

SITE NAME: Seattle DOT Mercer Parcels

Rank: 2

Cleanup Site ID: 14784 Facility/Site ID: 27913 Completed on 8/16/2021 for inclusion on the August 2021 Hazardous Sites List.

LOCATION OF SITE

800 Mercer St Seattle, King County, WA 98109 Township 25N, Range 4E, Section 30 Latitude, Longitude: 47.62507, -122.34110

Tax Parcel ID: 224900-0006, 224900-0055

SITE DESCRIPTION

Within Currently Defined Site Boundaries

Based on currently available information, the Seattle DOT Mercer Parcels site (Site) is contained by the two parcels listed above. The 2.35 acre property is on the southwest corner of the intersection of Roy Street and 9th Avenue North (Figure 1-1). It is zoned for mixed use (Seattle Mixed South Lake Union 175/85-280) and is currently vacant. There are two temporary sediment ponds for stormwater collection on the eastern half of the property. Photos of the property are provided at the end of this report.

The City of Seattle provides water, sewer, and stormwater services. A remedial investigation (RI) and feasibility study (FS) are currently being conducted in preparation for redevelopment under a prospective purchaser consent decree.

Soil and groundwater in the northwest area of the property are impacted with petroleum, likely related to operations of a former gasoline service station (Figure 3-1). These releases constitute the Site evaluated in this site hazard assessment (SHA).

Limited areas of shallow soil on the property are impacted with polycyclic aromatic hydrocarbons (PAHs) and arsenic from fill material along a historical road right-of-way from the southwest corner to the northeast corner. One sample with a lead concentration above the cleanup level appears to be an anomalous hot spot within the fill material. The contaminated fill material is distinct from the petroleum contamination due to the historical gas station and it constitutes a separate site called Broad Street Alignment Contaminated Fill (CSID 15446), which is not evaluated in this SHA.

Releases of chlorinated solvents (tetrachloroethene and degradation products) at the Maryatt Industries/American Linen site to the north have traveled in deep groundwater under the Site in a plume that is distinct from, and unrelated to, the releases at the Site (Figure 7-11). The chlorinated solvents are being evaluated in relation to the Maryatt Industries/American Linen site (CSID 12004) and are not evaluated in this SHA.

A variety of commercial businesses operated on the property between 1917 and 2019, some of which are summarized below. However, the only contamination detected on the property is that summarized in the paragraphs above. For additional details, see Hart Crowser (2021).



Historical Owners and Operators

<u>From</u>	<u>To</u>	Owner/Operator	Site Uses
Late 1800s	1950s	Unknown	Residences, possibly with heating oil tanks
1925	1940	Riebe Chemical Works, Riebe Continental Chemical Co., Riebe Soap & Chemical Wks.	Soap manufacturing
1925	1996	Multiple	Sign and painting businesses
1929	1960	Unknown	Gasoline service station
1930	1955	Newton Auto Wrecking, Shucks Auto Wrecking	Auto wrecking businesses
1940	1940	West Coast Junk Company	Junk yard
2014	2019	Shimmick Construction	Construction staging
2019	Present	Seattle Department of Transportation	Vacant

Area Surrounding the Site

The property is bounded to the north by Roy Street and across that an office building under construction, an existing office building, and a restaurant; to the east by 9th Avenue North and across that an office building; to the south by Mercer Street and across that a medical/dental office and an office building; and to the west by Dexter Avenue North and across that warehouses and parking lots.

The property is surrounded by five sites listed on Ecology's Confirmed and Suspected Contaminated Sites List (Figure 3-1). To the north are the Maryatt Industries/American Linen Supply (Cleanup Site IDs [CSIDs] 3167 and 12004), which are essentially one combined site, and the Seattle Roy Aloha Shops site (CSID 11216). Cleanup is ongoing and redevelopment has begun at the Maryatt Industries/American Linen site. Cleanup has begun but is not complete at Seattle Roy Aloha Shops. To the east is the AIBS Building Block 43 site (CSID 12637); cleanup has begun but is not complete. To the west are the 601 Dexter site (CSID 15113) and the Seattle DOT Dexter Parcel (CSID 14785). Remedial investigations and feasibility studies are being conducted at both sites.

The nearest surface water body is Lake Union, located 880 feet northeast of the property. A 0.55-acre grassy, undeveloped area with no parcel number and no ownership information is located 240 feet southwest of the property. During the site visit on August 11, 2021, the area was a tent encampment with tents erected side by side, almost completely covering the ground surface.

SITE CHARACTERIZATION AND/OR REMEDIATION

The property was included in ten different investigations before the RI/FS in process at the time of the SHA. The historical investigations included two Phase II Environmental Assessments and two RIs. The information in this section is taken from the most recent RI (Hart Crowser 2021). For additional details, see the 2021 RI.

During a 1997 Phase II Environmental Site Assessment, three soil samples and two groundwater samples were collected from the southcentral area of the property and adjacent to the property to the north and west and were analyzed for petroleum and chlorinated solvents. During a 2012 investigation, soil samples were collected from three borings adjacent to the property to the west and analyzed for lead. During a 2012-2013 investigation for



the American Linen site six monitoring wells were installed on or adjacent to the Mercer Parcels property; soil and groundwater samples were analyzed for petroleum and chlorinated solvents. Groundwater samples were collected from a monitoring well on the northeast side of the property between 2014 and 2020 and analyzed for gasoline range organics (GRO) and chlorinated solvents. During a 2017 limited Phase II Environmental Site Assessment, 15 soil and four grab groundwater samples collected on the property were analyzed for petroleum, metals, volatile organic compounds (VOCs), and polycyclic aromatic hydrocarbons (PAHs). During an investigation conducted for the American Linen site between 2017 and 2019, soil and groundwater samples were collected from 12 locations on or adjacent to the property and analyzed for VOCs. During the 2021 RI, 343 soil samples collected throughout the property were analyzed for petroleum, VOCs, metals, PCBs, and semi-volatile organic compounds (SVOCs) including PAHs. Groundwater samples collected from 36 monitoring wells throughout the property were analyzed for the same analyte list.

Soil on the property consists of fill, glacial deposits, and non-glacial deposits. The fill comprises sand with silt, gravel, and cobbles and brick, concrete, and glass debris. In most areas the fill is 12 to 18 feet deep, but it ranges up to 31 feet in some areas. In areas without fill, silt and/or clay with or without sand are present to a depth of 27 feet below ground surface (bgs). Below that is a layer of silty sand and silty gravel with varying degrees of gravel and cobbles to a depth of 73 feet bgs.

The hydrogeology at the site is described as four water-bearing zones (WBZs). The Shallow WBZ is discontinuous and unconfined in fill, lacustrine deposits, and glacial deposits. The intermediate WBZ is divided into two depth intervals called Intermediate A (upper, coarser zone) and Intermediate B (deeper, finer zone). The Deep WBZ consists of materials similar to the intermediate zones. Groundwater generally flows eastward across the property in all four WBZs. The depth to the Shallow WBZ is 25 feet. Water levels in the Intermediate and Deep WBZs have been influenced at times by temporary construction dewatering at nearby properties, but water levels in the Shallow WBZ have not been affected.

The chemicals of concern for soil are GRO and lead, both of which are attributed to operations at a former gasoline service station. GRO exceeds its MTCA Method A soil cleanup level in the northwest corner of the property between 5 and 25 feet bgs at concentrations up to 1,200 mg/kg (Figure 7-7).

The chemicals of concern for groundwater in the Shallow WBZ are GRO, diesel range organics (DRO), and benzene. These chemicals exceed their cleanup levels in the northwest corner of the property at concentrations up to 650 ug/L DRO, 1,600 ug/L GRO, and 34 ug/L benzene. They are also attributed to former gasoline service station operations.

ADDITIONAL INFORMATION COLLECTED BY THE SITE HAZARD ASSESSOR

Ecology performed a drive-by site visit for the purposes of the Site Hazard Assessment on August 11, 2021. Conditions were similar to those described in site reports. Ecology is also overseeing the preparation of the remedial investigation and feasibility study, including site visits in December 2019 and February 2021.

SPECIAL CONSIDERATIONS

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

□ Surface Water

Not evaluated because of subsurface releases.

🗹 Air

Volatile chemicals in ground water could be a source of vapor intrusion.

Groundwater

Contaminants detected in ground water.



Lead is a chemical of concern for soil, but it was not evaluated in the SHA because it has not impacted groundwater. Benzene was not evaluated separately because the scores for GRO are based on benzene. The scores for DRO are based on naphthalene.

ROUTE SCORES

Surface Water/ Human Health:	Surface Water/ Environment:		
Air/ Human Health:	48.1	Air/ Environment:	1.6
Groundwater/ Human Health:	35.4		

Overall Rank: 2



REFERENCES

- 1 Ecology's What's in my Neighborhood? Accessed July 2021. https://apps.ecology.wa.gov/neighborhood/
- 2 ESRI Global Annual Evapotranspiration. Accessed July 2021. https://www.arcgis.com/home/webmap/viewer.html?layers=ad3f8cc18fc74e6894ee220acd 15020a.
- 3 Hart Crowser. 2021. Remedial Investigation, Seattle DOT Mercer Parcels, 800 Mercer Street, Seattle, Washington. June 25.
- 4 King County iMap. Accessed July 2021. https://gismaps.kingcounty.gov/imap/
- 5 Missouri Census Data Center. Accessed July 2021. https://mcdc.missouri.edu/applications/caps2010.html.
- 6 NOAA NCEI Climate Data Online. Accessed July 2021. https://www.ncdc.noaa.gov/cdoweb/.
- 7 Washington Ranking Method (WARM) Toxicity Database. Available from Priscilla Tomlinson, Washington State Department of Ecology, Northwest Regional Office.
- 8 Washington State Department of Ecology. 2007. Washington Ranking Method (WARM) Scoring Manual. Https://apps.ecology.wa.gov/publications/documents/90014.pdf.
- 9 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



SITE HAZARD ASSESSMENT Worksheet 2: Route Documentation

SITE NAME: Seattle DOT Mercer Parcels

Cleanup Site ID: 14784

Facility/Site ID: 27913

1. SURFACE WATER ROUTE

List those substances to be considered for scoring:

None

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

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:

GRO DRO

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

Detected in soil

List those management units to be considered for scoring:

Soil

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

Contaminated soil is shallower than contaminated groundwater

3. GROUNDWATER ROUTE

List those substances to be considered for scoring:

GRO DRO

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

Detected in groundwater

List those management units to be considered for scoring:

Groundwater

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

Data available for groundwater

Worksheet 4 Surface Water Route

CSID: 14784 Site: Seattle DOT Mercer Parcels

Not scored.

Worksheet 5 Air Route

CSID: 14784 Site: Seattle DOT Mercer Parcels

1.0 SUBSTANCE CHARACTERISTICS

1.1 Introduction

No scoring in Section 1.1.

1.2 Human Toxicity

	Amb. Air	Stnd.	Acute To	xicity	Chronic T	oxicity	Carcinoge	enicity
Substance	Value (ug/m ³)	Score	Value (mg/m ³)	Score	Value (mg/kg/day)	Score	Adj. CPFi (risk/mg/kg- day)	Score
GRO	0.0345	10	31947	3	8.57E-03	8	2.73E-02	5
DRO	0.0294	10		Х	8.57E-04	10	5.95E-02	5

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

1.3 Mobility

Gaseous Mobility

	Vapor Pre	essure	Henry's	Law
	Value		Value (atm-	
Substance	(mm Hg)	Score	m3/ mol)	Score
GRO	9.50E+01	4	5.56E-03	4
DRO	8.20E-02	3	4.83E-04	3

Maximum score:	4
Source:	WARM Toxicity Database

Particulate Mobility

Soil type:Not scored; surface covered by pavementErodibility factor:Climatic factor:Mobility value:Source:

Mobility Score: 4 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		
	Acute		
	Value		
Substance	(mg/m ³) Score		
Gasoline (benzene)	3.19E+04 3		
Diesel (naphth.)	X		
Maximum score	3	Environmental Toxicity Score:	3
Source:	WARM Toxicity Dat		
		-	
		Environmental Tox/Mobil Score:	6
		Range: 1-24	
1.6 Substance Quantity			
Quantity:	800 cu yd		
Basis:	Soil in 100x70 foot	ea, 3 feet thick	
Source:	RI Figure 7-5a	Substance Quantity Score:	7
		Range: 1-10	
2.1 Containment			
Description:		vapor collection system	
Basis:	RI	Containment Score:	5
		Range: 0-10	
SUBSTANCE PARAMETER			
Human Health Pathway		_	
SUBh (Human Tox/Mobil +	5) x (Containment +1	- Substance Quantity	181.0
Environmental Pathway SUBe (Environ. Tox/Mobil	LE) x (Containment L		72.0
	+ 5) X (Containment +		73.0
3.0 TARGETS			
3.1 Nearest Population			
Description:	Tent encampment	southwest	
Distance (ft):	230	Nearest Population Score:	10
Source:	King County iMap	Range: 0-10	

3.2 Nearest Sensitive Envir	onment				
Description:	Lake Union				
Distance (ft):	880	Nearest Sensitive Environment Score: 7			
Source:	King County iMap	Range: 0-7			
3.3 Population within One	Half Mile				
Number:	6,053	Population within Half Mile Score: 75.0			
Source:	Missouri Census Data Center	Range: 0-75			
TARGET PARAMETER CAL	CULATIONS				
Human Health Pathway					
TARh=Nearest Population -	Population within Half Mile	85.0			
Environmental Pathway					
TARe Nearest Sensitive En	vironment	7.0			
4.0 RELEASE					
Evid. of release?	No; no visual evidence and no air	sampling			
Source:	RI	Release Score (REL): 0.0			
		Range: 0 or 5			
AIR ROUTE CALCULATION	5				
Human Health Pathway					
AIRh =(SUBh x 60/329) x {REL + (TARh x 35/85} / 24 48					
Environmental Pathway					
AIRe =(SUBe x 60/329) x {REL + (TARe x 35/85} / 24					
		D 0 100			

Range: 0-100

Worksheet 6 Groundwater Route

CSID: 14784

Site: Seattle DOT Mercer Parcels

1.0 SUBSTANCE CHARACTERISTICS

1.1 Human toxicity

		Drink. Wat	t. Stnd	Acute To	oxicity	Chronic To	oxicity	Carcinoge	nicity	
		Value		Value		Value		Adj. CPFo		
	Substance	(ug/L)	Score	(mg/kg)	Score	(mg/kg/day)	Score	(risk/mg/kg-day)	Score	
	GRO	5	8	3,306	3	4.00E-03	3	5.50E-02	5	
	DRO		Х	490	5	2.00E-02	1		Х	
	Maximum score:	8								
	Bonus points:	0					Hu	ıman Toxicity	Score:	8
	Source:	WARM Toxi	city Data	abase				, Range:		
1.2 N	1obility									
		Solubil	ity							
		Value	-							
	Substance	(mg/L)	Score							
	GRO	1.75E+03	3							
	DRO	3.10E+01	1							
	Maximum value:	3						Mobility	Scoro	3
	Source:	э WARM Toxi	city Data	haco				Range:		5
	Source.		City Data	ingse				Kalige.	1-2	
1.3 S	ubstance quantity									
	Quantity:	1,000 cu yd								
	Basis:	Ground wat	er in 88x	(38.5 ft & 4	4x22 ft a	ireas, each a	ssumed	3 feet thick		
	Source:	RI Figure 7-	7				Substa	nce Quantity		7
210	ontainment							Range:	1-10	
2.1 C	Description:	Contaminat	ed grour	nd water						
	Source:	RI						Containment	Score	10
								Range:		10
								Nullec.	0 10	

SUBSTANCE PARAMETER CALCULATION

SUB = (Human Toxicity +	- Mobility + 3) x (Containment + 1) + Substance Quantity	/	161.0
2.0 MIGRATION POTEN	TIAL		
2.2 Net precipitation Amount (in.): Source:	22 NOAA NCEI Climate Data Online ESRI Global Annual Evapotranspiration	Net Precipitation Score Range: 0-5	: 3
2.3 Subsurface Hydrauli Description:	c Conductivity Max hydraulic conductivity measured in shallow zone	e: 2.1E-3 cm/sec	
Source:	RI Hyd	draulic Conductivity Score Range: 1-4	: 4
2.4 Vertical Depth to Aq Depth (ft): Source:	uifer 0 (groundwater is contaminated) RI	Depth to Aquifer Score Range: 1-8	: 8
MIGRATION PARAMETE	ER CALCULATION		
MIG = Depth to Aquifer	+ Net Precipitation + Hydraulic Conductivity		15.0
3.0 TARGETS			
3.1 Aquifer Usage Description: Source:	Groundwater not used but useable King County iMap WDOH Office of Drinking Water-Find Water Systems	Aquifer Use Score Range: 1-10	: 2
3.2 Distance to Nearest Distance (ft): Source:	Drinking Water Well >10,000 King County iMap WDOH Office of Drinking Water-Find Water Systems	Well Distance Score Range: 0-5	: 0
3.3 Population Served b No. of people: Source:	y Drinking Water Wells within Two Miles 0 WDOH Office of Drinking Water-Find Water Systems	Population Served Score Range: 0-100	
3.4 Area Irrigated by We Area (acres): Source:	ells within Two Miles O King County iMap	Area Irrigated Score Range: 0-50	: 0.0

TARGET PARAMETER CALCULATION

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

4.0 RELEASE

Evid. of release? Yes; detections in aquifer Source: RI

GROUND WATER ROUTE CALCULATION

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

Release Score (REL): 5.0 Range: 0 or 5

Range: 0-100

2.0



Washington Ranking Method Route Scoring Summary and Ranking Calculation

CSID: 14784 Site: **Seattle DOT Mercer Parcels**

Human Health Route Scores

Pathway	Score	Quintile
Surface water	0.0	0
Air	48.1	5
Groundwater	35.4	3

Quintile	Value
High (H)	5
Middle (M)	3
Low (L)	0

Human Health Pathway Quintiles - based off February 2021 HSL

Quintile	Surface	Surface Water Air			Groundwater		
1	<=	<= 7.3 <= 8.6		<=	24.1		
2	7.4	14.7	8.7	16.4	24.2	33.2	
3	14.8	21.1	16.5	25.8	33.3	40.4	
4	21.1	29.7	25.9	40.2	40.5	49.7	
5	>=	29.8	>=	40.3	>=	49.8	

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

Environmental Route Scores									
Pathway	Score	Quintile							
Surface water	0.0	0							
Air	1.6	3							
		_							
Quintile	Value	_							
High (H)	3	-							
Low (L)	0	_							

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

FINAL MATRIX RANKING

Human Health	Environmental Priority								
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

Human Health Priority Bin Score: Environmental Pathway Quintiles - based off Febrauary 2021 HSL

LINNIOI	cilitari at	nway Qui	nunca bu	
Quintile	Surface	e Water	A	ir
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

Environmental Priority Bin Score: 1.3

3.9

Site Rank: 2





MBB-1 GRO	02/27/2020 5 ft el 50.02 5 U	02/27/2020 10 ft el 45.02 5 U	02/27/2020 15 ft el 40.02 7.7	02/27/2020 20 ft el 35.02 570	02/27/2020 25 ft el 30.02 5 U	MBGW-13 GRO	03/14/2019 5 ft el 49.47 5 U ROY S	03/14/2019 10 ft el 44.47 730 J	03/14/2019 15 ft el 39.47 16	03/14/2019 20 ft el 34.47 5 U		8TH AVE N		88-6 EL43	7		МВВ
GP-9 EL58.0	GP-7 ELS8.5	HMW-	8.61 HMW-619 EL 58.	MBB-2 EL 55.5 HIMW-41A EL 58.7 D 6 HIMW-41A EL 58.7 D 6	A417-MB2 EL 54.4 MBGW-13 EL 54.4 MBB-4 EL 54.6 MBB-3 EL 54.8 MBB-24 EL 54.1 HMW-8/B EL 58.0 21417-M EL 57.5 	HMW-9S EL 55.4 EL 55.3 HMW-9 EL 56.8	MBGW-10 EL 55.3	₽ 	MBGG			BB-5 EL 49.5	HIMW-105 E	HMW-2IB EL 47.4 PLAT7-MB7 EL 47.4 MBB-21 MM-10D EL 47.4 MBB-21 MM-10D EL 47.4 MBB-21 MM-10D EL 47.4 MBB-21 MBC-21		MBPP-3 EL 45.9	MBB-227 EL 42.0
GRO	5 09/03/2020 5 ft el 52.61 5 L	10 ft el 47.61	15 ft el 42.61	20 ft el 37.61	25 ft el 32.61	GRO	5 ft el 49.8	10 ft 34 el 44.8	15 ft 4 el 39.84	20 ft	25 ft el 29.84	MBB-4 GRO	02/27/2020 5 ft el 49.61 5 U	02/27/2020 10 ft el 44.61 5 U/7.3	02/27/2020 15 ft el 39.61 5 U	02/27/2020 20 ft el 34.61 210	25 el 29
GRO IN	SOIL (mg/kg) ≥ 300 ≥ 60 TO 300 ≥ 30 TO 60 ND/0 TO < 30 NO DATA		E DEPTH INTER ≤ 5 FT BELC 5 TO 10 10 TO 15 15 TO 20 20 TO 25 > 25		JRFACE (BGS)	۲ ســــــــــــــــــــــــــــــــــــ	O ELEVATION POTENTIAL HIS SOURCE PROPERTY BOI ORMER LAKE FORMER BROA THROUGH 1950	UNION SHORE	R TAMINANT LINE 0 8TH AVENUE M	RED TE> SCREEN CONCEN DEPTH II ELEVATI J, U = NON J = ESTII	AMPLING LOCATION KT INDICATES EXCEI NING LEVELS PROVII NTRATIONS IN MILLIO N FEET BELOW GRO ON IN FEET (NAVD 8 I-DETECT AT DETEC' MATED VALUE IPLE RESULTS INDIO	EDANCE OF F DED BY ECOL GRAMS PER I DUND SURFA 38); EL. = GRC TION LIMIT AS	PROTECTIVE OF (.OGY (NOVEMBEI KILOGRAM (mg/kg CE (BGS) PUND SURFACE E S INDICATED	GROUNDWATER S R 17, 2020) g) ELEVATION	SCREENING LEV	ELS REENING LEV GANICS (GRC	/ELS FOR O) IN SOII









Figure 1. Seattle DOT Mercer Parcels looking southwest, February 2021.



Figure 2. Seattle DOT Mercer Parcels looking west-northwest, February 2021. The Dexter Parcel site is in the background on the left.



Figure 3. Seattle DOT Mercer Parcels looking northeast, February 2021. The redevelopment at the American Linen site is on the left.