SITE HAZARD ASSESSMENT
Worksheet 1: Summary Score Sheet

SITE NAME: Block 79 East **Rank: 2**

Cleanup Site ID: 13006

Facility/Site ID: 84466254

Completed on 2/7/2022 for inclusion on the February 2022 Hazardous Sites List.

LOCATION OF SITE

701, 739, and 753 9th Ave N

Seattle, King County, WA 98109

Tax Parcel ID: 40880-3435, -3440, -3485, -3565

Township 25N, Range 4E, Section 30

Latitude, Longitude: 47.62635, -122.34014

SITE DESCRIPTION

Within Currently Defined Site Boundaries

Based on currently available information, the Block 79 East site includes the four parcels listed above (Property). Contaminants may also have migrated beyond parcel boundaries. The 1.52-acre Property is on the northwest corner of Roy Street and Westlake Avenue North (Figure 1). It is zoned as Seattle Mixed - South Lake Union Urban Center (SM-SLU 100/95), which allows a combination of light industrial, commercial, and residential uses and requires commercial uses at street level. Currently the Property is vacant.

The City of Seattle provides water, sewer, and stormwater services. A remedial investigation (RI) and feasibility study (FS) are planned under an agreed order to facilitate property redevelopment.

Petroleum, metals, volatile organic compounds (VOCs), and polycyclic aromatic hydrocarbons (PAHs) exceeding MTCA Method A cleanup levels are present in soil, groundwater, and soil vapor.

The Property formerly contained three separate sites. The Bayside Volvo site (FSID 45221945) at 753 9th Avenue North occupied the northern-most parcel (408880-3565). The Maaco Auto Painting Bodywork 9th Ave site (FSID 2224749) at 739 9th Avenue North occupied the middle parcel (408880-3485). The Seattle Motor Sports site (FSID 84466254) at 701 9th Avenue North occupied the southern-most parcels (408880-3400 and -3435). This last site was also referred to as the Buca di Beppo Ducati site and the Frank Kenney site. These three sites were combined into one, Block 79 East, to facilitate the RI and FS.

Historical Owners and Operators

From	To	Owner/Operator	Site Uses
1920	1969	Parcel 408880-3435 and -3440	Auto/truck repair shop
1969	2020	Parcel 408880-3435 and -3440	Auto sales, parking, and repair
1924	1930	Parcel 408880-3485	Tire service and vehicle repair
1940	1980	Parcel 408880-3485	Truck welding and equipment manufacturing
1979	1996	Parcel 408880-3485	Vehicle sales and service
1996	2020	Parcel 408880-3485	Vehicle collision body repair and painting

SITE HAZARD ASSESSMENT
Worksheet 1: Summary Score Sheet

1950 1992 Parcel 408880-3565 Auto and motorcycle sales and service

Area Surrounding the Site

The property is bounded to the north by Aloha Street and across that a hotel (Figure 2). It is bounded to the east by 9th Avenue North and across that Lake Union Park, a restaurant, and retail stores. It is bounded to the south by Roy Street and across that a vacant lot undergoing redevelopment. It is bounded to the west by an alley and across that an office building.

The property is surrounded by five sites listed on Ecology's Confirmed and Suspected Contaminated Sites List. The Seattle City DOT ROW 710 9th Ave N site (cleanup site identification [CSID] 12379) is across the street to the east. It is awaiting cleanup. The AIBS Building Block 43 site (CSID 12637) is southeast of the Site. Cleanup has been started under independent action. The Seattle DOT Mercer Parcels site (CSID 14784) is across the street to the south. Cleanup is ongoing under an agreed order in preparation for property redevelopment. The Roy Aloha (CSID 11216) site is west of the Site. Cleanup has been started under independent action. A block west is the American Linen site (12004). Cleanup is ongoing under an agreed order and the property is being redeveloped.

The nearest surface water body is Lake Union, located 250 feet east. A two-acre portion of Lake Union Park lies along the lake shore, directly across the street to the east of the Site. The park offers landscaped lawns, paved walking paths, a small beach, and a pier.

SITE CHARACTERIZATION AND/OR REMEDIATION

The four parcels are shown in Figure 2. The northern-most parcel (former Bayside Volvo site) was used for auto repair. Three USTs were removed in 1992 (Geotech 1992). Five soil samples were analyzed for gasoline range organics (GRO) and benzene, toluene, ethylbenzene, and xylenes (BTEX).

The middle parcel (former Maaco Auto Painting Bodywork site) was used for truck body assembly, painting, and servicing. Portions of the property have been filled; decaying trash and debris have been observed in the soil. An underground storage tank (UST) was closed in place (Figure 2). During a Phase II investigation conducted in 2014, 12 direct-push borings were advanced (GeoEngineers 2014b). Four hollow-stem borings were advanced, three of which were completed as monitoring wells. Six soil vapor probes were installed. A total of 36 soil samples collected at depths ranging down to 20 feet bgs, 3 groundwater samples, and 6 soil vapor samples were analyzed for petroleum hydrcarbons, metals, PAHs, polychlorinated biphenyls (PCBs), and VOCs.

The southern-most parcels (former Seattle Motor Sports site) were historically used for truck repair. There were six hoists and a UST (Figure 2). Later the property housed a restaurant and a motorcycle dealership. A preliminary assessment conducted in 1988 included four soil borings and one groundwater sample (SoundEarth 2015). Samples were analyzed for total petroleum hydrocarbons (TPH), BTEX, and extraction procedure toxicity metals . A Phase II investigation conducted in 1992 involved eight soil borings and one monitoring well (SoundEarth 2015). Samples were analyzed for GRO, diesel range organics (DRO), oil range organics (ORO), BTEX, and VOCs. Another Phase II investigation conducted in 2014 involved seven soil borings (SoundEarth 2015). Samples were analyzed for GRO, DRO, ORO, BTEX, chlorinated VOCs, and five metals.

In March 2021, two USTs and multiple hydraulic hoists were removed from the Maaco Auto Painting Bodywork and Seattle Motor Sports parcels, along with contaminated soils associated with these features (Figure 2) (Farallon 2021). After the decommissioning, 44 soil samples collected at depths ranging down to 15 feet bgs were analysed for petroleum hydrocarbons; BTEX; chlorinated VOCs; metals; PAHs; and PCBs. The parcels are currently vacant in preparation for property redevelopment (Figure 3).

Hazardous substances exceeding soil cleanup levels include GRO, DRO, and ORO; benzene, ethylbenzene, xylenes, naphthalene, and 1-methylnaphthalene; cadmium, mercury, and lead; benzo(a)pyrene; and tetrachlorothene (PCE). Hazardous substances exceeding groundwater cleanup levels include GRO, DRO, and ORO; benzene and ethylbenzene; arsenic; and vinyl chloride. Hazardous substances exceeding soil vapor

screening levels include TPH; benzene, naphthalene, and xylenes; 1,4-dioxane; and PCE.

ADDITIONAL INFORMATION COLLECTED BY THE SITE HAZARD ASSESSOR

A site visit was conducted on January 21, 2022. Conditions at the site and in the surrounding area were consistent with those described above.

SPECIAL CONSIDERATIONS

Checked boxes indicate routes applicable for Washington Ranking Method (WARM) scoring

☐ **Surface Water**

No confirmed transport pathway to surface water.

☑ **Air**

VOCs were detected in soil vapor above screening levels.

☑ **Groundwater**

Petroleum hydrocarbons, metals, VOCs, and PAHs were detected in soil and may leach to groundwater. Benzene, vinyl chloride, and arsenic were detected in groundwater.

Multiple areas of contamination are present throughout the four parcels. The most comprehensive sampling effort was conducted on the Maaco parcel in 2014. The estimated source volumes discussed below are based on Figures 4 and 5 of the GeoEngineers (2014) Phase II report for the Maaco parcel. Most of the sampling locations investigated during that study do not appear to have been removed during the decommissioning of historical features in 2021.

Benzene exceeds its Method B screening level in soil vapor probes (SV) 3 through 6, PCE in SV 5 and 6, naphthalene in SV 3 and 4, and xylenes in SV 3 (Figure 5). The air source was assumed to be the eastern half of the property, which is approximately 65 x 190 feet, which corresponds to approximately 12,300 square feet.

Benzene exceeds Method A in MW-2, was detected below Method A in MW-3, and was not detected in MW-1 (Figure 4). Vinyl chloride exceeds Method A in MW-2 and MW-3 and was not detected in MW-1. The groundwater source was assumed to be a circle with radius 70 feet (half the distance from MW-3 to MW-1), which corresponds to 16,300 square feet. The source was assumed to be three feet thick, a default assumption when exact dimensions are not known.

ROUTE SCORES

Surface Water/ Human Health:		Surface Water/ Environment:	
Air/ Human Health:	54.4	Air/ Environment:	5.7
Groundwater/ Human Health:	37.4		

Overall Rank: 2

DEPARTMENT OF ECOLOGY
State of Washington

SITE HAZARD ASSESSMENT
Worksheet 1: Summary Score Sheet

REFERENCES

1 Ecology's What's in my Neighborhood? Accessed November 2021. https://apps.ecology.wa.gov/neighborhood/

2 ESRI Gobal Annual Evapotranspiration. Access July 2021. https://www.arcgis.com/home/webmap/viewer.html?layers=ad3f8cc18fc74e6894ee220acd

3 Farallon. 2021. Historical Feature Decommissioning and Removal Summary Report, Block 79 East Property. May 17.

4 GeoEngineers. 2014a. Phase I Environmental Site Assessment, South Lake Union Marriott AC. November 13.

5 GeoEngineers. 2014b. Phase II Environmental Site Assessment, South Lake Union Marriott AC. November 13.

6 Geotech Consultants, Inc. 1992. Underground Storage Tank Removal and Supplemental Environmental Studies, Bayside Volvo, Seattle, WA. September 15.

7 King County iMap. Accessed November 2021. https://gismaps.kingcounty.gov/imap/

8 Missouri Census Data Center. Accessed November 2021. https://mcdc.missouri.edu/applications/caps2010.html

9 NOAA NCEI Climate Data Online. Accessed July 2021. https://www.ncdc.noaa.gov/cdoweb/

10 SoundEarth Strategies. 2015. Remedial Investigation and Cleanup Action Plan, Buca di Beppo/Ducati Property. November 19.

11 Washington Ranking Method (WARM) Toxicity Database. Available from Kim Wooten, Washington State Department of Ecology, Northwest Regional Office.

12 Washington State Department of Ecology. 2007. Washington Ranking Method (WARM) Scoring Manual. Https://apps.ecology.wa.gov/publications/documents/90014.pdf

13 WDOH Office of Drinking Water - Find Water Systems. Accessed July 2021. https://fortress.wa.gov/doh/eh/portal/odw/si/Disclaimer.aspx?Page=FindWaterSystem.aspx

DEPARTMENT OF ECOLOGY
State of Washington

SITE HAZARD ASSESSMENT
Worksheet 2: Route Documentation

SITE NAME: Block 79 East

Cleanup Site ID: 13006

Facility/Site ID: 84466254

1. SURFACE WATER ROUTE

List those substances to be considered for scoring:

Not scored

Explain the basis for choice of substances to be used in scoring:

No evidence of complete transport pathway.

List those management units to be considered for scoring:

Explain basis for choice of unit to be used in scoring:

2. AIR ROUTE

List those substances to be considered for scoring:

Benzene, PCE, naphthalene, and xylenes

Explain the basis for choice of substances to be used in scoring:

Exceedances in soil vapor.

List those management units to be considered for scoring:

Soil vapor

Explain basis for choice of unit to be used in scoring:

Exceedances in soil vapor.

3. GROUNDWATER ROUTE

List those substances to be considered for scoring:

Benzene, vinyl chloride

Explain the basis for choice of substances to be used in scoring:

Benzene exceeds Method A in soil and groundwater. Vinyl chloride exceeds Method A in groundwater and there is a source of PCE, which degrades to vinyl chloride, in soil

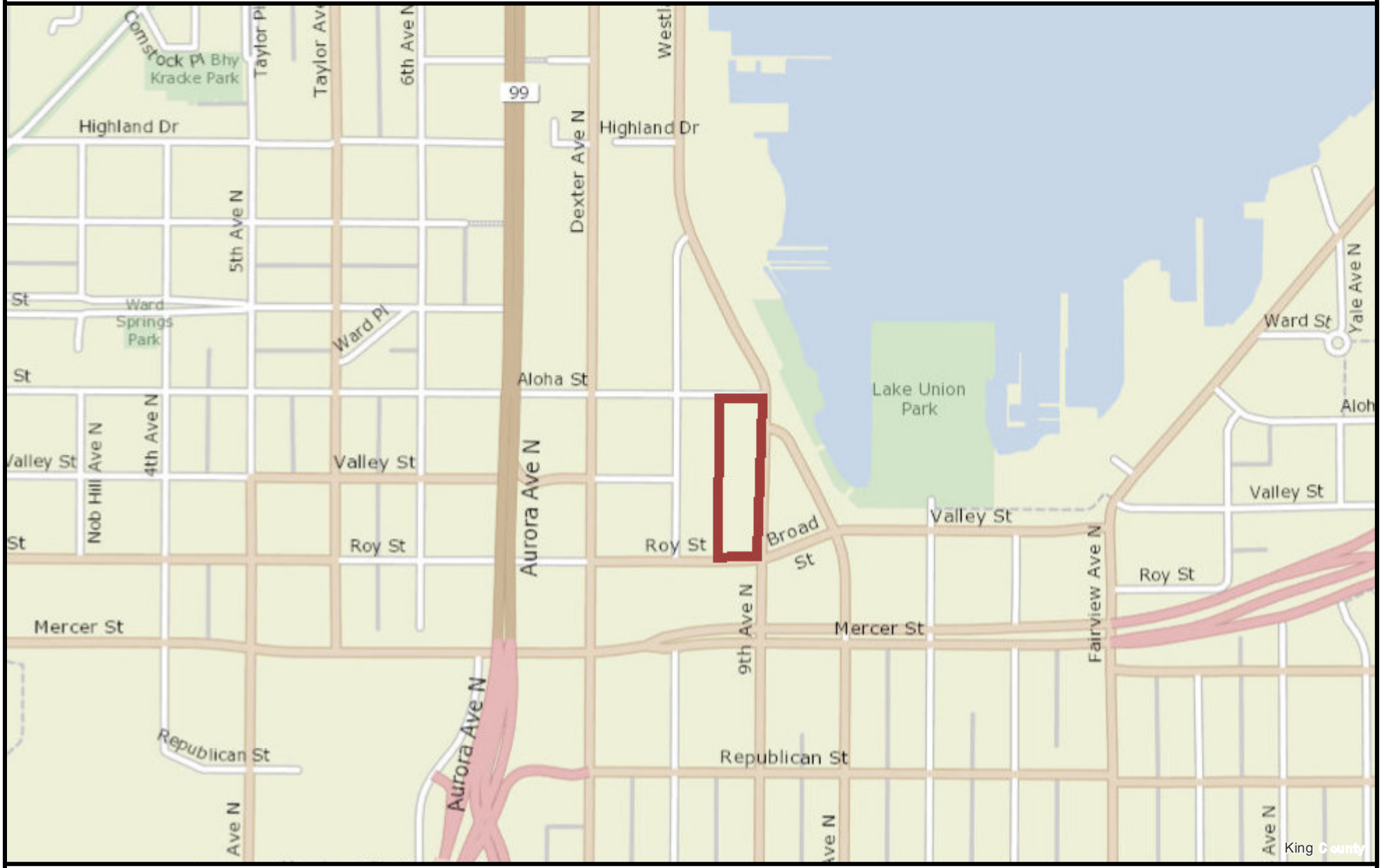
List those management units to be considered for scoring:

Groundwater

Explain basis for choice of unit to be used in scoring:

Exceedances in groundwater

Block 79 East Site Location

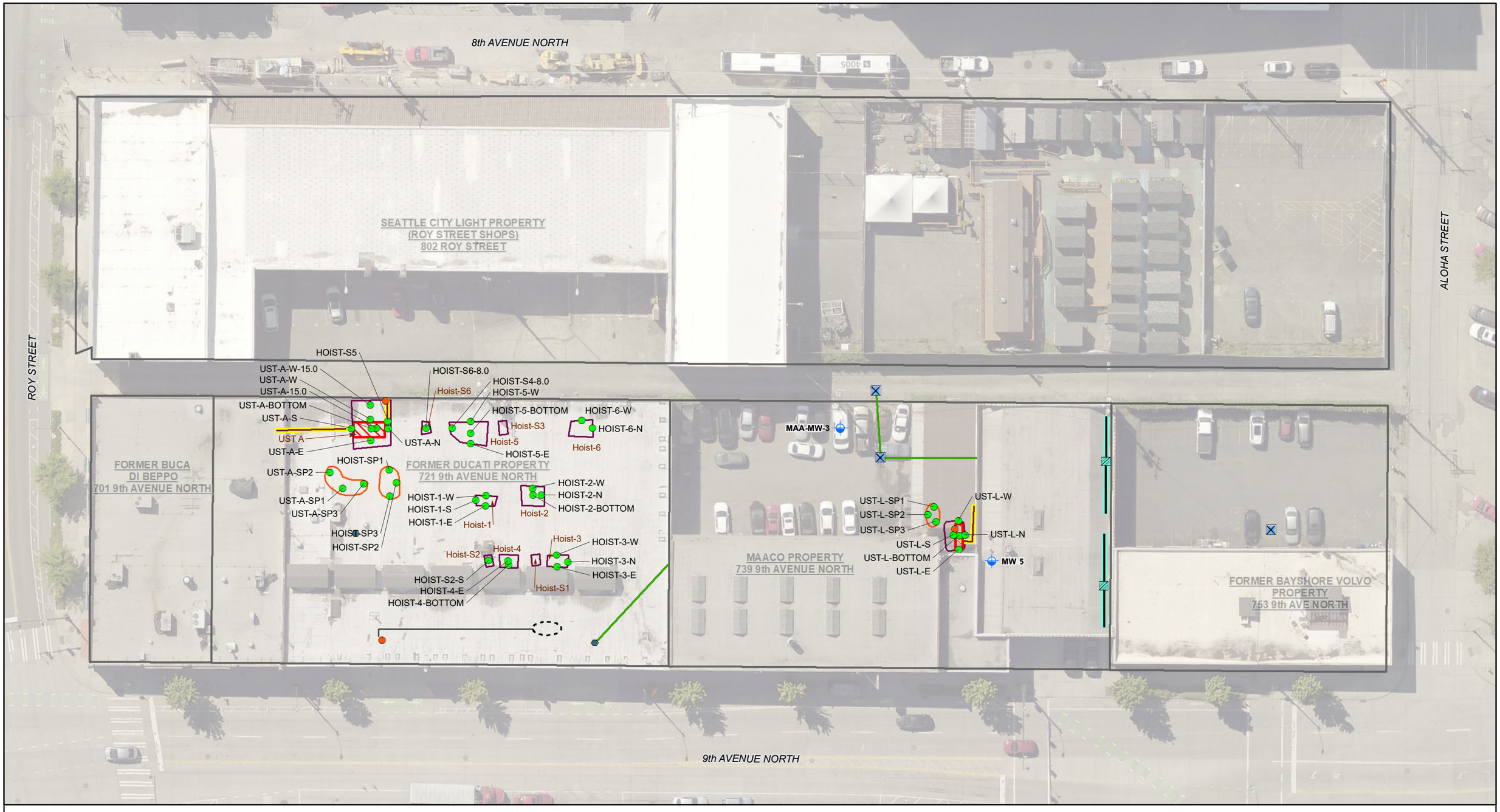


Date: 1/7/2022 Notes:

Figure 1

N

King County



LEGEND

- SOIL SAMPLES (2021)
- DEEP OUTWASH AQUIFER WELL
- CATCH BASIN
- TRENCH GRATE
- FLOOR DRAIN
- SUSPECTED UST FILL PORT
- PIPE TRACE
- CONCRETE GUTTER
- SANITARY SEWER LINE
- SURFACE DEPRESSION
- LINE TRACE
- FORMER OR EXISTING UNDERGROUND STORAGE TANK (UST)
- EXCAVATION EXTENT (2021)
- SOIL STOCKPILE

N

0 40

SCALE IN FEET

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

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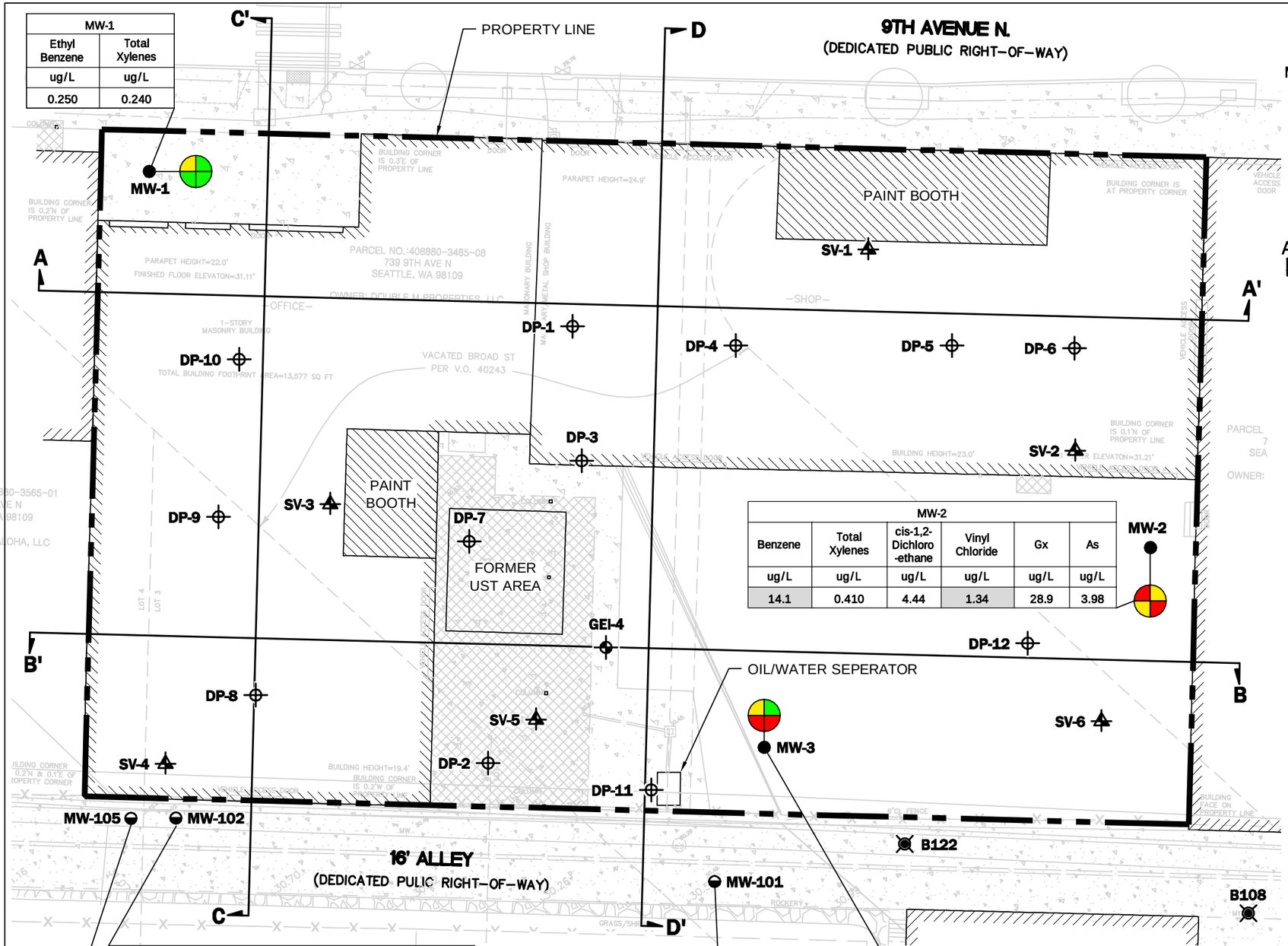
FIGURE 2

PROPERTY FEATURES
BLOCK 79 EAST PROPERTY
701, 739, AND 753 9th AVENUE NORTH
SEATTLE, WASHINGTON

FARALLON PN: 397-035

Drawn By: TPerrin | Checked By: EB | Date: 4/28/2021 | Disc Reference: Q:\Projects\397 VULCAN\035 Block79\Mapfiles\014_HDR-WorkPlan\Figure-02_SitePlan.mxd

Figure 3. Block 79 East Parcels Looking Northwest (photo taken by Ecology on February 12, 2021)



MW-1	
Ethyl Benzene	Total Xylenes
ug/L	ug/L
0.250	0.240

MW-2					
Benzene	Total Xylenes	cis-1,2-Dichloro-ethane	Vinyl Chloride	Gx	As
ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
14.1	0.410	4.44	1.34	28.9	3.98

MW-102				
Benzene	Ethyl Benzene	Toluene	Total Xylenes	Gx
ug/L	ug/L	ug/L	ug/L	ug/L
970	280	200	1,300	10,000

MW-105				
Benzene	Ethyl Benzene	Toluene	Total Xylenes	Gx
ug/L	ug/L	ug/L	ug/L	ug/L
390	91	43	280	3,200

MW-101				
Benzene	Ethyl Benzene	Toluene	Total Xylenes	Gx
ug/L	ug/L	ug/L	ug/L	ug/L
810	1,200	100	1,700	19,000

MW-3					
Benzene	Total Xylenes	Cis-1,2-Dichloro-ethane	1,2-Dichloro-ethane	Vinyl Chloride	As
ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
1.69	0.610	9.03	4.34	3.14	7.60

Legend

- MW-101 — Monitoring Well Sampled for Urban Development, LLC, 2002
- GEI-4 — Hollow-Stem Auger Boring by GeoEngineers, 2014
- DP-1 — Direct Push Boring by GeoEngineers, 2014
- MW-1 — Monitoring Well by GeoEngineers, 2014
- SV-1 — Sub-Slab Soil Vapor Sample Location
- B112 — Boring by Sound Earth Strategies, 2012
- A — A' — Cross-Section Location

Chemical Analytical Results of Discrete Soil Samples

- BETX (Benzene, Ethylbenzene, Toluene and Xylenes)
- Gasoline-Range Petroleum Hydrocarbons
- Arsenic
- HVOCs (Halogenated Volatile Organic Compunds)

- Contaminants of concern detected at concentrations greater than the MTCA Method A cleanup levels.
- Contaminants of concern detected at concentrations less than the MTCA Method A cleanup levels.
- Contaminants of concern were not detected; metal concentrations were detected below natural background concentrations.

N E S W

20 0 20
FEET

Notes

1. Only analytes detected at concentrations greater than the corresponding laboratory detection levels are shown in the data boxes above. For a full list of groundwater chemical analytical detections, see Table 4.
2. Shading indicates analyte detected at a concentration greater than the MTCA Method A or B cleanup.
3. The locations of all features shown are approximate.
4. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
5. Reference: Base Land Title Survey by Bush, Roed & Hitchings dated 6-28-14.

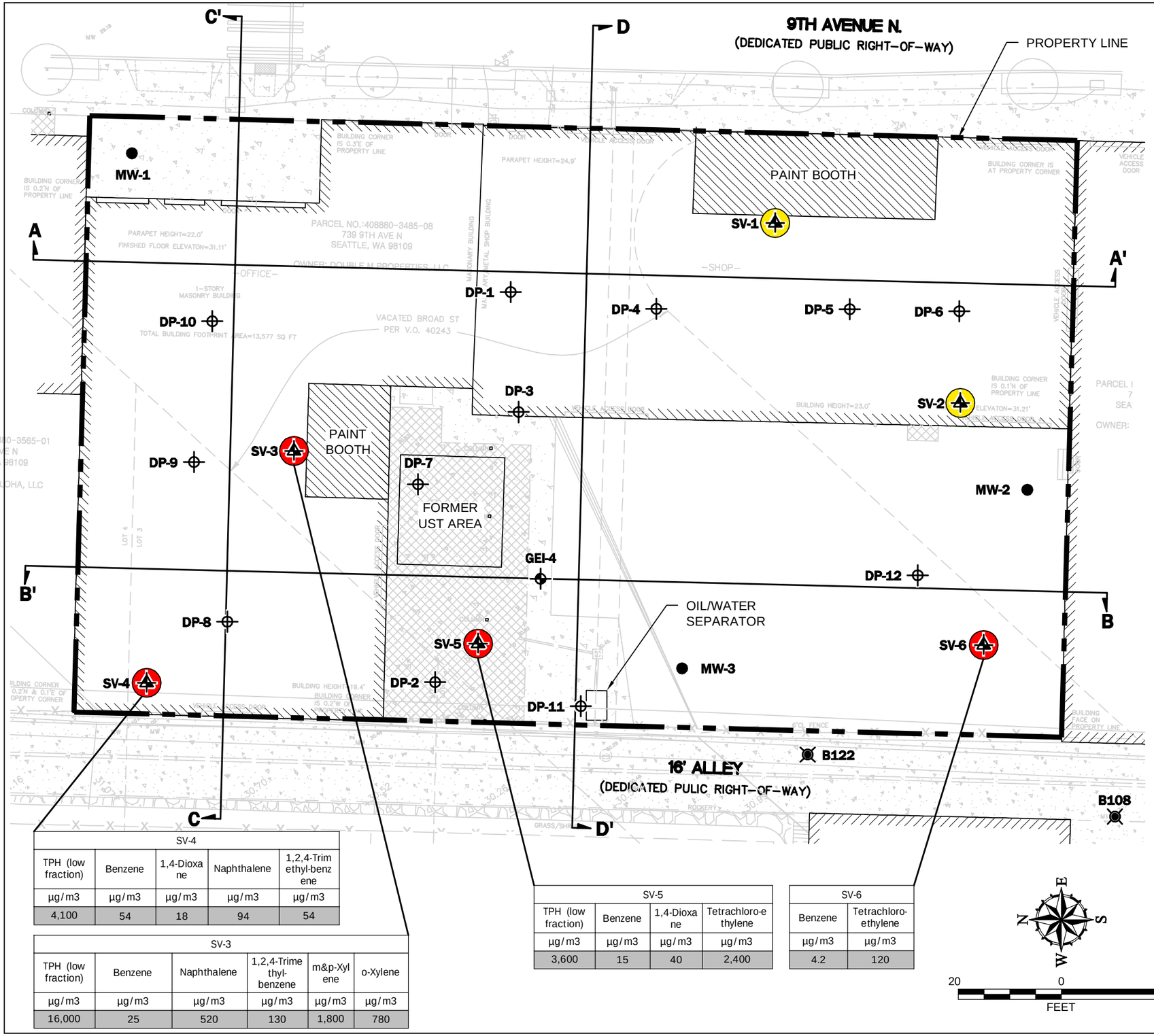
Groundwater Chemical Analytical Results

South Lake Union Marriott AC
Seattle, Washington

GeoEngineers

Figure 4

P:\20\20776003\00\CAD\20776003-00 SITE PLAN GW CHEMICAL DATA.DWG\TAB:SITE PLAN - LANDSCAPE MODIFIED BY TMICHAUD ON NOV 05, 2014 - 13:49



SV-4				
TPH (low fraction)	Benzene	1,4-Dioxane	Naphthalene	1,2,4-Trimethyl-benzene
µg/m3	µg/m3	µg/m3	µg/m3	µg/m3
4,100	54	18	94	54

SV-3					
TPH (low fraction)	Benzene	Naphthalene	1,2,4-Trimethyl-benzene	m&p-Xylene	o-Xylene
µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3
16,000	25	520	130	1,800	780

SV-5			
TPH (low fraction)	Benzene	1,4-Dioxane	Tetrachloro-ethylene
µg/m3	µg/m3	µg/m3	µg/m3
3,600	15	40	2,400

SV-6	
Benzene	Tetrachloro-ethylene
µg/m3	µg/m3
4.2	120

Legend

- GEI-4 — Hollow-Stem Auger Boring by GeoEngineers, 2014
- DP-1 — Direct Push Boring by GeoEngineers, 2014
- MW-1 — Monitoring Well by GeoEngineers, 2014
- SV-1 — Sub-Slab Soil Vapor Sample Location
- B112 — Boring by Sound Earth Strategies, 2012
- A A' — Cross-Section Location
- Contaminants of concern detected at concentrations greater than the MTCA Method B soil vapor screening levels.
- Contaminants of concern detected at concentrations less than the MTCA Method B soil vapor screening levels.
- Contaminants of concern were not detected.

Notes

1. Only analytes detected at concentrations greater than the corresponding MTCA Method A or B cleanup levels are shown in the data boxes above. For a full list of soil vapor chemical analytical detections, see Table 5.
2. The locations of all features shown are approximate.
3. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Reference: Base Land Title Survey by Bush, Roed & Hitchings dated 6-28-14.

Soil Vapor Chemical Analytical Results

South Lake Union Marriott AC
Seattle, Washington

GeoEngineers | Figure 5

P:\20\20776003\00\CAD\20776003-00 SITE PLAN SOIL VAPOR CHEMICAL DATA.DWG\TAB:SITE PLAN - LANDSCAPE MODIFIED BY TMICHAUD ON OCT 01, 2014 - 15:51

Worksheet 4
Surface Water Route

CSID: 13006

Site: Block 79 East

Not scored.

Worksheet 5
Air Route

CSID: 13006

Site: Block 79 East

1.0 SUBSTANCE CHARACTERISTICS

1.1 Introduction

No scoring in Section 1.1.

1.2 Human Toxicity

Substance	Amb. Air Stnd. Value (ug/m^3)	Score	Acute Toxicity Value (mg/m^3)	Score	Chronic Toxicity Value (mg/kg/day)	Score	Carcinogenicity Adj. CPFi (risk/mg/kg-day)	Score
Benzene	0.0345	10	31947	3	8.57E-03	8	2.73E-02	5
PCE	0.169	10	4000	5	1.14E-02	5	7.28E-04	3
Naphthalene	0.0294	10	--	X	8.57E-04	10	5.95E-02	5
Xylenes	--	X	21714	3	0.0286	5	--	X

Maximum score: 10

Bonus points: 2

Human Toxicity Score: 12

Source: WARM Toxicity Database

Range: 1-12

1.3 Mobility

Gaseous Mobility

Substance	Vapor Pressure Value (mm Hg)	Score	Henry's Law Value (atm-m3/ mol)	Score
Benzene	9.50E+01	4	5.56E-03	4
PCE	1.80E+01	4	1.82E-02	4
Naphthalene	8.20E-02	3	4.83E-04	3
Xylenes	1.00E+01	3	6.80E-03	4

Maximum score: 4

Source: WARM Toxicity Database

Particulate Mobility

Soil type: Not scored; chemicals are volatile

Erodibility factor:

Climatic factor:

Mobility value:

Mobility Score: 4

Source:

Range: 0-4

1.4 Human Toxicity/Mobility

Source: WARM Scoring Manual

Human Tox/Mobil Score: 24

Range: 1-24

1.5 Environmental Toxicity/Mobility

Substance	Acute Value (mg/m^3)	Score
Benzene	3.19E+04	3
PCE	4.00E+03	5
Naphthalene	--	X
Xylenes	21714	3
Maximum score	5	

Source: WARM Toxicity Database

Environmental Toxicity Score: 5

Range: 1-10

Environmental Tox/Mobil Score: 10

Range: 1-24

1.6 Substance Quantity

Quantity: 12,300 sq ft soil

Basis: Western half of property

Source: Phase II Table 5 and Figure 5

Substance Quantity Score: 5

Range: 1-10

2.1 Containment

Description: Soil cover 2 feet thick, no vapor collection system

Basis: Phase II and HFD Report

Containment Score: 5

Range: 0-10

SUBSTANCE PARAMETER CALCULATIONS

Human Health Pathway

SUBh (Human Tox/Mobil + 5) x (Containment +1) + Substance Quantity 179.0

Environmental Pathway

SUBe (Environ. Tox/Mobil + 5) x (Containment +1) + Substance Quantity 95.0

3.0 TARGETS

3.1 Nearest Population

Description: Office building to west

Distance (ft): < 1,000 feet

Source: iMap

Nearest Population Score: 10

Range: 0-10

3.2 Nearest Sensitive Environment

Description:	Lake Union		
Distance (ft):	< 1,000 feet	Nearest Sensitive Environment Score:	7
Source:	iMap	Range:	0-7

3.3 Population within One-Half Mile

Number:	9,831	Population within Half Mile Score:	75.0
Source:	MO CDC	Range:	0-75

TARGET PARAMETER CALCULATIONS

Human Health Pathway

TARh=Nearest Population + Population within Half Mile **85.0**

Environmental Pathway

TARe Nearest Sensitive Environment **7.0**

4.0 RELEASE

Evid. of release?	Yes		
Source:	Exceedance in soil vapor	Release Score (REL):	5.0
		Range:	0 or 5

AIR ROUTE CALCULATIONS

Human Health Pathway

AIRh =(SUBh x 60/329) x {REL + (TARh x 35/85} / 24 **54.4**

Environmental Pathway

AIRe =(SUBe x 60/329) x {REL + (TARe x 35/85} / 24 **5.7**

Range: 0-100

Worksheet 6
Groundwater Route

CSID: 13006

Site: Block 79 East

1.0 SUBSTANCE CHARACTERISTICS

1.1 Human toxicity

	Drink. Wat. Stnd		Acute Toxicity		Chronic Toxicity		Carcinogenicity	
Substance	Value (ug/L)	Score	Value (mg/kg)	Score	Value (mg/kg/day)	Score	Adj. CPFo (risk/mg/kg-day)	Score
Benzene	5	8	3,306	3	4.00E-03	3	5.50E-02	5
Vinyl chloride	2	8	500	5	3.00E-03	3	1.50E+00	7

Maximum score:	8		
Bonus points:	2	Human Toxicity Score:	10
Source:	WARM Toxicity Database	Range:	1-12

1.2 Mobility

Substance	Solubility Value (mg/L)	Score
Benzene	1.75E+03	3
Vinyl chloride	2.76E+03	3

Maximum value:	3	Mobility Score:	3
Source:	WARM Toxicity Database	Range:	1-3

1.3 Substance quantity

Quantity:	1,800 cu yd		
Basis:	Source 70 feet in radius		
Source:	Phase II Table 4 and Figure 4	Substance Quantity Score:	4
		Range:	1-10

2.1 Containment

Description:	Contaminated soil and groundwater		
Source:	Phase II and HFD Report	Containment Score:	10
		Range:	0-10

SUBSTANCE PARAMETER CALCULATION

SUB = (Human Toxicity + Mobility + 3) x (Containment + 1) + Substance Quantity **180.0**

2.0 MIGRATION POTENTIAL

2.2 Net precipitation

Amount (in.):	22	Net Precipitation Score:	3
Source:	NOAA NCEI Climate Data Online	Range:	0-5
	ESRI Gobal Annual Evapotranspiration		

2.3 Subsurface Hydraulic Conductivity

Description:	Sandy silt and silty sand		
Source:	Boring logs in Phase II	Hydraulic Conductivity Score:	3
		Range:	1-4

2.4 Vertical Depth to Aquifer

Depth (ft):	0 (groundwater is contaminated)	Depth to Aquifer Score:	8
Source:	Phase II and HFD Report	Range:	1-8

MIGRATION PARAMETER CALCULATION

MIG = Depth to Aquifer + Net Precipitation + Hydraulic Conductivity **14.0**

3.0 TARGETS

3.1 Aquifer Usage

Description:	Groundwater not used but useable		
Source:	iMap, WDOH Water System Database	Aquifer Use Score:	2
		Range:	1-10

3.2 Distance to Nearest Drinking Water Well

Distance (ft):	> 10,000	Well Distance Score:	0
Source:	iMap, WDOH Water System Database	Range:	0-5

3.3 Population Served by Drinking Water Wells within Two Miles — Population Served Score: 0.0

No. of people:	0	Range:	0-100
Source:	WDOH Water System Database, Well Log Viewer		

3.4 Area Irrigated by Wells within Two Miles — Area Irrigated Score: 0.0

Area (acres):	0	Range:	0-50
Source:	Water Resources Explorer		

TARGET PARAMETER CALCULATION

2.0

TAR = Aquifer Use + Well Distance + Population Served + Area Irrigated

4.0 RELEASE

Evid. of release? Yes

Source: Phase II

Release Score (REL): 5.0

Range: 0 or 5

GROUND WATER ROUTE CALCULATION

37.4

GW = (SUB x 40/208) x {(MIG x 25/17) + REL + (TAR x 30/165)} / 24

Range: 0-100

Washington Ranking Method
Route Scoring Summary and Ranking Calculation

CSID: **13006**

Site: **Block 79 East**

Human Health Route Scores

Pathway	Score	Quintile
Surface water	0.0	
Air	54.4	5
Groundwater	37.4	3

Quintile	Value
High (H)	5
Middle (M)	3
Low (L)	

Human Health Pathway Quintiles - based off August 2021 HSL

Quintile	Surface Water		Air		Groundwater	
1	<=	7.3	<=	8.6	<=	24.1
2	7.4	14.9	8.7	16.3	24.2	33.2
3	15.0	21.2	16.4	25.6	33.3	40.5
4	21.3	29.8	25.7	40.3	40.6	49.7
5	>=	29.9	>=	40.4	>=	49.8

$(H^2 + 2M + L) / 8$

Human Health Priority Bin Score: 3.9

Environmental Route Scores

Pathway	Score	Quintile
Surface water	0.0	
Air	5.7	3

Quintile	Value
High (H)	3
Low (L)	

Environmental Pathway Quintiles - based off August 2021 HSL

Quintile	Surface Water		Air	
1	<=	11.3	<=	1.2
2	11.4	24.1	1.3	1.5
3	24.2	32.5	1.6	13.8
4	32.6	49.6	13.9	26.5
5	>=	49.7	>=	26.6

$(H^2 + 2L) / 7$

Environmental Priority Bin Score: 1.3

FINAL MATRIX RANKING

Human Health Priority	Environmental Priority 5	4	3	2	1	n/a
5	1	1	1	1	1	1
4	1	2	2	2	3	2
3	1	2	3	4	4	3
2	2	3	4	4	5	3
1	2	3	4	5	5	5
n/a	3	4	5	5	5	NFA

n/a - not applicable

NFA - no further action

Site Rank: 2