	TP-14-20.0	Interior	Confirmation	Removed	---	20.0	Vadose	2/14/2020	< 95	410	410	---	---	---	---	---	---	---	---
	TP-14-15.0	Interior	Confirmation	Removed	---	15.0	Saturated	2/14/2020	120 N	640	760	---	---	---	---	---	---	---	---
	TP-14-10.0	Interior	Confirmation	Removed	---	10.0	Saturated	2/14/2020	< 33	< 67	< 67	---	---	---	---	---	---	---	---
TP-15	TP-15-20.0	Interior	Confirmation	Removed	---	20.0	Vadose	2/14/2020	< 97	700	700	---	---	---	---	---	---	---	---
	TP-15-15.0	Interior	Confirmation	Removed	---	15.0	Saturated	2/14/2020	95 N	490	585	---	---	---	---	---	---	---	---
	TP-15-10.0	Interior	Confirmation	Removed	---	10.0	Saturated	2/14/2020	< 32	< 65	< 65	---	---	---	---	---	---	---	---
TP-16	TP-16-20.0	Interior	Confirmation	Removed	---	20.0	Vadose	2/14/2020	< 65	250	250	---	---	---	---	---	---	---	---
	TP-16-15.0	Interior	Confirmation	Removed	---	15.0	Saturated	2/14/2020	88 N	400	488	---	---	---	---	---	---	---	---
	TP-16-10.0	Interior	Confirmation	Removed	---	10.0	Saturated	2/14/2020	< 32	< 64	< 64	---	---	---	---	---	---	---	---
TP-17	TP-17-20.0	Interior	Confirmation	Removed	---	20.0	Vadose	2/18/2020	300 N	1,700	2,000	---	---	---	---	---	---	---	---
	TP-17-15	Interior	Confirmation	Removed	---	15.0	Saturated	2/25/2020	< 59	< 120	< 120	---	---	---	---	---	---	---	---
	TP-17-10	Interior	Confirmation	Removed	---	10.0	Saturated	2/25/2020	< 29	< 58	< 58	---	---	---	---	---	---	---	---
TP-18	TP-18-10.0	Interior	Confirmation	Removed	---	10.0	Saturated	2/19/2020	< 28	< 56	< 56	---	---	---	---	---	---	---	---
<b>Underground Storage Tank Investigation and Decommissioning</b>																			
M1-Product	M1-24.5-PRODUCT	Interior	Performance	Removed	---	24.5	Vadose	1/17/2020	DETECTED <sup>9</sup>	DETECTED <sup>9</sup>	---	---	---	< 9,200 <sup>9</sup>	---	---	---	---	---
M1-Prod-Soil	M1-24.5	Interior	Performance	Removed	---	24.5	Vadose	1/17/2020	<b>8,600</b>	<b>15,000</b>	<b>23,600</b>	---	---	---	---	---	---	---	---
M1-Tank	M1-TANK-24.5	Interior	Performance	Removed	---	24.5	Vadose	1/21/2020	850 N	2,500	3,350	---	---	< 59	< 0.00082	< 0.0041	0.00099	0.0116	0.0116
UST01-B	UST01-B-17	Interior	Confirmation	Removed	---	17.0	Saturated	1/27/2020	37	100	137	---	---	< 5.5	< 0.00092	< 0.0046	< 0.00092	< 0.00272	< 0.00272
UST01-N1	UST01-N1-19	Interior	Confirmation	Removed	---	19.0	Vadose	1/27/2020	< 30	< 60	< 60	---	---	---	< 0.00094	< 0.0047	< 0.00094	< 0.00284	< 0.00284
UST01-E1	UST01-E1-19	Interior	Confirmation	Removed	---	19.0	Vadose	1/27/2020	< 29	< 58	< 58	---	---	---	< 0.00083	< 0.0042	< 0.00083	< 0.00253	< 0.00253
UST01-S1	UST01-S1-19	Interior	Confirmation	Removed	---	19.0	Vadose	1/27/2020	< 28	< 55	< 55	---	---	---	< 0.00084	< 0.0042	< 0.00084	< 0.00254	< 0.00254
UST01-W1	UST01-W1-19	Interior	Confirmation	Removed	---	19.0	Vadose	1/27/2020	< 30	< 61	< 61	---	---	---	< 0.00098	< 0.0049	< 0.00098	< 0.00298	< 0.00298
UST-01-line	UST-01-LINE-21.0	Sidewall	Performance	Removed	---	21.0	Vadose	1/31/2020	<b>3,400</b>	<b>3,100 N1</b>	<b>6,500</b>	---	---	---	---	---	---	---	---
<b>MTCA Method B Direct Contact<sup>6</sup></b>									<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>1,500<sup>8</sup></b>	<b>18</b>	<b>6,400</b>	<b>8,000</b>	<b>16,000</b>	<b>16,000</b>	
<b>Screening Levels for Soil Protective of Groundwater - Vadose Zone<sup>6</sup></b>									<b>2,000<sup>7</sup></b>	<b>2,000<sup>7</sup></b>	<b>2,000<sup>7</sup></b>	<b>2,000<sup>7</sup></b>	<b>30<sup>7</sup></b>	<b>0.027</b>	<b>4.5</b>	<b>5.9</b>	<b>14</b>	<b>14</b>	
<b>Screening Levels for Soil Protective of Groundwater - Saturated Zone<sup>6</sup></b>									<b>2,000<sup>7</sup></b>	<b>2,000<sup>7</sup></b>	<b>2,000<sup>7</sup></b>	<b>2,000<sup>7</sup></b>	<b>30<sup>7</sup></b>	<b>0.0017</b>	<b>0.27</b>	<b>0.34</b>	<b>0.83</b>	<b>0.83</b>	
<b>Laboratory Practical Quantitation Limits<sup>8</sup></b>									<b>75</b>	<b>75</b>	<b>75</b>	<b>75</b>	<b>5</b>	<b>0.001</b>	<b>0.005</b>	<b>0.001</b>	<b>0.003</b>	<b>0.003</b>	



**Table 1**  
**Soil Analytical Results for TPH and BTEX**  
**Block 38 West Property**  
**Seattle, Washington**  
**Farallon PN: 397-019**

Sample Location	Sample Identification	General Location	Sample Type	Sample Location Disposition	Sample Depth (feet) <sup>1</sup>	Sample Elevation (feet NAVD88) <sup>1</sup>	Zone	Sample Date	Analytical Results (milligrams per kilogram)										
									NWTPH-Dx <sup>2</sup>		Total NWTPH-Dx <sup>3</sup>	NWTPH-Dx with Silica Gel <sup>2</sup>		NWTPH-Gx <sup>4</sup>	EPA Method 8021B/8260 <sup>5</sup>				
									DRO	ORO		DRO	ORO		GRO	Benzene	Toluene	Ethylbenzene	Xylenes
UST-02-Product	UST-02-PRODUCT	Interior	Performance	Removed	---	18.0	Saturated	2/5/2020	DETECTED <sup>9</sup>	DETECTED <sup>9</sup>	---	---	---	< 41,000 <sup>9</sup>	---	---	---	---	---
UST02-N	UST-02-N	Interior	Performance	Removed	---	18.0	Saturated	2/5/2020	630	1,300	1,930	---	---	< 59	< 0.00091	< 0.0045	< 0.00091	< 0.00271	
UST02-E	UST-02-E	Interior	Performance	Removed	---	18.0	Saturated	2/5/2020	370	850	1,220	---	---	79 O	0.0033	0.018	0.0075	0.048	
UST02-B1	UST02-B1	Interior	Performance	Removed	---	15.0	Saturated	2/7/2020	140 N	820	960	---	---	---	---	---	---	---	
UST02-B2	UST02-B2	Interior	Confirmation	Removed	---	14.0	Saturated	2/7/2020	160 N	1,800	1,960	---	---	---	---	---	---	---	
UST02-N1	UST02-N1	Interior	Confirmation	Removed	---	17.5	Saturated	2/7/2020	160 N	440	600	---	---	---	---	---	---	---	
UST02-E1	UST02-E1	Interior	Confirmation	Removed	---	17.5	Saturated	2/7/2020	39 N	230	269	---	---	---	---	---	---	---	
UST02-S	UST02-S	Interior	Confirmation	Removed	---	17.5	Saturated	2/7/2020	< 50	200	200	---	---	---	---	---	---	---	
UST02-W1	UST02-W1	Interior	Confirmation	Removed	---	17.5	Saturated	2/7/2020	64 N	310	374	---	---	---	---	---	---	---	
<b>Alley</b>																			
B-6	B-6-3	Alley	Performance	Removed	3.0	23.6	Vadose	12/29/1998	< 20	850	850	---	---	< 5.0	< 50	< 50	< 50	< 50	
	B-6-13	Alley	Confirmation	Removed	13.0	13.6	Saturated	12/29/1998	< 20	< 50	< 50	---	---	< 5.0	< 50	< 50	< 50	< 50	
FB-11	FB-11-20.0	Alley	Performance	Removed	---	20.0	Vadose	9/12/2020	72 N	470	542	---	---	---	---	---	---	---	
	FB-11-17.5	Alley	Confirmation	In Place	---	17.5	Vadose	9/12/2020	< 59	< 120	< 120	---	---	---	---	---	---	---	
FB-12	FB-12-20.0	Alley	Performance	Removed	---	20.0	Vadose	9/13/2020	170 N	1,600	1,770	---	---	< 41	< 0.083	< 0.41	< 0.41	< 0.82	
	FB-12-17.5	Alley	Confirmation	In Place	---	17.5	Saturated	9/13/2020	< 94	1,300	1,300	---	---	< 38	< 0.075	< 0.38	< 0.38	< 0.76	
FB-13	FB-13-20.0	Alley	Performance	Removed	---	20.0	Vadose	9/12/2020	86 N	1,400	1,486	---	---	< 35	< 0.070	< 0.35	< 0.35	< 0.70	
	FB-13-17.5	Alley	Confirmation	In Place	---	17.5	Saturated	9/12/2020	160 N	2,700	2,860	---	---	< 51	< 0.10	< 0.51	< 0.51	< 1.02	
	FB-13-15.0	Alley	Confirmation	In Place	---	15.0	Saturated	9/12/2020	< 130	1,200	1,200	---	---	---	---	---	---	---	
FB-14	FB-14-20.0	Alley	Performance	Removed	---	20.0	Vadose	9/12/2020	32 N	150	182	---	---	---	---	---	---	---	
	FB-14-17.5	Alley	Confirmation	In Place	---	17.5	Saturated	9/13/2020	< 65	510	510	---	---	---	---	---	---	---	
FB-15	FB-15-22.5	Alley	Performance	Removed	---	22.5	Vadose	9/13/2020	< 140	1,500	1,500	---	---	---	---	---	---	---	
	FB-15-20.0	Alley	Confirmation	Removed	---	20.0	Vadose	9/13/2020	< 30	160	160	---	---	---	---	---	---	---	
	FB-15-17.5	Alley	Confirmation	In Place	---	17.5	Saturated	9/13/2020	< 28	< 56	< 56	---	---	---	---	---	---	---	
FB-16	FB-16-22.5	Alley	Performance	Removed	---	22.5	Vadose	9/13/2020	< 28	110	110	---	---	---	---	---	---	---	
	FB-16-20.0	Alley	Confirmation	Removed	---	20.0	Vadose	9/13/2020	< 28	< 56	< 56	---	---	---	---	---	---	---	
	FB-16-17.5	Alley	Confirmation	In Place	---	17.5	Saturated	9/13/2020	130 N	1,000	1,130	---	---	---	---	---	---	---	
PH-11A	PH-11A-4.0-011919	Alley	Performance	Removed	4.0	20.0	Vadose	1/19/2019	520 N	1,100	1,620	---	---	< 20	---	---	---	---	
PH-12	PH-12-4.0-011919	Alley	Performance	Removed	4.0	21.0	Vadose	1/19/2019	9,400 N,M	21,000	30,400	---	---	2,100	---	---	---	---	
PH-13	PH-13-3.0-011219	Alley	Performance	Removed	3.0	20.0	Vadose	1/12/2019	< 29	< 59	< 59	---	---	< 6.4	---	---	---	---	
E/A5-B	E/A5-B-17.5	Alley	Confirmation	In Place	---	17.5	Saturated	6/28/2021	130 N	2,100	2,230	---	---	< 45	< 0.0070	< 0.035	< 0.0070	< 0.021	
E/A5-ESW	E/A5-ESW-22.5-050421	Alley	Confirmation	In Place	---	22.5	Vadose	5/4/2021	350 N	1,600	1,950	---	---	< 14	< 0.0020	< 0.010	< 0.0020	< 0.0061	
	E/A5-ESW-20.0-050421	Alley	Confirmation	In Place	---	20.0	Vadose	5/4/2021	220 N	1,500	1,720	---	---	< 27	< 0.0039	< 0.019	< 0.0039	< 0.0117	
	E/A5-ESW-17.5-050421	Alley	Confirmation	In Place	---	17.5	Saturated	5/4/2021	130 N	1,000	1,130	---	---	< 34	< 0.0050	< 0.025	< 0.0050	< 0.015	
F/A5-B	F/A5-B-17.5	Alley	Confirmation	In Place	---	17.5	Saturated	6/28/2021	160 N	710	870	---	---	< 43	< 0.0062	< 0.031	< 0.0062	< 0.0182	
G/A5-ESW	G/A5-ESW-22.5-070621	Alley	Confirmation	In Place	---	22.5	Vadose	7/6/2021	150 N	1,700	1,850	---	---	---	---	---	---	---	
	G/A5-ESW-20.0-070621	Alley	Confirmation	In Place	---	20.0	Vadose	7/6/2021	890 N	3,300	4,190	---	---	---	---	---	---	---	
	G/A5-ESW-17.5-070621	Alley	Confirmation	In Place	---	17.5	Saturated	7/6/2021	940 N	6,100	7,040	---	---	---	---	---	---	---	
H/A5-B	H/A5-B-17.5-070621	Alley	Confirmation	In Place	---	17.5	Saturated	7/6/2021	98 N	780	878	---	---	---	---	---	---	---	
H/A5-ESW	H/A5-ESW-22.5-070621	Alley	Confirmation	In Place	---	22.5	Vadose	7/6/2021	200 N	2,400	2,600	---	---	---	---	---	---	---	
	H/A5-ESW-20.0-070621	Alley	Confirmation	In Place	---	20.0	Vadose	7/6/2021	360 N	2,800	3,160	---	---	---	---	---	---	---	
	H/A5-ESW-17.5-070621	Alley	Confirmation	In Place	---	17.5	Saturated	7/6/2021	< 86	250	250	---	---	---	---	---	---	---	
I/A5-B	I/A5-B-17.5-070921	Alley	Confirmation	In Place	---	17.5	Saturated	7/9/2021	87 N	230	317	---	---	---	---	---	---	---	
I/A5-ESW	I/A5-ESW-22.5-070921	Alley	Confirmation	In Place	---	22.5	Vadose	7/9/2021	82 N	550	632	---	---	---	---	---	---	---	
	I/A5-ESW-20.0-070921	Alley	Confirmation	In Place	---	20.0	Vadose	7/9/2021	520 N	4,100	4,620	---	---	---	---	---	---	---	
	I/A5-ESW-17.5-070921	Alley	Confirmation	In Place	---	17.5	Saturated	7/9/2021	1,400 N	3,000	4,400	---	---	---	---	---	---	---	
<b>MTCA Method B Direct Contact<sup>6</sup></b>									<b>NE</b>		<b>NE</b>	<b>NE</b>		<b>1,500<sup>8</sup></b>	<b>18</b>	<b>6,400</b>	<b>8,000</b>	<b>16,000</b>	
<b>Screening Levels for Soil Protective of Groundwater - Vadose Zone<sup>6</sup></b>									<b>2,000<sup>7</sup></b>		<b>2,000<sup>7</sup></b>	<b>2,000<sup>7</sup></b>		<b>30<sup>7</sup></b>	<b>0.027</b>	<b>4.5</b>	<b>5.9</b>	<b>14</b>	
<b>Screening Levels for Soil Protective of Groundwater - Saturated Zone<sup>6</sup></b>									<b>2,000<sup>7</sup></b>		<b>2,000<sup>7</sup></b>	<b>2,000<sup>7</sup></b>		<b>30<sup>7</sup></b>	<b>0.0017</b>	<b>0.27</b>	<b>0.34</b>	<b>0.83</b>	
<b>Laboratory Practical Quantitation Limits<sup>8</sup></b>									<b>75</b>		<b>75</b>	<b>75</b>		<b>5</b>	<b>0.001</b>	<b>0.005</b>	<b>0.001</b>	<b>0.003</b>	

**Table 1**  
**Soil Analytical Results for TPH and BTEX**  
**Block 38 West Property**  
**Seattle, Washington**  
**Farallon PN: 397-019**

Sample Location	Sample Identification	General Location	Sample Type	Sample Location Disposition	Sample Depth (feet) <sup>1</sup>	Sample Elevation (feet NAVD88) <sup>1</sup>	Zone	Sample Date	Analytical Results (milligrams per kilogram)										
									NWTPH-Dx <sup>2</sup>		Total NWTPH-Dx <sup>3</sup>	NWTPH-Dx with Silica Gel <sup>2</sup>		NWTPH-Gx <sup>4</sup>	EPA Method 8021B/8260 <sup>5</sup>				
									DRO	ORO		DRO	ORO		GRO	Benzene	Toluene	Ethylbenzene	Xylenes
J/A5-ESW	J/A5-ESW-22.5-070921	Alley	Confirmation	In Place	---	22.5	Vadose	7/9/2021	230 N	1,700	1,930	---	---	---	---	---	---	---	---
	J/A5-ESW-20.0-070921	Alley	Confirmation	In Place	---	20.0	Vadose	7/9/2021	110 N	310	420	---	---	---	---	---	---	---	---
	J/A5-ESW-17.5-070921	Alley	Confirmation	In Place	---	17.5	Saturated	7/9/2021	< 32	110	110	---	---	---	---	---	---	---	---
L/A5-B	L/A5-B-22.0-071221	Alley	Confirmation	Removed	---	22.0	Vadose	7/12/2021	< 29	< 57	< 57	---	---	---	---	---	---	---	---
L/A5-ESW	L/A5-ESW-25.0-071221	Alley	Confirmation	In Place	---	25.0	Vadose	7/12/2021	80 N	500	580	---	---	---	---	---	---	---	---
	L/A5-ESW-22.5-071221	Alley	Confirmation	In Place	---	22.5	Vadose	7/12/2021	31 N	200	231	---	---	---	---	---	---	---	---
M/A5-ESW	M/A5-ESW-25.0-071521	Alley	Confirmation	In Place	---	25.0	Vadose	7/15/2021	87 N	340	427	---	---	---	---	---	---	---	---
	M/A5-ESW-22.5-071521	Alley	Confirmation	In Place	---	22.5	Vadose	7/15/2021	< 28	< 55	< 55	---	---	---	---	---	---	---	---
<b>Block 38 East Property</b>																			
EX-11-W21 (EL21)	EX-11-W21 (EL21)	B38E	Confirmation	In Place	9.5	21.0	Vadose	7/2/2008	< 20	< 50	< 50	---	---	11	< 0.02	< 0.05	< 0.05	< 0.15	
EX-12-W16.5 (EL22)	EX-12-W16.5 (EL22)	B38E	Confirmation	In Place	7.0	22.0	Vadose	7/2/2008	< 20	< 50	< 50	---	---	< 10	< 0.02	< 0.05	< 0.05	< 0.15	
EX-17-W13 (EL23)	EX-17-W13 (EL23)	B38E	Confirmation	In Place	6.5	23.0	Vadose	7/3/2008	< 20	< 50	< 50	---	---	< 10	< 0.02	< 0.05	< 0.05	< 0.15	
EX-18-W9 (EL19.5)	EX-18-W9 (EL19.5)	B38E	Confirmation	In Place	6.0	19.5	Vadose	7/3/2008	< 20	< 50	< 50	---	---	< 10	< 0.02	< 0.05	< 0.05	< 0.15	
P-4	P-4-3.5	B38E	Performance	Removed	3.5	21.2	Vadose	6/12/2002	< 37	530	530	---	---	---	---	---	---	---	
	P-4-5.5	B38E	Performance	Removed	5.5	19.2	Vadose	6/12/2002	< 74	1,400	1,400	---	---	---	---	---	---	---	
W-3	W-3	B38E	Performance	Removed	10.0	10.5	Saturated	10/11/1993	<b>7,800</b>	<b>280</b>	<b>8,080</b>	---	---	<b>470</b>	< 0.16	< 0.16	0.19	0.87	
W-4	W-4	B38E	Performance	Removed	11.0	9.5	Saturated	10/11/1993	210	< 49	210	---	---	<b>44</b>	< 0.030	< 0.030	< 0.030	0.063	
<b>Block 37 Site</b>																			
MW-41	MW-41-3	B37	Confirmation	In Place	7.5	19.5	Vadose	10/28/1991	< 5	---	< 5	---	---	< 5	< 0.040	< 0.040	< 0.040	< 0.040	
	MW-41-7	B37	Confirmation	In Place	17.5	9.5	Saturated	10/28/1991	< 5	---	< 5	---	---	< 5	---	---	---	---	
MW-71	MW-71-5	B37	Confirmation	In Place	5.0	25.4	Vadose	10/12/2005	< 10.8	< 27.1	< 27.1	---	---	< 3.84	< 0.0267	< 0.0891	< 0.0891	< 0.267	
	MW-71-10	B37	Confirmation	In Place	10.0	20.4	Vadose	10/12/2005	< 11.2	< 28.0	< 28.0	---	---	< 4.33	<b>0.189</b>	< 0.0861	0.341	0.262	
	MW-71-15	B37	Confirmation	In Place	15.0	15.4	Saturated	10/12/2005	< 11.7	< 29.3	< 29.3	---	---	< 4.55	< 0.0273	< 0.0910	< 0.0910	< 0.273	
	MW-71-20	B37	Confirmation	In Place	20.0	10.4	Saturated	10/12/2005	135	298	433	---	---	<b>888</b>	<b>1.02</b>	<b>0.724</b>	<b>9.97</b>	<b>29.1</b>	
MW-72	MW-72-5	B37	Confirmation	In Place	5.0	25.3	Vadose	10/12/2005	< 11.1	< 27.9	< 27.9	---	---	< 3.82	< 0.0257	< 0.0857	< 0.0857	< 0.257	
	MW-72-10	B37	Confirmation	In Place	10.0	20.3	Vadose	10/12/2005	< 11.1	< 27.7	< 27.7	---	---	< 4.66	< 0.0260	< 0.0868	< 0.0868	< 0.260	
	MW-72-15	B37	Confirmation	In Place	15.0	15.3	Saturated	10/12/2005	219	403	622	---	---	< 22.9	<b>0.533</b>	< 0.702	< 0.702	< 2.10	
	MW-72-20	B37	Confirmation	In Place	20.0	10.3	Saturated	10/12/2005	109	99.6	208.6	---	---	< 11.8	< 0.0405	< 0.312	< 0.312	< 0.936	
MW-73	MW-73-5	B37	Confirmation	In Place	5.0	25.1	Vadose	10/12/2005	< 11.1	< 27.7	< 27.7	---	---	< 5.05	< 0.0288	< 0.0960	< 0.0960	< 0.288	
	MW-73-10	B37	Confirmation	In Place	10.0	20.1	Vadose	10/12/2005	45	< 28.5	45	---	---	<b>4,530</b>	< 0.0266	< 0.0888	< 0.0888	< 0.266	
	MW-73-16	B37	Confirmation	In Place	15.0	15.1	Saturated	10/12/2005	129	677	806	---	---	<b>33.4</b>	<b>0.261</b>	< 0.443	< 0.443	< 1.33	
	MW-73-20	B37	Confirmation	In Place	20.0	10.1	Saturated	10/12/2005	< 12.0	< 29.9	< 29.9	---	---	< 5.02	< 0.0131	< 0.100	< 0.100	< 0.301	
MW-95	MW-95-5	B37	Confirmation	In Place	5.0	27.0	Vadose	10/19/2005	48.4	< 26.4	48.4	---	---	< 4.70	<b>0.0346</b>	< 0.0508	< 0.0508	< 0.102	
	MW-95-10	B37	Confirmation	In Place	10.0	22.0	Vadose	10/19/2005	< 11.4	< 28.6	< 28.6	---	---	< 4.22	< 0.0277	< 0.0462	< 0.0462	< 0.0923	
	MW-95-15	B37	Confirmation	In Place	15.0	17.0	Saturated	10/19/2005	< 12.6	< 31.5	< 31.5	---	---	< 7.39	< 0.0295	< 0.0492	< 0.0492	< 0.0985	
<b>MTCA Method B Direct Contact<sup>6</sup></b>									<b>NE</b>		<b>NE</b>	<b>NE</b>		<b>1,500<sup>8</sup></b>	<b>18</b>	<b>6,400</b>	<b>8,000</b>	<b>16,000</b>	
<b>Screening Levels for Soil Protective of Groundwater - Vadose Zone<sup>6</sup></b>									<b>2,000<sup>7</sup></b>		<b>2,000<sup>7</sup></b>	<b>2,000<sup>7</sup></b>		<b>30<sup>7</sup></b>	<b>0.027</b>	<b>4.5</b>	<b>5.9</b>	<b>14</b>	
<b>Screening Levels for Soil Protective of Groundwater - Saturated Zone<sup>6</sup></b>									<b>2,000<sup>7</sup></b>		<b>2,000<sup>7</sup></b>	<b>2,000<sup>7</sup></b>		<b>30<sup>7</sup></b>	<b>0.0017</b>	<b>0.27</b>	<b>0.34</b>	<b>0.83</b>	
<b>Laboratory Practical Quantitation Limits<sup>8</sup></b>									<b>75</b>		<b>75</b>	<b>75</b>		<b>5</b>	<b>0.001</b>	<b>0.005</b>	<b>0.001</b>	<b>0.003</b>	

**NOTES:**  
Results in **bold** denote concentrations exceeding applicable screening levels; the shading indicates whether the exceedance is in the vadose or saturated zone as indicated to the right.  
< denotes analyte not detected at or exceeding the laboratory reporting limit listed.  
--- denotes sample not analyzed.

Shading represents most stringent screening level or practical quantitation limit for vadose zone soil, or an exceedance in this zone.  
 Shading represents most stringent screening level or practical quantitation limit for saturated zone soil, or an exceedance in this zone.  
Grey Text Grey text indicates a sample location that was subsequently removed during Interim Action excavation activities.

BTEX = benzene, toluene, ethylbenzene, and xylenes  
DRO = total petroleum hydrocarbons (TPH) as diesel-range organics  
F3 = result is elevated due to discrete peaks in quantitation range not representative of fuel  
GRO = TPH as gasoline-range organics  
H = sample analyzed outside of holding time  
M = hydrocarbons in the gasoline range are impacting the diesel-range result  
N = hydrocarbons in the oil-range are impacting the diesel-range result  
N1 = hydrocarbons in the diesel-range are impacting the oil-range result  
ORO = TPH as oil-range organics  
O = Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result  
T = the sample chromatographic pattern is not similar to the fuel standard used for quantitation

<sup>1</sup>Depth in feet below ground surface. Elevation in feet referenced to North American Vertical Datum of 1988 (NAVD88).  
<sup>2</sup>Analyzed by Northwest Method NWTPH-Dx, unless otherwise noted. Results denoted as analyzed by NWTPH-Dx with silica gel were analyzed using a sample extract treated with sulfuric acid/silica gel cleanup procedure.  
<sup>3</sup>Total is the sum of the DRO and ORO results. Where both results are non-detect, the higher of the two reporting limits is reported as the Total NWTPH-Dx value.  
<sup>4</sup>Analyzed by Northwest Method NWTPH-Gx, unless otherwise noted.  
<sup>5</sup>Analyzed by U.S. Environmental Protection Agency Method 8021B, 8260C, or 8260D.  
<sup>6</sup>Washington State Cleanup Levels and Risk Calculations (CLARC) under Washington State Model Toxics Control Act Cleanup Regulation (MTCA), Method B direct contact cleanup levels and default soil concentrations protective of groundwater (leaching pathway) from CLARC Master spreadsheet, <https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Contamination-clean-up-tools/CLARC>, unless otherwise noted.  
<sup>7</sup>MTCA Method A is used as a surrogate for Method B because no Method B vadose or saturated leaching value has been established for TPH gasoline-, diesel- and oil-range mixtures.  
<sup>8</sup>Laboratory Practical Quantitation Limits (PQLs) from OnSite Environmental of Redmond, Washington. PQLs for individual samples may vary due to sample matrix interferences, dilutions, or moisture content.  
<sup>9</sup>Source of this value is the generic TPH cleanup level from *Model Remedies for Sites with Petroleum Contaminated Soils*, Washington State Department of Ecology, Publication No. 15-09-043, Revised: December 2017.  
<sup>9</sup>Analyzed by Northwest Method NWTPH-HCID (hydrocarbon identification).











**Table 2  
Soil Analytical Results for PAHs  
Block 38 West Property  
Seattle, Washington  
Farallon PN: 397-019**

Sample Location	Sample Identification	General Location	Sample Type	Sample Location Disposition	Sample Composition	Sample Depth (feet) <sup>1</sup>	Sample Elevation (feet NAVD88) <sup>1</sup>	Zone	Sample Date	Analytical Results (milligrams per kilogram) <sup>2</sup>																														
										Non-Carcinogenic PAHs										Carcinogenic PAHs																				
										Naphthalene	1-Methylnaphthalene	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(g,h,i)Perylene	Fluoranthene	Fluorene	Phenanthrene	Pyrene	Benzo(a)Pyrene	Benzo(a)Anthracene	Benzo(b)Fluoranthene	Benzo(j,k)Fluoranthene	Total Benzofluoranthenes	Chrysene	Dibenzo(a,h)Anthracene	Indeno(1,2,3-cd)Pyrene	Total cPAHs TEC <sup>3,4</sup>											
<b>Block 38 East Property</b>																																								
EX-19-W5	EX-19-W5 (EL20)	Block 38E	Confirmation	In Place	Soil	5.0	20.0	Vadose	7/3/2008	0.07	---	---	0.42	0.11	0.98	2.0	2.9	0.30	2.3	3.6	<b>1.7</b>	0.97	1.3	0.55	---	0.88	0.50	0.78	<b>2.1</b>											
EX-20-W1.5	EX-20-W1.5 (EL19.5)	Block 38E	Confirmation	In Place	Soil	5.5	19.0	Vadose	7/3/2008	0.13	---	---	0.63	0.12	1.5	3.0	4.4	0.42	4.2	5.5	<b>0.75</b>	1.2	2.1	0.75	---	1.2	0.76	1.2	<b>1.4</b>											
EX-38-EL23	EX-38-EL23	Block 38E	Confirmation	In Place	Soil	1.0	23.0	Vadose	7/18/2008	< 0.05	---	---	< 0.05	0.14	1.7	2.9	6.3	0.43	1.7	7.8	<b>2.9</b>	2.7	1.6	1.7	---	1.4	1.0	1.1	<b>3.7</b>											
EX-39-EL23	EX-39-EL23	Block 38E	Confirmation	In Place	Soil	1.0	23.0	Vadose	7/18/2008	< 0.05	---	---	0.13	< 0.05	0.27	0.39	0.51	0.13	0.27	0.0	<b>0.32</b>	0.73	0.23	0.31	---	0.21	< 0.01	0.18	<b>0.47</b>											
EX-40-EL22	EX-40-EL22	Block 38E	Confirmation	In Place	Soil	2.0	22.0	Vadose	7/18/2008	<b>6</b>	---	---	0.61	7.2	40	12	43	4.9	53	53	<b>19</b>	17	17	20	---	9.4	1.4	5.7	<b>25</b>											
EX-41-EL22	EX-41-EL22	Block 38E	Confirmation	In Place	Soil	3.0	22.0	Vadose	7/18/2008	0.56	---	---	0.16	0.49	1.4	1.7	4.1	0.31	3.3	4.7	<b>2.3</b>	2.9	1.3	1.1	---	2.1	0.62	0.69	<b>2.98</b>											
P-4	P-4-3.5	Block 38E	Performance	Removed	Soil/Wood	3.5	21.2	Vadose	6/12/2002	0.52	<b>0.21</b>	0.36	0.39	0.39	0.60	1.1	2.4	0.39	3.4	3.5	<b>1.6</b>	1.1	1.1	1.0	---	1.4	0.34	0.95	<b>2.1</b>											
	P-4-5.5	Block 38E	Performance	Removed	Soil/Wood	5.5	19.2	Vadose	6/12/2002	0.055	< 0.025	< 0.025	0.047	< 0.025	0.067	0.17	0.36	0.042	0.33	0.24	<b>0.21</b>	0.090	0.56	0.48	---	0.18	0.026	0.12	<b>0.34</b>											
<b>Block 37 Site</b>																																								
MW-71	MW-71-5	Block 37	Confirmation	In Place	Soil	5.0	25.4	Vadose	10/12/2005	< 0.0891	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---										
	MW-71-10	Block 37	Confirmation	In Place	Soil	10.0	20.4	Vadose	10/12/2005	< 0.0861	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---										
	MW-71-15	Block 37	Confirmation	In Place	Soil	15.0	15.4	Saturated	10/12/2005	< 0.0910	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---										
	MW-71-20	Block 37	Confirmation	In Place	Soil	20.0	10.4	Saturated	10/12/2005	<b>6.49</b>	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---									
MW-72	MW-72-5	Block 37	Confirmation	In Place	Soil	5.0	25.3	Vadose	10/12/2005	< 0.0857	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---										
	MW-72-10	Block 37	Confirmation	In Place	Soil	10.0	20.3	Vadose	10/12/2005	< 0.0668	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---										
	MW-72-15	Block 37	Confirmation	In Place	Soil	15.0	15.3	Saturated	10/12/2005	< 0.702	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---										
	MW-72-20	Block 37	Confirmation	In Place	Soil	20.0	10.3	Saturated	10/12/2005	< 0.312	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---									
MW-73	MW-73-5	Block 37	Confirmation	In Place	Soil	5.0	25.1	Vadose	10/12/2005	< 0.0960	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---										
	MW-73-10	Block 37	Confirmation	In Place	Soil	10.0	20.1	Vadose	10/12/2005	< 0.0888	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---										
	MW-73-16	Block 37	Confirmation	In Place	Soil	15.0	15.1	Saturated	10/12/2005	< 0.443	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---										
	MW-73-20	Block 37	Confirmation	In Place	Soil	20.0	10.1	Saturated	10/12/2005	< 0.100	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---									
MW-95	MW-95-5	Block 37	Confirmation	In Place	Soil	5.0	27.0	Vadose	10/19/2005	< 0.102	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---										
	MW-95-10	Block 37	Confirmation	In Place	Soil	10.0	22.0	Vadose	10/19/2005	< 0.0923	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---										
	MW-95-15	Block 37	Confirmation	In Place	Soil	15.0	17.0	Saturated	10/19/2005	< 0.0985	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---										
<b>MTCA Method B Direct Contact<sup>5</sup></b>										<b>1,600</b>	<b>34</b>	<b>320</b>	<b>4,800</b>	<b>NE</b>	<b>24,000</b>	<b>NE</b>	<b>3,200</b>	<b>3,200</b>	<b>NE</b>	<b>2,400</b>	<b>0.19</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>0.19</b>			
<b>Screening Levels for Soil Protective of Groundwater - Vadose Zone<sup>5</sup></b>										<b>4.5</b>	<b>0.082</b>	<b>1.7</b>	<b>49</b>	<b>NE</b>	<b>1,100</b>	<b>NE</b>	<b>630</b>	<b>51</b>	<b>NE</b>	<b>330</b>	<b>3.9</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>3.9</b>		
<b>Screening Levels for Soil Protective of Groundwater - Saturated Zone<sup>5</sup></b>										<b>0.24</b>	<b>0.0042</b>	<b>0.088</b>	<b>2.5</b>	<b>NE</b>	<b>57</b>	<b>NE</b>	<b>32</b>	<b>2.6</b>	<b>NE</b>	<b>16</b>	<b>0.19</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>0.19</b>		
<b>Laboratory Practical Quantitation Limits<sup>6</sup></b>										<b>0.0067</b>	<b>0.0067</b>	<b>0.0067</b>	<b>0.0067</b>	<b>0.0067</b>	<b>0.0067</b>	<b>0.0067</b>	<b>0.0067</b>	<b>0.0067</b>	<b>0.0067</b>	<b>0.0067</b>	<b>0.0067</b>	<b>0.0067</b>	<b>0.0067</b>	<b>0.0067</b>	<b>0.0067</b>	<b>0.0067</b>	<b>0.0067</b>	<b>0.0067</b>	<b>0.0067</b>	<b>0.0067</b>	<b>0.0067</b>	<b>0.0067</b>	<b>0.0067</b>	<b>0.0067</b>	<b>0.0067</b>	<b>0.0067</b>	<b>0.0067</b>	<b>NA</b>		
<b>Proposed Feasibility Study/Cleanup Action Plan Preliminary Screening Levels (Vadose and Saturated)<sup>7</sup></b>										<b>1,600</b>	<b>34</b>	<b>320</b>	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	<b>0.19</b>

**NOTES:**  
Results in **bold** denote concentrations exceeding applicable screening levels; the shading indicates whether the exceedance is in the vadose or saturated zone as indicated to the right.  
--- denotes sample not analyzed or not applicable.  
< denotes analyte not detected at or exceeding the reporting limit listed.  
<sup>1</sup>Depth in feet below ground surface. Elevation in feet referenced to North American Vertical Datum of 1988 (NAVD88).  
<sup>2</sup>Analyzed by U.S. Environmental Protection Agency Method 8270D/SIM, 8270E, or 8270E/SIM.  
<sup>3</sup>Total cPAHs derived using the total toxicity equivalency method in Section 708(8) of Chapter 173-340 of the Washington Administrative Code.  
<sup>4</sup>For concentrations reported at less than the laboratory reporting limit, half the reporting limit was used to calculate total. If all constituent concentrations are non-detect, calculated total is indicated non-detect.  
<sup>5</sup>Washington State Cleanup Levels and Risk Calculations (CLARC) under Washington State Model Toxics Control Act Cleanup Regulation (MTCA), Method B direct contact cleanup levels and default soil concentrations protective of groundwater (leaching pathway) from CLARC Master spreadsheet, <https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Contamination-clean-up-tools/CLARC>  
<sup>6</sup>Laboratory Practical Quantitation Limits (PQLs) from OnSite Environmental of Redmond, Washington. PQLs for individual samples may vary due to sample matrix interferences, dilutions, or moisture content.  
<sup>7</sup>See Table 14 for proposed preliminary screening levels for the post-interim action Feasibility Study/Cleanup Action Plan phase of the project.  
cPAH TEC = Carcinogenic polycyclic aromatic hydrocarbon toxic equivalent concentration (cPAH TEC) calculated following the total toxicity equivalency method in Section 708(8) of Chapter 173-340 of the Washington Administrative Code.

Shading represents most stringent screening level or practical quantitation limit for vadose zone soil, or an exceedance in this zone.  
Shading represents most stringent screening level or practical quantitation limit for saturated zone soil, or an exceedance in this zone.  
Shading represents the proposed soil screening level for this chemical for the Feasibility Study/Cleanup Action Plan-phase of the project following completion of the Interim Action and empirical evidence from groundwater samples.  
Grey Text Grey text indicates a sample location that was subsequently removed during Interim Action excavation activities.

Adapt Engineering = Adapt Engineering, Inc.  
cPAHs = carcinogenic polycyclic aromatic hydrocarbons  
Enviros = Enviro Group, Ltd.  
Farallon = Farallon Consulting, L.L.C.  
GeoEngineers = GeoEngineers, Inc.  
H = sample analyzed outside of holding time  
J = result is an estimate  
NA = not applicable  
ND = not detected and reporting limit is not available.  
NE = not established  
PAHs = polycyclic aromatic hydrocarbons  
TEC = toxic equivalent concentration



**Table 3  
Soil Analytical Results for Select CVOCs  
Block 38 West Property  
Seattle, Washington  
Farallon PN: 397-019**

Sample Location	Sample Identification	General Location	Sample Type	Sample Location Disposition	Sample Depth (feet) <sup>1</sup>	Sample Elevation (feet NAVD88) <sup>1</sup>	Zone	Sample Date	Analytical Results (milligrams per kilogram) <sup>2</sup>							
									PCE	TCE	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Vinyl Chloride	1,2-Dibromoethane	1,2-Dichloroethane	Methyl Tertiary Butyl Ether (MTBE)
<b>Block 38 West Property</b>																
FB-02	FB-02-10.0-082018	Interior	Confirmation	Removed	10.0	15.1	Saturated	8/20/2018	< 0.0028	< 0.0028	< 0.0028	< 0.0028	< 0.0028	---	---	---
	FB-02-25.0-082018	Interior	Confirmation	Removed	25.0	0.1	Saturated	8/20/2018	< 0.00085	< 0.00085	< 0.00085	< 0.00085	< 0.00085	---	---	---
FB-04	FB-04-20.0-082118	Interior	Confirmation	Removed	20.0	2.0	Saturated	8/21/2018	< 0.00093	< 0.00093	< 0.00093	< 0.00093	< 0.00093	---	---	---
FB-05	FB-05-20.0-082218	Interior	Confirmation	Removed	20.0	5.5	Saturated	8/22/2018	< 0.00090	< 0.00090	< 0.00090	< 0.00090	< 0.00090	---	---	---
FMW-135	FMW-135-50.0-082418	Interior	Confirmation	In Place	50.0	-24.4	Saturated	8/24/2018	< 0.00074	< 0.00074	< 0.00074	< 0.00074	< 0.00074	---	---	---
FMW-136	FMW-136-10.0-082218	Interior	Confirmation	Removed	10.0	15.1	Saturated	8/22/2018	< 0.0015	< 0.0015	< 0.0015	< 0.0015	< 0.0015	---	---	---
	FMW-136-20.0-082218	Interior	Confirmation	Removed	20.0	5.1	Saturated	8/22/2018	< 0.00094	< 0.00094	< 0.00094	< 0.00094	< 0.00094	---	---	---
TP-7	TP-7-4.0	Interior	Confirmation	Removed	4.0	19.5	Vadose	12/23/2019	< 0.0044	< 0.0044	< 0.0044	< 0.0044	< 0.0044	< 0.0044	< 0.0044	< 0.0044
<b>Underground Storage Tank Investigation and Decommissioning</b>																
M1-Tank	M1-TANK-24.5	Interior	Confirmation	Removed	---	24.5	Vadose	1/21/2020	0.0041	< 0.00082	< 0.00082	< 0.00082	< 0.00082	< 0.00082	< 0.00082	< 0.00082
UST01-B	UST01-B-17	Interior	Confirmation	Removed	---	17.0	Saturated	1/27/2020	< 0.00092	< 0.00092	< 0.00092	< 0.00092	< 0.00092	< 0.00092	< 0.00092	< 0.00092
UST01-N1	UST01-N1-19	Interior	Confirmation	Removed	---	19.0	Vadose	1/27/2020	< 0.00094	< 0.00094	< 0.00094	< 0.00094	< 0.00094	---	---	---
UST01-E1	UST01-E1-19	Interior	Confirmation	Removed	---	19.0	Vadose	1/27/2020	< 0.00083	< 0.00083	< 0.00083	< 0.00083	< 0.00083	---	---	---
UST01-S1	UST01-S1-19	Interior	Confirmation	Removed	---	19.0	Vadose	1/27/2020	< 0.00084	< 0.00084	< 0.00084	< 0.00084	< 0.00084	---	---	---
UST01-W1	UST01-W1-19	Interior	Confirmation	Removed	---	19.0	Vadose	1/27/2020	< 0.00098	< 0.00098	< 0.00098	< 0.00098	< 0.00098	---	---	---
<b>Block 37 Site</b>																
MW-71	MW-71-5	Block 37	Confirmation	In Place	5.0	25.4	Vadose	10/12/2005	---	---	---	---	---	---	---	< 0.0891
	MW-71-10	Block 37	Confirmation	In Place	10.0	20.4	Vadose	10/12/2005	---	---	---	---	---	---	---	< 0.0861
	MW-71-15	Block 37	Confirmation	In Place	15.0	15.4	Saturated	10/12/2005	---	---	---	---	---	---	---	< 0.0910
	MW-71-20	Block 37	Confirmation	In Place	20.0	10.4	Saturated	10/12/2005	---	---	---	---	---	---	---	< 0.0623
MW-72	MW-72-5	Block 37	Confirmation	In Place	5.0	25.3	Vadose	10/12/2005	---	---	---	---	---	---	---	< 0.0857
	MW-72-10	Block 37	Confirmation	In Place	10.0	20.3	Vadose	10/12/2005	---	---	---	---	---	---	---	< 0.0868
	MW-72-15	Block 37	Confirmation	In Place	15.0	15.3	Saturated	10/12/2005	---	---	---	---	---	---	---	< 0.0912
	MW-72-20	Block 37	Confirmation	In Place	20.0	10.3	Saturated	10/12/2005	---	---	---	---	---	---	---	< 0.0405
MW-73	MW-73-5	Block 37	Confirmation	In Place	5.0	25.1	Vadose	10/12/2005	---	---	---	---	---	---	---	< 0.0960
	MW-73-10	Block 37	Confirmation	In Place	10.0	20.1	Vadose	10/12/2005	---	---	---	---	---	---	---	< 0.0888
	MW-73-16	Block 37	Confirmation	In Place	15.0	15.1	Saturated	10/12/2005	---	---	---	---	---	---	---	< 0.0576
	MW-73-20	Block 37	Confirmation	In Place	20.0	10.1	Saturated	10/12/2005	---	---	---	---	---	---	---	< 0.100
MW-95	MW-95-5	Block 37	Confirmation	In Place	5.0	26.99	Vadose	10/19/2005	---	---	---	---	---	---	---	< 0.102
	MW-95-10	Block 37	Confirmation	In Place	10.0	21.99	Vadose	10/19/2005	---	---	---	---	---	---	---	< 0.0923
	MW-95-15	Block 37	Confirmation	In Place	15.0	16.99	Saturated	10/19/2005	---	---	---	---	---	---	---	< 0.0985
<b>MTCA Method B Direct Contact<sup>3</sup></b>									<b>480</b>	<b>12</b>	<b>160</b>	<b>1,600</b>	<b>0.67</b>	<b>0.5</b>	<b>11</b>	<b>560</b>
<b>Screening Levels for Soil Protective of Groundwater - Vadose Zone<sup>3</sup></b>									<b>0.05</b>	<b>0.025</b>	<b>0.078</b>	<b>0.52</b>	<b>0.0017</b>	<b>0.00027</b>	<b>0.023</b>	<b>0.1</b>
<b>Screening Levels for Soil Protective of Groundwater - Saturated Zone<sup>3</sup></b>									<b>0.0028</b>	<b>0.0015</b>	<b>0.0052</b>	<b>0.032</b>	<b>0.00009</b>	<b>0.000018</b>	<b>0.0016</b>	<b>0.0072</b>
<b>Laboratory Practical Quantitation Limits<sup>4</sup></b>									<b>0.001</b>	<b>0.001</b>	<b>0.001</b>	<b>0.001</b>	<b>0.001</b>	<b>0.001</b>	<b>0.001</b>	<b>0.001</b>

**NOTES:**

--- denotes sample not analyzed.


< denotes analyte not detected at or exceeding the reporting limit listed.


<sup>1</sup>Depth in feet below ground surface. Elevation in feet referenced to North American Vertical Datum of 1988 (NAVD88).


<sup>2</sup>Analyzed by U.S. Environmental Protection Agency Method 8260C or 8260D.

<sup>3</sup>Washington State Cleanup Levels and Risk Calculations (CLARC) under Washington State Model Toxics Control Act Cleanup Regulation (MTCA), Method B direct contact cleanup levels and default soil concentrations protective of groundwater (leaching pathway) from CLARC Master spreadsheet, <https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Contamination-clean-up-tools/CLARC>

<sup>4</sup>Laboratory Practical Quantitation Limits (PQLs) from OnSite Environmental of Redmond, Washington. PQLs for individual samples may vary due to sample matrix interferences, dilutions, or moisture content.

 Shading represents most stringent screening level or practical quantitation limit for vadose zone soil.

 Shading represents most stringent screening level or practical quantitation limit for saturated zone soil.

 Grey text indicates a sample location that was subsequently removed during Interim Action excavation activities.

CVOC = chlorinated volatile organic compound

**Table 4  
Soil Analytical Results for PCBs  
Block 38 West Property  
Seattle, Washington  
Farallon PN: 397-019**

Sample Location	Sample Identification	General Location	Sample Type	Sample Location Disposition	Sample Depth (feet) <sup>1</sup>	Sample Elevation (feet NAVD88) <sup>1</sup>	Zone	Sample Date	Analytical Results (milligrams per kilogram) <sup>2</sup>							Total PCBs <sup>3</sup>
									Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	
<b>Block 38 West Property</b>																
TP-7	TP-7-4.0	Interior	Confirmation	Removed	4.0	19.5	Vadose	12/23/2019	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	< 0.53
<b>Underground Storage Tank Investigation and Decommissioning</b>																
M1-Tank	M1-TANK-24.5	Interior	Confirmation	Removed	---	24.5	Vadose	1/21/2020	< 0.062	< 0.062	< 0.062	< 0.062	< 0.062	< 0.062	< 0.062	< 0.217
UST01-B	UST01-B-17	Interior	Confirmation	Removed	---	17.0	Saturated	1/27/2020	< 0.055	< 0.055	< 0.055	< 0.055	< 0.055	< 0.055	< 0.055	< 0.193
UST02-N	UST-02-N	Interior	Confirmation	Removed	---	18.0	Saturated	2/5/2020	< 0.063	< 0.063	< 0.063	< 0.063	< 0.063	< 0.063	< 0.063	< 0.221
UST02-E	UST-02-E	Interior	Confirmation	Removed	---	18.0	Saturated	2/5/2020	< 0.087	< 0.087	< 0.087	< 0.087	< 0.087	< 0.087	< 0.087	< 0.305
<b>MTCA Method B Direct Contact<sup>4</sup></b>															<b>1.0</b>	
<b>Screening Levels for Soil Protective of Groundwater - Vadose Zone<sup>4</sup></b>															<b>0.34</b>	
<b>Screening Levels for Soil Protective of Groundwater - Saturated Zone<sup>4</sup></b>															<b>0.017</b>	
<b>Laboratory Practical Quantitation Limits<sup>5</sup></b>															<b>0.050</b>	

**NOTES:**

< denotes analyte not detected at or exceeding the reporting limit listed.

<sup>1</sup>Depth in feet below ground surface. Elevation in feet referenced to North American Vertical Datum of 1988 (NAVD88).

<sup>2</sup>Analyzed by U.S. Environmental Protection Agency Method 8082A.

<sup>3</sup>For non-detected results, half the reporting limit was used to calculate total PCBs.

<sup>4</sup>Washington State Cleanup Levels and Risk Calculations (CLARC) under Washington State Model Toxics Control Act Cleanup Regulation (MTCA), Method B direct contact cleanup levels and default soil concentrations protective of groundwater (leaching pathway) from CLARC Master spreadsheet, <https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Contamination-clean-up-tools/CLARC>

<sup>5</sup>Laboratory Practical Quantitation Limits (PQLs) from OnSite Environmental of Redmond, Washington. PQLs for individual samples may vary due to sample matrix interferences, dilutions, or moisture content.

Shading represents most stringent screening level or practical quantitation limit for vadose zone soil. PCB = polychlorinated biphenyl  
 Shading represents most stringent screening level or practical quantitation limit for saturated zone soil.  
 Grey Text Grey text indicates a sample location that was subsequently removed during Interim Action excavation activities.

**Table 5  
Soil Analytical Results for Metals  
Block 38 West Property  
Seattle, Washington  
Farallon PN: 397-019**

Sample Location	Sample Identification	General Location	Sample Type	Sample Location Disposition	Sample Depth (feet) <sup>1</sup>	Sample Elevation (feet NAVD88) <sup>1</sup>	Zone	Sample Date	Analytical Results (milligrams per kilogram) <sup>2</sup>							
									Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver
<b>Block 38 West Property</b>																
FB-01	FB-01-15.0-082118	Interior	Confirmation	Removed	15.0	11.3	Saturated	8/21/2018	< 16	110	< 0.81	60	< 8.1	< 0.40	< 16	< 1.6
FB-02	FB-02-10.0-082018	Interior	Confirmation	Removed	10.0	15.1	Saturated	8/20/2018	< 12	190	< 1.2	36	24	1.2	< 12	< 2.5
FB-03	FB-03-10.0-082318	Interior	Confirmation	Removed	10.0	15.8	Saturated	8/23/2018	< 13	230	< 0.65	100	8.9	< 0.32	< 13	< 1.3
	FB-03-35.0-082318	Interior	Confirmation	In Place	35.0	-9.2	Saturated	8/23/2018	< 12	44	< 0.60	42	< 6.0	< 0.30	< 12	< 1.2
FB-04	FB-04-5.0-082118	Interior	Confirmation	Removed	5.0	17.0	Saturated	8/21/2018	< 11	290	< 1.1	53	56	< 0.55	< 11	< 2.2
FB-05	FB-05-35.0-082218	Interior	Confirmation	In Place	35.0	-9.5	Saturated	8/22/2018	< 12	58	< 0.62	38	< 6.2	< 0.31	< 12	< 1.2
FMW-133	FMW-133-10.0-082418	Interior	Confirmation	Removed	10.0	15.3	Saturated	8/24/2018	< 17	200	< 1.7	29	18	< 0.83	< 17	< 3.3
	FMW-133-20.0-082418	Interior	Confirmation	Removed	20.0	5.3	Saturated	8/24/2018	< 12	50	< 0.60	27	< 6.0	< 0.30	< 12	< 1.2
FMW-134	FMW-134-5.0-082318	Interior	Confirmation	Removed	5.0	20.4	Vadose	8/23/2018	< 17	110	< 1.7	19	< 17	< 0.83	< 17	< 3.3
	FMW-134-15.0-082318	Interior	Confirmation	Removed	15.0	10.4	Saturated	8/23/2018	< 12	48	< 0.61	42	< 6.1	< 0.30	< 12	< 1.2
FMW-135	FMW-135-5.0-082418	Interior	Confirmation	Removed	5.0	20.6	Vadose	8/24/2018	< 12	120	< 0.61	48	16	< 0.31	< 12	< 1.2
	FMW-135-25.0-082418	Interior	Confirmation	Removed	25.0	0.6	Saturated	8/24/2018	< 14	120	< 0.69	60	< 6.9	< 0.35	< 14	< 1.4
	FMW-135-30.0-082418	Interior	Confirmation	Removed	30.0	-4.4	Saturated	8/24/2018	< 12	66	< 0.62	44	< 6.2	< 0.31	< 12	< 1.2
FMW-136	FMW-136-20.0-082218	Interior	Confirmation	Removed	20.0	5.1	Saturated	8/22/2018	< 13	46	< 0.63	42	< 6.3	< 0.32	< 13	< 1.3
	FMW-136-30.0-082218	Interior	Confirmation	Removed	30.0	-4.9	Saturated	8/22/2018	< 12	45	< 0.59	41	< 5.9	< 0.30	< 12	< 1.2
M1-WSW	M1-WSW-17.0	Sidewall	Confirmation	In Place	---	17.0	Saturated	2/10/2020	---	---	---	---	18	---	---	---
N1-WSW	N1-WSW-17.0	Interior	Confirmation	Removed	---	17.0	Saturated	2/10/2020	---	---	---	---	80	---	---	---
TP-7	TP-7-4.0	Interior	Confirmation	Removed	4.0	19.5	Vadose	12/23/2019	---	---	---	---	33	---	---	---
<b>Underground Storage Tank Investigation and Decommissioning</b>																
M1-Tank	M1-TANK-24.5	Interior	Confirmation	Removed	---	24.5	Vadose	1/21/2020	---	---	---	---	46	---	---	---
UST01-B	UST01-B-17	Interior	Confirmation	Removed	---	17.0	Saturated	1/27/2020	---	---	---	---	13	---	---	---
UST01-N1	UST01-N1-19	Interior	Confirmation	Removed	---	19.0	Vadose	1/27/2020	---	---	---	---	8.1	---	---	---
UST01-E1	UST01-E1-19	Interior	Confirmation	Removed	---	19.0	Vadose	1/27/2020	---	---	---	---	25	---	---	---
UST01-S1	UST01-S1-19	Interior	Confirmation	Removed	---	19.0	Vadose	1/27/2020	---	---	---	---	13	---	---	---
UST01-W1	UST01-W1-19	Interior	Confirmation	Removed	---	19.0	Vadose	1/27/2020	---	---	---	---	14	---	---	---
UST-01-line	UST-01-LINE-21.0	Sidewall	Confirmation	In Place	---	21.0	Vadose	1/31/2020	---	---	---	---	100	---	---	---
<b>Alley</b>																
FB-12	FB-12-21.5	Alley	Performance	Removed	---	21.5	Vadose	9/13/2020	---	---	---	---	25	---	---	---
FB-13	FB-13-22.5	Alley	Performance	Removed	---	22.5	Vadose	9/12/2020	< 11	490	0.73	23	130	< 0.29	< 11	< 1.1
	FB-13-20.0	Alley	Confirmation	Removed	---	20.0	Vadose	9/12/2020	---	---	< 1.4	---	96	---	---	---
FB-14	FB-14-22.5	Alley	Performance	Removed	---	22.5	Vadose	9/12/2020	13	68	< 0.55	17	31	< 0.27	< 11	< 1.1
	FB-14-20.0	Alley	Confirmation	Removed	---	20.0	Vadose	9/12/2020	---	---	< 0.58	---	50	---	---	---
<b>MTCA Method B Direct Contact<sup>3</sup></b>									0.67	16,000	80	120,000	250 <sup>4</sup>	NE	400	400
<b>Screening Levels for Soil Protective of Groundwater - Vadose Zone<sup>3</sup></b>									4.7	1,600	0.69	480,000	3,000	2.1	5.2	14
<b>Screening Levels for Soil Protective of Groundwater - Saturated Zone<sup>3</sup></b>									0.23	83	0.035	24,000	150	0.1	0.26	0.69
<b>Natural Background Concentrations<sup>5</sup></b>									7.3	NE	0.77	48	16.83	0.07	0.78	0.61
<b>Laboratory Practical Quantitation Limits<sup>6</sup></b>									10	2.5	0.50	0.50	5.0	0.25	10	1.0
<b>Proposed Feasibility Study/Cleanup Action Plan Preliminary Screening Levels (Vadose and Saturated)<sup>7</sup></b>									---	16,000	---	---	---	2.1	---	---

**Table 5  
Soil Analytical Results for Metals  
Block 38 West Property  
Seattle, Washington  
Farallon PN: 397-019**

Sample Location	Sample Identification	General Location	Sample Type	Sample Location Disposition	Sample Depth (feet) <sup>1</sup>	Sample Elevation (feet NAVD88) <sup>1</sup>	Zone	Sample Date	Analytical Results (milligrams per kilogram) <sup>2</sup>							
									Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver
FB-15	FB-15-22.5	Alley	Performance	Removed	---	22.5	Vadose	9/13/2020	< 11	81	< 0.54	15	120	< 0.27	< 11	< 1.1
	FB-15-20.0	Alley	Confirmation	Removed	---	20.0	Vadose	9/13/2020	---	---	< 0.59	---	56	---	---	---
	FB-15-17.5	Alley	Confirmation	In Place	---	17.5	Saturated	9/13/2020	---	---	< 0.56	---	< 5.6	---	---	---
TP-10-4	TP-10-4	Alley	Performance	Removed	4.0	20.5	Vadose	5/5/2008	---	---	2.4	---	1,900	---	---	---
G/A5-ESW	G/A5-ESW-22.5-070621	Alley	Confirmation	In Place	---	22.5	Vadose	7/6/2021	---	---	---	---	47	---	---	---
	G/A5-ESW-20.0-070621	Alley	Confirmation	In Place	---	20.0	Vadose	7/6/2021	---	---	---	---	21,000	---	---	---
	G/A5-ESW-17.5-070621	Alley	Confirmation	In Place	---	17.5	Saturated	7/6/2021	---	---	---	---	240	---	---	---
H/A5-B	H/A5-B-17.5-070621	Alley	Confirmation	In Place	---	17.5	Saturated	7/6/2021	---	---	---	---	210	---	---	---
H/A5-ESW	H/A5-ESW-22.5-070621	Alley	Confirmation	In Place	---	22.5	Vadose	7/6/2021	---	---	---	---	22	---	---	---
	H/A5-ESW-20.0-070621	Alley	Confirmation	In Place	---	20.0	Vadose	7/6/2021	---	---	---	---	1,300	---	---	---
	H/A5-ESW-17.5-070621	Alley	Confirmation	In Place	---	17.5	Saturated	7/6/2021	---	---	---	---	96	---	---	---
I/A5-B	I/A5-B-17.5-070921	Alley	Confirmation	In Place	---	17.5	Saturated	7/9/2021	---	---	---	---	130	---	---	---
I/A5-ESW	I/A5-ESW-22.5-070921	Alley	Confirmation	In Place	---	22.5	Vadose	7/9/2021	---	---	---	---	260	---	---	---
	I/A5-ESW-20.0-070921	Alley	Confirmation	In Place	---	20.0	Vadose	7/9/2021	---	---	---	---	2,600	---	---	---
J/A5-ESW	J/A5-ESW-22.5-070921	Alley	Confirmation	In Place	---	22.5	Vadose	7/9/2021	---	---	0.64	---	260	---	---	---
	J/A5-ESW-20.0-070921	Alley	Confirmation	In Place	---	20.0	Vadose	7/9/2021	---	---	< 0.91	---	420	---	---	---
<b>Block 38 East Property</b>																
EX-19-W5 (EL20)	EX-19-W5 (EL20)	B38E	Confirmation	In Place	5.0	20.0	Vadose	7/3/2008	---	---	< 2.0	---	64	---	---	---
EX-20-W1.5 (EL19.5)	EX-20-W1.5 (EL19.5)	B38E	Confirmation	In Place	5.5	19.5	Vadose	7/3/2008	---	---	< 2.0	---	120	---	---	---
EX-39-EL23	EX-39-EL23	B38E	Confirmation	In Place	1.0	23.0	Vadose	7/18/2008	---	---	< 2.0	---	86	---	---	---
EX-40-EL22	EX-40-EL22	B38E	Confirmation	In Place	2.0	22.0	Vadose	7/18/2008	---	---	< 2.0	---	1,800	---	---	---
EX-41-EL22	EX-41-EL22	B38E	Confirmation	In Place	3.0	22.0	Vadose	7/18/2008	---	---	< 2.0	---	1,200	---	---	---
P-4	P-4-3.5	B38E	Performance	Removed	3.5	21.2	Vadose	6/12/2002	---	---	2.1	---	1,500	---	---	---
	P-4-5.5	B38E	Performance	Removed	5.5	19.2	Vadose	6/12/2002	---	---	< 1.5	---	200	---	---	---
W-3	W-3	B38E	Performance	Removed	10.0	10.5	Saturated	10/11/1993	---	---	---	---	18	---	---	---
W-4	W-4	B38E	Performance	Removed	11.0	9.5	Saturated	10/11/1993	---	---	---	---	2.4	---	---	---
<b>Block 37 Site</b>																
MW-41	MW-41-3	Block 37	Confirmation	In Place	7.5	19.5	Vadose	10/28/1991	---	---	---	---	---	---	---	---
	MW-41-7	Block 37	Confirmation	In Place	17.5	9.5	Saturated	10/28/1991	---	---	---	---	---	---	---	---
MW-71	MW-71-5	Block 37	Confirmation	In Place	5.0	25.4	Vadose	10/12/2005	---	---	---	---	2.73	---	---	---
	MW-71-10	Block 37	Confirmation	In Place	10.0	20.4	Vadose	10/12/2005	---	---	---	---	5.39	---	---	---
	MW-71-15	Block 37	Confirmation	In Place	15.0	15.4	Saturated	10/12/2005	---	---	---	---	4.43	---	---	---
	MW-71-20	Block 37	Confirmation	In Place	20.0	10.4	Saturated	10/12/2005	---	---	---	---	7.1	---	---	---
<b>MTCA Method B Direct Contact<sup>3</sup></b>									<b>0.67</b>	<b>16,000</b>	<b>80</b>	<b>120,000</b>	<b>250<sup>4</sup></b>	<b>NE</b>	<b>400</b>	<b>400</b>
<b>Screening Levels for Soil Protective of Groundwater - Vadose Zone<sup>3</sup></b>									<b>4.7</b>	<b>1,600</b>	<b>0.69</b>	<b>480,000</b>	<b>3,000</b>	<b>2.1</b>	<b>5.2</b>	<b>14</b>
<b>Screening Levels for Soil Protective of Groundwater - Saturated Zone<sup>3</sup></b>									<b>0.23</b>	<b>83</b>	<b>0.035</b>	<b>24,000</b>	<b>150</b>	<b>0.1</b>	<b>0.26</b>	<b>0.69</b>
<b>Natural Background Concentrations<sup>5</sup></b>									<b>7.3</b>	<b>NE</b>	<b>0.77</b>	<b>48</b>	<b>16.83</b>	<b>0.07</b>	<b>0.78</b>	<b>0.61</b>
<b>Laboratory Practical Quantitation Limits<sup>6</sup></b>									<b>10</b>	<b>2.5</b>	<b>0.50</b>	<b>0.50</b>	<b>5.0</b>	<b>0.25</b>	<b>10</b>	<b>1.0</b>
<b>Proposed Feasibility Study/Cleanup Action Plan Preliminary Screening Levels (Vadose and Saturated)<sup>7</sup></b>									---	<b>16,000</b>	---	---	---	<b>2.1</b>	---	---

**Table 5  
Soil Analytical Results for Metals  
Block 38 West Property  
Seattle, Washington  
Farallon PN: 397-019**

Sample Location	Sample Identification	General Location	Sample Type	Sample Location Disposition	Sample Depth (feet) <sup>1</sup>	Sample Elevation (feet NAVD88) <sup>1</sup>	Zone	Sample Date	Analytical Results (milligrams per kilogram) <sup>2</sup>							
									Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver
MW-72	MW-72-5	Block 37	Confirmation	In Place	5.0	25.3	Vadose	10/12/2005	---	---	---	---	3.58	---	---	---
	MW-72-10	Block 37	Confirmation	In Place	10.0	20.3	Vadose	10/12/2005	---	---	---	---	5.42	---	---	---
	MW-72-15	Block 37	Confirmation	In Place	15.0	15.3	Saturated	10/12/2005	---	---	---	---	124	---	---	---
	MW-72-20	Block 37	Confirmation	In Place	20.0	10.3	Saturated	10/12/2005	---	---	---	---	20.9	---	---	---
MW-73	MW-73-5	Block 37	Confirmation	In Place	5.0	25.1	Vadose	10/12/2005	---	---	---	---	5.62	---	---	---
	MW-73-10	Block 37	Confirmation	In Place	10.0	20.1	Vadose	10/12/2005	---	---	---	---	3.54	---	---	---
	MW-73-16	Block 37	Confirmation	In Place	15.0	15.1	Saturated	10/12/2005	---	---	---	---	71.9	---	---	---
	MW-73-20	Block 37	Confirmation	In Place	20.0	10.1	Saturated	10/12/2005	---	---	---	---	20.9	---	---	---
MW-95	MW-95-5	Block 37	Confirmation	In Place	5.0	27.0	Vadose	10/19/2005	---	---	---	---	4.02	---	---	---
	MW-95-10	Block 37	Confirmation	In Place	10.0	22.0	Vadose	10/19/2005	---	---	---	---	5.4	---	---	---
	MW-95-15	Block 37	Confirmation	In Place	15.0	17.0	Saturated	10/19/2005	---	---	---	---	16.8	---	---	---
<b>MTCA Method B Direct Contact<sup>3</sup></b>									<b>0.67</b>	<b>16,000</b>	<b>80</b>	<b>120,000</b>	<b>250<sup>4</sup></b>	<b>NE</b>	<b>400</b>	<b>400</b>
<b>Screening Levels for Soil Protective of Groundwater - Vadose Zone<sup>3</sup></b>									<b>4.7</b>	<b>1,600</b>	<b>0.69</b>	<b>480,000</b>	<b>3,000</b>	<b>2.1</b>	<b>5.2</b>	<b>14</b>
<b>Screening Levels for Soil Protective of Groundwater - Saturated Zone<sup>3</sup></b>									<b>0.23</b>	<b>83</b>	<b>0.035</b>	<b>24,000</b>	<b>150</b>	<b>0.1</b>	<b>0.26</b>	<b>0.69</b>
<b>Natural Background Concentrations<sup>5</sup></b>									<b>7.3</b>	<b>NE</b>	<b>0.77</b>	<b>48</b>	<b>16.83</b>	<b>0.07</b>	<b>0.78</b>	<b>0.61</b>
<b>Laboratory Practical Quantitation Limits<sup>6</sup></b>									<b>10</b>	<b>2.5</b>	<b>0.50</b>	<b>0.50</b>	<b>5.0</b>	<b>0.25</b>	<b>10</b>	<b>1.0</b>
<b>Proposed Feasibility Study/Cleanup Action Plan Preliminary Screening Levels (Vadose and Saturated)<sup>7</sup></b>									---	<b>16,000</b>	---	---	---	<b>2.1</b>	---	---

**NOTES:**

Results in **bold** denote concentrations exceeding applicable screening levels; the shading indicates whether the exceedance is in the vadose or saturated zone as indicated to the right.  
 < denotes analyte not detected at or exceeding the laboratory reporting limit listed.  
 --- denotes sample not analyzed.

<sup>1</sup>Depth in feet below ground surface. Elevation in feet referenced to North American Vertical Datum of 1988 (NAVD88).

<sup>2</sup>Analyzed by U.S. Environmental Protection Agency Methods 6010D/6020B/7471B.

<sup>3</sup>Washington State Cleanup Levels and Risk Calculations (CLARC) under Washington State Model Toxics Control Act Cleanup Regulation (MTCA), Method B direct contact cleanup levels and default soil concentrations protective of groundwater (leaching pathway) from CLARC Master spreadsheet, <https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Contamination-clean-up-tools/CLARC> unless otherwise noted.

<sup>4</sup>Value based on Method A as a surrogate for Method B as no Method B direct contact value for soil has been established.

<sup>5</sup>Natural background concentrations provided in *Natural Background Soil Metals Concentrations in Washington State*, Washington State Department of Ecology, Publication #94-115, October 1994.

<sup>6</sup>Laboratory Practical Quantitation Limits (PQLs) from OnSite Environmental of Redmond, Washington. PQLs for individual samples may vary due to sample matrix interferences, dilutions, or moisture content.

<sup>7</sup>See Table 14 for proposed preliminary screening levels for the post-interim action Feasibility Study/Cleanup Action Plan phase of the project.

Shading represents most stringent screening level, natural background concentration, or practical quantitation limit for vadose zone soil, or an exceedance of the selected value in a vadose zone soil sample. NE = not established

Shading represents most stringent screening level, natural background concentration, or practical quantitation limit for saturated zone soil (or both vadose and saturated if they are the same value), or an exceedance of the selected value in a saturated zone soil sample.

Shading represents the proposed soil screening level for this chemical for the Feasibility Study/Cleanup Action Plan-phase of the project following completion of the Interim Action and empirical evidence from groundwater samples.

Grey Text Grey text indicates a sample location that was subsequently removed during Interim Action excavation activities.

**Table 6  
Groundwater Elevations  
Block 38 West Property  
Seattle, Washington  
Farallon PN: 397-019**

Location <sup>1</sup>	Water Bearing Zone	Screened Interval (feet bgs) <sup>2</sup>	Screened Interval (feet NAVD88) <sup>3</sup>	Top of Casing Elevation (feet NAVD88) <sup>3</sup>	Monitoring Date	Depth to Water (feet) <sup>4</sup>	Water Level Elevation (feet NAVD88) <sup>3</sup>
<b>Decommissioned Monitoring Wells</b>							
FMW-130	Intermediate	45.0 to 55.0	-22.8 to -32.8	21.86	8/30/2018	5.14	16.72
					12/28/2018	4.98	16.88
					3/26/2019	4.42	17.44
FMW-132	Shallow	5.0 to 10.0	20.7 to 15.7	25.48	8/30/2018	7.44	18.04
					12/28/2018	6.80	18.68
					3/26/2019	7.01	18.47
FMW-133	Shallow	6.5 to 11.5	18.8 to 13.8	24.87	8/30/2018	6.86	18.01
					12/28/2018	6.21	18.66
					3/26/2019	6.41	18.46
FMW-134	Shallow	12.0 to 17.0	13.4 to 8.4	24.98	8/30/2018	8.66	16.32
					12/28/2018	7.80	17.18
					3/26/2019	7.51	17.47
FMW-135	Shallow	7.0 to 12.0	18.6 to 13.6	25.29	8/30/2018	7.14	18.15
					12/28/2018	6.78	18.51
					3/26/2019	6.81	18.48
FMW-136	Intermediate	30.0 to 40.0	-4.9 to -14.9	24.79	8/30/2018	8.10	16.69
					12/28/2018	7.74	17.05
					3/26/2019	7.41	17.38
FMW-144	Intermediate	38.0 to 43.0	-8.0 to -13.0	29.41	12/23/2019	12.42	16.99
					12/26/2019	12.26	17.15
					12/30/2019	12.33	17.08
					12/30/2019	12.34	17.07
					12/31/2019	12.44	16.97
					12/31/2019	12.27	17.14
FMW-145	Intermediate	31.0 to 36.0	-8.0 to -13.0	22.90	12/23/2019	5.58	17.32
					12/26/2019	5.65	17.25
					12/30/2019	5.80	17.10
					12/30/2019	5.83	17.07
					12/31/2019	5.42	17.48
					12/31/2019	5.63	17.27

**Table 6  
Groundwater Elevations  
Block 38 West Property  
Seattle, Washington  
Farallon PN: 397-019**

Location <sup>1</sup>	Water Bearing Zone	Screened Interval (feet bgs) <sup>2</sup>	Screened Interval (feet NAVD88) <sup>3</sup>	Top of Casing Elevation (feet NAVD88) <sup>3</sup>	Monitoring Date	Depth to Water (feet) <sup>4</sup>	Water Level Elevation (feet NAVD88) <sup>3</sup>
FMW-146	Intermediate	31.0 to 36.0	-8.0 to -13.0	23.19	12/23/2019	6.38	16.81
					12/26/2019	6.14	17.05
					12/30/2019	6.18	17.01
					12/30/2019	6.24	16.95
					12/31/2019	6.00	17.19
					12/31/2019	5.89	17.30
FMW-147	Intermediate	31.0 to 36.0	-8.0 to -13.0	22.82	12/23/2019	5.78	17.04
					12/26/2019	5.75	17.07
					12/30/2019	5.88	16.94
					12/30/2019	5.82	17.00
					12/31/2019	5.98	16.84
					12/31/2019	5.70	17.12
FMW-149	Intermediate	44.0 to 49.0	-8.0 to -13.0	36.21	12/23/2019	19.01	17.20
					12/26/2019	19.14	17.07
					12/30/2019	19.18	17.03
					12/30/2019	19.13	17.08
					12/31/2019	18.94	17.27
					12/31/2019	18.92	17.29
OW-4	Intermediate	48.0 to 58.0	-11.7 to -21.7	32.05	1/15/2021	32.05	0.00
					1/19/2021	31.45	-31.45
				36.28	3/24/2021	31.60	4.68
					3/30/2021	31.60	4.68
					4/2/2021	31.11	5.17
					4/10/2021	26.28	10.00
					4/13/2021	25.98	10.30
					4/19/2021	25.57	10.71
					4/21/2021	25.34	10.94
					4/23/2021	25.28	11.00
39.23	7/26/2021	26.28	12.95				

**Table 6  
Groundwater Elevations  
Block 38 West Property  
Seattle, Washington  
Farallon PN: 397-019**

Location <sup>1</sup>	Water Bearing Zone	Screened Interval (feet bgs) <sup>2</sup>	Screened Interval (feet NAVD88) <sup>3</sup>	Top of Casing Elevation (feet NAVD88) <sup>3</sup>	Monitoring Date	Depth to Water (feet) <sup>4</sup>	Water Level Elevation (feet NAVD88) <sup>3</sup>
<b>Existing Monitoring Wells</b>							
FMW-137	Deep Outwash Aquifer	72.0 to 85.0	-41.9 to -54.9	30.09	11/20/2018	13.02	17.07
					12/28/2018	12.74	17.35
					3/14/2019	12.56	17.53
					5/6/2019	12.08	18.01
					7/8/2019	12.25	17.84
					5/15/2023	11.69	18.40
					8/14/2023	12.29	17.80
					11/14/2023	12.62	17.47
					2/27/2024	12.29	17.80
FMW-138	Deep Outwash Aquifer	90.0 to 100.0	-49.96 to -59.96	40.44	11/20/2018	24.50	15.94
					12/28/2018	24.38	16.06
					3/14/2019	24.14	16.30
					5/6/2019	23.80	16.64
					7/8/2019	23.84	16.60
					5/15/2023	23.44	17.00
					8/14/2023	23.60	16.84
					11/14/2023	23.58	16.86
					2/27/2024	23.40	17.04
FMW-150	Intermediate	31.7 to 36.7	-8.5 to -13.5	23.23	2/14/2022	6.50	16.73
					5/16/2022	5.95	17.28
					5/15/2023	5.46	17.77
					8/14/2023	5.79	17.44
					11/14/2023	5.79	17.44
					2/27/2024	5.71	17.52
FMW-151	Intermediate	33.1 to 38.1	-9.4 to -14.4	23.74	2/15/2022	7.21	16.53
					5/16/2022	6.34	17.40
					5/15/2023	5.87	17.87
					8/14/2023	6.49	17.25
					11/14/2023	6.30	17.44
					2/27/2024	6.18	17.56



**Table 6  
Groundwater Elevations  
Block 38 West Property  
Seattle, Washington  
Farallon PN: 397-019**

Location <sup>1</sup>	Water Bearing Zone	Screened Interval (feet bgs) <sup>2</sup>	Screened Interval (feet NAVD88) <sup>3</sup>	Top of Casing Elevation (feet NAVD88) <sup>3</sup>	Monitoring Date	Depth to Water (feet) <sup>4</sup>	Water Level Elevation (feet NAVD88) <sup>3</sup>
FMW-152	Intermediate	31.3 to 36.3	-8.5 to -13.5	22.83	2/14/2022	5.76	17.07
					5/16/2022	5.15	17.68
					5/15/2023	4.76	18.07
					8/14/2023	5.29	17.54
					11/14/2023	5.25	17.58
					2/27/2024	5.14	17.69
FMW-153	Intermediate	33.2 to 38.2	-8.5 to -13.5	24.72	2/15/2022	8.50	16.22
					5/16/2022	7.55	17.17
					5/15/2023	7.15	17.57
					8/14/2023	7.30	17.42
					11/14/2023	7.31	17.41
					2/27/2024	7.22	17.50
FMW-154	Shallow	10.0 to 15.0	12.8 to 7.8	22.80	2/14/2022	6.05	16.75
					5/16/2022	5.49	17.31
					5/15/2023	5.05	17.75
					8/14/2023	5.38	17.42
					11/14/2023	5.39	17.41
					2/27/2024	5.25	17.55
FMW-155	Shallow	10.0 to 15.0	13.9 to 8.9	23.90	2/14/2022	6.94	16.96
					5/16/2022	6.30	17.60
					5/15/2023	5.92	17.98
					8/14/2023	6.39	17.51
					11/14/2023	6.40	17.50
					2/27/2024	6.20	17.70
FMW-156	Shallow	15.0 to 20.0	10.7 to 5.7	25.70	2/14/2022	8.63	17.07
					5/16/2022	8.03	17.67
					5/15/2023	7.62	18.08
					8/14/2023	8.19	17.51
					11/14/2023	8.14	17.56
					2/27/2024	7.99	17.71

**Table 6  
Groundwater Elevations  
Block 38 West Property  
Seattle, Washington  
Farallon PN: 397-019**

Location <sup>1</sup>	Water Bearing Zone	Screened Interval (feet bgs) <sup>2</sup>	Screened Interval (feet NAVD88) <sup>3</sup>	Top of Casing Elevation (feet NAVD88) <sup>3</sup>	Monitoring Date	Depth to Water (feet) <sup>4</sup>	Water Level Elevation (feet NAVD88) <sup>3</sup>
FMW-157	Intermediate	30.0 to 40.0	-4.1 to -14.1	25.95	2/14/2022	5.87	20.08
					5/16/2022	8.28	17.67
					5/15/2023	7.90	18.05
					8/14/2023	8.46	17.49
					11/14/2023	8.54	17.41
					2/27/2024	8.21	17.74
FMW-158	Shallow	17.0 to 32.0	18.0 to 3.0	35.04	5/15/2023	16.86	18.18
					8/14/2023	16.04	19.00
					11/14/2023	17.32	17.72
					2/27/2024	17.13	17.91
FMW-159	Intermediate	41.0 to 51.0	-4.9 to -14.9	36.15	5/15/2023	18.12	18.03
					8/14/2023	18.51	17.64
					11/14/2023	18.48	17.67
					2/27/2024	18.36	17.79
FMW-160	Shallow	20.0 to 35.0	19.0 to 4.0	38.95	5/15/2023	21.04	17.91
					8/14/2023	21.47	17.48
					11/14/2023	21.42	17.53
					2/27/2024	21.44	17.51
FMW-161	Shallow	20.0 to 35.0	19.9 to 4.9	39.86	5/15/2023	21.14	18.72
					8/14/2023	22.42	17.44
					11/14/2023	22.36	17.50
					2/27/2024	22.24	17.62
FMW-162	Intermediate	45.0 to 55.0	-4.9 to -14.9	40.09	5/15/2023	22.40	17.69
					8/14/2023	22.54	17.55
					11/14/2023	22.55	17.54
					2/27/2024	22.41	17.68
FMW-163	Shallow	20.0 to 35.0	20.3 to 5.3	40.29	5/15/2023	22.50	17.79
					8/14/2023	22.85	17.44
					11/14/2023	22.74	17.55
					2/27/2024	22.55	17.74

**Table 6  
Groundwater Elevations  
Block 38 West Property  
Seattle, Washington  
Farallon PN: 397-019**

<b>Location<sup>1</sup></b>	<b>Water Bearing Zone</b>	<b>Screened Interval (feet bgs)<sup>2</sup></b>	<b>Screened Interval (feet NAVD88)<sup>3</sup></b>	<b>Top of Casing Elevation (feet NAVD88)<sup>3</sup></b>	<b>Monitoring Date</b>	<b>Depth to Water (feet)<sup>4</sup></b>	<b>Water Level Elevation (feet NAVD88)<sup>3</sup></b>
FMW-164	Intermediate	45.0 to 55.0	-4.8 to -14.8	40.18	5/15/2023	22.51	17.67
					8/14/2023	22.77	17.41
					11/14/2023	22.79	17.39
					2/27/2024	22.63	17.55
FMW-165	Deep Outwash Aquifer	77.0 to 87.0	-44.9 to -54.9	32.11	5/15/2023	14.12	17.99
					8/14/2023	14.70	17.41
					11/14/2023	14.63	17.48
					2/27/2024	14.45	17.66

**Table 6  
Groundwater Elevations  
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Seattle, Washington  
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Location <sup>1</sup>	Water Bearing Zone	Screened Interval (feet bgs) <sup>2</sup>	Screened Interval (feet NAVD88) <sup>3</sup>	Top of Casing Elevation (feet NAVD88) <sup>3</sup>	Monitoring Date	Depth to Water (feet) <sup>4</sup>	Water Level Elevation (feet NAVD88) <sup>3</sup>
OW-1	Intermediate	30.0 to 45.0	-5.8 to -20.8	24.17	1/15/2021	18.48	5.69
					1/19/2021	18.30	5.87
					3/24/2021	18.22	5.95
					3/30/2021	14.89	9.28
					4/2/2021	14.25	9.92
					4/10/2021	13.22	10.95
					4/13/2021	12.99	11.18
					4/19/2021	12.58	11.59
					4/21/2021	12.41	11.76
					4/23/2021	12.29	11.88
					4/27/2021	12.17	12.00
					4/30/2021	11.97	12.20
					5/4/2021	11.84	12.33
					5/17/2021	11.35	12.82
					6/14/2021	10.74	13.43
					6/28/2021	10.33	13.84
					7/12/2021	10.33	13.84
					7/26/2021	10.30	13.87
					8/9/2021	10.27	13.90
					9/22/2021	10.07	14.10
					10/13/2021	9.24	14.93
					10/26/2021	9.02	15.15
					12/1/2021	8.01	16.16
					12/13/2021	7.67	16.50
					1/7/2022	7.02	17.15
					1/13/2022	7.03	17.14
1/27/2022	7.23	16.94					
2/8/2022	7.50	16.67					
2/14/2022	7.42	16.75					
5/15/2023	6.21	17.96					
8/14/2023	6.65	17.52					
11/14/2023	6.67	17.50					
2/27/2024	6.56	17.61					

**Table 6  
Groundwater Elevations  
Block 38 West Property  
Seattle, Washington  
Farallon PN: 397-019**

Location <sup>1</sup>	Water Bearing Zone	Screened Interval (feet bgs) <sup>2</sup>	Screened Interval (feet NAVD88) <sup>3</sup>	Top of Casing Elevation (feet NAVD88) <sup>3</sup>	Monitoring Date	Depth to Water (feet) <sup>4</sup>	Water Level Elevation (feet NAVD88) <sup>3</sup>
OW-2	Intermediate	30.0 to 45.0	-7.1 to -22.1	22.91	1/15/2021	20.32	2.59
					1/19/2021	20.07	2.84
					3/24/2021	20.81	2.10
					3/30/2021	14.99	7.92
					4/2/2021	14.24	8.67
					4/10/2021	13.16	9.75
					4/13/2021	12.86	10.05
					4/19/2021	12.42	10.49
					4/21/2021	12.22	10.69
					4/23/2021	12.12	10.79
					4/27/2021	11.99	10.92
					4/30/2021	11.75	11.16
					5/4/2021	11.71	11.20
					6/28/2021	9.97	12.94
					7/12/2021	9.88	13.03
					7/26/2021	9.79	13.12
					8/9/2021	9.73	13.18
					9/22/2021	9.05	13.86
					10/13/2021	8.40	14.51
					10/26/2021	8.10	14.81
					12/1/2021	7.03	15.88
					12/13/2021	6.68	16.23
					1/7/2022	5.97	16.94
					1/13/2022	6.04	16.87
1/27/2022	6.20	16.71					
2/8/2022	6.37	16.54					
2/14/2022	6.07	16.84					
5/15/2023	5.04	17.87					
8/14/2023	5.42	17.49					
11/14/2023	5.43	17.48					
2/27/2024	5.35	17.56					

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Groundwater Elevations  
Block 38 West Property  
Seattle, Washington  
Farallon PN: 397-019**

Location <sup>1</sup>	Water Bearing Zone	Screened Interval (feet bgs) <sup>2</sup>	Screened Interval (feet NAVD88) <sup>3</sup>	Top of Casing Elevation (feet NAVD88) <sup>3</sup>	Monitoring Date	Depth to Water (feet) <sup>4</sup>	Water Level Elevation (feet NAVD88) <sup>3</sup>
OW-3	Intermediate	48.0 to 63.0	-9.2 to -24.2	38.77	1/15/2021	36.11	2.66
					1/19/2021	38.44	0.33
					3/24/2021	35.83	2.94
					3/30/2021	31.35	7.42
					4/2/2021	27.31	11.46
					4/10/2021	29.92	8.85
					4/13/2021	29.66	9.11
				38.91	4/19/2021	29.35	9.56
					4/21/2021	29.18	9.73
					4/23/2021	29.04	9.87
					4/27/2021	28.95	9.96
					4/30/2021	28.61	10.30
					5/4/2021	28.66	10.25
					5/17/2021	27.99	10.92
					6/14/2021	27.23	11.68
					6/28/2021	26.87	12.04
					7/28/2021	26.61	12.30
					8/9/2021	26.29	12.62
					9/22/2021	25.42	13.49
					10/13/2021	24.41	14.50
					10/26/2021	24.05	14.86
					12/1/2021	22.78	16.13
					12/13/2021	22.30	16.61
					1/7/2022	21.50	17.41
					1/13/2022	21.58	17.33
					1/27/2022	21.75	17.16
2/8/2022	21.93	16.98					
2/15/2022	21.88	17.03					
5/15/2023	20.60	18.31					
8/14/2023	20.88	18.03					
11/14/2023	20.84	18.07					
2/27/2024	20.84	18.07					

**Table 6  
Groundwater Elevations  
Block 38 West Property  
Seattle, Washington  
Farallon PN: 397-019**

Location <sup>1</sup>	Water Bearing Zone	Screened Interval (feet bgs) <sup>2</sup>	Screened Interval (feet NAVD88) <sup>3</sup>	Top of Casing Elevation (feet NAVD88) <sup>3</sup>	Monitoring Date	Depth to Water (feet) <sup>4</sup>	Water Level Elevation (feet NAVD88) <sup>3</sup>
OW-5	Intermediate	44.8 to 54.8	-11.0 to -21.0	33.80	1/15/2021	29.10	4.70
					1/19/2021	28.97	4.83
					3/24/2021	25.32	8.48
					3/30/2021	23.05	10.75
					4/2/2021	22.53	11.27
					4/10/2021	21.72	12.08
					4/13/2021	21.52	12.28
					4/19/2021	21.16	12.64
					4/21/2021	21.00	12.80
					4/23/2021	20.90	12.90
					4/27/2021	20.98	12.82
					4/30/2021	20.80	13.00
					5/4/2021	20.73	13.07
					5/17/2021	20.18	13.62
					6/14/2021	19.52	14.28
					6/28/2021	19.13	14.67
					7/12/2021	18.93	14.87
				7/26/2021	19.01	14.79	
				8/9/2021	19.03	14.77	
				9/22/2021	18.53	15.27	
				30.25	10/13/2021	14.57	15.68
				34.57	10/26/2021	18.77	15.80
					12/1/2021	17.57	17.00
12/13/2021	17.31	17.26					
1/7/2022	16.56	18.01					
1/13/2022	16.47	18.10					
1/27/2022	17.01	17.56					
2/8/2022	17.37	17.20					

**Table 6  
Groundwater Elevations  
Block 38 West Property  
Seattle, Washington  
Farallon PN: 397-019**

<b>Location<sup>1</sup></b>	<b>Water Bearing Zone</b>	<b>Screened Interval (feet bgs)<sup>2</sup></b>	<b>Screened Interval (feet NAVD88)<sup>3</sup></b>	<b>Top of Casing Elevation (feet NAVD88)<sup>3</sup></b>	<b>Monitoring Date</b>	<b>Depth to Water (feet)<sup>4</sup></b>	<b>Water Level Elevation (feet NAVD88)<sup>3</sup></b>
OW-5 (continued)	Intermediate	44.8 to 54.8	-11.0 to -21.0	34.57	2/14/2022	17.14	17.43
					5/8/2023	13.96	20.61
					8/10/2023	14.59	19.98
					2/27/2024	14.33	20.24

**NOTES:**

<sup>1</sup>OW monitoring well series were used as observation wells during and post construction dewatering activities associated with redevelopment at the Block 38 West Property.

<sup>2</sup>Depth in feet below ground surface (bgs).

<sup>3</sup>In feet referenced to North American Vertical Datum of 1988 (NAVD88).

<sup>4</sup>In feet below top of well casing.



**Table 7  
Groundwater Analytical Results for TPH and BTEX  
Block 38 West Property  
Seattle, Washington  
Farallon PN: 397-019**

Sample Location	Sample Date	Sample Identification	Screened Interval (feet NAVD88) <sup>1</sup>	Water Bearing Zone	Analytical Results (micrograms per liter)								
					NWTPH-Dx <sup>2</sup>		Total NWTPH-Dx <sup>3</sup>	NWTPH-Dx <sup>2</sup>	NWTPH-Gx <sup>4</sup>	EPA Method 8021B or 8260 <sup>5</sup>			
					DRO	ORO		Kerosene	GRO	Benzene	Toluene	Ethylbenzene	Xylenes
<b>Block 38 West Property</b>													
<b>Reconnaissance Groundwater Samples from Borings</b>													
FB-03	8/23/2018	FB-03-082318	8.8 to 3.8	Shallow	660	490	1,150	---	< 100	< 1.0	< 1.0	< 1.0	< 2.0
FB-05	8/22/2018	FB-05-082218	8.5 to 3.5	Shallow	< 260	< 410	< 410	---	< 100	< 1.0	< 1.0	< 1.0	< 2.0
FMW-130	7/21/2014	F-MW-130-GW1-072114	7.2 to 2.2	Shallow	---	---	---	---	2,100 T	5.1	7.5	2.2	6.7
<b>Decommissioned Monitoring Wells</b>													
FMW-130	7/24/2014	F-MW-130-072414	-22.8 to -32.8	Intermediate	---	---	---	---	< 100	< 1.0	< 1.0	< 1.0	< 2.0
	7/3/2017	FMW-130-070317			---	---	---	---	< 100	< 0.20	< 1.0	< 0.20	< 0.60
	8/30/2018	FMW-130-083018			< 250	< 410	< 410	---	< 100	< 0.20	< 1.0	< 0.20	< 0.60
	12/28/2018	FMW130-122818			< 260	< 410	< 410	---	< 100	< 0.20	< 1.0	< 0.20	< 0.60
	3/26/2019	FMW-130-032619			< 250	< 400	< 400	---	< 100	< 1.0	< 1.0	< 1.0	< 2.0
FMW-132	8/30/2018	FMW-132-083018	20.7 to 15.7	Shallow	260	< 400	260	---	< 100	< 0.20	< 1.0	< 0.20	< 0.60
	12/28/2018	FMW132-122818			< 260	< 410	< 410	---	< 100	< 0.20	< 1.0	< 0.20	< 0.60
	3/26/2019	FMW-132-032619			< 250	< 400	< 400	---	< 100	< 1.0	< 1.0	< 1.0	< 2.0
FMW-133	8/30/2018	FMW-133-083018	18.8 to 13.8	Shallow	270	< 410	270	---	< 100	< 0.20	< 1.0	< 0.20	< 0.60
	12/28/2018	FMW133-122818			310	< 410	310	---	< 100	< 0.20	< 1.0	< 0.20	< 0.60
	3/26/2019	FMW-133-032619			280	< 400	280	---	< 100	< 1.0	< 1.0	< 1.0	< 2.0
FMW-134	8/30/2018	FMW-134-083018	13.4 to 8.4	Shallow	1,000 M	< 410	1,000	---	1,100 Z	< 1.0	< 5.0	< 1.0	< 3.0
	12/28/2018	FMW134-122818			560	< 410	560	---	< 100	< 0.20	< 1.0	< 0.20	< 0.60
	12/28/2018	FMW500-122818			680	490	1,170	---	< 100	< 0.20	< 1.0	< 0.20	< 0.60
	3/26/2019	FMW-134-032619			540 M	< 400	540	---	140 Z	< 1.0	< 1.0	< 1.0	< 2.0
FMW-135	8/30/2018	FMW-135-083018	18.6 to 13.6	Shallow	< 260	< 410	< 410	---	< 100	< 0.20	< 1.0	< 0.20	< 0.60
	12/28/2018	FMW135-122818			370	< 410	370	---	< 100	< 0.20	< 1.0	< 0.20	< 0.60
	3/26/2019	FMW-135-032619			< 250	< 410	< 410	---	< 100	< 1.0	< 1.0	< 1.0	< 2.0
FMW-136	8/30/2018	FMW-136-083018	-4.9 to -14.9	Intermediate	< 250	< 400	< 400	---	< 100	< 0.20	< 1.0	< 0.20	< 0.60
	12/28/2018	FMW136-122818			< 260	< 410	< 410	---	< 100	< 0.20	< 1.0	< 0.20	< 0.60
	3/26/2019	FMW-136-032619			< 250	< 410	< 410	---	< 100	< 1.0	< 1.0	< 1.0	< 2.0
FMW-144	12/26/2019	FMW-144-122619	-8.6 to -13.6	Intermediate	< 200	< 200	< 200	---	< 100	< 1.0	< 1.0	< 1.0	< 2.0
FMW-145	12/26/2019	FMW-145-122619	-8.1 to -13.1	Intermediate	280	310	590	---	< 100	< 1.0	< 1.0	< 1.0	< 2.0
FMW-146	12/26/2019	FMW-146-122619	-7.8 to -12.8	Intermediate	1,100	650	1,750	---	170 T	< 1.0	< 1.0	< 1.0	< 2.0
FMW-147	12/26/2019	FMW-147-122619	-8.2 to -13.2	Intermediate	1,900	1,400	3,300	---	< 100	< 1.0	< 1.0	< 1.0	< 2.0
FMW-149	12/26/2019	FMW-149-122619	-7.8 to -12.8	Intermediate	< 210	< 210	< 210	---	< 100	< 1.0	< 1.0	< 1.0	< 2.0
<b>Screening Level for Protection of Groundwater as Drinking Water<sup>6</sup></b>					<b>500<sup>7</sup></b>		<b>500<sup>7</sup></b>	<b>500<sup>7</sup></b>	<b>800<sup>7</sup></b>	<b>5.0<sup>8</sup></b>	<b>640<sup>8</sup></b>	<b>700<sup>8</sup></b>	<b>1,600<sup>8</sup></b>
<b>Screening Level for Protection of Indoor Air<sup>6</sup></b>					<b>NE</b>		<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>2.4</b>	<b>15,000</b>	<b>2,800</b>	<b>320</b>
<b>Laboratory Practical Quantitation Limit<sup>9</sup></b>					<b>500</b>		<b>500</b>	<b>500</b>	<b>100</b>	<b>0.20</b>	<b>1.0</b>	<b>0.20</b>	<b>0.60</b>

**Table 7  
Groundwater Analytical Results for TPH and BTEX  
Block 38 West Property  
Seattle, Washington  
Farallon PN: 397-019**

Sample Location	Sample Date	Sample Identification	Screened Interval (feet NAVD88) <sup>1</sup>	Water Bearing Zone	Analytical Results (micrograms per liter)								
					NWTPH-Dx <sup>2</sup>		Total NWTPH-Dx <sup>3</sup>	NWTPH-Dx <sup>2</sup>	NWTPH-Gx <sup>4</sup>	EPA Method 8021B or 8260 <sup>5</sup>			
					DRO	ORO		Kerosene	GRO	Benzene	Toluene	Ethylbenzene	Xylenes
<b>Existing Monitoring Wells</b>													
FMW-150	5/16/2023	FMW-150-051623	-8.5 to -13.5	Intermediate	92.4	< 154	92.4	---	---	---	---	---	---
	8/15/2023	FMW-150-081523			< 76.9	< 154	< 154	---	---	---	---	---	---
	11/15/2023	FMW-150-111523			< 76.2	< 152	< 152	---	---	---	---	---	---
	2/29/2024	FMW-150-022924			---	---	< 250 ^	---	---	---	---	---	---
FMW-151	5/16/2023	FMW-151-051623	-9.4 to -14.4	Intermediate	287	< 150	287	---	---	---	---	---	---
	8/15/2023	FMW-151-081523			222	< 151	222	---	---	---	---	---	---
	11/15/2023	FMW-151-111523			263 F3	< 151	263	---	---	---	---	---	---
	2/29/2024	FMW-151-022924			---	---	< 250 ^	---	---	---	---	---	---
FMW-152	5/16/2023	FMW-152-051623	-8.5 to -13.5	Intermediate	143	< 151	143	---	---	---	---	---	---
	8/15/2023	FMW-152-081523			216	< 154	216	---	---	---	---	---	---
	11/15/2023	FMW-152-111523			269 F3	< 151	269	---	---	---	---	---	---
	2/29/2024	FMW-152-022924			---	---	< 250 ^	---	---	---	---	---	---
FMW-153	5/16/2023	FMW-153-051623	-8.5 to -13.5	Intermediate	< 74.8	< 150	< 150	---	---	---	---	---	---
	8/15/2023	FMW-153-081523			< 76.2	< 152	< 152	---	---	---	---	---	---
	11/15/2023	FMW-153-111523			< 76.9	< 154	< 154	---	---	---	---	---	---
	2/29/2024	FMW-153-022924			---	---	< 250 ^	---	---	---	---	---	---
FMW-154	5/16/2023	FMW-154-051623	12.8 to 7.8	Shallow	318	< 154	318	---	< 100	< 0.200	< 1.00	< 0.500	< 1.50
	8/14/2023	FMW-154-081423			<b>514</b> <sup>#</sup> < 76.2*	< 152 195*	<b>514</b> <sup>#</sup> 195*	---	< 100	0.120 J	< 1.00	< 0.500	< 1.50
	11/14/2023	FMW-154-111423			<b>791</b> <sup>#</sup> < 76.2*	< 152 < 152*	<b>791</b> <sup>#</sup> < 152*	---	< 100	< 0.200	< 1.00	< 0.500	< 1.50
	2/28/2024	FMW-154-022824			---	---	435 <sup>^</sup>	---	< 100	< 0.200	< 1.00	< 0.500	< 1.50
FMW-155	5/16/2023	FMW-155-051623	13.9 to 8.9	Shallow	287	< 151	287	---	< 100	< 0.200	< 1.00	< 0.500	< 1.50
	8/14/2023	FMW-155-081423			<b>530</b> <sup>#</sup> < 76.9*	< 154 < 154*	<b>530</b> <sup>#</sup> < 154*	---	< 100	< 0.200	< 1.00	< 0.500	< 1.50
	11/14/2023	FMW-155-111423			<b>943</b> <sup>#</sup> < 76.2*	< 152 < 152*	<b>943</b> <sup>#</sup> < 152*	---	< 100	< 0.200	< 1.00	< 0.500	< 1.50
	2/27/2024	FMW-155-022724			---	---	<b>605</b> ^ # < 250* ^	---	< 100	< 0.200	< 1.00	< 0.500	< 1.50
FMW-156	5/16/2023	FMW-156-051623	10.7 to 5.7	Shallow	170	< 154	170	---	< 100	< 0.200	< 1.00	< 0.500	< 1.50
	8/14/2023	FMW-156-081423			256	< 151	256	---	< 100	< 0.200	< 1.00	< 0.500	< 1.50
	11/15/2023	FMW-156-111523			397	< 154	397	---	< 100	< 0.200	< 1.00	< 0.500	< 1.50
	2/27/2024	FMW-156-022724			---	---	< 250 ^	---	< 100	< 0.200	< 1.00	< 0.500	< 1.50
<b>Screening Level for Protection of Groundwater as Drinking Water<sup>6</sup></b>					<b>500<sup>7</sup></b>	<b>500<sup>7</sup></b>	<b>500<sup>7</sup></b>	<b>800<sup>7</sup></b>	<b>5.0<sup>8</sup></b>	<b>640<sup>8</sup></b>	<b>700<sup>8</sup></b>	<b>1,600<sup>8</sup></b>	
<b>Screening Level for Protection of Indoor Air<sup>6</sup></b>					<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>2.4</b>	<b>15,000</b>	<b>2,800</b>	<b>320</b>	
<b>Laboratory Practical Quantitation Limit<sup>9</sup></b>					<b>500</b>	<b>500</b>	<b>500</b>	<b>100</b>	<b>0.20</b>	<b>1.0</b>	<b>0.20</b>	<b>0.60</b>	

**Table 7  
Groundwater Analytical Results for TPH and BTEX  
Block 38 West Property  
Seattle, Washington  
Farallon PN: 397-019**

Sample Location	Sample Date	Sample Identification	Screened Interval (feet NAVD88) <sup>1</sup>	Water Bearing Zone	Analytical Results (micrograms per liter)								
					NWTPH-Dx <sup>2</sup>		Total NWTPH-Dx <sup>3</sup>	NWTPH-Dx <sup>2</sup>	NWTPH-Gx <sup>4</sup>	EPA Method 8021B or 8260 <sup>5</sup>			
					DRO	ORO		Kerosene	GRO	Benzene	Toluene	Ethylbenzene	Xylenes
FMW-157	5/16/2023	FMW-157-051623	-4.1 to -14.1	Intermediate	161	< 151	161	---	---	---	---	---	---
	8/15/2023	FMW-157-081523			173	< 155	173	---	---	---	---	---	---
	11/15/2023	FMW-157-111523			283	< 152	283	---	---	---	---	---	---
	2/28/2024	FMW-157-022824			---	---	< 250 ^	---	---	---	---	---	---
FMW-158	5/15/2023	FMW-158-051523	18.0 to 3.0	Shallow	149	< 151	149	---	< 100	< 0.200	< 1.00	< 0.500	< 1.50
	8/15/2023	FMW-158-081523			256	< 151	256	---	< 100	< 0.200	< 1.00	< 0.500	< 1.50
	11/15/2023	FMW-158-111523			398 <sup>#</sup> < 75.5*	< 151 < 151*	398 <sup>#</sup> < 151*	---	< 100	< 0.200	< 1.00	< 0.500	< 1.50
	2/29/2024	FMW-158-022924			---	---	< 250 ^ # < 250* ^	---	< 100	< 0.200	< 1.00	< 0.500	< 1.50
FMW-159	5/16/2023	FMW-159-051623	-4.9 to -14.9	Intermediate	102	< 150	102	---	---	---	---	---	---
	8/15/2023	FMW-159-081523			109	< 154	109	---	---	---	---	---	---
	11/15/2023	FMW-159-111523			249 <sup>#</sup> < 75.5*	< 151 < 151*	249 <sup>#</sup> < 151*	---	---	---	---	---	---
	2/28/2024	FMW-159-022824			---	---	< 250 ^ # < 250* ^	---	---	---	---	---	---
FMW-160	5/15/2023	FMW-160-051523	19.0 to 4.0	Shallow	114	< 151	114	---	< 100	< 0.200	< 1.00	< 0.500	< 1.50
	8/14/2023	FMW-160-081423			634 <sup>#</sup> < 76.9*	< 154 < 154*	634 <sup>#</sup> < 154*	---	< 100	0.250	< 1.00	< 0.500	< 1.50
	11/14/2023	FMW-160-111423			375	< 154	375	---	< 100	0.170 J	< 1.00	< 0.500	< 1.50
	2/27/2024	FMW-160-022724			---	---	< 250 ^	---	< 100	< 0.200	< 1.00	< 0.500	< 1.50
FMW-161	5/15/2023	FMW-161-051523	19.9 to 4.9	Shallow	211	< 151	211	---	< 100	0.120 J	< 1.00	< 0.500	< 1.50
	8/14/2023	FMW-161-081423			202	< 154	202	---	< 100	< 0.200	< 1.00	< 0.500	< 1.50
	11/14/2023	FMW-161-111423			423	< 151	423	---	< 100	< 0.200	< 1.00	< 0.500	< 1.50
	2/27/2024	FMW-161-022724			---	---	< 250 ^	---	< 100	< 0.200	< 1.00	< 0.500	< 1.50
FMW-162	5/16/2023	FMW-162-051623	-4.9 to -14.9	Intermediate	212 F3	< 150	212 F3	---	---	---	---	---	---
	8/15/2023	FMW-162-081523			103	< 154	103	---	---	---	---	---	---
	11/15/2023	FMW-162-111523			< 75.5	< 151	< 151	---	---	---	---	---	---
	2/28/2024	FMW-162-022824			---	---	< 250 ^	---	---	---	---	---	---
FMW-163	5/15/2023	FMW-163-051523	20.3 to 5.3	Shallow	181	< 154	181	---	< 100	1.16	< 1.00	< 0.500	< 1.50
	8/14/2023	FMW-163-081423			259	< 154	259	---	< 100	1.22	< 1.00	< 0.500	< 1.50
	11/15/2023	FMW-163-111523			406	< 154	406	---	< 100	0.750	< 1.00	< 0.500	< 1.50
	2/27/2024	FMW-163-022724			---	---	< 250 ^	---	< 100	0.420	< 1.00	< 0.500	< 1.50
<b>Screening Level for Protection of Groundwater as Drinking Water<sup>6</sup></b>					<b>500<sup>7</sup></b>		<b>500<sup>7</sup></b>	<b>500<sup>7</sup></b>	<b>800<sup>7</sup></b>	<b>5.0<sup>8</sup></b>	<b>640<sup>8</sup></b>	<b>700<sup>8</sup></b>	<b>1,600<sup>8</sup></b>
<b>Screening Level for Protection of Indoor Air<sup>6</sup></b>					<b>NE</b>		<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>2.4</b>	<b>15,000</b>	<b>2,800</b>	<b>320</b>
<b>Laboratory Practical Quantitation Limit<sup>9</sup></b>					<b>500</b>		<b>500</b>	<b>500</b>	<b>100</b>	<b>0.20</b>	<b>1.0</b>	<b>0.20</b>	<b>0.60</b>

**Table 7  
Groundwater Analytical Results for TPH and BTEX  
Block 38 West Property  
Seattle, Washington  
Farallon PN: 397-019**

Sample Location	Sample Date	Sample Identification	Screened Interval (feet NAVD88) <sup>1</sup>	Water Bearing Zone	Analytical Results (micrograms per liter)								
					NWTPH-Dx <sup>2</sup>		Total NWTPH-Dx <sup>3</sup>	NWTPH-Dx <sup>2</sup>	NWTPH-Gx <sup>4</sup>	EPA Method 8021B or 8260 <sup>5</sup>			
					DRO	ORO		Kerosene	GRO	Benzene	Toluene	Ethylbenzene	Xylenes
FMW-164	5/16/2023	FMW-164-051623	-4.8 to -14.8	Intermediate	82.9	< 154	82.9	---	---	---	---	---	---
	8/15/2023	FMW-164-081523			< 76.9	< 154	< 154	---	---	---	---	---	---
	11/15/2023	FMW-164-111523			< 75.5	< 151	< 151	---	---	---	---	---	---
	2/29/2024	FMW-164-022924			---	---	< 250 ^	---	---	---	---	---	---
OW-1	5/16/2023	OW-1-051623	-5.8 to -20.8	Intermediate	332	< 151	332	---	---	---	---	---	---
	8/15/2023	OW-1-081523			385	< 154	385	---	---	---	---	---	---
	11/15/2023	OW-1-111523			<b>628<sup>#</sup></b> < 76.2*	< 152	<b>628<sup>#</sup></b> < 152*	---	---	---	---	---	---
	2/28/2024	OW-1-022824			---	---	391 ^	---	---	---	---	---	---
OW-2	5/16/2023	OW-2-051623	-7.1 to -22.1	Intermediate	107	< 154	107	---	---	---	---	---	---
	8/15/2023	OW-2-081523			< 78.4	< 157	< 157	---	---	---	---	---	---
	11/15/2023	OW-2-111523			378	< 154	378	---	---	---	---	---	---
	2/28/2024	OW-2-022824			---	---	< 250 ^	---	---	---	---	---	---
OW-3	5/17/2023	OW-3-051723	-9.2 to -24.2	Intermediate	84.8	< 150	84.8	---	---	---	---	---	---
	8/15/2023	OW-3-081523			< 76.9	< 154	< 154	---	---	---	---	---	---
	11/15/2023	OW-3-111523			238	< 151	238	---	---	---	---	---	---
	2/28/2024	OW-3-022824			---	---	< 250 ^	---	---	---	---	---	---
<b>Screening Level for Protection of Groundwater as Drinking Water<sup>6</sup></b>					<b>500<sup>7</sup></b>		<b>500<sup>7</sup></b>	<b>500<sup>7</sup></b>	<b>800<sup>7</sup></b>	<b>5.0<sup>8</sup></b>	<b>640<sup>8</sup></b>	<b>700<sup>8</sup></b>	<b>1,600<sup>8</sup></b>
<b>Screening Level for Protection of Indoor Air<sup>6</sup></b>					<b>NE</b>		<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>2.4</b>	<b>15,000</b>	<b>2,800</b>	<b>320</b>
<b>Laboratory Practical Quantitation Limit<sup>9</sup></b>					<b>500</b>		<b>500</b>	<b>500</b>	<b>100</b>	<b>0.20</b>	<b>1.0</b>	<b>0.20</b>	<b>0.60</b>

**Table 7  
Groundwater Analytical Results for TPH and BTEX  
Block 38 West Property  
Seattle, Washington  
Farallon PN: 397-019**

Sample Location	Sample Date	Sample Identification	Screened Interval (feet NAVD88) <sup>1</sup>	Water Bearing Zone	Analytical Results (micrograms per liter)								
					NWTPH-Dx <sup>2</sup>		Total NWTPH-Dx <sup>3</sup>	NWTPH-Dx <sup>2</sup>	NWTPH-Gx <sup>4</sup>	EPA Method 8021B or 8260 <sup>5</sup>			
					DRO	ORO		Kerosene	GRO	Benzene	Toluene	Ethylbenzene	Xylenes
<b>Block 37 Site</b>													
<b>Groundwater Samples from Monitoring Wells</b>													
MW-41	11/5/1991	MW-41	22.0 to 7.0	Shallow	< 1,000	---	< 1,000	---	< 1,000	<b>67</b>	< 0.5	< 0.5	< 0.5
	12/29/1993	MW-41			< 250	< 750	< 750	---	< 100	<b>4.6</b>	< 0.5	< 0.5	< 0.5
	7/14/1994	MW-41			< 250	< 750	< 750	---	< 100	<b>10</b>	< 0.5	< 0.5	< 0.5
	10/25/1994	MW-41			500	< 750	500	---	< 50	< 0.5	< 0.5	< 0.5	< 1.0
	3/8/1995	MW-41			< 250	< 750	< 750	---	< 50	1.6	< 0.5	< 0.5	< 1.0
	6/6/1995	MW-41			< 250	< 750	< 750	---	< 50	< 0.5	< 0.5	< 0.5	< 1.0
	9/7/1995	MW-41			< 250	< 750	< 750	---	< 50	< 0.5	< 0.5	< 0.5	< 1.0
	12/8/1995	MW-41			< 250	< 750	< 750	---	< 50	< 0.5	< 0.5	< 0.5	< 1.0
	4/1/1996	MW-41			< 250	< 750	< 750	---	< 50	< 0.5	< 0.5	< 0.5	< 1.0
	6/25/1996	MW-41			< 250	< 750	< 750	---	< 50	< 0.5	< 0.5	< 0.5	< 1.00
	9/27/1996	MW-41			< 250	< 750	< 750	---	< 50	< 0.5	< 0.5	< 0.5	< 1.00
	6/2/2005	MW-41			< 237	< 474	< 474	---	< 100	< 1	< 1	< 1	< 2
	7/26/2005	MW-41			258	<b>977</b>	<b>1,235</b>	---	< 50	< 0.2	< 0.2	< 0.2	< 0.50
	11/2/2005	MW-41			< 238	< 476	< 476	---	< 50	< 0.5	< 0.5	< 0.5	< 3.00
	2/23/2006	MW-41			< 250	< 500	< 500	---	< 50	< 0.5	< 0.5	< 0.5	< 3.00
	5/9/2006	MW-41			< 253	< 505	< 505	---	< 50	< 0.5	< 0.5	< 0.5	< 3.00
8/30/2006	MW-41	< 240	< 481	< 481	---	< 80	< 0.5	< 0.5	< 0.5	< 3.00			
12/12/2006	MW-41	< 243	< 485	< 485	---	< 50	< 0.5	< 0.5	< 0.5	< 3.00			
<b>Screening Level for Protection of Groundwater as Drinking Water<sup>6</sup></b>					<b>500<sup>7</sup></b>	<b>500<sup>7</sup></b>	<b>500<sup>7</sup></b>	<b>800<sup>7</sup></b>	<b>5.0<sup>8</sup></b>	<b>640<sup>8</sup></b>	<b>700<sup>8</sup></b>	<b>1,600<sup>8</sup></b>	
<b>Screening Level for Protection of Indoor Air<sup>6</sup></b>					<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>2.4</b>	<b>15,000</b>	<b>2,800</b>	<b>320</b>	
<b>Laboratory Practical Quantitation Limit<sup>9</sup></b>					<b>500</b>	<b>500</b>	<b>500</b>	<b>100</b>	<b>0.20</b>	<b>1.0</b>	<b>0.20</b>	<b>0.60</b>	

**Table 7  
Groundwater Analytical Results for TPH and BTEX  
Block 38 West Property  
Seattle, Washington  
Farallon PN: 397-019**

Sample Location	Sample Date	Sample Identification	Screened Interval (feet NAVD88) <sup>1</sup>	Water Bearing Zone	Analytical Results (micrograms per liter)									
					NWTPH-Dx <sup>2</sup>		Total NWTPH-Dx <sup>3</sup>	NWTPH-Dx <sup>2</sup>	NWTPH-Gx <sup>4</sup>	EPA Method 8021B or 8260 <sup>5</sup>				
					DRO	ORO		Kerosene	GRO	Benzene	Toluene	Ethylbenzene	Xylenes	
MW-41 (continued)	3/7/2007	MW-41	22.0 to 7.0	Shallow	< 263	< 526	< 526	---	< 50	< 0.5	< 0.5	< 0.5	< 3.00	
	6/14/2007	MW-41			< 236	< 472	< 472	---	79.2	< 0.5	< 0.5	< 0.5	< 3.00	
	9/13/2007	MW-41			< 236	< 472	< 472	---	< 50	< 0.5	< 0.5	< 0.5	< 3.00	
	12/18/2007	MW-41			< 236	< 472	< 472	---	< 50	< 1	< 1	< 1	< 3	
	3/17/2008	MW-41			< 236	< 472	< 472	< 1	< 50	< 236	< 0.5	< 0.5	< 0.5	< 0.5
	6/3/2008	MW-41			< 236	< 472	< 472	< 236	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 3
	8/4/2008	MW-41			< 236	< 472	< 472	< 236	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 3
	11/4/2008	MW-41			< 245	< 490	< 490	< 245	< 50.0	< 0.500	< 0.500	< 0.500	< 0.500	< 3.00
	2/24/2009	MW-41			< 240	< 481	< 481	< 240	< 50.0	< 0.500	< 0.500	< 0.500	< 0.500	< 3.00
	5/17/2009	MW-41			< 250	< 500	< 500	< 250	< 50.0	< 0.500	< 0.500	< 0.500	< 0.500	< 3.00
	8/16/2009	MW-41			470	< 480	470	< 240	< 50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
	11/15/2009	MW-41			< 280	< 560	< 560	< 280	< 50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.0
	2/21/2010	MW-41			98.4	< 379	98.4	< 75.8	< 50.0	< 1.0	< 1.0	< 1.0	< 1.0	< 3.0
	5/23/2010	MW-41			< 76.9	< 385	< 385	< 76.9	< 50.0	< 1.0	< 1.0	< 1.0	< 1.0	< 3.0
	11/15/2010	MW-41			< 77.7	< 388	< 388	< 77.7	< 50.0	< 1.0	1.8	< 1.0	< 1.0	< 3.0
	2/28/2011	MW-41			< 77.7	< 388	< 388	< 77.7	< 50.0	< 1.0	< 1.0	< 1.0	< 1.0	< 3.0
	6/14/2011	MW-41			< 82.5	< 412	< 412	---	< 50.0	< 1.0	< 1.0	< 1.0	< 1.0	< 3.0
	8/29/2011	MW-41			< 84.2	< 421	< 421	< 84.2	< 50.0	< 1.0	< 1.0	< 1.0	< 1.0	< 3.0
	12/5/2011	MW-41			< 85.1	< 426	< 426	< 85.1	< 50.0	< 1.0	< 1.0	< 1.0	< 1.0	< 3.0
	2/15/2012	MW-41			< 76.2	< 381	< 381	< 76.2	< 50.0	< 1.0	< 1.0	< 1.0	< 1.0	< 3.0
5/16/2012	MW-41	< 81.6	< 408	< 408	< 81.6	< 50.0	< 1.0	< 1.0	< 1.0	< 1.0	< 3.0			
8/14/2012	MW-41	< 88.9	< 444	< 444	< 88.9	< 50.0	< 1.0	< 1.0	< 1.0	< 1.0	< 3.0			
MW-71	11/3/2005	MW-71	25.42 to 10.42	Shallow	5,880	< 472	5,880	---	18,100	240	59.3	925	1,750	
	2/23/2006	MW-71			1,770	< 485	1,770	---	21,800	190	28	848	1,710	
	5/10/2006	MW-71			733	< 495	733	---	25,100	195	< 20	803	1,338	
	8/29/2006	MW-71			664	< 476	664	---	15,400	207	4.61	698	834	
	12/12/2006	MW-71			609	< 476	609	---	11,300	127	68.2	237	512	
	3/7/2007	MW-71			567	< 490	567	---	22,100	211	< 20	836	1,220	
	6/14/2007	MW-71			851	< 490	851	---	19,200	186	2.67	647	667	
	9/14/2007	MW-71			901	< 485	901	---	7,230	128	2	329	122	
	12/17/2007	MW-71			823	< 472	823	---	16,500	200	17	600	694	
<b>Screening Level for Protection of Groundwater as Drinking Water<sup>6</sup></b>					<b>500<sup>7</sup></b>	<b>500<sup>7</sup></b>	<b>500<sup>7</sup></b>	<b>800<sup>7</sup></b>	<b>5.0<sup>8</sup></b>	<b>640<sup>8</sup></b>	<b>700<sup>8</sup></b>	<b>1,600<sup>8</sup></b>		
<b>Screening Level for Protection of Indoor Air<sup>6</sup></b>					<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>2.4</b>	<b>15,000</b>	<b>2,800</b>	<b>320</b>		
<b>Laboratory Practical Quantitation Limit<sup>9</sup></b>					<b>500</b>	<b>500</b>	<b>500</b>	<b>100</b>	<b>0.20</b>	<b>1.0</b>	<b>0.20</b>	<b>0.60</b>		

**Table 7  
Groundwater Analytical Results for TPH and BTEX  
Block 38 West Property  
Seattle, Washington  
Farallon PN: 397-019**

Sample Location	Sample Date	Sample Identification	Screened Interval (feet NAVD88) <sup>1</sup>	Water Bearing Zone	Analytical Results (micrograms per liter)								
					NWTPH-Dx <sup>2</sup>		Total NWTPH-Dx <sup>3</sup>	NWTPH-Dx <sup>2</sup>	NWTPH-Gx <sup>4</sup>	EPA Method 8021B or 8260 <sup>5</sup>			
					DRO	ORO		Kerosene	GRO	Benzene	Toluene	Ethylbenzene	Xylenes
MW-71 (continued)	3/17/2008	MW-71	25.42 to 10.42	Shallow	1,070	< 472	1,070	< 1	15,900	5,710	124	2.7	454
	6/2/2008	MW-71			566	< 472	566	4,280	9,480	94	24.5	291	328
	8/4/2008	MW-71			550	< 472	550	1,860	4,140	31.7	1.06	103	62.3
	11/3/2008	MW-71			524	< 485	524	2,450	5,820	49.2	1.03	69	10.4
	2/23/2009	MW-71			828	< 481	828	4,340	11,600	136	2.3	358	213
	5/17/2009	MW-71			1,380	< 481	1,380	5,820	13,400	104	2.38	260	201
	8/16/2009	MW-71			660	< 480	660	1,700	2,300	37	< 0.50	56	14
	11/15/2009	MW-71			940	< 470	940	1,100	2,500	6.2	0.6	25	6.5
	2/21/2010	MW-71			3,990	4,500	8,490	4,980	6,390	97.1	1.9	403	101
	5/23/2010	MW-71			3,860	4,440	8,300	4,410	2,550	39.7	3.8	84	12.7
	8/15/2010	MW-71			912	729	1,641	2,710	5,130	99.1	< 1.0	148	12.1
11/14/2010	MW-71	541	2,600	3,141	267	244	< 1.0	1.8	< 1.0	< 3.0			
MW-72	11/3/2005	MW-72	25.32 to 10.32	Shallow	< 236	< 472	< 472	---	71.3	0.98	< 0.5	< 0.500	2.32
	2/23/2006	MW-72			408	< 500	408	---	1,900	11	1.22	98.2	25.3
	5/10/2006	MW-72			< 250	< 500	< 500	---	1,540	8.2	1.12	70.4	< 6
	8/29/2006	MW-72			< 253	< 505	< 505	---	810	6.28	< 0.5	10.2	< 3
	12/12/2006	MW-72			< 250	< 500	< 500	---	970	3.29	< 0.5	1.95	< 3
	3/7/2007	MW-72			< 260	< 521	< 521	---	560	5.45	0.59	38.5	< 3
	6/14/2007	MW-72			< 255	< 510	< 510	---	1,140	5.29	< 0.5	2.72	< 3
	9/14/2007	MW-72			< 250	< 500	< 500	---	239	1.76	< 0.5	< 0.500	< 3
	12/17/2007	MW-72			< 238	< 476	< 476	---	489	1.8	< 1	< 1.00	< 2
	3/17/2008	MW-72			< 236	< 472	< 472	< 1	983	407	3.3	< 0.5	4.34
	6/2/2008	MW-72			< 238	< 476	< 476	474	1,160	2.89	< 0.5	4.77	< 3
	8/4/2008	MW-72			< 236	< 472	< 472	247	330	0.81	< 0.5	< 0.5	< 3
	11/3/2008	MW-72			< 243	< 485	< 485	278	577	< 0.500	< 0.500	< 0.500	< 3.00
	2/23/2009	MW-72			< 243	< 485	< 485	3,130	780	< 0.500	< 0.500	< 0.500	< 3.00
	5/17/2009	MW-72			634	< 476	634	962	786	3.55	< 0.500	24.1	< 3.00
	8/16/2009	MW-72			< 240	< 490	< 490	< 240	170	< 0.50	< 0.50	0.82	< 2.0
	11/15/2009	MW-72			430	2,500	2,930	< 240	110	< 0.50	0.77	< 0.50	< 2.0
	2/21/2010	MW-72			1,810	1,720	3,530	803	258	< 1.0	1.7	< 1.0	< 3.0
5/23/2010	MW-72	6,100	2,250	8,350	5,630	329	2.3	< 1.0	< 1.0	< 3.0			
8/15/2010	MW-72	641	3,460	4,101	236	330	1.4	< 1.0	3.1	< 3.0			
11/14/2010	MW-72	159	749	908	147	261	< 1.0	< 1.0	1.6	< 3.0			
<b>Screening Level for Protection of Groundwater as Drinking Water<sup>6</sup></b>					<b>500<sup>7</sup></b>	<b>500<sup>7</sup></b>	<b>500<sup>7</sup></b>	<b>800<sup>7</sup></b>	<b>5.0<sup>8</sup></b>	<b>640<sup>8</sup></b>	<b>700<sup>8</sup></b>	<b>1,600<sup>8</sup></b>	
<b>Screening Level for Protection of Indoor Air<sup>5</sup></b>					<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>2.4</b>	<b>15,000</b>	<b>2,800</b>	<b>320</b>	
<b>Laboratory Practical Quantitation Limit<sup>9</sup></b>					<b>500</b>	<b>500</b>	<b>500</b>	<b>100</b>	<b>0.20</b>	<b>1.0</b>	<b>0.20</b>	<b>0.60</b>	

**Table 7**  
**Groundwater Analytical Results for TPH and BTEX**  
**Block 38 West Property**  
**Seattle, Washington**  
**Farallon PN: 397-019**

Sample Location	Sample Date	Sample Identification	Screened Interval (feet NAVD88) <sup>1</sup>	Water Bearing Zone	Analytical Results (micrograms per liter)								
					NWTPH-Dx <sup>2</sup>		Total NWTPH-Dx <sup>3</sup>	NWTPH-Dx <sup>2</sup>	NWTPH-Gx <sup>4</sup>	EPA Method 8021B or 8260 <sup>5</sup>			
					DRO	ORO		Kerosene	GRO	Benzene	Toluene	Ethylbenzene	Xylenes
MW-73	11/3/2005	MW-73	25.11 to 10.11	Shallow	249	< 472	249	---	1,070	23.1	1.74	3.58	4.74
	2/23/2006	MW-73			731	< 500	731	---	2,420	13.2	2.13	4.52	< 3
	4/10/2006	MW-73			< 236	< 472	< 472	---	2,460	9.56	2.19	4.51	2.44
	8/29/2006	MW-73			< 236	< 472	< 472	---	1,130	12.6	2.4	1.89	< 3
	12/12/2006	MW-73			< 243	< 485	< 485	---	2,360	14.5	2.01	4.32	< 3
	3/7/2007	MW-73			< 236	< 472	< 472	---	2,260	17.5	1.47	2.72	3.11
	6/14/2007	MW-73			< 260	< 521	< 521	---	2,450	11.6	1.56	2.63	< 3
	9/14/2007	MW-73			< 236	< 472	< 472	---	1,380	12.1	1.88	0.65	< 3
	12/17/2007	MW-73			< 236	< 472	< 472	---	2,390	18	1.4	3.3	1.4
	3/17/2008	MW-73			< 238	< 476	< 476	1.17	2,670	707	10.1	1.35	2.16
	6/2/2008	MW-73			< 236	< 472	< 472	767	2,260	15.8	0.76	1.14	< 3
	8/4/2008	MW-73			< 236	< 472	< 472	465	1,250	10.3	1.15	< 0.5	< 3
	11/3/2008	MW-73			< 243	< 485	< 485	466	1,790	21.3	1.38	< 0.500	< 3.00
	2/23/2009	MW-73			< 240	< 481	< 481	7,510	2,800	25.6	2.05	1.59	< 3.00
	5/17/2009	MW-73			< 243	< 485	< 485	430	1,510	9.97	1	0.73	< 3.00
	8/16/2009	MW-73			430	< 480	430	1,100	1,200	5	< 0.50	< 0.50	< 2.0
	11/15/2009	MW-73			1,100	< 480	1,100	1,500	2,700	26	2	3.8	< 2.0
	2/21/2010	MW-73			946	624	1,570	1,110	2,190	39	2.4	3.3	6.9
5/23/2010	MW-73	1,030	659	1,689	1,670	2,260	31.2	2.2	2.1	< 3.0			
8/15/2010	MW-73	173	< 392	173	671	1,960	37.3	1.8	1.7	< 3.0			
11/14/2010	MW-73	407	1,670	2,077	733	1,410	26	3.4	< 1.0	< 3.0			
<b>Screening Level for Protection of Groundwater as Drinking Water<sup>6</sup></b>					<b>500<sup>7</sup></b>		<b>500<sup>7</sup></b>	<b>500<sup>7</sup></b>	<b>800<sup>7</sup></b>	<b>5.0<sup>8</sup></b>	<b>640<sup>8</sup></b>	<b>700<sup>8</sup></b>	<b>1,600<sup>8</sup></b>
<b>Screening Level for Protection of Indoor Air<sup>5</sup></b>					<b>NE</b>		<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>2.4</b>	<b>15,000</b>	<b>2,800</b>	<b>320</b>
<b>Laboratory Practical Quantitation Limit<sup>9</sup></b>					<b>500</b>		<b>500</b>	<b>500</b>	<b>100</b>	<b>0.20</b>	<b>1.0</b>	<b>0.20</b>	<b>0.60</b>



**Table 7  
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Block 38 West Property  
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Farallon PN: 397-019**

Sample Location	Sample Date	Sample Identification	Screened Interval (feet NAVD88) <sup>1</sup>	Water Bearing Zone	Analytical Results (micrograms per liter)								
					NWTPH-Dx <sup>2</sup>		Total NWTPH-Dx <sup>3</sup>	NWTPH-Dx <sup>2</sup>	NWTPH-Gx <sup>4</sup>	EPA Method 8021B or 8260 <sup>5</sup>			
					DRO	ORO		Kerosene	GRO	Benzene	Toluene	Ethylbenzene	Xylenes
MW-95	11/2/2005	MW-95	Unknown	Shallow	< 236	< 472	< 472	---	545	1.06	0.91	1.18	9.87
	2/23/2006	MW-95			240	< 481	240	---	278	<b>9.67</b>	5.57	7.88	19.2
	5/9/2006	MW-95			< 255	< 510	< 510	---	326	<b>2.91</b>	0.73	1.4	15.78
	8/30/2006	MW-95			< 248	< 495	< 495	---	94.3	---	---	---	---
	12/12/2006	MW-95			< 243	< 485	< 485	---	<b>1,330</b>	<b>52.9</b>	14.5	32.9	119
	3/7/2007	MW-95			< 250	< 500	< 500	---	60.2	<b>3.87</b>	< 0.5	1.31	10.5
	6/14/2007	MW-95			< 236	< 472	< 472	---	215	<b>4.12</b>	< 0.5	1.6	41.7
	9/13/2007	MW-95			< 238	< 476	< 476	---	< 50.0	< 0.5	< 0.5	< 0.500	< 3
	12/18/2007	MW-95			< 238	< 476	< 476	---	< 50	< 1	< 1	< 1	< 3
	3/17/2008	MW-95			< 236	< 472	< 472	< 1	< 50	< 236	< 0.5	< 0.5	< 0.5
	6/3/2008	MW-95			< 236	< 472	< 472	< 236	< 50	< 0.5	< 0.5	< 0.5	< 3
	8/4/2008	MW-95			< 236	< 472	< 472	< 236	< 50	< 0.5	< 0.5	< 0.5	< 3
	11/4/2008	MW-95			< 248	< 495	< 495	< 248	< 50.0	< 0.500	< 0.500	< 0.500	< 3.00
	2/24/2009	MW-95			< 240	< 481	< 481	< 240	< 50.0	< 0.500	< 0.500	< 0.500	< 3.00
	5/17/2009	MW-95			< 240	< 481	< 481	< 240	< 50.0	< 0.500	< 0.500	< 0.500	< 3.00
	8/16/2009	MW-95			< 240	< 480	< 480	< 240	< 50	< 0.50	< 0.50	< 0.50	< 2.0
	11/15/2009	MW-95			< 240	< 480	< 480	< 240	110	< 0.50	< 0.50	< 0.50	< 2.0
	2/21/2010	MW-95			202	< 388	202	< 77.7	< 50.0	< 1.0	< 1.0	< 1.0	< 3.0
	5/23/2010	MW-95			80	< 392	80	83.2	< 50.0	< 1.0	< 1.0	< 1.0	< 3.0
8/16/2010	MW-95	< 78.4	< 392	< 392	< 78.4	56.5	< 1.0	< 1.0	< 1.0	4.5			
11/15/2010	MW-95	< 77.7	< 388	< 388	97	85.7	< 1.0	< 1.0	< 1.0	23.7			
<b>Screening Level for Protection of Groundwater as Drinking Water<sup>6</sup></b>					<b>500<sup>7</sup></b>	<b>500<sup>7</sup></b>	<b>500<sup>7</sup></b>	<b>800<sup>7</sup></b>	<b>5.0<sup>8</sup></b>	<b>640<sup>8</sup></b>	<b>700<sup>8</sup></b>	<b>1,600<sup>8</sup></b>	
<b>Screening Level for Protection of Indoor Air<sup>5</sup></b>					<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>2.4</b>	<b>15,000</b>	<b>2,800</b>	<b>320</b>	
<b>Laboratory Practical Quantitation Limit<sup>9</sup></b>					<b>500</b>	<b>500</b>	<b>500</b>	<b>100</b>	<b>0.20</b>	<b>1.0</b>	<b>0.20</b>	<b>0.60</b>	

NOTES:

Results in **bold** and highlighted **yellow** denote concentrations exceeding applicable screening levels.

Results in **bold** denote results by Northwest Method NWTPH-Dx without silica gel cleanup that exceed the screening level but analysis by NWTPH-Dx with silica gel cleanup indicate the presence of polar organics in these samples. See Table 12 for calculation of petroleum hydrocarbons versus polar organics and applicable screening levels for these samples.

< denotes analyte not detected at or exceeding the reporting limit listed.

— denotes sample not analyzed.

<sup>1</sup>In feet referenced to North American Vertical Datum of 1988 (NAVD88).

<sup>2</sup>Analyzed by Northwest Method NWTPH-Dx without silica gel cleanup unless otherwise noted.

<sup>3</sup>Total is the sum of the DRO and ORO results. Where both results are non-detect, the higher of the two reporting limits is reported as the Total NWTPH-Dx value.

<sup>4</sup>Analyzed by Northwest Method NWTPH-Gx.

<sup>5</sup>Analyzed by U.S. Environmental Protection Agency Method 8021B or 8260/8260D.

<sup>6</sup>Washington State Cleanup Levels and Risk Calculations (CLARC) under Washington State Model Toxics Control Act Cleanup Regulation (MTCA), Standard Method B Values for Groundwater and Vapor Intrusion Method B Table, Groundwater Screening Levels, from CLARC Master spreadsheet, <https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Contamination-clean-up-tools/CLARC>, unless otherwise noted.

<sup>7</sup>MTCA Method A is used as a surrogate for Method B because no Method B groundwater value has been established for TPH gasoline-, diesel- and oil-range mixtures.

<sup>8</sup>Groundwater screening level adjusted or based on the Federal Maximum Contaminant Level (MCL), 40 Code of Federal Regulations (CFR) Part 141.

<sup>9</sup>Laboratory Practical Quantitation Limits (PQLs) from OnSite Environmental of Redmond, Washington. PQLs for individual samples may vary due to sample matrix interferences or dilutions.

Shading represents most stringent screening level for groundwater.

BTEX = benzene, toluene, ethylbenzene, and xylenes

DRO = total petroleum hydrocarbons (TPH) as diesel-range organics

F3 = result is elevated due to discrete peaks in quantitation range not representative of fuel pattern

GRO = TPH as gasoline-range organics

J = result is an estimate

M = hydrocarbons in the gasoline range are impacting the diesel-range result

ORO = TPH as oil-range organics

T = the sample chromatogram is not similar to a typical gas

Z = the gasoline result is mainly attributed to a single peak (naphthalene)

\* = sample analyzed by Northwest Method NWTPH-Dx with silica gel cleanup

# = sample result by Northwest Method NWTPH-Dx without silica gel cleanup; sample also analyzed by Northwest Method NWTPH-Dx with silica gel cleanup. See Table 12 for calculation of petroleum hydrocarbons versus polar organics and applicable screening levels for these samples.

^ = lab-provided total NWTPH-Dx value covering C10-C40 carbon range



**Table 8  
Groundwater Analytical Results for PAHs  
Block 38 West Property  
Seattle, Washington  
Farallon PN: 397-019**

Sample Location	Sample Date	Sample Identification	Screened Interval (feet NAVD88) <sup>1</sup>	Water Bearing Zone	Analytical Results (micrograms per liter) <sup>2</sup>																			
					Non-Carcinogenic PAHs											Carcinogenic PAHs								
					Naphthalene	1-Methylnaphthalene	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(g,h,i)Perylene	Fluoranthene	Fluorene	Phenanthrene	Pyrene	Benzo(a)Pyrene	Benzo(a)Anthracene	Benzo(b)Fluoranthene	Benzo(j,k)Fluoranthene	Chrysene	Dibenzo(a,h)Anthracene	Indeno(1,2,3-cd)Pyrene	Total cPAHs TEC <sup>3,4</sup>	
FMW-153	5/16/2023	FMW-153-051623	-8.5 to -13.5	Intermediate	< 0.0755	< 0.0755	< 0.0755	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
	8/15/2023	FMW-154-081523			< 0.0777	< 0.0777	< 0.0777	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	11/15/2023	FMW-153-111523			< 0.0385	< 0.0385	< 0.0385	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	2/29/2024	FMW-153-022924			< 0.0377	< 0.0377	< 0.0377	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
FMW-154	5/16/2023	FMW-154-051623	12.8 to 7.8	Shallow	0.0678 J	< 0.0784	< 0.0784	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
	8/14/2023	FMW-154-081423			2.14	1.29	< 0.0769	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	11/14/2023	FMW-154-111423			0.992	< 0.154	< 0.154	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	2/28/2024	FMW-154-022824			< 5.00*	< 0.151 UJ	< 0.151 UJ	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
FMW-155	5/16/2023	FMW-155-051623	13.9 to 8.9	Shallow	< 0.0755	< 0.0755	< 0.0755	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
	8/14/2023	FMW-155-081423			< 0.0784	< 0.0784	< 0.0784	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	11/14/2023	FMW-155-111423			< 0.0377	< 0.0377	< 0.0377	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	2/27/2024	FMW-155-022724			< 5.00*	< 0.0377 UJ	< 0.0377 UJ	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
FMW-156	5/16/2023	FMW-156-051623	10.7 to 5.7	Shallow	< 0.0808	< 0.0808	< 0.0808	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
	8/14/2023	FMW-156-081423			< 0.0784	< 0.0784	< 0.0784	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	11/15/2023	FMW-156-111523			0.0234 J	< 0.0408	< 0.0408	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	2/27/2024	FMW-156-022724			< 5.00*	< 0.0381 UJ	< 0.0381 UJ	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
FMW-157	5/16/2023	FMW-157-051623	-4.1 to -14.1	Intermediate	< 0.0808	< 0.0808	< 0.0808	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
	8/15/2023	FMW-157-081523			< 0.0816	< 0.0816	< 0.0816	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	11/15/2023	FMW-157-111523			< 0.0400	< 0.0400	< 0.0400	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	2/28/2024	FMW-157-022824			< 5.00* UJ	< 0.0377 UJ	< 0.0377 UJ	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
FMW-158	5/15/2023	FMW-158-051523	18.0 to 3.0	Shallow	0.316	0.180	< 0.0762	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
	8/15/2023	FMW-158-081523			0.108	0.0902	< 0.0816	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	11/15/2023	FMW-158-111523			0.0458	0.0693	< 0.0400	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	2/27/2024	FMW-158			< 5.00*	< 0.0377 UJ	< 0.0377 UJ	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
FMW-159	5/16/2023	FMW-159-051623	-4.9 to -14.9	Intermediate	< 0.0755	< 0.0755	< 0.0755	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
	8/15/2023	FMW-159-081523			< 0.0769	< 0.0769	< 0.0769	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	11/15/2023	FMW-159-111523			< 0.0408	< 0.0408	< 0.0408	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	2/28/2024	FMW-159-022824			< 5.00* UJ	< 0.0400 UJ	< 0.0400 UJ	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
FMW-160	5/15/2023	FMW-160-051523	19.0 to 4.0	Shallow	< 0.0755	< 0.0755	< 0.0755	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
	8/14/2023	FMW-160-081423			< 0.0842	< 0.0842	< 0.0842	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	11/14/2023	FMW-160-111423			< 0.0408	< 0.0408	< 0.0408	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	2/27/2024	FMW-160-022724			< 5.00*	< 0.0400 UJ	< 0.0400 UJ	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
FMW-161	5/15/2023	FMW-161-051523	19.9 to 4.9	Shallow	0.206	< 0.0762	< 0.0762	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
	8/14/2023	FMW-161-081423			0.0692 J	< 0.0769	< 0.0769	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	11/14/2023	FMW-161-111423			0.0503	< 0.0377	< 0.0377	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	2/27/2024	FMW-161-022724			< 5.00*	< 0.0430 UJ	< 0.0430 UJ	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
FMW-162	5/16/2023	FMW-162-051623	-4.9 to -14.9	Intermediate	< 0.0755	< 0.0755	< 0.0755	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
	8/15/2023	FMW-162-081523			< 0.0769	< 0.0769	< 0.0769	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	11/15/2023	FMW-162-111523			< 0.0400	< 0.0400	< 0.0400	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	2/28/2024	FMW-162-022824			< 5.00* UJ	< 0.0377 UJ	< 0.0377 UJ	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
<b>Screening Level for Protection of Groundwater as Drinking Water<sup>5</sup></b>					<b>160</b>	<b>1.5</b>	<b>32</b>	<b>480</b>	<b>NE</b>	<b>2,400</b>	<b>NE</b>	<b>640</b>	<b>320</b>	<b>NE</b>	<b>240</b>	<b>0.2<sup>6</sup></b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>0.2<sup>6</sup></b>	
<b>Screening Level for Protection of Indoor Air<sup>5</sup></b>					<b>8.9</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>
<b>Laboratory Practical Quantitation Limit<sup>7</sup></b>					<b>0.10</b>	<b>0.10</b>	<b>0.10</b>	<b>0.10</b>	<b>0.10</b>	<b>0.10</b>	<b>0.010</b>	<b>0.10</b>	<b>0.10</b>	<b>0.10</b>	<b>0.10</b>	<b>0.010</b>	<b>0.010</b>	<b>0.010</b>	<b>0.010</b>	<b>0.010</b>	<b>0.010</b>	<b>0.010</b>	<b>NA</b>	

**Table 8  
Groundwater Analytical Results for PAHs  
Block 38 West Property  
Seattle, Washington  
Farallon PN: 397-019**

Sample Location	Sample Date	Sample Identification	Screened Interval (feet NAVD88) <sup>1</sup>	Water Bearing Zone	Analytical Results (micrograms per liter) <sup>2</sup>																		
					Non-Carcinogenic PAHs											Carcinogenic PAHs							
					Naphthalene	1-Methylnaphthalene	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(g,h,i)Perylene	Fluoranthene	Fluorene	Phenanthrene	Pyrene	Benzo(a)Pyrene	Benzo(a)Anthracene	Benzo(b)Fluoranthene	Benzo(j,k)Fluoranthene	Chrysene	Dibenzo(a,h)Anthracene	Indeno(1,2,3-cd)Pyrene	Total cPAHs TEC <sup>3,4</sup>
FMW-163	5/15/2023	FMW-163-051523	20.3 to 5.3	Shallow	0.122	< 0.0762	< 0.0762	---	---	---	---	---	---	---	---	---	---	---	---	---	---		
	8/14/2023	FMW-163-081423			0.328	< 0.0889	< 0.0889	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
	11/15/2023	FMW-163-111523			0.0755	< 0.0408	< 0.0408	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
	2/27/2024	FMW-163-022724			< 5.00*	< 0.0417 UJ	< 0.0417 UJ	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
FMW-164	5/16/2023	FMW-164-051623	-4.8 to -14.8	Intermediate	< 0.0755	< 0.0755	< 0.0755	---	---	---	---	---	---	---	---	---	---	---	---	---	---		
	8/15/2023	FMW-164-081523			< 0.0800	< 0.0800	< 0.0800	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
	11/15/2023	FMW-164-111523			< 0.0377	< 0.0377	< 0.0377	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
	2/29/2024	FMW-164-022924			< 0.0408	< 0.0408	< 0.0408	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
OW-1	5/16/2023	OW-1-051623	-5.8 to -20.8	Intermediate	< 0.0755	< 0.0755	< 0.0755	---	---	---	---	---	---	---	---	---	---	---	---	---	---		
	8/15/2023	OW-1-081523			< 0.0808	< 0.0808	< 0.0808	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
	11/15/2023	OW-1-111523			< 0.0385	< 0.0385	< 0.0385	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
	2/28/2024	OW-1-022824			< 25.0*	< 0.0377 UJ	< 0.0377 UJ	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
OW-2	5/16/2023	OW-2-051623	-7.1 to -22.1	Intermediate	< 0.0769	< 0.0769	< 0.0769	---	---	---	---	---	---	---	---	---	---	---	---	---	---		
	8/15/2023	OW-2-081523			< 0.0755	< 0.0755	< 0.0755	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
	11/15/2023	OW-2-111523			0.387	0.0322 J	< 0.0385	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
	2/28/2024	OW-2-022824			< 5.00* UJ	< 0.0377 UJ	< 0.0377 UJ	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
OW-3	5/17/2023	OW-3-051723	-9.2 to -24.2	Intermediate	< 0.0755	< 0.0755	< 0.0755	---	---	---	---	---	---	---	---	---	---	---	---	---	---		
	8/15/2023	OW-3-081523			< 0.0808	< 0.0808	< 0.0808	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
	11/15/2023	OW-3-111523			< 0.0412	< 0.0412	< 0.0412	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
	2/28/2024	OW-3-022824			< 5.00* UJ	< 0.0417 UJ	< 0.0417 UJ	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
<b>Screening Level for Protection of Groundwater as Drinking Water<sup>5</sup></b>					<b>160</b>	<b>1.5</b>	<b>32</b>	<b>480</b>	<b>NE</b>	<b>2,400</b>	<b>NE</b>	<b>640</b>	<b>320</b>	<b>NE</b>	<b>240</b>	<b>0.2<sup>6</sup></b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>0.2<sup>6</sup></b>
<b>Screening Level for Protection of Indoor Air<sup>5</sup></b>					<b>8.9</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>
<b>Laboratory Practical Quantitation Limit<sup>7</sup></b>					<b>0.10</b>	<b>0.10</b>	<b>0.10</b>	<b>0.10</b>	<b>0.10</b>	<b>0.10</b>	<b>0.010</b>	<b>0.10</b>	<b>0.10</b>	<b>0.10</b>	<b>0.10</b>	<b>0.010</b>	<b>0.010</b>	<b>0.010</b>	<b>0.010</b>	<b>0.010</b>	<b>0.010</b>	<b>0.010</b>	<b>NA</b>

**Table 8  
Groundwater Analytical Results for PAHs  
Block 38 West Property  
Seattle, Washington  
Farallon PN: 397-019**

Sample Location	Sample Date	Sample Identification	Screened Interval (feet NAVD88) <sup>1</sup>	Water Bearing Zone	Analytical Results (micrograms per liter) <sup>2</sup>																				
					Non-Carcinogenic PAHs										Carcinogenic PAHs										
					Naphthalene	1-Methylnaphthalene	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(g,h,i)Perylene	Fluoranthene	Fluorene	Phenanthrene	Pyrene	Benzo(a)Pyrene	Benzo(a)Anthracene	Benzo(b)Fluoranthene	Benzo(j,k)Fluoranthene	Chrysene	Dibenzo(a,h)Anthracene	Indeno(1,2,3-cd)Pyrene	Total cPAHs TEC <sup>3,4</sup>		
<b>Block 37 Site</b>																									
<b>Groundwater Samples from Monitoring Wells</b>																									
MW-41	7/26/2005	MW-41	22.0 to 7.0	Shallow	< 0.5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---				
	2/23/2006	MW-41			< 1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---		
	5/9/2006	MW-41			< 1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
	8/30/2006	MW-41			< 5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
	12/12/2006	MW-41			< 5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
	3/7/2007	MW-41			< 5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
	6/14/2007	MW-41			< 5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
	9/13/2007	MW-41			< 5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	12/18/2007	MW-41			< 1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	3/17/2008	MW-41			< 1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	6/3/2008	MW-41			< 5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	8/4/2008	MW-41			< 5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	11/4/2008	MW-41			< 5.00	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	2/24/2009	MW-41			< 5.00	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	5/17/2009	MW-41			< 5.00	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	8/16/2009	MW-41			< 5.0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	11/15/2009	MW-41			< 5.0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	2/21/2010	MW-41			< 1.0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	5/23/2010	MW-41			< 1.0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	11/15/2010	MW-41			< 1.0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
2/28/2011	MW-41	< 1.0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---			
8/29/2011	MW-41	< 1.0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---			
12/5/2011	MW-41	< 10.0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---			
2/15/2012	MW-41	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---			
5/16/2012	MW-41	< 1.0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---			
8/14/2012	MW-41	< 1.0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---			
<b>Screening Level for Protection of Groundwater as Drinking Water<sup>5</sup></b>					160	1.5	32	480	NE	2,400	NE	640	320	NE	240	0.2 <sup>6</sup>	NE	NE	NE	NE	NE	0.2 <sup>6</sup>			
<b>Screening Level for Protection of Indoor Air<sup>5</sup></b>					8.9	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE		
<b>Laboratory Practical Quantitation Limit<sup>7</sup></b>					0.10	0.10	0.10	0.10	0.10	0.10	0.010	0.10	0.10	0.10	0.10	0.010	0.010	0.010	0.010	0.010	0.010	0.010	NA		

**Table 8  
Groundwater Analytical Results for PAHs  
Block 38 West Property  
Seattle, Washington  
Farallon PN: 397-019**

Sample Location	Sample Date	Sample Identification	Screened Interval (feet NAVD88) <sup>1</sup>	Water Bearing Zone	Analytical Results (micrograms per liter) <sup>2</sup>																	
					Non-Carcinogenic PAHs										Carcinogenic PAHs							
					Naphthalene	1-Methylnaphthalene	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(g,h,i)Perylene	Fluoranthene	Fluorene	Phenanthrene	Pyrene	Benzo(a)Pyrene	Benzo(a)Anthracene	Benzo(b)Fluoranthene	Benzo(j,k)Fluoranthene	Chrysene	Dibenzo(a,h)Anthracene	Indeno(1,2,3-cd)Pyrene
MW-71	2/23/2006	MW-71	25.42 to 10.42	Shallow	341	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
	5/10/2006	MW-71			410	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	8/29/2006	MW-71			364	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	12/12/2006	MW-71			151	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	3/7/2007	MW-71			691	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	6/14/2007	MW-71			326	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	9/14/2007	MW-71			200	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	3/17/2008	MW-71			< 1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	6/2/2008	MW-71			156	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	8/4/2008	MW-71			89.4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	11/3/2008	MW-71			68.7	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	2/23/2009	MW-71			193	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	5/17/2009	MW-71			151	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	8/16/2009	MW-71			11	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	11/15/2009	MW-71			6.2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
2/21/2010	MW-71	126	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---			
5/23/2010	MW-71	56.4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---			
8/15/2010	MW-71	128	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---			
11/14/2010	MW-71	3.3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---			
MW-72	2/23/2006	MW-72	25.32 to 10.32	Shallow	37.3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---		
	5/10/2006	MW-72			48.9	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
	8/29/2006	MW-72			48.4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
	12/12/2006	MW-72			12.5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
	3/7/2007	MW-72			6.68	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
	6/14/2007	MW-72			10	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
	9/14/2007	MW-72			< 5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
	3/17/2008	MW-72			< 1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
	6/2/2008	MW-72			< 5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
	8/4/2008	MW-72			6.4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
	11/3/2008	MW-72			< 5.00	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
	2/23/2009	MW-72			< 5.00	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
	5/17/2009	MW-72			8.92	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
	8/16/2009	MW-72			< 5.0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
	11/15/2009	MW-72			< 5.0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
2/21/2010	MW-72	2.3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---				
5/23/2010	MW-72	< 1.0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---				
8/15/2010	MW-72	< 1.0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---				
11/14/2010	MW-72	< 1.0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---				
<b>Screening Level for Protection of Groundwater as Drinking Water<sup>5</sup></b>					<b>160</b>	<b>1.5</b>	<b>32</b>	<b>480</b>	<b>NE</b>	<b>2,400</b>	<b>NE</b>	<b>640</b>	<b>320</b>	<b>NE</b>	<b>240</b>	<b>0.2<sup>6</sup></b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>0.2<sup>6</sup></b>
<b>Screening Level for Protection of Indoor Air<sup>5</sup></b>					<b>8.9</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>
<b>Laboratory Practical Quantitation Limit<sup>7</sup></b>					<b>0.10</b>	<b>0.10</b>	<b>0.10</b>	<b>0.10</b>	<b>0.10</b>	<b>0.10</b>	<b>0.010</b>	<b>0.10</b>	<b>0.10</b>	<b>0.10</b>	<b>0.10</b>	<b>0.010</b>	<b>0.010</b>	<b>0.010</b>	<b>0.010</b>	<b>0.010</b>	<b>0.010</b>	<b>NA</b>

**Table 8  
Groundwater Analytical Results for PAHs  
Block 38 West Property  
Seattle, Washington  
Farallon PN: 397-019**

Sample Location	Sample Date	Sample Identification	Screened Interval (feet NAVD88) <sup>1</sup>	Water Bearing Zone	Analytical Results (micrograms per liter) <sup>2</sup>																					
					Non-Carcinogenic PAHs											Carcinogenic PAHs										
					Naphthalene	1-Methylnaphthalene	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(g,h,i)Perylene	Fluoranthene	Fluorene	Phenanthrene	Pyrene	Benzo(a)Pyrene	Benzo(a)Anthracene	Benzo(b)Fluoranthene	Benzo(j,k)Fluoranthene	Chrysene	Dibenzo(a,h)Anthracene	Indeno(1,2,3-cd)Pyrene	Total cPAHs TEC <sup>3,4</sup>			
MW-73	2/23/2006	MW-73	25.11 to 10.11	Shallow	< 1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---				
	4/10/2006	MW-73			1.06	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---		
	8/29/2006	MW-73			< 5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---		
	12/12/2006	MW-73			< 5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---		
	3/7/2007	MW-73			< 5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---		
	6/14/2007	MW-73			< 5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
	9/14/2007	MW-73			< 5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
	3/17/2008	MW-73			< 1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	6/2/2008	MW-73			< 5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	8/4/2008	MW-73			< 5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	11/3/2008	MW-73			< 5.00	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	2/23/2009	MW-73			< 5.00	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	5/17/2009	MW-73			< 5.00	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	8/16/2009	MW-73			< 5.0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	11/15/2009	MW-73			< 5.0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
2/21/2010	MW-73	2.4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---			
5/23/2010	MW-73	< 1.0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---			
8/15/2010	MW-73	3.3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---			
11/14/2010	MW-73	< 1.0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---			
<b>Screening Level for Protection of Groundwater as Drinking Water<sup>5</sup></b>					<b>160</b>	<b>1.5</b>	<b>32</b>	<b>480</b>	<b>NE</b>	<b>2,400</b>	<b>NE</b>	<b>640</b>	<b>320</b>	<b>NE</b>	<b>240</b>	<b>0.2<sup>6</sup></b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>0.2<sup>6</sup></b>			
<b>Screening Level for Protection of Indoor Air<sup>5</sup></b>					<b>8.9</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>			
<b>Laboratory Practical Quantitation Limit<sup>7</sup></b>					<b>0.10</b>	<b>0.10</b>	<b>0.10</b>	<b>0.10</b>	<b>0.10</b>	<b>0.10</b>	<b>0.010</b>	<b>0.10</b>	<b>0.10</b>	<b>0.10</b>	<b>0.10</b>	<b>0.010</b>	<b>0.010</b>	<b>0.010</b>	<b>0.010</b>	<b>0.010</b>	<b>0.010</b>	<b>0.010</b>	<b>NA</b>			

**Table 8  
Groundwater Analytical Results for PAHs  
Block 38 West Property  
Seattle, Washington  
Farallon PN: 397-019**

Sample Location	Sample Date	Sample Identification	Screened Interval (feet NAVD88) <sup>1</sup>	Water Bearing Zone	Analytical Results (micrograms per liter) <sup>2</sup>																					
					Non-Carcinogenic PAHs											Carcinogenic PAHs										
					Naphthalene	1-Methylnaphthalene	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(g,h,i)Perylene	Fluoranthene	Fluorene	Phenanthrene	Pyrene	Benzo(a)Pyrene	Benzo(a)Anthracene	Benzo(b)Fluoranthene	Benzo(j,k)Fluoranthene	Chrysene	Dibenzo(a,h)Anthracene	Indeno(1,2,3-cd)Pyrene	Total cPAHs TEC <sup>3,4</sup>			
MW-95	2/23/2006	MW-95	Unknown	Shallow	3.31	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---				
	5/9/2006	MW-95			5.56	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---		
	12/12/2006	MW-95			10.6	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---		
	3/7/2007	MW-95			< 5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---		
	6/14/2007	MW-95			< 5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---		
	9/13/2007	MW-95			< 5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
	12/18/2007	MW-95			< 1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
	3/17/2008	MW-95			< 1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	6/3/2008	MW-95			< 5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	8/4/2008	MW-95			< 5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	11/4/2008	MW-95			< 5.00	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	2/24/2009	MW-95			< 5.00	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	5/17/2009	MW-95			< 5.00	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	8/16/2009	MW-95			< 5.0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	11/15/2009	MW-95			< 5.0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
2/21/2010	MW-95	< 1.0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---			
5/23/2010	MW-95	< 1.0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---			
8/16/2010	MW-95	< 1.0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---			
11/15/2010	MW-95	< 1.0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---			
<b>Screening Level for Protection of Groundwater as Drinking Water<sup>5</sup></b>					<b>160</b>	<b>1.5</b>	<b>32</b>	<b>480</b>	<b>NE</b>	<b>2,400</b>	<b>NE</b>	<b>640</b>	<b>320</b>	<b>NE</b>	<b>240</b>	<b>0.2<sup>6</sup></b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>0.2<sup>6</sup></b>			
<b>Screening Level for Protection of Indoor Air<sup>5</sup></b>					<b>8.9</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>			
<b>Laboratory Practical Quantitation Limit<sup>7</sup></b>					<b>0.10</b>	<b>0.10</b>	<b>0.10</b>	<b>0.10</b>	<b>0.10</b>	<b>0.10</b>	<b>0.010</b>	<b>0.10</b>	<b>0.10</b>	<b>0.10</b>	<b>0.10</b>	<b>0.010</b>	<b>0.010</b>	<b>0.010</b>	<b>0.010</b>	<b>0.010</b>	<b>0.010</b>	<b>0.010</b>	<b>NA</b>			

**NOTES:**

Results in **bold** and highlighted **yellow** denote concentrations exceeding applicable screening levels.

< denotes analyte not detected at or exceeding the reporting limit listed.

— denotes sample not analyzed.

<sup>1</sup>In feet referenced to North American Vertical Datum of 1988 (NAVD88).

<sup>2</sup>Analyzed by U.S. Environmental Protection Agency (EPA) Method 8270D/SIM or 8270E/SIM. FB-03, FMW-130, and Potable Well samples analyzed by EPA Method 8260C. Naphthalene results from February 2024 with a \* next to the result analyzed by EPA Method 8260D.

<sup>3</sup>Total cPAHs derived using the total toxicity equivalency method in Section 708(8) of Chapter 173-340 of the Washington Administrative Code.

<sup>4</sup>For concentrations reported at less than the laboratory reporting limit, half the reporting limit was used to calculate total. If all constituent concentrations are non-detect, calculated total is indicated non-detect.

<sup>5</sup>Washington State Cleanup Levels and Risk Calculations (CLARC) under Washington State Model Toxics Control Act Cleanup Regulation (MTCA), Standard Method B Values for Groundwater and Vapor Intrusion Method B Table, Groundwater Screening Levels, from CLARC Master spreadsheet, <https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Contamination-clean-up-tools/CLARC>, unless otherwise noted.

<sup>6</sup>Groundwater screening level based on the Federal Maximum Contaminant Level (MCL), 40 Code of Federal Regulations (CFR) Part 141.

<sup>7</sup>Laboratory Practical Quantitation Limits (PQLs) from OnSite Environmental of Redmond, Washington. PQLs for individual samples may vary due to sample matrix interferences or dilutions.

<sup>8</sup>MTCA Method B vapor intrusion groundwater screening level is applicable for the Shallow Water-Bearing Zone and the Method B screening level for drinking water is applicable for the deeper Intermediate Water-Bearing Zone.

\* denotes the result is from analysis by EPA Method 8260D instead of EPA Method 8270.

Shading represents most stringent screening level for groundwater.

cPAHs = carcinogenic polycyclic aromatic hydrocarbons

E = result exceeded instrument quantitation range and is an estimate

J = result is an estimate

NA = not applicable

NE = not established

PAHs = polycyclic aromatic hydrocarbons

TEC = toxic equivalent concentration

UJ = analyte not detected and reporting limit is an estimate



**Table 9  
Groundwater Analytical Results for Select CVOCs  
Block 38 West Property  
Seattle, Washington  
Farallon PN: 397-019**

Sample Location	Sample Date	Sample Identification	Screened Interval (feet NAVD88) <sup>1</sup>	Water Bearing Zone	Analytical Results (micrograms per liter) <sup>2</sup>										
					PCE	TCE	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Vinyl Chloride	1,1,1-Trichloroethane	Acetone	Bromodichloromethane	Chloroform	Methyl Tertiary Butyl Ether (MTBE)	
<b>Block 38 West Property</b>															
<b>Reconnaissance Groundwater Samples from Borings</b>															
FB-03	8/23/2018	FB-03-082318	8.8 to 3.8	Shallow	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	7.4	< 0.20	< 0.20	---	
FB-05	8/22/2018	FB-05-082218	8.5 to 3.5	Shallow	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	---	< 0.20	< 0.20	---	
FMW-130	7/21/2014	F-MW-130-GW1-072114	7.2 to 2.2	Shallow	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	---	< 0.20	< 0.20	---	
<b>Decommissioned Monitoring Wells</b>															
FMW-130	7/24/2014	F-MW-130-072414	-22.8 to -32.8	Intermediate	< 0.20	< 0.20	0.51	< 0.20	< 0.20	< 0.20	0.26	---	< 0.20	0.91	
	7/3/2017	FMW-130-070317			< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 5.0	< 0.20	< 0.20	---	
	8/30/2018	FMW-130-083018			< 0.20	< 0.20	0.27	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	---
	12/28/2018	FMW130-122818			< 0.20	< 0.20	0.22	< 0.20	< 0.20	< 0.20	< 0.20	---	< 0.20	< 0.20	---
FMW-132	8/30/2018	FMW-132-083018	20.7 to 15.7	Shallow	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	---	< 0.20	< 0.20	---	
	12/28/2018	FMW132-122818			< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	---	< 0.20	< 0.20	---
FMW-133	8/30/2018	FMW-133-083018	18.8 to 13.8	Shallow	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	---	< 0.20	< 0.20	---	
	12/28/2018	FMW133-122818			< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	---	< 0.20	< 0.20	---
FMW-134	8/30/2018	FMW-134-083018	13.4 to 8.4	Shallow	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	---	< 1.0	< 1.0	---	
	12/28/2018	FMW134-122818			< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	---
	12/28/2018	FMW500-122818			< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	---	< 0.20	< 0.20	---
FMW-135	8/30/2018	FMW-135-083018	18.6 to 13.6	Shallow	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	---	< 0.20	0.41	---	
	12/28/2018	FMW135-122818			< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	---	< 0.20	< 0.20	---
FMW-136	8/30/2018	FMW-136-083018	-4.9 to -14.9	Intermediate	< 0.20	< 0.20	0.36	< 0.20	< 0.20	< 0.20	---	< 0.20	<b>2.7</b>	---	
	12/28/2018	FMW136-122818			< 0.20	< 0.20	0.35	< 0.20	< 0.20	< 0.20	< 0.20	---	< 0.20	< 0.20	---
FMW-144	12/26/2019	FMW-144-122619	-8.6 to -13.6	Intermediate	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	---	---	---	---	---	
FMW-145	12/26/2019	FMW-145-122619	-8.1 to -13.1	Intermediate	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	---	---	---	---	---	
FMW-146	12/26/2019	FMW-146-122619	-7.8 to -12.8	Intermediate	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	---	---	---	---	---	
FMW-147	12/26/2019	FMW-147-122619	-8.2 to -13.2	Intermediate	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	---	---	---	---	---	
FMW-149	12/26/2019	FMW-149-122619	-7.8 to -12.8	Intermediate	< 0.20	< 0.20	0.21	< 0.20	< 0.20	---	---	---	---	---	
<b>Existing Monitoring Wells</b>															
FMW-137	11/20/2018	FMW-137-112018	-41.9 to -54.9	Deep Outwash Aquifer	< 0.20	< 0.20	1.2	< 0.20	< 0.20	---	---	---	---	---	
	12/28/2018	FMW137-122818			< 0.20	< 0.20	1.1	< 0.20	< 0.20	---	---	---	---	---	
	5/6/2019	FMW-137-050619			< 0.20	< 0.20	1.3	< 0.20	< 0.20	---	---	---	---	---	
	7/8/2019	FMW-137-070819			< 0.20	< 0.20	1.3	< 0.20	< 0.20	---	---	---	---	---	
	5/16/2023	FMW-137-051623			< 0.400	< 0.400	<b>20.3</b>	< 0.400	<b>0.320 J</b>	---	---	---	---	---	
FMW-138	11/20/2018	FMW-138-112018	-45.96 to -55.96	Deep Outwash Aquifer	< 0.20	< 0.20	0.29	< 0.20	< 0.20	---	---	---	---	---	
	12/28/2018	FMW138-122818			< 0.20	< 0.20	0.34	< 0.20	< 0.20	---	---	---	---	---	
	5/6/2019	FMW-138-050619			< 0.20	< 0.20	0.38	< 0.20	< 0.20	---	---	---	---	---	
	7/8/2019	FMW-138-070819			< 0.20	< 0.20	0.34	< 0.20	< 0.20	---	---	---	---	---	
	5/16/2023	FMW-138-051623			< 0.400	< 0.400	< 0.400	< 0.400	< 0.400	---	---	---	---	---	
FMW-165	5/17/2023	FMW-165-051723	-44.9 to -54.9	Deep Outwash Aquifer	< 0.400 V	< 0.400 V	4.46 V	< 0.400 V	<b>0.880 V</b>	---	---	---	---	---	
<b>Screening Level for Protection of Groundwater as Drinking Water<sup>3</sup></b>					<b>5.0<sup>4</sup></b>	<b>4.0</b>	<b>16</b>	<b>100</b>	<b>0.29</b>	<b>200<sup>4</sup></b>	<b>7,200</b>	<b>7.1</b>	<b>14<sup>4</sup></b>	<b>24</b>	
<b>Screening Level for Protection of Indoor Air<sup>3</sup></b>					<b>25</b>	<b>1.4</b>	<b>180</b>	<b>77</b>	<b>0.33</b>	<b>5,400</b>	<b>NE</b>	<b>1.4</b>	<b>1.2</b>	<b>800</b>	
<b>Laboratory Practical Quantitation Limit<sup>5</sup></b>					<b>0.20</b>	<b>0.20</b>	<b>0.20</b>	<b>0.20</b>	<b>0.20</b>	<b>0.20</b>	<b>5.0</b>	<b>0.20</b>	<b>0.20</b>	<b>0.20</b>	

**Table 9  
Groundwater Analytical Results for Select CVOCs  
Block 38 West Property  
Seattle, Washington  
Farallon PN: 397-019**

Sample Location	Sample Date	Sample Identification	Screened Interval (feet NAVD88) <sup>1</sup>	Water Bearing Zone	Analytical Results (micrograms per liter) <sup>2</sup>										
					PCE	TCE	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Vinyl Chloride	1,1,1-Trichloroethane	Acetone	Bromodichloromethane	Chloroform	Methyl Tertiary Butyl Ether (MTBE)	
<b>Block 37 Site</b>															
MW-41	6/2/2005	MW-41	22.0 to 7.0	Shallow	---	---	---	---	---	---	---	---	---	< 1	
	7/26/2005	MW-41			---	---	---	---	---	---	---	---	---	---	< 1
	11/2/2005	MW-41			---	---	---	---	---	---	---	---	---	---	< 1
	2/23/2006	MW-41			---	---	---	---	---	---	---	---	---	---	< 1
	5/9/2006	MW-41			---	---	---	---	---	---	---	---	---	---	< 1
	8/30/2006	MW-41			---	---	---	---	---	---	---	---	---	---	< 1
	12/12/2006	MW-41			---	---	---	---	---	---	---	---	---	---	< 1
	3/7/2007	MW-41			---	---	---	---	---	---	---	---	---	---	< 1
	6/14/2007	MW-41			---	---	---	---	---	---	---	---	---	---	< 1
	9/13/2007	MW-41			---	---	---	---	---	---	---	---	---	---	< 1
	12/18/2007	MW-41			---	---	---	---	---	---	---	---	---	---	< 1
	3/17/2008	MW-41			---	---	---	---	---	---	---	---	---	---	< 3
	6/3/2008	MW-41			---	---	---	---	---	---	---	---	---	---	< 1
	8/4/2008	MW-41			---	---	---	< 0.102	---	---	---	---	---	---	< 1
	11/4/2008	MW-41			---	---	---	---	---	---	---	---	---	---	< 1.00
5/17/2009	MW-41	---	---	---	---	---	---	---	---	---	---	< 1.00			
8/16/2009	MW-41	---	---	---	---	---	---	---	---	---	---	< 1.0			
11/15/2009	MW-41	---	---	---	---	---	---	---	---	---	---	< 1.0			
MW-71	11/3/2005	MW-71	25.42 to 10.42	Shallow	---	---	---	---	---	---	---	---	---	< 20	
	2/23/2006	MW-71			---	---	---	---	---	---	---	---	---	---	< 20
	5/10/2006	MW-71			---	---	---	---	---	---	---	---	---	---	< 40
	8/29/2006	MW-71			---	---	---	---	---	---	---	---	---	---	< 1
	12/12/2006	MW-71			---	---	---	---	---	---	---	---	---	---	< 1
	3/7/2007	MW-71			---	---	---	---	---	---	---	---	---	---	< 40
	6/14/2007	MW-71			---	---	---	---	---	---	---	---	---	---	< 1
	9/14/2007	MW-71			---	---	---	---	---	---	---	---	---	---	< 1
	12/17/2007	MW-71			---	---	---	---	---	---	---	---	---	---	< 1
	3/17/2008	MW-71			---	---	---	---	---	---	---	---	---	---	<b>259</b>
	6/2/2008	MW-71			---	---	---	---	---	---	---	---	---	---	< 1
	8/4/2008	MW-71			---	---	---	---	---	---	---	---	---	---	< 1
	11/3/2008	MW-71			---	---	---	---	---	---	---	---	---	---	< 1.00
	5/17/2009	MW-71			---	---	---	---	---	---	---	---	---	---	< 1.00
8/16/2009	MW-71	---	---	---	---	---	---	---	---	---	---	< 1.0			
11/15/2009	MW-71	---	---	---	---	---	---	---	---	---	---	< 1.0			
<b>Screening Level for Protection of Groundwater as Drinking Water<sup>3</sup></b>					<b>5.0<sup>4</sup></b>	<b>4.0</b>	<b>16</b>	<b>100</b>	<b>0.29</b>	<b>200<sup>4</sup></b>	<b>7,200</b>	<b>7.1</b>	<b>14<sup>4</sup></b>	<b>24</b>	
<b>Screening Level for Protection of Indoor Air<sup>3</sup></b>					<b>25</b>	<b>1.4</b>	<b>180</b>	<b>77</b>	<b>0.33</b>	<b>5,400</b>	<b>NE</b>	<b>1.4</b>	<b>1.2</b>	<b>800</b>	
<b>Laboratory Practical Quantitation Limit<sup>5</sup></b>					<b>0.20</b>	<b>0.20</b>	<b>0.20</b>	<b>0.20</b>	<b>0.20</b>	<b>0.20</b>	<b>5.0</b>	<b>0.20</b>	<b>0.20</b>	<b>0.20</b>	

**Table 9  
Groundwater Analytical Results for Select CVOCs  
Block 38 West Property  
Seattle, Washington  
Farallon PN: 397-019**

Sample Location	Sample Date	Sample Identification	Screened Interval (feet NAVD88) <sup>1</sup>	Water Bearing Zone	Analytical Results (micrograms per liter) <sup>2</sup>										
					PCE	TCE	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Vinyl Chloride	1,1,1-Trichloroethane	Acetone	Bromodichloromethane	Chloroform	Methyl Tertiary Butyl Ether (MTBE)	
MW-72	11/3/2005	MW-72	25.32 to 10.32	Shallow	---	---	---	---	---	---	---	---	---	< 2	
	2/23/2006	MW-72			---	---	---	---	---	---	---	---	---	---	< 2
	5/10/2006	MW-72			---	---	---	---	---	---	---	---	---	---	< 2
	8/29/2006	MW-72			---	---	---	---	---	---	---	---	---	---	< 1
	12/12/2006	MW-72			---	---	---	---	---	---	---	---	---	---	< 1
	3/7/2007	MW-72			---	---	---	---	---	---	---	---	---	---	< 1
	6/14/2007	MW-72			---	---	---	---	---	---	---	---	---	---	< 1
	9/14/2007	MW-72			---	---	---	---	---	---	---	---	---	---	< 1
	12/17/2007	MW-72			---	---	---	---	---	---	---	---	---	---	< 1
	3/17/2008	MW-72			---	---	---	---	---	---	---	---	---	---	< 3
	6/2/2008	MW-72			---	---	---	---	---	---	---	---	---	---	< 1
	8/4/2008	MW-72			---	---	---	---	---	---	---	---	---	---	< 1
	11/3/2008	MW-72			---	---	---	---	---	---	---	---	---	---	< 1.00
	5/17/2009	MW-72			---	---	---	---	---	---	---	---	---	---	< 1.00
8/16/2009	MW-72	---	---	---	---	---	---	---	---	---	---	< 1.0			
11/15/2009	MW-72	---	---	---	---	---	---	---	---	---	---	< 1.0			
MW-73	11/3/2005	MW-73	25.11 to 10.11	Shallow	---	---	---	---	---	---	---	---	---	< 2	
	2/23/2006	MW-73			---	---	---	---	---	---	---	---	---	---	< 1
	4/10/2006	MW-73			---	---	---	---	---	---	---	---	---	---	< 1
	8/29/2006	MW-73			---	---	---	---	---	---	---	---	---	---	< 1
	12/12/2006	MW-73			---	---	---	---	---	---	---	---	---	---	< 1
	3/7/2007	MW-73			---	---	---	---	---	---	---	---	---	---	< 1
	6/14/2007	MW-73			---	---	---	---	---	---	---	---	---	---	< 1
	9/14/2007	MW-73			---	---	---	---	---	---	---	---	---	---	< 1
	12/17/2007	MW-73			---	---	---	---	---	---	---	---	---	---	< 1
	3/17/2008	MW-73			---	---	---	---	---	---	---	---	---	---	< 3
	6/2/2008	MW-73			---	---	---	---	---	---	---	---	---	---	< 1
	8/4/2008	MW-73			---	---	---	---	---	---	---	---	---	---	< 1
	11/3/2008	MW-73			---	---	---	---	---	---	---	---	---	---	< 1.00
	5/17/2009	MW-73			---	---	---	---	---	---	---	---	---	---	< 1.00
8/16/2009	MW-73	---	---	---	---	---	---	---	---	---	---	< 1.0			
11/15/2009	MW-73	---	---	---	---	---	---	---	---	---	---	< 1.0			
<b>Screening Level for Protection of Groundwater as Drinking Water<sup>3</sup></b>					<b>5.0<sup>4</sup></b>	<b>4.0</b>	<b>16</b>	<b>100</b>	<b>0.29</b>	<b>200<sup>4</sup></b>	<b>7,200</b>	<b>7.1</b>	<b>14<sup>4</sup></b>	<b>24</b>	
<b>Screening Level for Protection of Indoor Air<sup>3</sup></b>					<b>25</b>	<b>1.4</b>	<b>180</b>	<b>77</b>	<b>0.33</b>	<b>5,400</b>	<b>NE</b>	<b>1.4</b>	<b>1.2</b>	<b>800</b>	
<b>Laboratory Practical Quantitation Limit<sup>5</sup></b>					<b>0.20</b>	<b>0.20</b>	<b>0.20</b>	<b>0.20</b>	<b>0.20</b>	<b>0.20</b>	<b>5.0</b>	<b>0.20</b>	<b>0.20</b>	<b>0.20</b>	

**Table 9  
Groundwater Analytical Results for Select CVOCs  
Block 38 West Property  
Seattle, Washington  
Farallon PN: 397-019**

Sample Location	Sample Date	Sample Identification	Screened Interval (feet NAVD88) <sup>1</sup>	Water Bearing Zone	Analytical Results (micrograms per liter) <sup>2</sup>										
					PCE	TCE	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Vinyl Chloride	1,1,1-Trichloroethane	Acetone	Bromodichloromethane	Chloroform	Methyl Tertiary Butyl Ether (MTBE)	
MW-95	11/2/2005	MW-95	Unknown	Shallow	---	---	---	---	---	---	---	---	---	< 1	
	2/23/2006	MW-95			---	---	---	---	---	---	---	---	---	---	< 1
	5/9/2006	MW-95			---	---	---	---	---	---	---	---	---	---	< 1
	12/12/2006	MW-95			---	---	---	---	---	---	---	---	---	---	< 1
	3/7/2007	MW-95			---	---	---	---	---	---	---	---	---	---	< 1
	6/14/2007	MW-95			---	---	---	---	---	---	---	---	---	---	< 1
	9/13/2007	MW-95			---	---	---	---	---	---	---	---	---	---	< 1
	12/18/2007	MW-95			---	---	---	---	---	---	---	---	---	---	< 1
	3/17/2008	MW-95			---	---	---	---	---	---	---	---	---	---	< 3
	6/3/2008	MW-95			---	---	---	---	---	---	---	---	---	---	< 1
	8/4/2008	MW-95			---	---	---	---	---	---	---	---	---	---	< 1
	11/4/2008	MW-95			---	---	---	---	---	---	---	---	---	---	< 1.00
	5/17/2009	MW-95			---	---	---	---	---	---	---	---	---	---	< 1.00
	8/16/2009	MW-95			---	---	---	---	---	---	---	---	---	---	< 1.0
11/15/2009	MW-95	---	---	---	---	---	---	---	---	---	---	< 1.0			
<b>Screening Level for Protection of Groundwater as Drinking Water<sup>3</sup></b>					<b>5.0<sup>4</sup></b>	<b>4.0</b>	<b>16</b>	<b>100</b>	<b>0.29</b>	<b>200<sup>4</sup></b>	<b>7,200</b>	<b>7.1</b>	<b>14<sup>4</sup></b>	<b>24</b>	
<b>Screening Level for Protection of Indoor Air<sup>3</sup></b>					<b>25</b>	<b>1.4</b>	<b>180</b>	<b>77</b>	<b>0.33</b>	<b>5,400</b>	<b>NE</b>	<b>1.4</b>	<b>1.2</b>	<b>800</b>	
<b>Laboratory Practical Quantitation Limit<sup>5</sup></b>					<b>0.20</b>	<b>0.20</b>	<b>0.20</b>	<b>0.20</b>	<b>0.20</b>	<b>0.20</b>	<b>5.0</b>	<b>0.20</b>	<b>0.20</b>	<b>0.20</b>	

**NOTES:**

Results in **bold** and highlighted **yellow** denote concentrations exceeding applicable screening levels.

< denotes analyte not detected at or exceeding the reporting limit listed.

— denotes sample not analyzed.

<sup>1</sup>In feet referenced to North American Vertical Datum of 1988 (NAVD88).

<sup>2</sup>Analyzed by U.S. Environmental Protection Agency Method 8260C or 8260D. Only detected and select VOCs shown; see laboratory report for full list of analytes.

<sup>3</sup>Washington State Cleanup Levels and Risk Calculations (CLARC) under Washington State Model Toxics Control Act Cleanup Regulation (MTCA), Standard Method B Values for Groundwater and Vapor Intrusion Method B Table, Groundwater Screening Levels, from CLARC Master spreadsheet, <https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Contamination-clean-up-tools/CLARC>, unless otherwise noted.

<sup>4</sup>Groundwater screening level adjusted or based on the Federal Maximum Contaminant Level (MCL), 40 Code of Federal Regulations (CFR) Part 141.

<sup>5</sup>Laboratory Practical Quantitation Limits (PQLs) from OnSite Environmental of Redmond, Washington. PQLs for individual samples may vary due to sample matrix interferences or dilutions.

Shading represents most stringent screening level for groundwater.

ESP = elevation survey pending

NE = not established

V = sample taken from VOA vial with headspace (air bubble over 6 mm in diameter)

VOCs = volatile organic compounds

**Table 10**  
**Groundwater Analytical Results for Select PCBs**  
**Block 38 West Property**  
**Seattle, Washington**  
**Farallon PN: 397-019**

Sample Location	Sample Date	Sample Identification	Screened Interval (feet NAVD88) <sup>1</sup>	Water Bearing Zone	Analytical Results (micrograms per liter) <sup>2</sup>							Total PCBs <sup>3</sup>
					Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	
<b>Block 38 West</b>												
<b>Decommissioned Monitoring Wells</b>												
FMW-144	12/26/2019	FMW-144-122619	-8.6 to -13.6	Intermediate	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.16
FMW-145	12/26/2019	FMW-145-122619	-8.1 to -13.1	Intermediate	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.16
FMW-146	12/26/2019	FMW-146-122619	-7.8 to -12.8	Intermediate	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.048	< 0.17
FMW-147	12/26/2019	FMW-147-122619	-8.2 to -13.2	Intermediate	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.16
FMW-149	12/26/2019	FMW-149-122619	-7.8 to -12.8	Intermediate	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.047	< 0.16
<b>Screening Level for Protection of Groundwater as Drinking Water<sup>4</sup></b>												<b>0.22</b>
<b>Screening Level for Protection of Indoor Air<sup>4</sup></b>												<b>NE</b>
<b>Laboratory Practical Quantitation Limit<sup>5</sup></b>												<b>0.050</b>

**NOTES:**

< denotes analyte not detected at or exceeding the reporting limit listed.

<sup>1</sup>In feet referenced to North American Vertical Datum of 1988 (NAVD88).

<sup>2</sup>Analyzed by U.S. Environmental Protection Agency Method 8082A.

<sup>3</sup>Where all Aroclors were non-detect in a specific sample, half the reporting limit for each Aroclor was used to calculate total PCBs.

<sup>4</sup>South Lake Union Preliminary Cleanup Level Workbook, dated February 2023, prepared by the Washington State Department of Ecology.

<sup>5</sup>Laboratory Practical Quantitation Limits (PQLs) from OnSite Environmental of Redmond, Washington. PQLs for individual samples may vary due to sample matrix interferences or dilutions.

Shading represents most stringent screening level for groundwater.

NE = not established

PCB = polychlorinated biphenyl

**Table 11**  
**Groundwater Analytical Results for Metals**  
**Block 38 West Property**  
**Seattle, Washington**  
**Farallon PN: 397-019**

Sample Location	Sample Date	Sample Identification	Screened Interval (feet NAVD88) <sup>1</sup>	Water Bearing Zone	Analytical Results (micrograms per liter) <sup>2</sup>			
					Total Barium	Dissolved Barium	Total Mercury	Dissolved Mercury
<b>Existing Wells</b>								
FMW-154	5/16/2023	FMW-154-051623	12.8 to 7.8	Shallow	95.5	91.1	---	---
FMW-155	5/16/2023	FMW-155-051623	13.9 to 8.9	Shallow	87.7	89.4	< 0.0800	< 0.0800
FMW-156	5/16/2023	FMW-156-051623	10.7 to 5.7	Shallow	44.5	44.2	---	---
FMW-158	5/15/2023	FMW-158-051523	18.0 to 3.0	Shallow	84.7	82.0	---	---
<b>MTCA Cleanup Levels for Groundwater<sup>3</sup></b>					<b>3,200<sup>4</sup></b>		<b>2</b>	

**NOTES:**

Results in **bold** denote concentrations exceeding applicable cleanup levels.

< denotes analyte not detected at or exceeding the reporting limit listed.

<sup>1</sup>In feet referenced to North American Vertical Datum of 1988 (NAVD88).

<sup>2</sup>Analyzed by U.S. Environmental Protection Agency Method 6020B.

<sup>3</sup>Washington State Model Toxics Control Act Cleanup Regulation (MTCA) Method A Cleanup Levels for Groundwater, Table 720-1 of Section 900 of Chapter 173-340 of the Washington Administrative Code, as revised 2013, unless otherwise noted.

<sup>4</sup>Washington State Cleanup Levels and Risk Calculations (CLARC) under Washington State MTCA, Standard Method B Formula Values for Groundwater from CLARC Master spreadsheet, <https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Contamination-clean-up-tools/CLARC>

**Table 12**  
**Groundwater Analytical Results for DRO and ORO with and without Silica Gel Cleanup**  
**Block 38 West Property**  
**Seattle, Washington**  
**Farallon PN: 397-019**

Sample Location	Sample Date	Sample Identification	Screened Interval (feet NAVD88) <sup>1</sup>	Water Bearing Zone	Analytical Results (micrograms per liter)								Analytical Results (milligrams per liter)	
					NWTPH-Dx <sup>2</sup>			NWTPH-Dx with Silica Gel Cleanup <sup>3</sup>			Total Polar Organics <sup>4</sup>	Background Polar Organics <sup>4</sup>	Adjusted Polar Organics (Metabolites) <sup>5</sup>	Total Organic Carbon <sup>6</sup>
					DRO	ORO	Total Petroleum + Polar Organics	DRO	ORO	Total Petroleum				
<b>Block 38 West Property</b>														
<b>Background Monitoring Wells</b>														
FMW-158	5/15/2023	FMW-158-051523	18.0 to 3.0	Shallow	149	< 151	149	---	---	---	149	149	---	---
	8/15/2023	FMW-158-081523			256	< 151	256	---	---	---	256	256 <sup>7</sup>	---	---
	11/15/2023	FMW-158-111523			398	< 151	398	< 75.5	< 151	< 151	398	398	---	---
	2/29/2024	FMW-158-022924			---	---	< 250 <sup>^</sup>	---	---	< 250 <sup>^</sup>	< 250	< 250	---	8.80
FMW-159	5/16/2023	FMW-159-051623	-4.9 to -14.9	Intermediate	102	< 150	102	---	---	---	102	102	---	---
	8/15/2023	FMW-159-081523			109	< 154	109	---	---	---	109	109	---	---
	11/15/2023	FMW-159-111523			249	< 151	249	< 75.5	< 151	< 151	249	249	---	---
	2/28/2024	FMW-159-022824			---	---	< 250 <sup>^</sup>	---	---	< 250 <sup>^</sup>	< 250	< 250	---	4.20
<b>Existing Monitoring Wells</b>														
FMW-154	5/16/2023	FMW-154-051623	12.8 to 7.8	Shallow	318	< 154	318	---	---	---	---	---	---	---
	8/14/2023	FMW-154-081423			<b>514</b>	< 152	<b>514</b>	< 76.2	195 <sup>8</sup>	195 <sup>8</sup>	319	256	63	---
	11/14/2023	FMW-154-111423			<b>791</b>	< 152	<b>791</b>	< 76.2	< 152	< 152	<b>791</b>	398	393	---
	2/28/2024	FMW-154-022824			---	---	435 <sup>^</sup>	---	---	---	---	---	---	---
FMW-155	5/16/2023	FMW-155-051623	13.9 to 8.9	Shallow	287	< 151	287	---	---	---	---	---	---	---
	8/14/2023	FMW-155-081423			<b>530</b>	< 154	<b>530</b>	< 76.9	< 154	< 154	<b>530</b>	256	274	---
	11/14/2023	FMW-155-111423			<b>943</b>	< 152	<b>943</b>	< 76.2	< 152	< 152	<b>943</b>	398	545	---
	2/27/2024	FMW-155-022724			---	---	<b>605<sup>^</sup></b>	---	---	< 250 <sup>^</sup>	<b>605</b>	< 250	605	---
FMW-160	5/15/2023	FMW-160-051523	19.0 to 4.0	Shallow	114	< 151	114	---	---	---	---	---	---	---
	8/14/2023	FMW-160-081423			<b>634</b>	< 154	<b>634</b>	< 76.9	< 154	< 154	<b>634</b>	256	378	---
	11/14/2023	FMW-160-111423			375	< 154	375	---	---	---	---	---	---	---
	2/27/2024	FMW-160-022724			---	---	< 250 <sup>^</sup>	---	---	---	---	---	---	---
<b>Screening Level for Protection of Groundwater as Drinking Water<sup>9</sup></b>					<b>500</b>		<b>500</b>	<b>500</b>	<b>500</b>	<b>500</b>	<b>500</b>	<b>NA</b>	<b>NE</b>	<b>NA</b>
<b>Screening Level for Protection of Indoor Air<sup>10</sup></b>					<b>NE</b>		<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NA</b>	<b>NE</b>	<b>NA</b>
<b>Screening Level for Sites with No Detectable Petroleum Hydrocarbons<sup>11</sup></b>					<b>NE</b>		<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NA</b>	<b>700</b>	<b>NA</b>
<b>Laboratory Practical Quantitation Limit<sup>12</sup></b>					<b>500</b>		<b>500</b>	<b>500</b>	<b>500</b>	<b>500</b>	<b>500</b>	<b>NA</b>	<b>500</b>	<b>NA</b>

**Table 12  
Groundwater Analytical Results for DRO and ORO with and without Silica Gel Cleanup  
Block 38 West Property  
Seattle, Washington  
Farallon PN: 397-019**

Sample Location	Sample Date	Sample Identification	Screened Interval (feet NAVD88) <sup>1</sup>	Water Bearing Zone	Analytical Results (micrograms per liter)								Analytical Results (milligrams per liter)	
					NWTPH-Dx <sup>2</sup>			NWTPH-Dx with Silica Gel Cleanup <sup>3</sup>			Total Polar Organics <sup>4</sup>	Background Polar Organics <sup>4</sup>	Adjusted Polar Organics (Metabolites) <sup>5</sup>	Total Organic Carbon <sup>6</sup>
					DRO	ORO	Total Petroleum + Polar Organics	DRO	ORO	Total Petroleum				
OW-1	5/16/2023	OW-1-051623	-5.8 to -20.8	Intermediate	332	< 151	332	---	---	---	---	---	---	---
	8/15/2023	OW-1-081523			385	< 154	385	---	---	---	---	---	---	---
	11/15/2023	OW-1-111523			<b>628</b>	< 152	<b>628</b>	< 76.2	< 152	< 152	<b>628</b>	249	379	---
	2/28/2024	OW-1-022824			---	---	391 ^	---	---	---	---	---	---	---
<b>Screening Level for Protection of Groundwater as Drinking Water<sup>9</sup></b>					<b>500</b>		<b>500</b>	<b>500</b>	<b>500</b>	<b>500</b>	<b>500</b>	<b>NA</b>	<b>NE</b>	<b>NA</b>
<b>Screening Level for Protection of Indoor Air<sup>10</sup></b>					<b>NE</b>		<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NA</b>	<b>NE</b>	<b>NA</b>
<b>Screening Level for Sites with No Detectable Petroleum Hydrocarbons<sup>11</sup></b>					<b>NE</b>		<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NA</b>	<b>700</b>	<b>NA</b>
<b>Laboratory Practical Quantitation Limit<sup>12</sup></b>					<b>500</b>		<b>500</b>	<b>500</b>	<b>500</b>	<b>500</b>	<b>500</b>	<b>NA</b>	<b>500</b>	<b>NA</b>

**NOTES:**

Results in **bold** denote concentrations exceeding applicable screening levels.  
 < denotes analyte not detected at or exceeding the reporting limit listed.  
 --- denotes sample not analyzed or not applicable.

<sup>1</sup>In feet referenced to North American Vertical Datum of 1988 (NAVD88).

<sup>2</sup>Analyzed by Northwest Method NWTPH-Dx. Total Petroleum + Polar Organics is the sum of DRO and ORO results.

<sup>3</sup>Analyzed by Northwest Method NWTPH-Dx using sample extract treated with silica gel cleanup procedure. Total Petroleum is the sum of DRO and ORO results. Where both results are non-detect, the higher of the two reporting limits is reported as the Total NWTPH-Dx value.

<sup>4</sup>Total Polar Organics is calculated by subtracting Total Petroleum from Total Petroleum + Polar Organics. Background Polar Organics represents values from selected background wells.

<sup>5</sup>Polar Organics (polar metabolites) concentration is calculated by subtracting "Total Petroleum" from "Total Petroleum + Polar Organics", and then subtracting "Background Polar Organics".

<sup>6</sup>Analyzed by Standard Method 5310C.

<sup>7</sup>Washington State Department of Ecology approved the use of the August 2023 FMW-158 NWTPH-Dx result as a background polar organic concentration in a January 8, 2024 email.

<sup>8</sup>This detection may be attributed to sediment interference in the silica gel cleanup analysis and is less than the November 2023 silica gel reporting limit of 250 micrograms per liter.


<sup>9</sup>Washington State Model Toxics Control Act Cleanup Regulation (MTCA) Method A Cleanup Levels for Groundwater, Table 720-1 of Section 900 of Chapter 173-340 of the Washington Administrative Code, as amended 2013. MTCA Method A is used as a surrogate for Method B because no Method B groundwater value has been established for TPH diesel- and oil-range mixtures.

<sup>10</sup>Washington State Cleanup Levels and Risk Calculations (CLARC) under Washington State MTCA from CLARC Master spreadsheet.

<<https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Contamination-clean-up-tools/CLARC>>.

<sup>11</sup>Washington State Department of Ecology, *Guidance for Silica Gel Cleanup in Washington State*, Publication No. 22-09-059, revised November 2023.

<sup>12</sup>Laboratory Practical Quantitation Limits (PQLs) from OnSite Environmental of Redmond, Washington. PQLs for individual samples may vary due to sample matrix interferences or dilutions.

 Shading represents selected screening level for groundwater.

DRO = total petroleum hydrocarbons (TPH) as diesel-range organics

J = result is an estimate

NA = not applicable

NE = not established

ORO = TPH as oil-range organics

^ = laboratory-provided total NWTPH-Dx value covering C10-C40 carbon range



**Table 13**  
**Remedial Investigation Work Plan Preliminary Screening Levels**  
**Block 38 West Site**  
**Seattle, Washington**  
**Farallon PN: 397-019**

Chemical	Soil Screening Levels											Groundwater Screening Levels							Chemical Retained as COPC (based on Soil or Groundwater)		
	Method B Direct Contact	Protection of Groundwater				Adjustment Factors		Proposed Soil Screening Level (mg/kg)		Maximum Concentration Detected at Site (mg/kg)	Retained as Soil COPC	Groundwater		Protection of Indoor Air	Adjustment Factors		Proposed Groundwater Screening Level (µg/l)	Maximum Concentration Detected at Site (µg/l)		Retained as Groundwater COPC	
		Vadose Zone		Saturated Zone		Natural Background (mg/kg)	Practical Quantitation Limits (mg/kg)	Vadose Zone	Saturated Zone			Level (µg/l)	Basis		Level (µg/l)	Natural Background (µg/l)					Practical Quantitation Limits (µg/l)
		Level (mg/kg)	Basis	Level (mg/kg)	Basis																
<b>Petroleum Hydrocarbons</b>																					
TPH, diesel- and oil-range organics	---	2,000	Method A#	2,000	Method A#	---	75	2,000	2,000	30,400   23,800	Yes	500	Method A	---	---	500	500	3,300	Yes	Yes	
TPH, gasoline-range organics, benzene present	1,500*	30	Method A#	30	Method A#	---	5	30	30	2,100   83	Yes	800	Method A	---	---	100	800	2,100 <sup>1</sup>	Yes	Yes	
TPH, gasoline-range organics, no detectable benzene	1,500*	100	Method A#	100	Method A#	---	5	100	100	2,100   83	Yes	1,000	Method A	---	---	100	1,000	2,100 <sup>1</sup>	Yes	Yes	
<b>Volatile Organic Compounds</b>																					
Acetone	72,000	29	Leach	2.1	Leach	---	0.005	29	2.1	Not Analyzed	---	7,200	Method B	---	---	5.0	7,200	7.4	No	No	
Benzene	18	0.027	Leach	0.0017	Leach	---	0.001	0.027	0.0017	0.12   0.0033	Yes	5.0	MCL	2.4	---	0.20	2.4	5.1 <sup>2</sup>	Yes	Yes	
Chloroform	32	0.074	Leach	0.0048	Leach	---	0.001	0.074	0.0048	Not Analyzed	---	14	Method B/Adjusted MCL	1.2	---	0.20	1.2	2.7	No <sup>3</sup>	No <sup>3</sup>	
cis-1,2-Dichloroethene	160	0.078	Leach	0.0052	Leach	---	0.001	0.078	0.0052	Not Detected <sup>6</sup>	No	16	Method B	180	---	0.20	16	1.3	No	No <sup>3</sup>	
Ethylbenzene	8,000	5.9	Leach	0.34	Leach	---	0.001	5.9	0.34	0.13   0.0075	No	700	MCL	2,800	---	0.20	700	2.2	No	No	
Tetrachloroethene	480	0.05	Leach	0.0028	Leach	---	0.001	0.05	0.0028	0.0041   ND	No	5.0	MCL	25	---	0.20	5.0	Not Detected	No	No	
Toluene	6,400	4.5	Leach	0.27	Leach	---	0.005	4.5	0.27	0.49   0.018	No	640	Method B/Adjusted MCL	15,000	---	1.0	640	7.5	No	No	
1,1,1-Trichloroethane	160,000	1.5	Leach	0.084	Leach	---	0.001	1.5	0.084	Not Analyzed	---	200	MCL	5,400	---	0.20	200	0.26	No	No	
Xylenes	16,000	14	Leach	0.83	Leach	---	0.003	14	0.83	0.94   0.048	No	1,600	Method B/Adjusted MCL	320	---	0.60	320	6.7	No	No	
<b>Polycyclic Aromatic Hydrocarbons (PAHs)</b>																					
Naphthalene	1,600	4.5	Leach	0.24	Leach	---	0.0067	4.5	0.24	22   9.8	Yes	160	Method B	8.9 <sup>**</sup>	---	0.10	8.9 <sup>**</sup>	650	Yes	Yes	
1-Methylnaphthalene	34	0.082	Leach	0.0042	Leach	---	0.0067	0.082	0.0067	14   7.5	Yes	1.5	Method B	---	---	0.10	1.5	10	Yes	Yes	
2-Methylnaphthalene	320	1.7	Leach	0.088	Leach	---	0.0067	1.7	0.088	15   8.8	Yes	32	Method B	---	---	0.10	32	13	No	Yes	
Acenaphthene	4,800	49	Leach	2.5	Leach	---	0.0067	49	2.5	1.5   0.049	No	480	Method B	---	---	0.10	480	8.3	No	No	
Acenaphthylene	---	---	---	---	---	---	0.0067	---	---	0.45   0.045	No	---	---	---	---	0.10	---	0.12	No	No	
Anthracene	24,000	1,100	Leach	57	Leach	---	0.0067	1,100	57	3.3   0.29	No	2,400	Method B	---	---	0.10	2,400	Not Detected	No	No	
Benzo(g,h,i)Perylene	---	---	---	---	---	---	0.0067	---	---	8.5   0.21	No	---	---	---	---	0.010	---	Not Detected	No	No	
Fluoranthene	3,200	630	Leach	32	Leach	---	0.0067	630	32	18   0.97	No	640	Method B	---	---	0.10	640	Not Detected	No	No	
Fluorene	3,200	51	Leach	2.6	Leach	---	0.0067	51	2.6	1.3   0.22	No	320	Method B	---	---	0.10	320	1.6	No	No	
Phenanthrene	---	---	---	---	---	---	0.0067	---	---	18   1.0	No	---	---	---	---	0.10	---	0.48	No	No	
Pyrene	2,400	330	Leach	16	Leach	---	0.0067	330	16	27   1.1	No	240	Method B	---	---	0.10	240	Not Detected	No	No	
<b>Carcinogenic PAHs</b>																					
Benzo(a)Pyrene	0.19	3.9	Leach	0.19	Leach	---	0.0067	0.19	0.19	120   120	Yes	0.2	MCL	---	---	0.010	0.2	0.023	No	Yes	
Benzo(a)Anthracene	cPAH TEC	cPAH TEC	Leach	cPAH TEC	Leach	---	0.0067	cPAH TEC	cPAH TEC	110   91	Yes	cPAH TEC	cPAH TEC	---	---	0.010	cPAH TEC	0.043	No	Yes	
Benzo(b)Fluoranthene	cPAH TEC	cPAH TEC	Leach	cPAH TEC	Leach	---	0.0067	cPAH TEC	cPAH TEC	100   120	Yes	cPAH TEC	cPAH TEC	---	---	0.010	cPAH TEC	0.031	No	Yes	
Benzo(j,k)Fluoranthene	cPAH TEC	cPAH TEC	Leach	cPAH TEC	Leach	---	0.0067	cPAH TEC	cPAH TEC	31   24	Yes	cPAH TEC	cPAH TEC	---	---	0.010	cPAH TEC	Not Detected	No	Yes	
Chrysene	cPAH TEC	cPAH TEC	Leach	cPAH TEC	Leach	---	0.0067	cPAH TEC	cPAH TEC	110   110	Yes	cPAH TEC	cPAH TEC	---	---	0.010	cPAH TEC	0.036	No	Yes	
Dibenzo(a,h)Anthracene	cPAH TEC	cPAH TEC	Leach	cPAH TEC	Leach	---	0.0067	cPAH TEC	cPAH TEC	9.9   9.1	Yes	cPAH TEC	cPAH TEC	---	---	0.010	cPAH TEC	Not Detected	No	Yes	
Indeno(1,2,3-cd)Pyrene	cPAH TEC	cPAH TEC	Leach	cPAH TEC	Leach	---	0.0067	cPAH TEC	cPAH TEC	63   69	Yes	cPAH TEC	cPAH TEC	---	---	0.010	cPAH TEC	0.014	No	Yes	
cPAH TEC	0.19	3.9	Leach	0.19	Leach	---	NA	0.19	0.19	152   150	Yes	0.2	MCL	---	---	NA	0.2	0.033	No	Yes	

**Table 13**  
**Remedial Investigation Work Plan Preliminary Screening Levels**  
**Block 38 West Site**  
**Seattle, Washington**  
**Farallon PN: 397-019**

Chemical	Soil Screening Levels											Groundwater Screening Levels							Chemical Retained as COPC (based on Soil or Groundwater)		
	Method B Direct Contact	Protection of Groundwater				Adjustment Factors		Proposed Soil Screening Level (mg/kg)		Maximum Concentration Detected at Site Vadose   Saturated (mg/kg)	Retained as Soil COPC	Groundwater		Protection of Indoor Air	Adjustment Factors		Proposed Groundwater Screening Level (µg/l)	Maximum Concentration Detected at Site (µg/l)		Retained as Groundwater COPC	
		Vadose Zone		Saturated Zone		Natural Background (mg/kg)	Practical Quantitation Limits (mg/kg)	Vadose Zone	Saturated Zone			Level (µg/l)	Basis		Level (µg/l)	Natural Background (µg/l)					Practical Quantitation Limits (µg/l)
		Level (mg/kg)	Basis	Level (mg/kg)	Basis																
<b>Metals</b>																					
Arsenic	0.67	4.7	Leach	0.23	Leach	7.3	5	7.3	7.3	13   ND	No <sup>3</sup>	0.58	Method B/Adjusted MCL	---	8.0 <sup>5</sup>	3.3	8.0	Not Analyzed	No <sup>3</sup>	No <sup>3</sup>	
Barium	16,000	1,600	Leach	83	Leach	---	2.5	1,600	83	490   290	Yes	2,000	MCL	---	---	28	2,000	Not Analyzed	Yes	Yes	
Cadmium	80	0.69	Leach	0.035	Leach	0.77 <sup>4</sup>	0.50	0.77 <sup>4</sup>	0.77 <sup>4</sup>	2.4   ND	No <sup>3</sup>	5.0	MCL	---	---	4.4	5.0	Not Analyzed	No <sup>3</sup>	No <sup>3</sup>	
Chromium <sup>7</sup>	120,000	480,000	Leach	24,000	Leach	48	0.50	120,000	24,000	48   100	No	100	MCL	---	---	2.0	100	Not Analyzed	No	No	
Lead	250 <sup>8</sup>	3,000	Leach	150	Leach	16.83	5.0	250	150	21,000   240	No <sup>3</sup>	15	MCL	---	---	1.1	15	Not Analyzed	No <sup>3</sup>	No <sup>3</sup>	
Mercury	---	2.1	Leach	0.1	Leach	0.07	0.25	2.1	0.25	ND   1.2	Yes	2.0	MCL	1.1	---	0.50	1.1	Not Analyzed	Yes	Yes	

**NOTES:**

Shading represents most stringent screening level, natural background concentration, or practical quantitation limit for vadose zone soil.  
Shading represents most stringent screening level, natural background concentration, or practical quantitation limit for saturated zone soil.  
Shading represents most stringent screening level or natural background concentration for groundwater.  
**Bold** Maximum concentration detected at the site exceeds proposed screening level.

--- denotes no screening level established for this parameter.

COPC = contaminant of potential concern

cPAH TEC = Carcinogenic polycyclic aromatic hydrocarbon toxic equivalent concentration (cPAH TEC) calculated following the total toxicity equivalency method in Section 708(8) of Chapter 173-340 of the Washington Administrative Code.

Leach = Washington State Cleanup Levels and Risk Calculations (CLARC) under Washington State Model Toxics Control Act Cleanup Regulation (MTCA), default soil concentrations protective of groundwater from CLARC Master spreadsheet, <https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Contamination-clean-up-tools/CLARC>

MCL = Federal Maximum Contaminant Level (MCL), 40 Code of Federal Regulations (CFR) Part 141.

Method A = MTCA Method A Soil Cleanup Levels for Unrestricted Land Uses, Table 740-1 of Section 900 of Chapter 173-340 of the Washington Administrative Code, as revised 2013.

Method B = Washington State CLARC under Washington State MTCA, Standard Method B Formula Values from CLARC Master spreadsheet, <https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Contamination-clean-up-tools/CLARC>

NA = not applicable

<sup>1</sup> Result was derived from a reconnaissance groundwater sample. Analysis of reconnaissance groundwater samples can result in potentially biased data due to turbidity of the sample and greater presence of suspended solids that hazardous substances can sorb onto. This detection in groundwater was flagged by the laboratory because the sample chromatogram was not similar to a typical gas.

<sup>2</sup> Result was derived from a reconnaissance groundwater sample. Analysis of reconnaissance groundwater samples can result in potentially biased data due to turbidity of the sample and greater presence of suspended solids that hazardous substances can sorb onto.

<sup>3</sup> Section 6.4 of the Agency Review Draft-Remedial Investigation Work Plan provides additional information as to why the COPC was not retained for further evaluation for the Block 38 West Site. [Arsenic](#), cadmium and lead are not retained as COPCs for Block 38 West based on historical data indicating that the source is likely associated with the adjacent Rosen Property Site.

<sup>4</sup> Arsenic and cadmium screening levels adjusted for natural background concentrations provided in *Natural Background Soil Metals Concentrations in Washington State*, Washington State Department of Ecology, Publication #94-115, October 1994.

<sup>5</sup> Puget Sound Lowland natural background concentration from *Natural Background Groundwater Arsenic Concentrations in Washington State, Study Results*, Washington State Department of Ecology, Publication No. 14-09-044, dated January 2022.

<sup>6</sup> Reporting limits for cis-1,2-dichloroethene in soil ranged from 0.00074 mg/kg to 0.0044 mg/kg.

<sup>7</sup> Values based on trivalent chromium risk-based values for soil SLs (120,000 mg/kg for direct contact, 480,000 mg/kg vadose leaching, 24,000 saturated leaching) since there is no known source of hexavalent chromium used on the Block 38 West Property. Background levels are based on total chromium. Total chromium groundwater screening level of 100 µg/L based on the MCL.

<sup>8</sup> Value based on Method A as a surrogate for Method B as no Method B direct contact value for soil has been established.

<sup>9</sup> Reporting limits for mercury in soil ranged from 0.27 mg/kg to 0.83 mg/kg.

\* Source of this value is the generic TPH cleanup level from *Model Remedies for Sites with Petroleum Contaminated Soils*, Washington State Department of Ecology, Publication No. 15-09-043, Revised: December 2017.

\*\* MTCA Method B vapor intrusion groundwater screening level for naphthalene is applicable for the Shallow Water-Bearing Zone and the Method B screening level for drinking water is applicable for the deeper Intermediate Water-Bearing Zone.

# Method A is used as a surrogate for Method B because no Method B vadose or saturated leaching value has been established for TPH gasoline-, diesel- and oil-range mixtures.

µg/l = micrograms per liter

mg/kg = milligrams per kilogram

ND = not detected

TPH = total petroleum hydrocarbons

(V) = result from sample collected in vadose zone

(S) = result from sample collected in saturated zone

**Table 14**  
**Post Interim Action Proposed Cleanup Levels**  
**Block 38 West Site**  
**Seattle, Washington**  
**Farallon PN: 397-019**

Chemical	Soil Screening Levels												Groundwater Screening Levels								Chemical Retained as Proposed COC (based on Soil or Groundwater)		
	Method B Direct Contact	Protection of Groundwater				Adjustment Factors		Proposed FS/CAP Soil Cleanup Level (mg/kg)		Maximum Concentration Detected at Site Vadose   Saturated (mg/kg)	Retained as Soil COC for RI Work Plan	Retained as Proposed Soil COC for FS/CAP (post Interim Action)	Groundwater		Protection of Indoor Air	Adjustment Factors		Proposed Groundwater Screening Level (µg/l)	Maximum Concentration Detected at Site (µg/l)	Retained as Groundwater COC for RI Work Plan		Retained as Proposed Groundwater COC for FS/CAP (post Interim Action)	
		Vadose Zone		Saturated Zone		Natural Background (mg/kg)	Practical Quantitation Limits (mg/kg)	Vadose Zone	Saturated Zone				Level (µg/l)	Basis		Level (µg/l)	Natural Background (µg/l)						Practical Quantitation Limits (µg/l)
		Level (mg/kg)	Basis	Level (mg/kg)	Basis																		
<b>Petroleum Hydrocarbons</b>																							
TPH, diesel- and oil-range organics	---	2,000	Method A#	2,000	Method A#	---	75	2,000	2,000	30,400   23,800	Yes	Yes	500	Method A	---	---	500	500	3,300	Yes	No	Yes	
TPH, gasoline-range organics, benzene present	1,500*	30	Method A#	30	Method A#	---	5	30	30	2,100   83	Yes	No	800	Method A	---	---	100	800	2,100 <sup>1</sup>	Yes	No	No	
TPH, gasoline-range organics, no detectable benzene	1,500*	100	Method A#	100	Method A#	---	5	100	100	2,100   83	Yes	No	1,000	Method A	---	---	100	1,000	2,100 <sup>1</sup>	Yes	No	No	
<b>Volatile Organic Compounds</b>																							
Acetone	72,000	29	Leach	2.1	Leach	---	0.005	29	2.1	Not Analyzed	---	---	7,200	Method B	---	---	5.0	7,200	7.4	No	No	No	
Benzene	18	0.027	Leach	0.0017	Leach	---	0.001	0.027	0.0017	0.12   0.0033	Yes	No	5.0	MCL	2.4	---	0.20	2.4	5.1 <sup>2</sup>	Yes	No	No	
Chloroform	32	0.074	Leach	0.0048	Leach	---	0.001	0.074	0.0048	Not Analyzed	---	---	14	Method B/Adjusted MCL	1.2	---	0.20	1.2	2.7	No <sup>3</sup>	No <sup>3</sup>	No <sup>3</sup>	
cis-1,2-Dichloroethene	160	0.078	Leach	0.0052	Leach	---	0.001	0.078	0.0052	Not Detected <sup>6</sup>	No	No	16	Method B	180	---	0.20	16	1.3	No	No	No <sup>3</sup>	
Ethylbenzene	8,000	5.9	Leach	0.34	Leach	---	0.001	5.9	0.34	0.13   0.0075	No	No	700	MCL	2,800	---	0.20	700	2.2	No	No	No	
Tetrachloroethene	480	0.05	Leach	0.0028	Leach	---	0.001	0.05	0.0028	0.0041   ND	No	No	5.0	MCL	25	---	0.20	5.0	Not Detected	No	No	No	
Toluene	6,400	4.5	Leach	0.27	Leach	---	0.005	4.5	0.27	0.49   0.018	No	No	640	Method B/Adjusted MCL	15,000	---	1.0	640	7.5	No	No	No	
1,1,1-Trichloroethane	160,000	1.5	Leach	0.084	Leach	---	0.001	1.5	0.084	Not Analyzed	---	---	200	MCL	5,400	---	0.20	200	0.26	No	No	No	
Xylenes	16,000	14	Leach	0.83	Leach	---	0.003	14	0.83	0.94   0.048	No	No	1,600	Method B/Adjusted MCL	320	---	0.60	320	6.7	No	No	No	
<b>Polycyclic Aromatic Hydrocarbons (PAHs)</b>																							
Naphthalene	1,600	4.5	Leach	0.24	Leach	---	0.0067	1,600 <sup>9</sup>	1,600 <sup>9</sup>	22   9.8	Yes	No	160	Method B	8.9**	---	0.10	8.9**	650	Yes	No	No	
1-Methylnaphthalene	34	0.082	Leach	0.0042	Leach	---	0.0067	34 <sup>9</sup>	34 <sup>9</sup>	14   7.5	Yes	No	1.5	Method B	---	---	0.10	1.5	10	Yes	No	No	
2-Methylnaphthalene	320	1.7	Leach	0.088	Leach	---	0.0067	320 <sup>9</sup>	320 <sup>9</sup>	15   8.8	Yes	No	32	Method B	---	---	0.10	32	13	No	No	No	
Acenaphthene	4,800	49	Leach	2.5	Leach	---	0.0067	49	2.5	1.5   0.049	No	No	480	Method B	---	---	0.10	480	8.3	No	No	No	
Acenaphthylene	---	---	---	---	---	---	0.0067	---	---	0.45   0.045	No	No	---	---	---	---	0.10	---	0.12	No	No	No	
Anthracene	24,000	1,100	Leach	57	Leach	---	0.0067	1,100	57	3.3   0.29	No	No	2,400	Method B	---	---	0.10	2,400	Not Detected	No	No	No	
Benzo(g,h,i)Perylene	---	---	---	---	---	---	0.0067	---	---	8.5   0.21	No	No	---	---	---	---	0.010	---	Not Detected	No	No	No	
Fluoranthene	3,200	630	Leach	32	Leach	---	0.0067	630	32	18   0.97	No	No	640	Method B	---	---	0.10	640	Not Detected	No	No	No	
Fluorene	3,200	51	Leach	2.6	Leach	---	0.0067	51	2.6	1.3   0.22	No	No	320	Method B	---	---	0.10	320	1.6	No	No	No	
Phenanthrene	---	---	---	---	---	---	0.0067	---	---	18   1.0	No	No	---	---	---	---	0.10	---	0.48	No	No	No	
Pyrene	2,400	330	Leach	16	Leach	---	0.0067	330	16	27   1.1	No	No	240	Method B	---	---	0.10	240	Not Detected	No	No	No	
<b>Carcinogenic PAHs</b>																							
Benzo(a)Pyrene	0.19	3.9	Leach	0.19	Leach	---	0.0067	0.19	0.19	120   120	Yes	Yes	0.2	MCL	---	---	0.010	0.2	0.023	No	No	Yes	
Benzo(a)Anthracene	cPAH TEC	cPAH TEC	Leach	cPAH TEC	Leach	---	0.0067	cPAH TEC	cPAH TEC	110   91	Yes	Yes	cPAH TEC	cPAH TEC	---	---	0.010	cPAH TEC	0.043	No	No	Yes	
Benzo(b)Fluoranthene	cPAH TEC	cPAH TEC	Leach	cPAH TEC	Leach	---	0.0067	cPAH TEC	cPAH TEC	100   120	Yes	Yes	cPAH TEC	cPAH TEC	---	---	0.010	cPAH TEC	0.031	No	No	Yes	
Benzo(j,k)Fluoranthene	cPAH TEC	cPAH TEC	Leach	cPAH TEC	Leach	---	0.0067	cPAH TEC	cPAH TEC	31   24	Yes	Yes	cPAH TEC	cPAH TEC	---	---	0.010	cPAH TEC	Not Detected	No	No	Yes	
Chrysene	cPAH TEC	cPAH TEC	Leach	cPAH TEC	Leach	---	0.0067	cPAH TEC	cPAH TEC	110   110	Yes	Yes	cPAH TEC	cPAH TEC	---	---	0.010	cPAH TEC	0.036	No	No	Yes	
Dibenzo(a,h)Anthracene	cPAH TEC	cPAH TEC	Leach	cPAH TEC	Leach	---	0.0067	cPAH TEC	cPAH TEC	9.9   9.1	Yes	Yes	cPAH TEC	cPAH TEC	---	---	0.010	cPAH TEC	Not Detected	No	No	Yes	
Indeno(1,2,3-cd)Pyrene	cPAH TEC	cPAH TEC	Leach	cPAH TEC	Leach	---	0.0067	cPAH TEC	cPAH TEC	63   69	Yes	Yes	cPAH TEC	cPAH TEC	---	---	0.010	cPAH TEC	0.014	No	No	Yes	
cPAH TEC	0.19	3.9	Leach	0.19	Leach	---	NA	0.19	0.19	152   150	Yes	Yes	0.2	MCL	---	---	NA	0.2	0.033	No	No	Yes	

**Table 14  
Post Interim Action Proposed Cleanup Levels  
Block 38 West Site  
Seattle, Washington  
Farallon PN: 397-019**

Chemical	Soil Screening Levels												Groundwater Screening Levels								Chemical Retained as Proposed COC (based on Soil or Groundwater)		
	Method B Direct Contact	Protection of Groundwater				Adjustment Factors		Proposed FS/CAP Soil Cleanup Level (mg/kg)		Maximum Concentration Detected at Site Vadose   Saturated (mg/kg)	Retained as Soil COPC for RI Work Plan	Retained as Proposed Soil COC for FS/CAP (post Interim Action)	Groundwater		Protection of Indoor Air	Adjustment Factors		Proposed Groundwater Screening Level (µg/l)	Maximum Concentration Detected at Site (µg/l)	Retained as Groundwater COPC for RI Work Plan		Retained as Proposed Groundwater COC for FS/CAP (post Interim Action)	
		Vadose Zone		Saturated Zone		Natural Background (mg/kg)	Practical Quantitation Limits (mg/kg)	Vadose Zone	Saturated Zone				Level (µg/l)	Basis		Level (µg/l)	Natural Background (µg/l)						Practical Quantitation Limits (µg/l)
<b>Metals</b>																							
Arsenic	0.67	4.7	Leach	0.23	Leach	7.3	5	7.3	7.3	13   ND	No <sup>3</sup>	No <sup>3</sup>	0.58	Method B/Adjusted MCL	---	8.0 <sup>5</sup>	3.3	8.0	Not Analyzed	No <sup>3</sup>	No <sup>3</sup>	No <sup>3</sup>	
Barium	16,000	1,600	Leach	83	Leach	---	2.5	16,000 <sup>9</sup>	16,000 <sup>9</sup>	490   290	Yes	No	2,000	MCL	---	---	28	2,000	Not Analyzed	Yes	No	No	
Cadmium	80	0.69	Leach	0.035	Leach	0.77 <sup>4</sup>	0.50	0.77 <sup>4</sup>	0.77 <sup>4</sup>	2.4   ND	No <sup>3</sup>	No <sup>3</sup>	5.0	MCL	---	---	4.4	5.0	Not Analyzed	No <sup>3</sup>	No <sup>3</sup>	No <sup>3</sup>	
Chromium <sup>7</sup>	120,000	480,000	Leach	24,000	Leach	48	0.50	120,000	24,000	48   100	No	No	100	MCL	---	---	2.0	100	Not Analyzed	No	No	No	
Lead	250 <sup>8</sup>	3,000	Leach	150	Leach	16.83	5.0	250	150	21,000   240	No <sup>3</sup>	No <sup>3</sup>	15	MCL	---	---	1.1	15	Not Analyzed	No <sup>3</sup>	No <sup>3</sup>	No <sup>3</sup>	
Mercury	---	2.1	Leach	0.1	Leach	0.07	0.25	2.1	2.1 <sup>9</sup>	ND   1.2	Yes	No	2.0	MCL	1.1	---	0.50	1.1	Not Analyzed	Yes	No	No	

**NOTES:**

- Shading represents most stringent screening level, natural background concentration, or practical quantitation limit for vadose zone soil.
  - Shading represents most stringent screening level, natural background concentration, or practical quantitation limit for saturated zone soil.
  - Shading indicates the chemical or specific matrix is not a COPC for the FS/CAP after completion of the Remedial Investigation.
  - Shading indicates a change from information provided in the RI Work Plan screening level table (Table 13).
- denotes no screening level established for this parameter.

- CAP = Cleanup Action Plan
- COC = contaminant of concern
- COPC = contaminant of potential concern
- FS = Feasibility Study
- µg/l = micrograms per liter
- mg/kg = milligrams per kilogram
- NA = not applicable
- ND = not detected
- TPH = total petroleum hydrocarbons

cPAH TEC = Carcinogenic polycyclic aromatic hydrocarbon toxic equivalent concentration (cPAH TEC) calculated following the total toxicity equivalency method in Section 708(8) of Chapter 173-340 of the Washington Administrative Code.

Leach = Washington State Cleanup Levels and Risk Calculations (CLARC) under Washington State Model Toxics Control Act Cleanup Regulation (MTCA), default soil concentrations protective of groundwater from CLARC Master spreadsheet, <https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Contamination-clean-up-tools/CLARC>

MCL = Federal Maximum Contaminant Level (MCL), 40 Code of Federal Regulations (CFR) Part 141.

Method A = MTCA Method A Soil Cleanup Levels for Unrestricted Land Uses, Table 740-1 of Section 900 of Chapter 173-340 of the Washington Administrative Code, as revised 2013.

Method B = Washington State CLARC under Washington State MTCA, Standard Method B Formula Values from CLARC Master spreadsheet, <https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Contamination-clean-up-tools/CLARC>

<sup>1</sup> Result was derived from a reconnaissance groundwater sample. Analysis of reconnaissance groundwater samples can result in potentially biased data due to turbidity of the sample and greater presence of suspended solids that hazardous substances can sorb onto. This detection in groundwater was flagged by the laboratory because the sample chromatogram was not similar to a typical gas.

<sup>2</sup> Result was derived from a reconnaissance groundwater sample. Analysis of reconnaissance groundwater samples can result in potentially biased data due to turbidity of the sample and greater presence of suspended solids that hazardous substances can sorb onto.

<sup>3</sup> Section 6.4 of the Agency Review Draft-Remedial Investigation Work Plan provides additional information as to why the COPC was not retained for further evaluation for the Block 38 West Site. [Arsenic](#), cadmium and lead are not retained as COPCs for Block 38 West based on historical data indicating that the source is likely associated with the adjacent Rosen Property Site.

<sup>4</sup> Arsenic and cadmium screening levels adjusted for natural background concentrations provided in *Natural Background Soil Metals Concentrations in Washington State*, Washington State Department of Ecology, Publication #94-115, October 1994.

<sup>5</sup> Puget Sound Lowland natural background concentration from *Natural Background Groundwater Arsenic Concentrations in Washington State, Study Results*, Washington State Department of Ecology, Publication No. 14-09-044, dated January 2022.

<sup>6</sup> Reporting limits for cis-1,2-dichloroethene in soil ranged from 0.00074 mg/kg to 0.0044 mg/kg.

<sup>7</sup> Values based on trivalent chromium risk-based values for soil SLs (120,000 mg/kg for direct contact, 480,000 mg/kg vadose leaching, 24,000 saturated leaching) since there is no known source of hexavalent chromium used on the Block 38 West Property. Background levels are based on total chromium. Total chromium groundwater screening level of 100 µg/L based on the MCL.

<sup>8</sup> Value based on Method A as a surrogate for Method B as no Method B direct contact value for soil has been established.

<sup>9</sup> Ecology approved the use of the direct contact soil screening level for this chemical.

\* Source of this value is the generic TPH cleanup level from *Model Remedies for Sites with Petroleum Contaminated Soils*, Washington State Department of Ecology, Publication No. 15-09-043, Revised: December 2017.

\*\* MTCA Method B vapor intrusion groundwater screening level for naphthalene is applicable for the Shallow Water-Bearing Zone and the Method B screening level for drinking water is applicable for the deeper Intermediate Water-Bearing Zone.

# Method A is used as a surrogate for Method B because no Method B vadose or saturated leaching value has been established for TPH gasoline-, diesel- and oil-range mixtures.

**Table 15**  
**Applicable Local, State, and Federal Laws**  
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<b>Standard, Requirement, or Limitation<sup>1</sup></b>	<b>Applicability</b>
<b>Location-Specific ARARs<sup>2</sup></b>	
State Environmental Policy Act (RCW 43.21C; WAC 197-11 and WAC 173-802)	SEPA review is required for MTCA cleanup actions; Ecology will be the lead agency for this effort.
Native American Graves Protection and Repatriation Act (25 USC 3001 through 3013; 43 CFR 10) Washington's Indian Graves and Records Law (RCW 27.44)	These statutes prohibit the destruction or removal of Native American cultural items and require written notification of inadvertent discovery to the appropriate agencies and Native American tribe. These programs are applicable to the cleanup action if cultural items are found. The activities must cease in the area of the discovery; a reasonable effort must be made to protect the items discovered; and notice must be provided.
Archaeological Resources Protection Act(16 USC 470aa et seq.; 43 CFR 7)	This program sets forth requirements that are triggered when archaeological resources are discovered. These requirements only apply if archaeological items are discovered during implementation of the selected remedy.
National Historic Preservation Act (16 USC 470 et seq.; 36 CFR parts 60, 63, and 800)	This program sets forth a national policy of historic preservation and provides a process that must be followed to ensure that impacts of actions on archaeological, historic, and other cultural resources are protected.
ESA [16 USC §§ 1531-1544] and Implementing Regulations	The ESA protects species of fish, wildlife, and plants that are listed as threatened or endangered with extinction. It also protects designated critical habitat for listed species. The ESA outlines procedures for federal agencies to follow, including consultation with resource agencies, when taking actions that may jeopardize listed species. No threatened or endangered species or habitat areas are expected to be impacted by the planned cleanup action.

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<b>Standard, Requirement, or Limitation<sup>1</sup></b>	<b>Applicability</b>
<b>Location-Specific ARARs<sup>2</sup> (cont.)</b>	
<p>U.S. Archaeological and Historic Preservation Act [16 USC § 469, 470 et seq.; 36 CFR Parts 65 and 800]            Washington Archaeological Sites and Resources [RCW 27.44, 27.48, and 27.53; Chapter 25-48 WAC]</p>	<p>Actions must be taken to preserve and recover significant artifacts, preserve historic and archaeological properties and resources, and minimize harm to national landmarks. There are no known historic or archaeological sites in the vicinity of the Site, but these regulations may be applicable if archaeological resources are discovered during construction.</p>
<p>Clarification of SEPA Historic Preservation Policy for Potential Archaeologically Significant Sites and Requirements for Archaeological Assessments (Director's Rule 2-98; SMC Chapter 25.05.675 H)</p>	<p>Provides guidance for the identification, protection, and treatment of archaeological sites on the City of Seattle's shorelines. The archaeological significance of a project site must be assessed for any proposed project involving excavation within 200 feet of the U.S. Government Meander line which approximates the historical shoreline. The Site is within 200 feet of the historical shoreline of Lake Union.</p>
<p>Shoreline Management Act of 1971 [RCW 90.58] and Implementing Regulations</p>	<p>Actions are prohibited within 200 feet of shorelines of statewide significance unless permitted.            The Site is not within 200 feet of the current shoreline of Lake Union.</p>
<p>Shoreline Management Act of 1971 [RCW 90.58] and Implementing Regulations</p>	<p>The construction or management of property in wetlands is required to minimize potential harm, avoid adverse effects, and preserve and enhance wetlands. The Site is not within a wetland.</p>

**Table 15**  
**Applicable Local, State, and Federal Laws**  
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<b>Standard, Requirement, or Limitation<sup>1</sup></b>	<b>Applicability</b>
<b>Action-Specific ARARs<sup>3</sup></b>	
State Environmental Policy Act (RCW 43.21C, WAC 197-11 and WAC 173-802)	Establishes the state's policy for protection and preservation of the natural environment. Applies to cleanup actions conducted under MTCA. A SEPA review is required for local permitting pursuant to MTCA and was completed for the interim actions.
Resource Conservation and Recovery Act (42 USC 6921-6949a; 40 CFR Part 268, Subtitles C and D)	Establishes requirements for the identification, handling, and disposal of hazardous and nonhazardous waste. These regulations establish guidelines and criteria from which states develop solid waste regulations. Subtitle C of RCRA pertains to the management of hazardous waste. These requirements are applicable for the interim actions completed and planned cleanup action since it involves off-Site disposal of impacted soil, groundwater, treatment media, and/or wastewater designated as hazardous waste. Subtitle D of RCRA establishes a framework for management of nonhazardous solid waste. These requirements are applicable for the interim actions completed and planned cleanup action since it involves off-Site disposal of impacted soil and/or groundwater designated as nonhazardous waste.
Dangerous Waste Regulations (RCW 70.105; WAC 173-303)	Establishes regulations that are the state equivalent of RCRA requirements for determining whether a solid waste is a state dangerous waste. This regulation also provides requirements for the management of dangerous wastes. These requirements are applicable for the interim actions completed and planned cleanup action since it involves off-Site disposal of impacted soil, groundwater, treatment media, and/or wastewater designated as hazardous waste.
Solid Waste Disposal Act (42 USC Sec. 6901-6992; 40 CFR 257-258) Federal Land Disposal Requirements (40 CFR 268)	Protects health and the environment and promotes conservation of valuable material and energy resources. The Solid Waste Disposal Act establishes a framework for regulation of solid waste disposal. Federal land disposal requirements promulgated under the authority of the Solid Waste Disposal Act set minimum safety requirements for landfills including limitations on storage and land disposal for hazardous substances.

**Table 15**  
**Applicable Local, State, and Federal Laws**  
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<b>Standard, Requirement, or Limitation<sup>1</sup></b>	<b>Applicability</b>
<b>Action-Specific ARARs<sup>3</sup> (cont.)</b>	
Department of Transportation Hazardous Materials Regulations (49 CFR 172)	Regulates the safe and secure transportation of hazardous materials, including documentation and handling requirements for shipping. These requirements are applicable for the interim actions completed and planned cleanup action since it involves off-Site disposal of impacted soil, groundwater, treatment media, and/or wastewater designated as hazardous waste.
Washington Minimum Functional Standards for Solid Waste Handling (WAC 173-304)	Sets minimum functional standards for the proper handling of all solid waste materials originating from residences, commercial, agricultural, and industrial operations, as well as other sources.
Washington Solid Waste Handling Standards (RCW 70.95 and WAC 173-351 and 173-304)	Establishes minimum standards for handling and disposal of solid waste. Solid waste includes wastes that are likely to be generated as a result of site remediation, including contaminated soils, construction and demolition wastes, and garbage.
Noise Control Act of 1974 (RCW 70.107, WAC 173-60, SMC Chapter 25.08)	Establishes maximum noise levels. Construction activities will be limited to normal working hours, to the extent possible, to minimize noise impacts.
Accreditation of Environmental Laboratories (RCW 43.21A.230 and WAC 173-50)	Required persons or organizations submitting analytical data under the purview of Ecology, Department of Health, and other entities, to use environmental laboratories which are accredited.
City of Seattle Traffic Code (SMC 11.1)	The City of Seattle code regulates construction use and permitting in the right-of-way. Guidelines for grading activities, applicable since the interim actions completed and planned cleanup action involves an excavation and filling volume greater than 500 cubic yards.
City of Seattle Construction Codes for Grading (SMC 22.170)	Required for the excavation or addition of material within an Environmentally Critical Area, movement of more than 500 cubic yards of material, and in-place modification of the ground (soil remediation).
Seattle of Seattle Construction Codes for Demolition (Seattle Building Code Chapter 33)	Regulates the demolition of any structures within an Environmentally Critical Area or greater than 120 square feet in size.



**Table 15**  
**Applicable Local, State, and Federal Laws**  
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<b>Standard, Requirement, or Limitation<sup>1</sup></b>	<b>Applicability</b>
<b>Action-Specific ARARs<sup>3</sup> (cont.)</b>	
National Electrical Code (NFPA 70) and the Seattle Electric Code Supplement for Class 1 Division 2 Environments.	Establishes restrictions and guidelines for temporary and/or permanent electrical installations.
King County Industrial Waste Program	The King County Industrial Waste Program monitors discharge of liquid waste to the wastewater (sanitary sewer) system. Any discharges during construction to the wastewater system must be approved by King County prior to discharge. The King County Industrial Waste Program monitors volume and water quality of liquid waste discharged to the system. Guidelines for erosion control and construction stormwater management. These regulations are applicable since the completed interim actions and planned cleanup action involves construction requiring dewatering and stormwater management.
U.S. Federal Water Pollution Control Act--NPDES [CWA; 33 USC § 1342, Section 402] and Implementing Regulations Washington Waste Discharge General Permit Program [RCW 90.48; Chapter 173-226 WAC]	The NPDES program establishes requirements for point source discharges, including stormwater runoff. These requirements are applicable to the planned cleanup action since the interim actions involved point source discharge of stormwater during construction or following cleanup.

**Table 15**  
**Applicable Local, State, and Federal Laws**  
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<b>Standard, Requirement, or Limitation<sup>1</sup></b>	<b>Applicability</b>
<b>Action-Specific ARARs<sup>3</sup> (cont.)</b>	
Federal, State, and Local Air Quality Protection Programs State Implementation of Ambient Air Quality Standards Regional Standards for Fugitive Dust Emissions Toxic Air Pollutants	Regulations promulgated under the federal Clean Air Act (42 USC 7401) and the Washington State Clean Air Act (RCW 70.94) govern the release of airborne contaminants from point and non-point sources. Local air pollution control authorities such as PSCAA have also set forth regulations for implementing these air quality requirements. These requirements may be applicable to the Site for the purposes of demolition or dust control. PSCAA requires notification prior to demolition of any building with asbestos-containing material. Both PSCAA (under Regulation III) and WAC 173-460 establish ambient source impact levels for arsenic.
Clean Air Act and Implementing Regulations [RCW 70A.15; Chapter 173-400 WAC]	These regulations require the owner or operator of a source of fugitive dust to take reasonable precautions to prevent fugitive dust from becoming airborne and to maintain and operate the source to minimize emissions primarily during construction. These regulations are applicable for interim actions completed and the planned cleanup action due to active construction.
Regional Emission Standards for Toxic Air Pollutants [PSCAA Regulations I and III]	A source of toxic air contaminant requires a notice of construction. This is applicable for interim actions completed and the planned cleanup action due to active construction and construction dewatering treatment system.
U.S. OSHA [29 CFR Parts 1904, 1910, and 1926] WISHA [RCW 49.17; Title 296 WAC]	Site worker and visitor health and safety requirements established by OSHA/WISHA were met during implementation of the interim actions completed and are applicable to the planned cleanup action.
Minimum Standards for Construction and Maintenance of Wells [RCW 18.104; Chapter 173-160 WAC]	Washington State has developed minimum standards for constructing water and monitoring wells, and for the decommissioning of wells. These regulations are applicable since the planned cleanup action involves drilling or decommissioning wells.

**Table 15**  
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<b>Standard, Requirement, or Limitation<sup>1</sup></b>	<b>Applicability</b>
<b>Chemical-Specific ARARs<sup>4</sup></b>	
Model Toxics Control Act (RCW 70A.305 and WAC 173-340)	Establishes Washington administrative processes and standards to identify, investigate, and clean up facilities where hazardous substances have come to be located.
Drinking Water Standards—State MCLs (WAC 246-290-310)	Establishes standards for contaminant levels in drinking water for water system purveyors.
Water Quality Standards for Groundwaters of the State of Washington (WAC 173-200)	Implements the Water Pollution Control Act and the Water Resources Act of 1971 (90.54 RCW).
National Recommended Water Quality Standards (40 CFR 131) Washington Maximum Contaminant Levels (WAC 246-290-310)	These water quality standards define the water quality goals of the water body by designating the use or uses to be made of the water and by setting criteria necessary to protect the uses. States adopt water quality standards from 40 CFR 131 to protect public health or welfare, enhance the quality of water, and serve the purposes of the CWA. Washington water quality standards (MCLs) are presented in WAC.
MTCA [RCW 70A.305; Chapter 173- 340 WAC]	The MTCA soil cleanup levels are applicable.
MTCA [RCW 70A.305; Chapter 173- 340 WAC]	The MTCA groundwater cleanup levels are applicable.

**Table 15**  
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**NOTES:**

<sup>1</sup> Projects conducted under an agreed order or consent decree are exempt from the procedural requirements of most state and local permits (RCW 70.305D.090); however, the remedial actions must still comply with the substantive requirements of the exempt permits. Therefore, for exempt permits, the statutory review timelines do not apply; actual timelines will be based on negotiations with the jurisdiction or agency, which should result in an expedited review timeline.

<sup>2</sup> Location-specific ARARs are requirements that are applicable to the specific area where the Site is located, and can restrict the performance of activities, including cleanup actions, solely because they occur in specific locations.

<sup>3</sup> Action-specific ARARs are requirements that are applicable to certain types of activities that occur or technologies that are used during the implementation of cleanup actions.

<sup>4</sup> Chemical-specific ARARs are applicable to the types of contaminants present at the Site. The cleanup of contaminated media at the Site must meet the CULs developed under MTCA; these CULs are considered chemical-specific ARARs.

**ABBREVIATIONS:**

CFR = Code of Federal Regulations

CWA = Clean Water Act

Ecology = Washington State Department of Ecology

ESA = Endangered Species Act

MCL = Maximum Contaminant Level

MTCA = Model Toxics Control Act Cleanup Regulation

NFPA = National Fire Protection Association

NPDES = National Pollutant Discharge Elimination System

OSHA = Occupational Safety and Health Act

PSCAA = Puget Sound Clean Air Agency

RCRA = Resource Conservation and Recovery Act

RCW = Revised Code of Washington

SEPA = State Environmental Policy Act

SMC = Seattle Municipal Code

USC = U.S. Code

WAC = Washington Administrative Code

WISHA = Washington Industrial Safety and Health Act