State of Oregon
Department of Environmental Quality Memorandum

Date: August 23, 2023

To: FILE

Through: Bruce Scherzinger and Brad Shultz

From: Sarah Kingery
Western Region

Subject: Sweet Home Chevron, LUST 22-20-0417, Staff Memorandum in support of a conditional No Further Action determination

This document presents the basis for the Oregon Department of Environmental Quality's (DEQ's) recommended conditional No Further Action (NFA) determination for the Sweet Home Chevron, in Sweet Home. As discussed in this report, contaminant concentrations in soil and groundwater are below acceptable risk levels.

The proposed conditional NFA meets the requirements of Oregon Administrative Rules Chapter 340, Division 122, Sections 0205 to 360 and ORS 465.200 through 465.455.

The proposal is based on information documented in the administrative record for this site. A copy of the administrative record index is presented at the end of this report.

1. BACKGROUND

Site location.
The site's location can be described as follows:
- Address: 1762 Main Street, Sweet Home, Linn County Oregon.
- Latitude 44º 23'56.83" North, longitude 122º 43'24.11" West
- Tax lots 100, 101, and 102, Township 13 South, Range 1 East, Section 31

Site setting.
The site is relatively flat at an approximate elevation of 540 feet above sea level. It is currently paved with the original station building and canopy still in place. All underground storage tanks (USTs) and piping have been decommissioned by removal. Adjacent properties include a warehouse to the north and a concrete building to the west. The site is bounded by 18th Avenue on the east property line and Main Street on the south property boundary. The site and adjacent properties are zoned commercial highway and industrial.

Physical setting.
The site, approximately 0.34 acre, is flat with a depth to groundwater of 6-8 feet. Groundwater flow direction is typically toward the north-northwest. Soils at the site consist of silty clay and

sand. The nearest body of water is Cotton creek located approximately 360 feet southwest of the site.

Site history.

The site was operated as a gas station from 1966 until 2020 when the USTs were removed. Historic use of the site prior to the gas station is unknown. In 2006, DEQ granted a conditional NFA for a release identified during a UST upgrade in 1988. A second release was reported in 2020 during the UST decommissioning (LUST 22-20-0417).

2. BENEFICIAL LAND AND WATER USE DETERMINATIONS

Land use.
The site and adjacent properties are currently zoned Commercial Highway. The Commercial Highway zone, also known as C2 was modified July 25, 2023. The changes allow for residential use in this zone, specifically duplexes, multi-family dwellings, and residential facilities. It is unlikely that the current building at the property (former gas station building) could be used for these purposes. However, residential receptors should be considered as a possible future receptor for this site.

Groundwater use.
The City of Sweet Home provides municipal water to the site and surrounding properties. City water is drawn from Foster Reservoir approximately 2.8 miles to the northeast. There are no current or reasonably likely future beneficial uses of groundwater within the locality of facility (LOF).

Martin S. Burck Associates, Inc. (MSBA) conducted a well survey within a quarter mile radius of the site. Four wells were identified within the radius. These wells were located between 390 and 1000 feet from the site and drilled to depths ranging from 38 to 46 feet bgs (below ground surface). A door-to-door and mail survey was also conducted for adjacent properties and the surrounding vicinity which identified 2 additional wells located between 575 and 600 feet from the site. All the residences within this survey are provided with city water.

Surface water use.
Two tributaries of the Santiam River, Cotton Creek and Ames Creek, were identified near the site. Both are outside of the LOF for this site. Storm water at the site sheet drains to the street or is collected in a catch basin in the southwest corner of the property and is conveyed to the city stormwater system.

3. INVESTIGATION AND CLEANUP WORK

The areas of concern at this site consisted of the five former USTs and their associated piping. In 1989, a 4,000-gallon gasoline UST was decommissioned in place with sand. No site assessment was conducted at that time. A release was reported (LUST 22-98-4052) at the site in 1998 during a UST upgrade. Approximately 85 tons of petroleum-contaminated soil were removed for

disposal. Excavation cleanup, confirmation soil sampling, and groundwater monitoring and sampling activities were performed between 1998 and 2004. A conditional NFA determination was issued by DEQ in 2006. As part of the conditional NFA institutional controls were implemented via an Easement and Equitable Servitude (EES) which was recorded with the county and attached to the property deed. The EES precludes the following on the property:

1) Residential use of the property
2) The installation of domestic groundwater wells
3) Excavation to depths greater than 10 feet bsg without a health and safety management plan

All USTs were decommissioned in 2020. Confirmation soil and groundwater samples were obtained at that time and summarized on Figures 2 and 3. Additional soil and groundwater investigation took place in April 2023 to characterize conditions downgradient of the release. Boring locations and analytical results are shown on figure 3.

Nature and extent of contamination.
The contaminants of interest are gasoline and diesel range hydrocarbons which are present in both soil and groundwater. These contaminants are located in the vicinity of the former north UST area. The highest concentrations were found in MW-1 and TW-1 located adjacent to and down gradient of the former 12,000-gallon gasoline and diesel USTs (figures 2 and 3).

Concentrations of gasoline and diesel were detected in soil and groundwater samples collected from TW-1 on the north portion of the site. The inferred extent of contamination extends into the adjacent northern property which is zoned Industrial.

4. RISK EVALUATION

Conceptual site model.
The sources of contamination at the site are the former five gasoline and diesel USTs, associated piping, and operations. The site is zoned Commercial Highway. The closure report prepared by MSBA Inc. excluded consideration of residential receptors based on this zoning. However, through additional conversations with the City of Sweet Home, DEQ learned that the C2 zoning was modified on July 25 to include residential uses therefore residential is considered a potential future receptor. The site is currently unoccupied; however, this is a likely potential future risk. Institutional controls are already in effect for the site that restrict residential use of the site.

To evaluate human exposure to residual chemical contamination requires an assessment of the type and extent of that exposure. This is based on current and reasonably likely future site use. DEQ publishes risk-based concentrations (RBCs) for contaminants commonly encountered, for different types of exposure scenarios. These RBCs are conservative estimates of protective levels of contaminants in soil, groundwater, and air. Table 1 shows potential exposure pathways and receptors for this site. Based on this, applicable RBCs are identified and used for risk screening.

CONCEPTUAL SITE MODEL TABLE
Table 1. Identification of applicable RBCs, based on pertinent pathways and receptors.

	Pathway	Receptor	Is pathway complete?	Is RBC Exceeded?	Comments
Soil	Ingestion, Dermal Contact, and Inhalation	Residential and/or Urban Residential	No	N/A	
		Occupational	No	N/A	
		Construction Worker	Future	No	
		Excavation Worker	Future	No	
	Volatilization to Outdoor Air	Residential and/or Urban residential	No	N/A	Currently unoccupied. EES restricts residential use.
		Occupational	Future	No	Risk not exceeded
	Leaching to Groundwater	Residential and/or Urban residential	No	N/A	Groundwater is not used as a source for drinking water. EES restricts well installation.
		Occupational	No	N/A	
Groundwater	Ingestion & Inhalation from Tap Water	Residential and/or Urban residential	No	N/A	Groundwater is not used as a source for drinking water. EES restricts well installation.
		Occupational	No	N/A	
	Vapor Intrusion into Buildings	Residential	No	No	Currently unoccupied. EES restricts residential use.
		Commercial	Future	No	
	Groundwater in Excavation	Occupational	Future	No	Risk not exceeded
Ecological		Terrestrial & Surface Water	No	No	Soil contamination at depth. No surface water impacts.

Contaminant concentrations.
The contaminants of interest (COIs) are gasoline, diesel, and oil. Concentrations detected at the site are summarized in Figure 2 prepared by MSBA, inc. Additional analytical data can be found on Tables 1 and 3.

Human health risk.
Conditions at the site are protective of human health given the current use of the site as vacant property and for future use given the EES on the deed that restricts residential use, groundwater use and the installation of wells, and requires a health and safety plan for excavations greater than 10 feet bgs.

The inferred extent of contamination indicates groundwater contamination extends onto the adjacent property to the north of the site. The adjacent property is zoned industrial and the building/warehouse is likely greater than 30 feet from plume.

Ecological risk.
The site is a fully paved commercial site devoid of threatened or endangered species.

(a) Contaminated soils are only present at a depth greater than 3 feet below ground surface, or, if present at a shallower depth, such soils cover an area no greater than 0.125 acre.

(b) Surface water has not been affected by the release.
(c) Contaminated groundwater does not and is not reasonably likely to discharge to surface waters or otherwise reach the surface in a manner that might result in contact with ecological receptors; and
(d) Contaminated groundwater does not and is not reasonably likely to come into contact with aquatic sediments. (OAR 340-122-0244(3))

These conditions eliminate ecological risk.

5. RECOMMENDATION

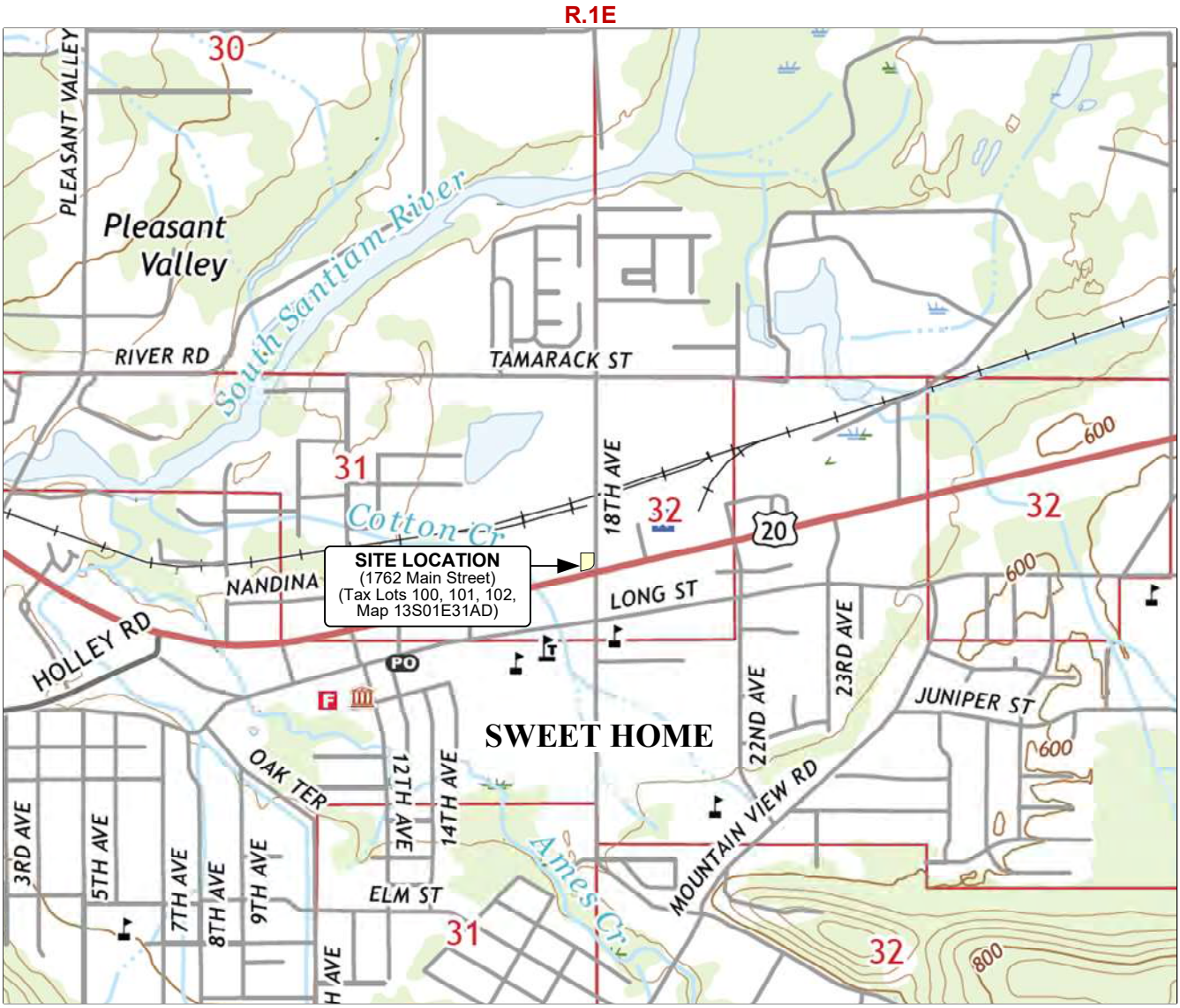
Based on information provided in the closure report and the presence of an institutional control on the deed of the property, a conditional NFA is recommended for the site.
Any type of No Further Action determination should be recorded in DEQ's underground storage tank database LUST No. 22-20-0417

6. ADMINISTRATIVE RECORD

2020-02-25_22-20-0417_DecomChecklist.pdf
2020-02-25_22-20-0417_USTdecom-Sample-results.pdf
2020-06-05_22-20-0417-20DayReport.pdf
2023-06-23_22-20-0417_ClosureReport.pdf

7. ATTACHMENTS

1. Site Location Map, Site Layout and 2020-2022 Data Map, Site Plan and Analytical Results: Figures 1, 2, and 3 (MSBA Inc.)
2. Table 1: Soil Sample Analytical Data (MSBA Inc.)
3. Table 3: Groundwater Sample Analytical Data (MSBA Inc.)



Adapted from: Sweet Home Quadrangle, Oregon – Linn County
USGS Topographic Map, 2020
7.5 Minute Series, Contour Interval 40 feet
North American Vertical Datum of 1988

Revised: 6/26/2023 3:51 PM

NORTH

0 1/4 1/2

Approximate Scale (mile)

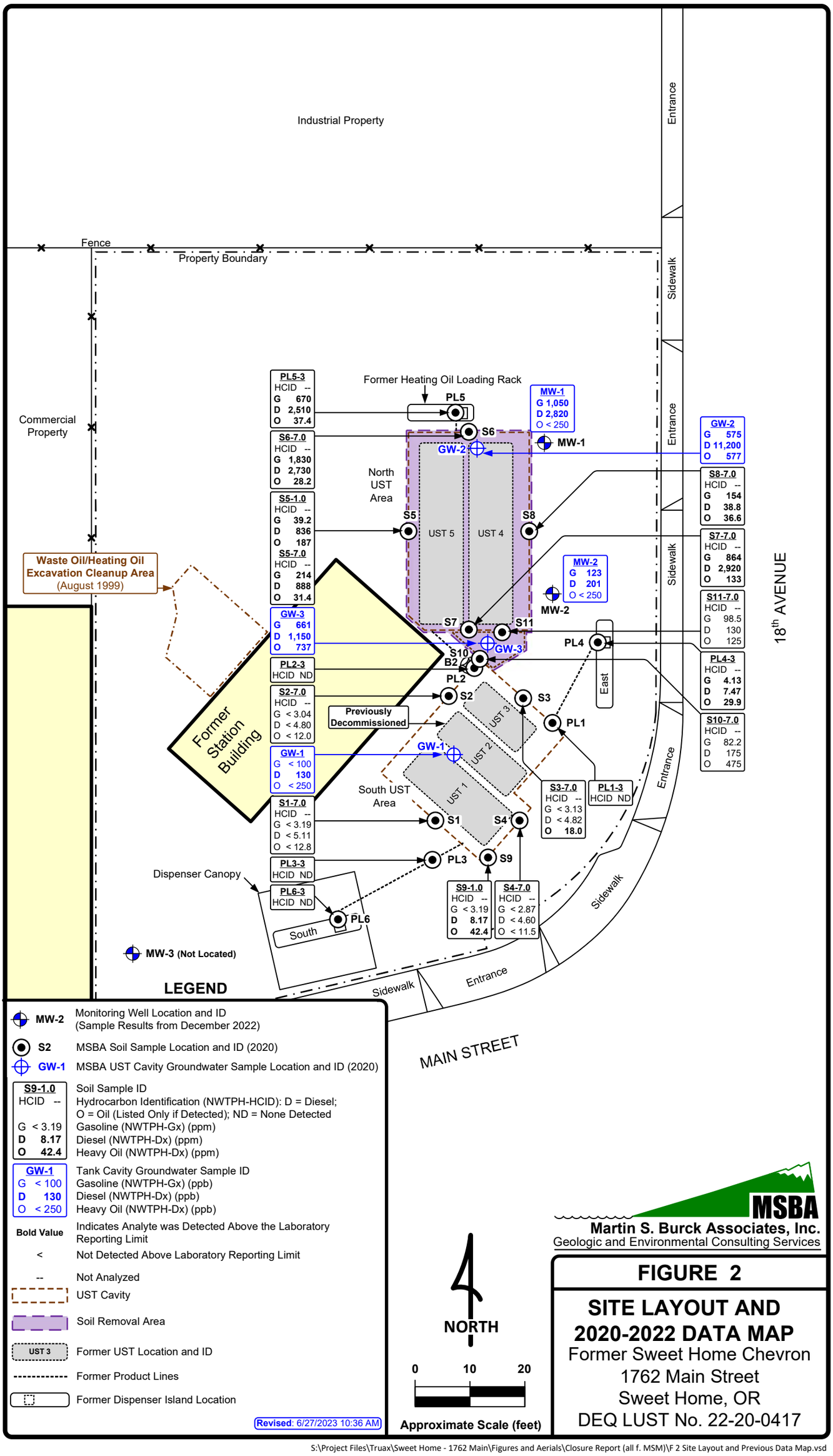
MSBA
Martin S. Burck Associates, Inc.
Geologic and Environmental Consulting Services

FIGURE 1

SITE LOCATION MAP

Former Sweet Home Chevron
1762 Main Street
Sweet Home, OR
DEQ LUST No. 22-20-0417

S:\Project Files\Truax\Sweet Home - 1762 Main\Figures and Aerials\Closure Report (all f. MSM)\F 1 Site Location Map.vsd



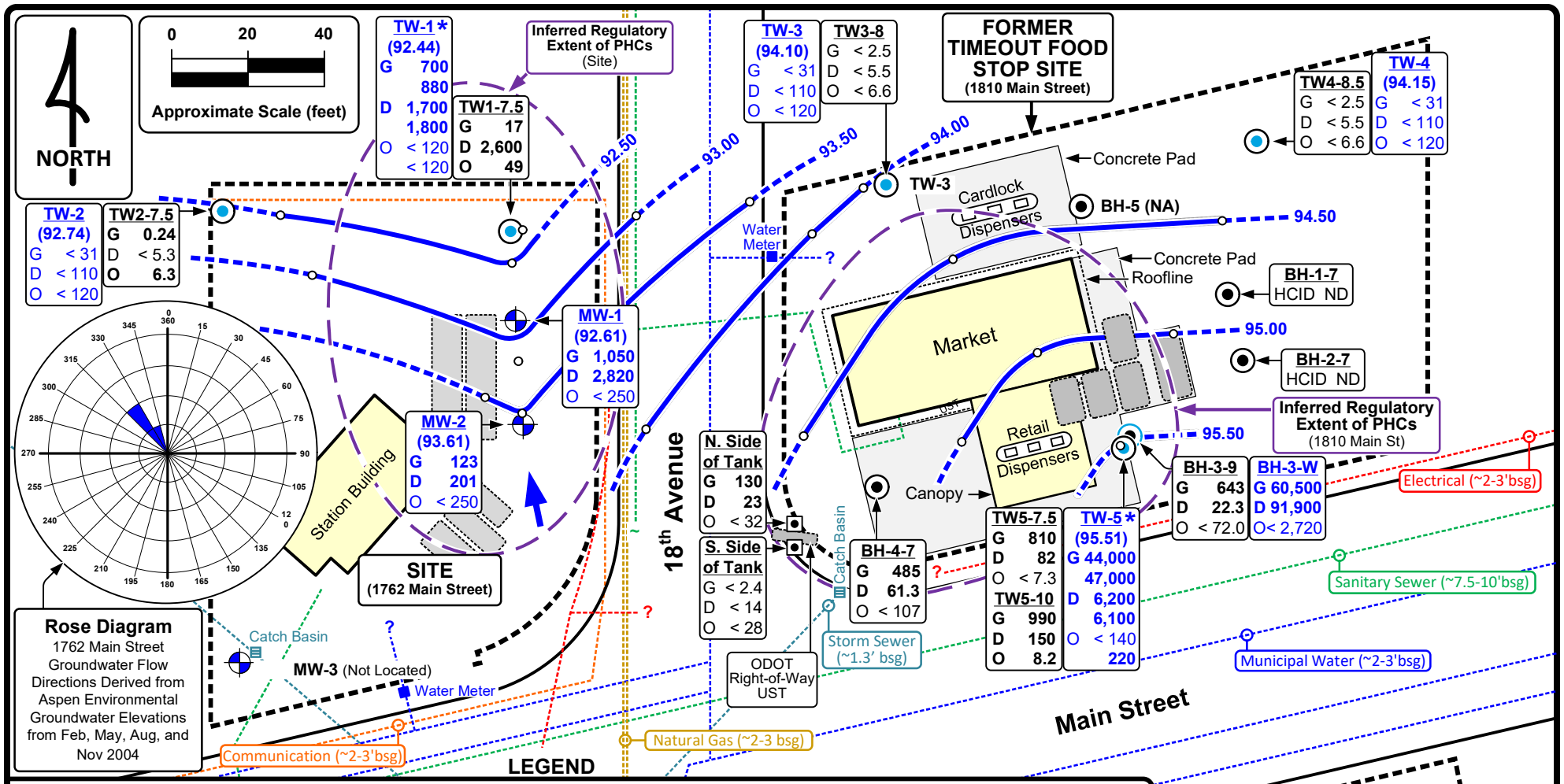
Martin S. Burck Associates, Inc.
Geologic and Environmental Consulting Services

FIGURE 2

SITE LAYOUT AND 2020-2022 DATA MAP

Former Sweet Home Chevron
1762 Main Street
Sweet Home, OR
DEQ LUST No. 22-20-0417

S:\Project Files\Truax\Sweet Home - 1762 Main\Figures and Aerials\Closure Report (all f. MSM)\F 2 Site Layout and Previous Data Map.vsd



S:\Project Files\Truax\Sweet Home - 1762 Main\Figures and Aerials\Closure Report (all f. MSM)\F 3 Site Plan & Analytical.vsd

TABLE 1
SOIL SAMPLE ANALYTICAL DATA

Former Sweet Home Chevron
1762 Main Street, Sweet Home, OR
DEQ LUST No. 22-20-0417

Sample ID	Sample Date	Sample Depth (Feet bsg) [a]	PHCs [b] (ppm) [c]				RBDM VOCs [d] (ppm)											PAHs [e] (ppm)													Metals [f] (ppm)					
			HCID (see key) [g]	Gasoline	Diesel	Oil	Benzene	Toluene	Ethylbenzene	Xylenes	1,2-Dibromoethane	1,2-Dichloroethane	Methyl tert-butyl ether	Isopropylbenzene	Naphthalene	124-Trimethylbenzene	135-Trimethylbenzene	Acenaphthene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Naphthalene	Indeno(1,2,3-cd)pyrene	Pyrene	Cadmium		Chromium [h]		Lead	
																															Total	TCLP	Total	TCLP	Total	TCLP
2020 UST Decommissioning Samples																																				
S1-7.0	1/23/20	7.0	- [i]	< 3.19 [j]	< 5.11	< 12.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S2-7.0	1/23/20	7.0	-	< 3.04	< 4.80	< 12.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S3-7.0	1/23/20	7.0	-	< 3.13	< 4.82	**18.0** [k]	< 0.00121	**0.0113**	< 0.00301	**0.0155**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-
S4-7.0	1/23/20	7.0	-	< 2.87	< 4.60	< 11.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S5-1.0	1/24/20	1.0	-	**39.2**	**836**	**187**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S5-7.0	1/24/20	7.0	-	**214** [l]	**888**	**31.4**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S6-7.0	1/24/20	7.0	-	**1,830**	**2,730**	**28.2**	< 0.0492	< 0.246	< 0.123	< 0.320	< 0.123	< 0.123	< 0.0492	**1.21**	< 0.615	< 0.246	< 0.246	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**4.12**	-
S7-7.0	1/24/20	7.0	-	**864**	**2,920**	**133**	< 0.0147	< 0.0733	< 0.0367	< 0.0953	-	-	-	-	-	-	-	**0.115**	**0.0343**	< 0.00880	< 0.00880	< 0.00880	< 0.00880	< 0.00880	< 0.00880	< 0.00880	**0.182**	< 0.587	< 0.00880	< 0.00880	< 0.733	-	**18.5**	-	**27.2**	-
S8-7.0	1/24/20	7.0	-	**154**	**38.8**	**36.6**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S9-1.0	1/24/20	1.0	-	< 3.19	**8.17**	**42.4**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S10-7.0 [m]	1/30/20	7.0	-	**82.2**	**175**	**475**	**0.0348**	**0.0964**	**0.0677**	**0.302**	< 0.00313	< 0.00313	< 0.00125	**0.172**	**0.430**	**0.307**	**0.0573**	< 0.00752	< 0.00752	< 0.00752	< 0.00752	< 0.00752	< 0.00752	< 0.00752	< 0.00752	< 0.00752	< 0.00752	**0.0732**	< 0.00752	< 0.00752	-	< 0.100	-	< 0.100	-	< 0.100
S11-7.0	1/30/20	7.0	-	**98.5**	**130**	**125**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PL1-3	1/24/20	3.0	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PL2-3	1/24/20	3.0	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PL3-3	1/24/20	3.0	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PL4-3	1/24/20	3.0	-	**4.13**	**7.47**	**29.9**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PL5-3	1/24/20	3.0	-	**670**	**2,510**	**37.4**	< 0.0301	< 0.150	< 0.0752	< 0.195	< 0.0752	< 0.0752	< 0.0301	**0.237**	<0.377	< 0.150	< 0.150	**0.805**	**0.232**	< 0.00813	< 0.00813	< 0.00813	< 0.00813	< 0.00813	< 0.00813	< 0.00813	< 0.00813	**0.563**	< 0.00813	**0.0794**	-	-	-	-	-	-	-
PL6-3	1/24/20	3.0	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2023 Geoprobe Investigation Samples (1762 Main Street) - MSBA																																				
TW1-7.5	4/13/23	7.5	-	**17**	**2,600**	**49**	< 0.013	< 0.018	< 0.022	< 0.069	< 0.045	< 0.0093	< 0.040	**0.14**	**1.3**	< 0.031	< 0.043	**0.630**	**0.110**	**0.0025**	< 0.0049	< 0.0041	< 0.0029	**0.0032**	< 0.0033	**0.0048**	**1.200**	**0.400**	< 0.0034	**0.750**	-	-	-	-	-	-
TW2-7.5	4/13/23	7.5	-	**0.24**	< 5.3	**6.3**	< 0.014	< 0.019	< 0.023	< 0.075	< 0.049	< 0.010	< 0.043	< 0.045	**0.14**	< 0.034	< 0.046	< 0.0031	< 0.0025	< 0.0026	< 0.0053	< 0.0044	< 0.0031	< 0.0019	< 0.0035	< 0.0031	< 0.0027	< 0.0027	< 0.0037	< 0.0037	-	-	-	-	-	-
DEQ Soil Risk-Based Concentrations (RBCs) - Revised May 2018																																				
LGW [n]	Occupational	na [o]	130	> MAX [p]	0.10	490	0.90	100	0.00056	0.013	0.54	> Csat [q]	0.34	48	53	> Csat	> Csat	> Csat	> Csat	> Csat	> Csat	> Csat	> Csat	> Csat	> Csat	> Csat	0.34	> Csat	> Csat	* [r]		*		30	
SIDCI [s]	Occupational	na	20,000	14,000	37	88,000	150	25,000	0.73	16	1,100	57,000	23	6,900	6,900	70,000	350,000	21	2.1	21	210	2,100	2.1	30,000	47,000	23	21	23,000	1,100		> Max		800	
	Construction	na	9,700	4,600	380	28,000	1,700	20,000	9.0	200	12,000	27,000	580	2,900	2,900	21,000	110,000	170	17	170	1,700	17,000	17	10,000	14,000	580	170	7,500	350		530,000		800	
	Excavation	na	> MAX	> Max	11,000	770,000	49,000	560,000	250	5,600	320,000	750,000	16,000	81,000	81,000	590,000	> MAX	4,800	490	4,900	49,000	490,000	490	280,000	390,000	16,000	4,900	210,000	9,700		> Max		800	
VIB [t]	Occupational	na	> MAX	> Max	2.1	> Csat	17	> Csat	0.16	1.0	110	> Csat	83	> Csat	> Csat	> MAX	> MAX	> Csat	NV [u]	NV	NV	NV	NV	NV	> MAX	83	NV	> MAX	NV		NV		NV	
VOA [v]	Occupational	na	69,000	> Max	50	> Csat	160	> Csat	0.65	15	1,500	> Csat	83	> Csat	> Csat	> MAX	> MAX	> Csat	NV	NV	NV	NV	NV	NV	> MAX	83	NV	> MAX	NV		NV		NV	

a Depth of sample in feet below surface grade (bsg)
b Petroleum Hydrocarbons (PHCs) were analyzed using Oregon Department of Environmental Quality (DEQ) NWTPH methods Gx (gasoline) and Dx (diesel and oil)
c Analytical results reported in parts per million (ppm)
d Risk-Based Decision Making (RBDM) volatile organic compounds (VOCs) were analyzed using EPA method 8260B/8260C
e Polynuclear Aromatic Hydrocarbons (PAHs) were analyzed using EPA method 8270D-SIM
f Metals analyzed using EPA Method 6020B (Total) or 6010D (TCLP), as listed
g Hydrocarbon Identification Key: "G" denotes gasoline hydrocarbon detection, "D" denotes diesel hydrocarbon detection, "O" denotes heavy oil hydrocarbon detection, and "nd" denotes none detected
h Samples were analyzed for total or TCLP chromium, as listed. Listed RBCs are for Chromium III. RBCs for chromium VI are as follows: direct contact (occupational worker) = 0.3 ppm, direct contact (construction worker) = 49 ppm, direct contact (excavation worker) = 1,400 ppm.
i (-) Not analyzed
j (<) Analyte concentration not detected above the laboratory reporting limit, as listed
k Bold value indicates analyte concentration exceeded laboratory reporting limit
l Yellow shading indicates analyte concentration (or one-half the reporting limit) exceeds an RBC. The exceeded level is also shaded
m Sample *S10-7.0* was submitted for analysis of full list VOCs. Additional VOCs were detected as follows: b-Butylbenzene (0.0348 ppm), sec-Butylbenzene (0.197 ppm), tert-Butylbenzene (0.0431 ppm), n-propylbenzene (1.01 ppm), and 1,2,3-Trimethylbenzene (0.185 ppm).
n Leaching to groundwater (LGW) RBCs for occupational receptors
o (na) Not applicable
p (> MAX) "The constituent RBC for this pathway is calculated as greater than 1,000,000 mg/kg or 1,000,000 mg/L. Therefore, these substances are not expected to pose risks in the scenario shown" (Appendix A, RBDM, 2018)
q (> Csat) "This soil RBC exceeds the limit of three-phase equilibrium partitioning" (Appendix A, RBDM, 2018)
r (*) "Leaching to groundwater RBCs are not provided for inorganic chemicals" (Appendix A, RBDM, 2018)
s Soil ingestion, dermal contact, and inhalation (SIDCI) RBCs for occupational, construction, and excavation worker receptors
t Vapor intrusion into buildings (VIB) RBCs for the occupational receptors
u (NV) "This chemical is considered "nonvolatile" for the purposes of the exposure calculations" (Appendix A, RBDM, 2018)
v Volatilization to outdoor air (VOA) RBCs for the occupational receptors

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TABLE 3
GROUNDWATER SAMPLE ANALYTICAL DATA

Former Sweet Home Chevron
1762 Main Street, Sweet Home, OR 97386
DEQ LUST No. 22-20-0417

Sample ID	Sample Date	PHCs [a] (ppb) [b]			RBDM VOCs [c] (ppb)											PAHs [d] (ppb)																		Lead [e]
		Gasoline	Diesel	Oil	Benzene	Toluene	Ethylbenzene	Xylenes	1,2-Dibromoethane	1,2-Dichloroethane	Methyl tert-butyl ether	Isopropylbenzene	Naphthalene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Anthracene	Acenaphthene	Acenaphthylene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene	1-Methylnaphthalene	2-Methylnaphthalene	
On-Site 2020 Tank Cavity Groundwater Samples (1762 Main Street) - MSBA																																		
GW-1	1/23/20	< 100 [h]	**130** [f]	< 250	< 1.00	**2.53**	< 1.00	**4.47**	< 1.00 [g]	< 1.00	< 1.00	< 1.00	< 5.00	**2.33**	< 1.00	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	**0.358**	< 0.0500	< 0.0500	**0.288**	**0.425**	- [i]
GW-2	1/24/20	**575**	**11,200**	**577**	**2.95**	< 1.00	**1.73**	**3.06**	< 1.00	< 1.00	< 1.00	**3.35**	< 5.00	**2.16**	< 1.00	**2.22**	**0.211**	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	**4.83**	< 0.0500	**3.63**	< 0.0500	**0.0607**	**71.8**	**62.5**	**4.42**
GW-3	1/30/20	**661**	**1,150**	**737**	**3.55**	**1.88**	**6.05**	**8.19**	< 1.00	< 1.00	< 1.00	**8.23**	**6.51**	**18.1**	**4.39**	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.250	< 0.0500	< 0.0500	< 0.250	< 0.0500	< 0.0500	< 0.250	< 0.250	**3.42**
On-Site 2022 Monitoring Well Samples (1762 Main Street) - MSBA																																		
MW-1	12/16/22	**1,050**	**2,820**	< 250 [h]	**2.99**	**0.616**	**0.875**	**1.66**	< 0.500	< 0.500	< 0.500	**8.35**	< 2.50	< 0.500	< 0.500	< 0.0500	**1.38**	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.100	**2.88**	< 0.0500	**1.93**	**1.32**	< 0.0500	**32.9**	**26.9**	-
MW-2	12/16/22	**123**	**201**	< 250	**0.505**	< 0.500	**1.21**	< 1.50	< 0.500	< 0.500	< 0.500	< 0.500	< 2.50	**0.835**	< 0.500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.100	< 0.0500	< 0.0500	< 0.250	< 0.0500	< 0.0500	< 0.250	< 0.250	-
On-Site 2023 Geoprobe Investigation Samples (1762 Main Street) - MSBA																																		
TW-1 [j]	4/14/23	**700**	**1,700**	< 120	**0.54**	**0.34**	< 0.20	**0.25**	< 0.20	< 0.31	< 0.16	**13**	**0.95**	< 0.31	< 0.32	< 0.025	**1.6**	**0.42**	< 0.012	< 0.012	< 0.025	< 0.021	< 0.015	< 0.010	< 0.013	**0.023**	**3.9**	< 0.022	**1.8**	**1.2**	< 0.026	**70**	**11**	< 5.1
		880	**1,800**	< 120	**0.72**	< 0.31	< 0.20	**0.69**	< 0.20	< 0.31	< 0.16	**16**	**1.7**	< 0.31	< 0.32	< 0.025	**1.7**	**0.38**	< 0.012	< 0.012	< 0.025	< 0.021	< 0.015	< 0.010	< 0.013	< 0.017	**3.8**	< 0.022	**1.7**	**1.1**	< 0.026	**66**	**9.9**	**9.6**
TW-2	4/13/23	< 31	< 110	< 120	< 0.093	< 0.31	< 0.20	< 0.44	< 0.20	< 0.31	< 0.16	< 0.24	< 0.63	< 0.31	< 0.32	< 0.025	< 0.022	< 0.016	< 0.012	< 0.012	< 0.025	< 0.021	< 0.015	< 0.0099	< 0.013	< 0.017	< 0.016	< 0.022	< 0.052	< 0.055	< 0.026	**0.029**	< 0.043	**10**
Off-Site 2005 Geoprobe Investigation Sample - EGR and Associates (1810 Main Street) [q]																																		
BH-3-W	4/13/05	**60,500**	**91,900**	< 2,720	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Off-Site 2023 Geoprobe Investigation Samples - MSBA (1810 Main Street)																																		
TW-3	4/14/23	< 31	< 110	< 120	< 0.093	< 0.31	< 0.20	< 0.44	< 0.20	< 0.31	< 0.16	< 0.24	< 0.63	< 0.31	< 0.32	< 0.026	< 0.023	< 0.016	**0.015**	**0.013**	< 0.026	< 0.022	< 0.015	< 0.010	< 0.013	**0.028**	< 0.016	< 0.023	< 0.054	< 0.058	< 0.027	< 0.024	< 0.045	< 5.1
TW-4	4/13/23	< 31	< 110	< 120	< 0.093	< 0.31	< 0.20	< 0.44	< 0.20	< 0.31	< 0.16	< 0.24	< 0.63	< 0.31	< 0.32	**0.057**	**0.045**	**0.021**	**0.047**	**0.036**	**0.041**	**0.040**	**0.032**	**0.052**	**0.042**	**0.061**	**0.075**	**0.035**	< 0.052	**0.063**	**0.046**	**0.16**	**0.052**	< 5.1
TW-5 [j]	4/14/23	**44,000**	**6,200**	< 140	**100**	**130**	**2,100**	**11,500**	< 0.20	< 0.31	< 0.16	**120**	**740**	**4,000**	**1,100**	**0.1**	**0.20**	**0.088**	**0.058**	**0.038**	**0.042**	**0.046**	**0.035**	**0.061**	**0.045**	**0.073**	**0.20**	**0.039**	**500**	**0.21**	**0.069**	**39**	**82**	**9.6**
		47,000	**6,100**	**220**	**46**	**30**	**230**	**1,240**	< 0.20	< 0.31	< 0.16	**7.7**	**280**	**360**	**87**	**0.034**	**0.16**	**0.047**	< 0.012	< 0.012	< 0.026	< 0.022	< 0.015	< 0.010	< 0.013	**0.023**	**0.15**	< 0.023	**490**	**0.17**	**0.027**	**40**	**82**	**10**
Equipment and Trip Blank Samples																																		
EB-GW	4/13/23	< 31	< 110	< 120	< 0.093	< 0.31	< 0.20	< 0.44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trip Blank	4/13/23	-	-	-	< 0.093	< 0.31	< 0.20	< 0.44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DEQ Soil Risk-Based Concentrations (RBCs) - Revised May 2018																																		
IIT [k]	Occupational	450	430	430	2.1	6,300	6.4	830	0.034	0.78	68	2,000	0.72	250	280	> S [l]	2,500	- -	0.38	0.47	> S	- -	> S	> S	0.47	> S	1,300	> S	0.72	- -	> S	- -	- -	15
VIB [m]	Occupational	> S	> S	> S	2,800	> S	8,200	> S	590	3,900	870,000	> S	11,000	> S	> S	> S	> S	- -	> S	NV [n]	NV	- -	NV	NV	NV	NV	> S	NV	11,000	- -	> S	- -	- -	NV
VOA [o]	Occupational	> S	> S	> S	14,000	> S	43,000	> S	790	9,000	1.5E+06	> S	16,000	> S	> S	> S	> S	- -	> S	NV	NV	- -	NV	NV	NV	NV	> S	NV	16,000	- -	> S	- -	- -	NV
GWE [p]	Construction	14,000	> S	> S	1,800	220,000	4,500	23,000	27	630	63,000	51,000	500	63,000	7,500	> S	> S	- -	> S	> S	> S	- -	> S	> S	> S	> S	> S	> S	500	- -	> S	- -	- -	> S
	Excavation																																	

a Petroleum hydrocarbons (PHCs) were analyzed using Department of Environmental Quality (DEQ) NWTPH methods Gx (gasoline) and Dx (diesel and oil)
b Analytical results reported in parts per billion (ppb)
c Risk-Based Decision Making (RBDM) volatile organic compounds (VOCs) were analyzed using EPA method 8260D
d Polycyclic Aromatic Hydrocarbons (PAHs) were analyzed using EPA method 8270E SIM
e Total Lead was analyzed using EPA method 6010D
f Bold value indicates analyte concentration exceeded laboratory reporting limit
g Yellow shading indicates analyte concentration (or one-half the laboratory reporting limit, which was raised due to dilution) exceeds an RBC. The exceeded level is also shaded
h (<) Analyte concentration not detected above the method detection limit (MDL), as listed
i (-) Not analyzed/not applicable
j A field duplicate sample was collected for quality assurance/quality control purposes. The first set of results represent the initial sample and the second set of results represent the field duplicate.
k Ingestion and Inhalation from Tapwater (IIT) RBCs for the occupational receptor
l (> S) "This groundwater RBC exceeds the solubility limit" (Appendix A, RBDM, 2018)
m Vapor Intrusion into Buildings (VIB) RBCs for the occupational receptor
n (NV) "This chemical is considered "nonvolatile" for the purposes of the exposure calculations" (Appendix A, RBDM, 2018)
o Volatilization to Outdoor Air (VOA) RBCs for the occupational receptor
p Groundwater in Excavation (GWE) RBCs for the construction and excavation worker receptor
q Blue text indicates off-site samples that were not included in the comparison to the RBCs

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