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Memorandum

To: Matt Morris, Washington State Department of Ecology

Copies: Dianne Conway, Gordon Thomas Honeywell; Jay Petersen, KAMG Management

From: Tom Colligan and Kristin Anderson, Floyd|Snider

Date: June 15, 2018

Re: **Data Report for the Camas Property (RowTac Building)**
2926 South M Street
Tacoma, WA 98409

This memorandum summarizes the data gaps investigation performed at the Camas Property (Site) through the first round of quarterly groundwater monitoring completed in March 2018. This investigation was performed to fill data gaps identified in the draft Remedial Investigation/Feasibility Study (RI/FS), in accordance with the Washington State Department of Ecology (Ecology)–approved Data Gaps Investigation Work Plan (Work Plan; Floyd Snider 2017). The findings from the data gaps investigation will be presented in further detail in a revised draft RI/FS, which will be completed 120 days after the last of the four quarterly groundwater monitoring events.

Data gaps identified in the Work Plan are summarized below.

- Delineating the vertical and horizontal extents of soil and groundwater contamination at the Site, including the following:
  - Investigating the possibility of dense, non-aqueous-phase liquid (DNAPL) in areas of heavily impacted groundwater and the potential downward migration of DNAPL, if found
  - The extent of shallow fill soil contamination on the property and adjacent properties and in the City of Tacoma rights-of-way
- Further refining the nature of Site contamination, to determine whether other contaminants of concern (COCs; i.e., polychlorinated biphenyls [PCBs] and chlorinated volatile organic compounds [CVOCs]) are present in soil
- Establishing vertical and horizontal groundwater gradients
- Identifying potential low-permeability confining layers that prevent downward migration of contaminants

- Determining whether soil vapor is a risk to indoor air quality in the RowTac warehouse and Graybar facility

INVESTIGATION SUMMARY

The investigation was completed in four mobilizations between November 2017 and March 2018. Samples were collected from the three Site properties (the RowTac property, Graybar property, and M Street Industrial Park property) and City of Tacoma rights-of-way in South Cushman Avenue and South M Street. The investigation was completed in accordance with the work plan, with modifications made in coordination with Ecology after discussion of the findings from each mobilization. No significant deviations other than the agreed-upon modifications were made from the Work Plan. All sample locations for this investigation and previous sample locations from the draft RI/FS are shown on Figure 1.

The first mobilization consisted of shallow borings (1 to 4 feet below ground surface [bgs]) to further delineate the extent of pitch/tarry contamination in shallow fill soil at the property boundaries and deeper borings into native, undisturbed soil to delineate oily contamination in the west lot encountered during previous investigations. These direct push borings, completed between November 9 and November 13, 2017, included BW14 through BW26, WW2D, and BE15 through BE19.

The second mobilization included additional shallow fill soil borings in the South Cushman Avenue right-of-way. These borings were advanced on January 10, 2018, using a vactor truck in order to avoid damaging utilities and included locations BC01 through BC10.

The third mobilization consisted of monitoring well installation, further shallow fill soil sampling, and collection of sub-slab soil vapor samples. Monitoring wells on the Graybar property (WW5), Rowtac property (WM1 and deep well WW2D), and M Street Industrial Park property (WM2) were installed using roto-sonic drilling between January 23 and January 29, 2018. Additional shallow fill soil borings in the South M Street planting strip to the east of the east lot (BE20 and BE21) were installed using a hand auger on January 23, 2018. Shallow fill soil borings on the M Street Industrial Park property (BM4 through BM8) were installed using a vactor truck on January 25, 2018. Sub-slab soil vapor samples GM1 through GM3 were collected from inside the RowTac warehouse on February 13, 2018.

The fourth mobilization consisted of the first site-wide quarterly groundwater monitoring event and was completed on March 2, 2018.

Soils were screened for field indications of contamination including odor, sheen, oil, and elevated volatile organic compound (VOC) concentrations measured with a photoionization detector (PID). Representative samples for laboratory analysis were collected in accordance with the Work Plan.

FIELD OBSERVATIONS

Soils at the Site consisted of 1 to 4 feet of sandy and gravelly fill underlain by native sandy gravel. A poorly graded sand was encountered below the gravel at depths of approximately 10 to 15 feet bgs. Groundwater was first encountered in the sand unit at approximately 25 feet bgs. A firm to stiff silt layer ranging in thickness from 1 to 3 feet was present below the sand layer between approximately 30 and 35 feet bgs and graded to very fine silty sand to the northwest below the Graybar lot. These findings were consistent with the lithology observed during the prior RI/FS field work. Shallow monitoring wells installed during the data gaps investigation were screened across the water table within the sand unit and above the silt, consistent with the existing Site wells.

At deep boring WW2D, the silt layer was present from approximately 34 to 35 feet bgs. Below the silt layer, sandy and silty gravel and gravelly sand were encountered from 35 to 55 feet bgs. Within this interval, wet soils were observed at the time of drilling, indicating a potential water-bearing zone. Below 55 feet bgs, moist silty gravel with occasional discontinuous wet lenses was encountered. The silty gravel unit was underlain by a dry to slightly moist, very stiff sandy silt that extended from 73 feet bgs to the bottom of the boring at 80 feet. This lower silt layer is presumed to be the regional aquitard that has been documented at other sites in the vicinity. Groundwater grab samples were attempted at several depth below the upper silt layer at WW2D, but water could only successfully be collected from wet soils above 50 feet bgs. An attempted groundwater grab sample at 55 feet did not yield water and an attempted sample within a wet lens at 70 feet was highly turbid with very slow recharge. Therefore, the deep well at WW2D was screened from 40 to 50 feet.

In shallow fill soil, two modes of contamination were observed. Oily contamination with petroleum odors and/or apparent demolition debris was encountered in the shallow fill of the west and east lots and beneath the RowTac building. A vitreous, black pitch-like material was also encountered in fill soil on the Site properties and in the South Cushman Avenue right-of-way to the west, but it was not encountered to the east in South M Street.

In deeper native soil in the west lot and beneath the RowTac building, oily creosote contamination and oil stringers were observed in sandy gravel and sand above the silt layer. Contamination in native soil was first observed beginning at approximately 10 feet bgs at WW2D and WM1 in the vicinity of the former crude oil tanks. Oil-saturated soil indicating a likely source area for creosote contamination was encountered in sandy soil at WM1. Oily contamination was not observed below the upper silt layer at any boring locations. The lateral extent of soil contamination in native soils is presented in Figure 2.

Additionally, a diesel-like odor was encountered in soil at approximately 10 feet bgs at WW5; a sample of this was collected for laboratory analysis.

A cross-section presenting the Site geology and field observations of contamination is presented in Figure 3.

Groundwater elevations were measured at all wells during the March 2018 monitoring event. Groundwater elevations and preliminary flow directions are shown on Figure 4. Shallow groundwater flow appears to be to the south-southeast.

ANALYTICAL RESULTS

Soil Results

Per the Work Plan, fill soil samples were analyzed for diesel-range organics (DRO) and oil-range organics (ORO). Native soil samples were additionally analyzed for gasoline-range organics (GRO) and VOCs including benzene, toluene, ethylbenzene, and xylenes (BTEX); naphthalene; and CVOCs. Selected representative fill and native soil samples were analyzed for polycyclic aromatic hydrocarbons (PAHs), and selected native soil samples were analyzed for PCBs. Results were compared to the screening levels presented in the Work Plan, which are based on the most stringent applicable Model Toxics Control Act (MTCA) Method A cleanup levels. Analytical data for soil samples collected during the data gaps investigation are presented in Table 1 through Table 3. Analytes that were not detected in soil are summarized in Table 4.

In shallow fill, DRO and ORO concentrations exceeding their screening levels were associated with oil and debris contamination in the east and west lots and beneath the RowTac warehouse. Carcinogenic PAHs (cPAHs) exceeding the screening level were present in all areas with vitreous contamination including the South Cushman Avenue right-of-way. DRO and ORO did not exceed their screening levels in samples with vitreous contamination only (i.e., no oily or debris contamination). Fill soil DRO, ORO, and cPAH results are shown on Figure 5.

In native soil samples collected from the west lot and beneath the RowTac warehouse, the presence of elevated PID readings, creosote odors, and oil stringers was associated with concentrations of GRO, DRO, ORO, BTEX compounds, naphthalene, and cPAHs exceeding the screening levels. Exceedances of screening levels for petroleum compound were also highly predictive of BTEX, naphthalene, and cPAH screening level exceedances. The greatest contaminant concentrations were detected in soils with visible oily product collected during the installation of well WM1.

At all locations, an underlying sample with contaminant concentrations less than screening levels vertically delineated the extents of contamination. The deepest contamination is in the vicinity of WM1, where stringers were observed in saturated sandy soils extending to approximately 32 feet below the warehouse floor grade (28 feet bgs). A sample collected from the top of the underlying silt layer at WM1 did not exceed screening levels.

PCBs and CVOCs were not detected in soil samples with apparent creosote contamination collected in the vicinity of the former crude oil storage tanks at WW2D. At WW5 on the Graybar

property, where diesel-like odor was observed in shallow native soil, DRO was less than the screening level. Tetrachloroethene (PCE) was also detected at a concentration less than the screening level at WW5 in soil above the water table at approximately 20 feet bgs. CVOCs were not detected at other soil sample locations.

Groundwater Results

Per the Work Plan, groundwater samples were analyzed for GRO; DRO; and ORO; VOCs including BTEX, naphthalene, and CVOCs; cPAHs; and selected metals including arsenic, cadmium, lead, and mercury. The sample collected from WM1 in March 2018 was not analyzed because non-aqueous-phase liquid (NAPL) droplets were present in the sample. Results were compared to the screening levels presented in the Work Plan, which are based on the most stringent applicable MTCA Method A cleanup levels. Analytical data for all Site groundwater monitoring are presented in Table 5 and Table 6. Groundwater results for key analytes are summarized in Figure 6 and Figure 7.

During the March 2018 monitoring event, DRO slightly exceeding the screening level was detected in the sample from WW2. PCE was detected in several wells, including WW5 on the Graybar lot, WW1 and WW3 along the west property line of the RowTac property, and deep well WW2D. The PCE concentration at WW5 exceeded the screening level. WW5 is located in the presumed upgradient direction from the contaminated areas at the Site; therefore, the presence of detectable GRO and PCE exceeding the screening level in this well only suggests an off-site source of groundwater contamination. No other analytes were detected at concentrations exceeding the screening levels.

Soil Vapor Results

Sub-slab soil vapor samples were analyzed for petroleum aliphatics/aromatics, BTEX, and other VOCs. Vapor sample results are presented in Table 7. Results were compared to the screening levels presented in the Work Plan, which are based on the most stringent applicable MTCA Method B screening levels. Petroleum aliphatics/aromatics, BTEX, dichlorofluoromethane and PCE were detected at low-level concentrations that were less than the soil vapor screening levels at one or more locations.

UPCOMING WORK

Three additional quarters of groundwater monitoring will be performed in accordance with the Work Plan. An interface probe will be used to determine whether NAPL is present in well WM1. If measureable NAPL is observed, the product will be sampled and analyzed to determine its composition in accordance with the Work Plan. If no NAPL is observed, a groundwater sample will be collected for analysis. The next groundwater monitoring event is scheduled for late June 2018.

REFERENCES

Floyd|Snider. 2017. *The Camas Property, Tacoma, Washington, Data Gaps Investigation Work Plan.* Prepared for Camas Associates, September.

LIST OF ATTACHMENTS

Table 1	Data Gaps Investigation Soil Total Petroleum Hydrocarbon Sample Results
Table 2	Data Gaps Investigation Soil Semivolatile Organic Compound Sample Results
Table 3	Data Gaps Investigation Soil Volatile Organic Compound Sample Results
Table 4	Summary of Non-Detect Analytes in Site Soil
Table 5	Summary of Site Groundwater Sample Results
Table 6	Summary of Non-Detect Analytes in Site Groundwater
Table 7	Data Gaps Investigation Soil Vapor Sample Results
Figure 1	All Sample Locations
Figure 2	Extent of Native Soil Contamination and Cross-Section Transect Location
Figure 3	Cross-Section A-A’
Figure 4	Groundwater Elevations, March 2018
Figure 5	DRO, ORO, and cPAHs in Fill Soil
Figure 6	Groundwater DRO, ORO, and cPAH Analytical Results, March 2018
Figure 7	Groundwater GRO and VOC Results, March 2018

Tables

Table 1
Data Gaps Investigation Soil Total Petroleum Hydrocarbon Sample Results

		Analyte	Gasoline-Range Organics	Diesel-Range Organics	Oil-Range Organics
		Screening Level	100	2,000	2,000
		Units	mg/kg	mg/kg	mg/kg
Location	Sample ID	Sample Date			
BE15	BE15-0.25-1	11/13/2017	--	1,500	**13,000**
BE16	BE16-0.25-1.25	11/13/2017	--	730	**4,000**
BE17	BE17-0.25-1.25	11/13/2017	--	610	**2,600**
BE18	BE18-0.25-3	11/13/2017	--	200	830
BE19	BE19-0.25-2.25	11/13/2017	--	**3,300**	**8,300**
BW14	BW14-1-3	11/13/2017	--	**75,000**	**65,000**
BW15	BW15-1-3	11/13/2017	--	**4,800**	**9,900**
BW16	BW16-3-5	11/13/2017	--	840	**2,100**
BW17	BW17-3-5	11/13/2017	--	**24,000**	**110,000**
BW18	BW18-11-12.5	11/10/2017	**570**	**5,200**	**2,600**
BW18	BW18-14.5-16	11/10/2017	7.0 U	5.3 U	11 U
BW19	BW19-13-15	11/10/2017	**1,500**	**10,000**	**4,400**
BW19	BW19-21.5-23	11/10/2017	12	11	11 U
BW20	BW20-16.5-18	11/10/2017	**2,800**	**16,000**	**7,600**
BW20	BW20-20-25	11/10/2017	--	42	23
BW21	BW21-12.5-14	11/13/2017	**7,300**	**13,000**	**6,400**
BW21	BW21-32-33.5	11/13/2017	10	7.8	12 U
BW21	BW21-34-35	11/13/2017	--	16	13 U
BW22	BW22-13.5-15.5	11/13/2017	5.2 U	19	36
BW23	BW23-11-12.5	11/13/2017	**630**	**6,000**	**2,500**
BW23	BW23-15-16.5	11/13/2017	6.7 U	19	23
BW24	BW24-19-20	11/13/2017	**1,200**	**3,600**	2,000
BW24	BW24-20-21.5	11/13/2017	8.1 U	5.3 U	11 U
BW25	BW25-12.5-13.5	11/13/2017	**1,800**	**6,100**	**2,300**
BW25	BW25-20.5-22	11/13/2017	8.3 U	30	26
WW2D	WW2D-1-2.5	11/09/2017	**5,900**	**41,000**	**39,000**
WW2D	WW2D-9.5-11.5	11/09/2017	**3,000**	**3,100**	2,000
WW2D	WW2D-14-16	11/09/2017	5.5 U	13	16
WW2D	WW2D-31.3-32.5	11/09/2017	--	6.1 U	12 U
BC1	BC1-1	01/10/2018	--	160	300
BC2	BC2-2.5	01/10/2018	--	25	100
BC3	BC3-1	01/10/2018	--	32	180
BC4	BC4-1	01/10/2018	--	38	87
BC5	BC5-1	01/10/2018	--	95	250
BC6	BC6-1.5	01/10/2018	--	70	290
BC7	BC7-1.5	01/10/2018	--	59	260
BC8	BC8-1.5	01/10/2018	--	150	330
BC9	BC9-1'	01/10/2018	--	5.3 U	24
BC10	BC10-1.5	01/10/2018	--	110	350
BE20	BE20-0.25-1.25	01/23/2018	--	20	120
BE21	BE21-0.25-1.25	01/23/2018	--	21	93
BM5	BM5-1-1.25	01/25/2018	--	140	340
BM6	BM6-1.5-1.75	01/25/2018	--	270	480
BM7	BM7-1.75-2.5	01/25/2018	--	11	24
BM8	BM8-0.5-1.5	01/25/2018	--	16	57
WM1	WM1-3-4.5	01/26/2018	**3,300**	**10,000**	**10,000**
WM1	WM1-16-17	01/29/2018	**1,900**	**8,400 J**	**6,100**
WM1	WM1-30-31	01/29/2018	**31,000**	**86,000 J**	**27,000**
WM1	WM1-35-36	01/29/2018	9.5 U	24 J	18
WM2	WM2-3.5-4	01/25/2018	--	240	590
WM2	WM2-21-22	01/25/2018	6.8 U	5.3 U	11 U
WW2D	WW2D-57-58	01/24/2018	4.9 U	5.6 U	11 U
WW2D	WW2D-72-73	01/24/2018	6.4 U	5.5 U	11 U
WW5	WW5-0.25-1	01/23/2018	--	7.2	24
WW5	WW5-10.5-11.5	01/23/2018	--	970	36
WW5	WW5-20.5-21.5	01/23/2018	50	45	71

Notes:

Bold/Red Indicates a concentration that exceeds the screening level.

-- Not applicable or not analyzed.

Abbreviation:

mg/kg Milligram per kilogram

Qualifiers:

J Analyte was detected, concentration is considered an estimate.

U Analyte was not detected at the given reporting limit.

Table 2
Data Gaps Investigation Soil Semivolatile Organic Compound Sample Results

		Location	BC3	BC5	BC7	BC8	BC9	BE15	BE19	BM7	BM8	BW14	BW18	BW20
		Sample ID	BC3-1	BC5-1	BC7-1.5	BC8-1.5	BC9-1'	BE15-0.25-1	BE19-0.25-2.25	BM7-1.75-2.5	BM8-0.5-1.5	BW14-1-3	BW18-14.5-16	BW20-20-25
		Sample Date	01/10/2018	01/10/2018	01/10/2018	01/10/2018	01/10/2018	11/13/2017	11/13/2017	01/25/2018	01/25/2018	11/13/2017	11/10/2017	11/10/2017
Analyte	Units	Screening Level												
Total Petroleum Hydrocarbons (TPHs)														
Gasoline-range organics	mg/kg	30											6.97 U	
Diesel-range organics	mg/kg	2,000	32.2	94.5	59.4	145	5.32 U	1,500	**3,300**	11	16	**75,000**	5.3 U	42
Oil-range organics	mg/kg	2,000	175	253	260	325	24.4	**13,000**	**8,300**	24	57	**65,000**	11 U	23
Polycyclic Aromatic Hydrocarbons (PAHs)														
Naphthalene	µg/kg	5,000	--	--	--	--	--	76 JQ	4,000	--	--	400,000	19 U	260
Acenaphthylene	µg/kg	--	--	--	--	--	--	280 U	1,400	--	--	80,000	19 U	21 U
Acenaphthene	µg/kg	--	--	--	--	--	--	280 U	8,400	--	--	100,000	19 U	190
Fluorene	µg/kg	--	--	--	--	--	--	280 U	5,300	--	--	330,000	19 U	430
Phenanthrene	µg/kg	--	--	--	--	--	--	350	65,000	--	--	2,000,000	10 JQ	1,800
Anthracene	µg/kg	--	--	--	--	--	--	280 U	13,000	--	--	300,000	19 U	360
1-Methylnaphthalene	µg/kg	--	--	--	--	--	--	130 JQ	1,300	--	--	230,000	19 U	83
2-Methylnaphthalene	µg/kg	--	--	--	--	--	--	160 JQ	2,300	--	--	310,000	19 U	110
Fluoranthene	µg/kg	--	--	--	--	--	--	330	57,000	--	--	1,000,000	4.9 JQ	480
Pyrene	µg/kg	--	--	--	--	--	--	480	70,000	--	--	1,300,000	7.3 JQ	390
Benzo(g,h,i)perylene	µg/kg	--	--	--	--	--	--	400	32,000	--	--	210,000	19 U	23
Benzo(a)anthracene	µg/kg	--	523	703	303	490	12.3 JQ	220 JQ	28,000	21	55	490,000	19 U	130
Chrysene	µg/kg	--	775	958	425	696	15.3 JQ	550	39,000	40	73	560,000	19 U	160
Benzo(b)fluoranthene	µg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	µg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzofluoranthenes (total)	µg/kg	--	861	1,150	599	744	28.3 JQ	440 JQ	46,000	58	150	570,000	39 U	140
Benzo(a)pyrene	µg/kg	--	558	788	381	489	12.7 JQ	300	34,000	39	81	450,000	19 U	71
Indeno(1,2,3-c,d)pyrene	µg/kg	--	299	472	256	253	10.5 JQ	210 JQ	21,000	27	56	170,000	19 U	24
Dibenzo(a,h)anthracene	µg/kg	--	132	183	97.5	113	19.4 U	280 U	7,900	9.5 JQ	18 JQ	100,000	19 U	21 U
cPAHs (MTCA TEQ-ZeroND)	µg/kg	100	**747**	**1,050**	**511**	**656**	18 J	**390 J**	**45,000**	51 J	**110 J**	**590,000**	0 U	100
cPAHs (MTCA TEQ-HalfND)	µg/kg		**747**	**1,050**	**511**	**656**	18.9 J	**400 J**	**45,000**	51 J	**110 J**	**590,000**	15 U	100
Other Semivolatile Organic Compounds (SVOCs)														
2-Methylphenol	µg/kg	--	--	--	--	--	--	280 U	580 U	--	--	2,000 JQ	19 U	21 U
4-Methylphenol	µg/kg	--	--	--	--	--	--	280 U	580 U	--	--	5,000	19 U	21 U
Benzoic acid	µg/kg	--	--	--	--	--	--	2,800 U	5,800 U	--	--	28,000 U	190 U	210 U
Carbazole	µg/kg	--	--	--	--	--	--	280 U	5,700	--	--	68,000	19 U	140
Dibenzofuran	µg/kg	--	--	--	--	--	--	280 U	3,200	--	--	68,000	19 U	320
Phenol	µg/kg	--	--	--	--	--	--	280 U	580 U	--	--	2,600 JQ	19 U	21 U

Notes:
Bold/Red Indicates a concentration that exceeds the screening level.
-- Not applicable or not analyzed.

Abbreviations:
cPAH Carcinogenic polycyclic aromatic hydrocarbon
µg/kg Micrograms per kilogram
mg/kg Milligrams per kilogram
MTCA Model Toxics Control Act
TEQ Toxic equivalent

Qualifiers:
J Analyte was detected, concentration is considered an estimate.
JQ Analyte was detected between the reporting limit and method detection limit, concentration is considered an estimate.
U Analyte was not detected at the given reporting limit.

Table 2
Data Gaps Investigation Soil Semivolatile Organic Compound Sample Results

		Location	BW21	BW24	WM1				WM2	WW2D			WW5
		Sample ID	BW21-32-33.5	BW24-19-20	WM1-3-4.5	WM1-16-17	WM1-30-31	WM1-35-36	WM2-21-22	WW2D-9.5-11.5	WW2D-57-58	WW2D-72-73	WW5-20.5-21.5
		Sample Date	11/13/2017	11/13/2017	01/26/2018	01/29/2018	01/29/2018	01/29/2018	01/25/2018	11/09/2017	01/24/2018	01/24/2018	01/23/2018
Analyte	Units	Screening Level											
Total Petroleum Hydrocarbons (TPHs)													
Gasoline-range organics	mg/kg	30		**1,200**	**3,300**	**1,900**	**31,000**	9.45 U	6.84 U	**3,000**	4.9 U	6.35 U	**50**
Diesel-range organics	mg/kg	2,000	7.8	**3,600**	**10,000**	**8,400 J**	**86,000 J**	24 J	5.3 U	**3,100**	5.6 U	5.5 U	45
Oil-range organics	mg/kg	2,000	12 U	2,000	**10,000**	**6,100**	**27,000**	18	11 U	2,000	11 U	11 U	71
Polycyclic Aromatic Hydrocarbons (PAHs)													
Naphthalene	µg/kg	5,000	310	190 U	--	--	--	--	--	2,200	--	--	--
Acenaphthylene	µg/kg	--	49	190 U	--	--	--	--	--	740	--	--	--
Acenaphthene	µg/kg	--	21	530	--	--	--	--	--	5,200	--	--	--
Fluorene	µg/kg	--	41	350	--	--	--	--	--	4,800	--	--	--
Phenanthrene	µg/kg	--	190	96 JQ	--	--	--	--	--	16,000	--	--	--
Anthracene	µg/kg	--	39	330	--	--	--	--	--	4,500	--	--	--
1-Methylnaphthalene	µg/kg	--	46	190 U	--	--	--	--	--	6,400	--	--	--
2-Methylnaphthalene	µg/kg	--	72	190 U	--	--	--	--	--	3,400	--	--	--
Fluoranthene	µg/kg	--	41	710	--	--	--	--	--	6,000	--	--	--
Pyrene	µg/kg	--	47	1,700	--	--	--	--	--	5,900	--	--	--
Benzo(g,h,i)perylene	µg/kg	--	12 JQ	320	--	--	--	--	--	570	--	--	--
Benzo(a)anthracene	µg/kg	--	21	340	21,000	27,000	170,000	44	19 U	2,000	20 U	18 U	17 JQ
Chrysene	µg/kg	--	24	710	27,000	26,000	190,000	46	19 U	2,600	20 U	18 U	21
Benzo(b)fluoranthene	µg/kg	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	µg/kg	--	--	--	--	--	--	--	--	--	--	--	--
Benzofluoranthenes (total)	µg/kg	--	27 JQ	750	32,000	30,000	160,000	47	38 U	1,800	39 U	37 U	30 JQ
Benzo(a)pyrene	µg/kg	--	20 JQ	760	29,000	23,000	140,000	39	19 U	1,300	20 U	18 U	17 JQ
Indeno(1,2,3-c,d)pyrene	µg/kg	--	10 JQ	270	14,000	9,900	59,000	15 JQ	19 U	510	20 U	18 U	8.3 JQ
Dibenzo(a,h)anthracene	µg/kg	--	20 U	190 U	3,900	3,400	18,000	19 U	19 U	220	20 U	18 U	20 U
cPAHs (MTCA TEQ-ZeroND)	µg/kg	100	26 J	**900**	**36,000**	**30,000**	**190,000**	50	0 U	**1,800**	0 U	0 U	23 J
cPAHs (MTCA TEQ-HalfND)	µg/kg		27 J	**910**	**36,000**	**30,000**	**190,000**	51	15 U	**1,800**	15 U	14 U	24 J
Other Semivolatile Organic Compounds (SVOCs)													
2-Methylphenol	µg/kg	--	20 U	190 U	--	--	--	--	--	110 U	--	--	--
4-Methylphenol	µg/kg	--	20 U	190 U	--	--	--	--	--	110 U	--	--	--
Benzoic acid	µg/kg	--	200 U	1,900 U	--	--	--	--	--	1,100 U	--	--	--
Carbazole	µg/kg	--	61	190 U	--	--	--	--	--	350	--	--	--
Dibenzofuran	µg/kg	--	20 JQ	190 U	--	--	--	--	--	2,300	--	--	--
Phenol	µg/kg	--	20 U	190 U	--	--	--	--	--	110 U	--	--	--

Notes:
Bold/Red Indicates a concentration that exceeds the screening level.
-- Not applicable or not analyzed.

Abbreviations:
cPAH Carcinogenic polycyclic aromatic hydrocart
µg/kg Micrograms per kilogram
mg/kg Milligrams per kilogram
MTCA Model Toxics Control Act
TEQ Toxic equivalent

Qualifiers:
J Analyte was detected, concentration is considered an estimate.
JQ Analyte was detected between the reporting limit and method detection limit, concentration is considered an estimate.
U Analyte was not detected at the given reporting limit.

Table 3

Data Gaps Investigation Soil Volatile Organic Compound Sample Results

		Location	BW18	BW19	BW20	BW21	BW24	WM1				WM2
		Sample ID	BW18-15.5	BW19-22	BW20-17	BW21-13.5	BW24-19.5	WM1-3-4.5	WM1-16.5	WM1-30.5	WM1-35.5	WM2-21.5
		Sample Date	11/10/2017	11/10/2017	11/10/2017	11/13/2017	11/13/2017	01/26/2018	01/29/2018	01/29/2018	01/29/2018	01/25/2018
Analyte	Units	Screening Level										
Total Petroleum Hydrocarbons (TPHs)												
Gasoline-range organics	mg/kg	30	6.97 U	11.9	**2,800**	**7,300**	**1,200**	**3,300**	**1,900**	**31,000**	9.5 U	6.8 U
Diesel-range organics	mg/kg	2,000	5.3 U	--	**3,600**	--	**3,600**	**10,000**	**8,400 J**	**86,000 J**	24 J	5.3 U
Oil-range organics	mg/kg	2,000	11 U	--	2,000	--	2,000	**10,000**	**6,100**	**27,000**	18	11 U
Benzene, Toluene, Ethylebenzene, and Xylenes (BTEX)												
Benzene	µg/kg	30	1.46 U	1.41 U	54 U	**4,900 JQ**	59 U	1300 U	**6,200 U**	**48,000**	0.86 JQ	1.3 U
Toluene	µg/kg	7,000	1.46 U	1.41 U	54 U	**8,100**	59 U	1,300 U	6,200 U	**250,000**	0.54 JQ	1.3 U
Ethylbenzene	µg/kg	6,000	1.46 U	1.41 U	560	**22,000**	59 U	1,300 U	4,500 JQ	**350,000**	1.2 U	1.3 U
Xylene (meta & para)	µg/kg	--	2.92 U	2.82 U	370 JQ	62,000	120 U	2,600 U	6,700 JQ	350,000	0.84 JQ	2.6 U
Xylene (ortho)	µg/kg	--	1.46 U	1.41 U	770	26,000	59 U	600 JQ	3,800 JQ	140,000	1.2 U	1.3 U
Xylene (total)	µg/kg	9,000	2.92 U	2.82 U	1,100	**88,000**	120 U	2,600 U	**11,000 JQ**	**490,000**	0.84 JQ	2.6 U
Other Volatile Organic Compounds (VOCs)												
1,2,4-Trimethylbenzene	µg/kg	--	--	--	--	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	µg/kg	--	--	--	--	--	--	--	--	--	--	--
Acetone	µg/kg	--	--	--	--	--	--	--	--	--	--	--
Cymene	µg/kg	--	--	--	--	--	--	--	--	--	--	--
iso-Propylbenzene	µg/kg	--	--	--	--	--	--	--	--	--	--	--
Methyl ethyl ketone	µg/kg	--	--	--	--	--	--	--	--	--	--	--
Methylene chloride	µg/kg	--	--	--	--	--	--	--	--	--	--	--
n-Butylbenzene	µg/kg	--	--	--	--	--	--	--	--	--	--	--
n-Propylbenzene	µg/kg	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	µg/kg	5,000	0.69 JQ	7.06 U	4,900	**6,300,000**	240 U	**46,000**	**580,000**	**7,600,000**	7.2	6.5 U
Styrene	µg/kg		--	--	--	--	--	--	--	--	--	--
Tetrachloroethene	µg/kg	50	1.46 U	1.41 U	54 U	6800 U	59 U	1300 U	6200 U	780 U	1.2 U	1.3 U

Note:

Bold/Red Indicates a concentration that exceeds the screening level.

-- Not applicable or not analyzed.

Abbreviations:

µg/kg Micrograms per kilogram

mg/kg Milligrams per kilogram

Qualifiers:

J Analyte was detected, concentration is considered an estimate.

JQ Analyte was detected between the reporting limit and method detection limit, concentration is considered an estimate.

U Analyte was not detected at the given reporting limit.

Table 3
Data Gaps Investigation Soil Volatile Organic Compound Sample Results

		Location	WW2D					WW5
		Sample ID	WW2D-1.5	WW2D-10	WW2D-15	WW2D-57.5	WW2D-73	WW5-21
		Sample Date	11/09/2017	11/09/2017	11/09/2017	01/24/2018	01/24/2018	01/23/2018
Analyte	Units	Screening Level						
Total Petroleum Hydrocarbons (TPHs)								
Gasoline-range organics	mg/kg	30	**5,900**	**3,000**	5.5 U	4.9 U	6.4 U	**50**
Diesel-range organics	mg/kg	2,000	--	**3,100**	--	5.6 U	5.5	45
Oil-range organics	mg/kg	2,000	--	2,000	--	11 U	11	71
Benzene, Toluene, Ethylebenzene, and Xylenes (BTEX)								
Benzene	µg/kg	30	**460**	**100 U**	1.1 U	0.83 U	0.79 U	0.50 JQ
Toluene	µg/kg	7,000	1,200	100 U	0.36 JQ	3.5	0.79 U	0.56 JQ
Ethylbenzene	µg/kg	6,000	**8,900**	100 U	1.1 U	0.83 U	0.79 U	0.96 U
Xylene (meta & para)	µg/kg	--	5,500	210 U	2.2 U	1.7 U	1.6 U	0.41 JQ
Xylene (ortho)	µg/kg	--	9,700	100 U	1.1 U	0.83 U	0.79 U	0.96 U
Xylene (total)	µg/kg	9,000	**15,000**	210 U	2.2 U	1.7 U	1.6 U	1.9 U
Other Volatile Organic Compounds (VOCs)								
1,2,4-Trimethylbenzene	µg/kg	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	µg/kg	--	--	--	--	--	--	--
Acetone	µg/kg	--	--	--	--	--	--	--
Cymene	µg/kg	--	--	--	--	--	--	--
iso-Propylbenzene	µg/kg	--	--	--	--	--	--	--
Methyl ethyl ketone	µg/kg	--	--	--	--	--	--	--
Methylene chloride	µg/kg	--	--	--	--	--	--	--
n-Butylbenzene	µg/kg	--	--	--	--	--	--	--
n-Propylbenzene	µg/kg	--	--	--	--	--	--	--
Naphthalene	µg/kg	5,000	**1,700,000**	550 U	4.3 JQ	4.2 U	4.0 U	4.8 U
Styrene	µg/kg		--	--	--	--	--	--
Tetrachloroethene	µg/kg	50	340 U	100 U	1.1 U	0.83 U	0.79 U	3.8

Notes:
Bold/Red Indicates a concentration that exceeds the screening level.
-- Not applicable or not analyzed.

Abbreviations:
µg/kg Micrograms per kilogram
mg/kg Milligrams per kilogram

Qualifiers:
J Analyte was detected, concentration is considered an estimate.
JQ Analyte was detected between the reporting limit and method detection limit, concentration is considered an estimate.
U Analyte was not detected at the given reporting limit.

Table 4
Summary of Non-Detect Analytes in Site Soil

Analyte	Units	Number of Non-Detect Results	Minimum Non-Detect Value	Maximum Non-Detect Value
Total Petroleum Hydrocarbons (TPHs)				
JP-4	mg/kg	2	5.2	6.2
Polychlorinated Biphenyls (PCBs)				
PCB Aroclor 1016	µg/kg	2	51	52
PCB Aroclor 1221	µg/kg	2	51	52
PCB Aroclor 1232	µg/kg	2	51	52
PCB Aroclor 1242	µg/kg	2	51	52
PCB Aroclor 1248	µg/kg	2	51	52
PCB Aroclor 1254	µg/kg	2	51	52
PCB Aroclor 1260	µg/kg	2	51	52
PCBs (Total, Aroclors)	µg/kg	2	51	52
Semivolatile Organic Compounds (SVOCs)				
2,4,5-Trichlorophenol	µg/kg	17	97	61,000
2,4,6-Trichlorophenol	µg/kg	17	97	61,000
2,4-Dichlorophenol	µg/kg	17	97	37,000
2,4-Dimethylphenol	µg/kg	17	97	37,000
2,4-Dinitrophenol	µg/kg	17	190	120,000
2,4-Dinitrotoluene	µg/kg	17	97	61,000
2,6-Dinitrotoluene	µg/kg	17	97	61,000
2-Chloronaphthalene	µg/kg	17	19	12,000
2-Chlorophenol	µg/kg	17	19	12,000
2-Nitroaniline	µg/kg	17	97	61,000
2-Nitrophenol	µg/kg	17	19	61,000
3,3'-Dichlorobenzidine	µg/kg	17	97	61,000
3-Nitroaniline	µg/kg	17	97	73,000
4,6-Dinitro-o-cresol	µg/kg	17	190	120,000
4-Bromophenyl phenyl ether	µg/kg	17	19	12,000
4-Chloro-3-methylphenol	µg/kg	17	97	24,000
4-Chloroaniline	µg/kg	17	97	37,000
4-Chlorophenyl phenyl ether	µg/kg	17	19	12,000
4-Nitroaniline	µg/kg	17	97	61,000
4-Nitrophenol	µg/kg	17	97	61,000
Benzyl alcohol	µg/kg	17	19	61,000
bis(2-Chloroethoxy)methane	µg/kg	17	19	12,000
bis(2-Chloroethyl)ether	µg/kg	17	19	24,000
bis(2-Ethylhexyl)phthalate	µg/kg	17	48	12,000
bis-Chloroisopropyl ether	µg/kg	17	19	12,000
Butyl benzyl phthalate	µg/kg	17	19	12,000
Diethylphthalate	µg/kg	17	19	12,000
Dimethyl phthalate	µg/kg	17	19	12,000
Di-n-butyl phthalate	µg/kg	17	19	12,000
Di-n-octyl phthalate	µg/kg	17	19	12,000
Hexachlorobenzene	µg/kg	17	19	12,000
Hexachlorocyclopentadiene	µg/kg	17	97	61,000
Hexachloroethane	µg/kg	17	19	24,000
Isophorone	µg/kg	17	19	12,000
Nitrobenzene	µg/kg	17	19	12,000
N-Nitroso-di-n-propylamine	µg/kg	17	19	24,000
N-Nitrosodiphenylamine	µg/kg	17	19	12,000
Pentachlorophenol	µg/kg	17	97	61,000
Volatile Organic Compounds (VOCs)				
1,1,1,2-Tetrachloroethane	µg/kg	12	1.0	1,500
1,1,1-Trichloroethane	µg/kg	12	1.0	1,500
1,1,2,2-Tetrachloroethane	µg/kg	12	1.0	1,500
1,1,2-Trichloroethane	µg/kg	12	1.0	1,500
1,1,2-Trichlorotrifluoroethane	µg/kg	12	2.0	3,000
1,1-Dichloroethane	µg/kg	12	1.0	1,500
1,1-Dichloroethene	µg/kg	29	0.79	6,800
1,1-Dichloropropene	µg/kg	12	1.0	1,500
1,2,3-Trichlorobenzene	µg/kg	12	5.0	7,400
1,2,3-Trichloropropane	µg/kg	12	2.0	3,000
1,2,4-Trichlorobenzene	µg/kg	29	5.0	12,000
1,2-Dibromo-3-chloropropane	µg/kg	12	5.0	7,400
1,2-Dibromoethane	µg/kg	12	1.0	1,500
1,2-Dichlorobenzene	µg/kg	29	1.0	12,000
1,2-Dichloroethane	µg/kg	12	1.0	1,500
1,2-Dichloropropane	µg/kg	12	1.0	1,500
1,3-Dichlorobenzene	µg/kg	29	1.0	12,000

Table 4
Summary of Non-Detect Analytes in Site Soil

Analyte	Units	Number of Non-Detect Results	Minimum Non-Detect Value	Maximum Non-Detect Value
VOCs (cont.)				
1,3-Dichloropropane	µg/kg	12	1.0	1,500
1,4-Dichlorobenzene	µg/kg	29	1.0	12,000
2,2-Dichloropropane	µg/kg	12	1.0	1,500
2-Chloroethyl vinyl ether	µg/kg	12	5.0	7,400
2-Chlorotoluene	µg/kg	12	1.0	1,500
2-Hexanone	µg/kg	12	5.0	7,400
4-Chlorotoluene	µg/kg	12	1.0	1,500
Acrolein	µg/kg	12	50	720,000
Acrylonitrile	µg/kg	12	5.0	7,400
Bromobenzene	µg/kg	12	1.0	1,500
Bromochloromethane	µg/kg	12	1.0	1,500
Bromodichloromethane	µg/kg	12	1.0	1,500
Bromoethane	µg/kg	12	2.0	3,000
Bromoform	µg/kg	12	1.0	1,500
Bromomethane	µg/kg	12	1.0	1,500
Carbon disulfide	µg/kg	12	1.0	1,500
Carbon tetrachloride	µg/kg	12	1.0	1,500
Chlorobenzene	µg/kg	12	1.0	1,500
Chloroethane	µg/kg	12	1.0	1,500
Chloroform	µg/kg	12	1.0	1,500
Chloromethane	µg/kg	12	1.0	1,500
cis-1,2-Dichloroethene	µg/kg	29	0.79	6,800
cis-1,3-Dichloropropene	µg/kg	12	1.0	1,500
Dibromomethane	µg/kg	12	1.0	1,500
Dibromochloromethane	µg/kg	12	1.0	1,500
Hexachlorobutadiene	µg/kg	29	5.0	24,000
Iodomethane	µg/kg	12	1.0	1,500
Methyl iso butyl ketone	µg/kg	12	5.0	7,400
sec-Butylbenzene	µg/kg	12	1.0	1,500
tert-Butylbenzene	µg/kg	12	1.0	1,500
trans-1,2-Dichloroethene	µg/kg	29	0.79	6,800
trans-1,3-Dichloropropene	µg/kg	12	1.0	1,500
trans-1,4-Dichloro-2-butene	µg/kg	12	5.0	7,400
Trichloroethene	µg/kg	29	0.79	6,800
Trichlorofluoromethane	µg/kg	12	1.0	1,500
Vinyl acetate	µg/kg	12	5.0	7,400
Vinyl chloride	µg/kg	29	0.79	6,800

Abbreviations:
µg/kg Micrograms per kilogram
mg/kg Milligrams per kilogram

Table 5
Summary of Site Groundwater Sample Results

		Location	WE1		WE2		WE3	
		Sample ID	WE-1 102004	WE1-030218	WE-2 102004	WE2-030218	WE-3 102004	WE3-030218
		Sample Date	10/20/2004	03/02/2018	10/20/2004	03/02/2018	10/20/2004	03/02/2018
Analyte	**Units**	**Screening Level**						
Metals								
Arsenic	mg/L	5	0.0096	0.000050 JQ	0.0044	0.000067 JQ	0.012	0.00023
Barium	mg/L	--	0.57	--	0.32	--	0.15	--
Cadmium	mg/L	--	0.0020 U	--	0.0020 U	--	0.0020 U	--
Chromium	mg/L	50	0.052	0.00031 JQ	0.027	0.00072	0.034	0.0011
Lead	mg/L	15	0.012	0.00010 U	0.0060	0.00010 U	0.0080	0.00010 U
Mercury	mg/L	2	0.00010	0.00010 U	0.00010 U	0.00010 U	0.00010 U	0.00010 U
Selenium	mg/L	--	0.050 U	--	0.050 U	--	0.050 U	--
Silver	mg/L	--	0.0030 U	--	0.0030 U	--	0.0030 U	--
Total Petroleum Hydrocarbons (TPHs)								
Gasoline-range organics	µg/L	800	--	100 U	--	100 U	--	100 U
Diesel-range organics	µg/L	500	250 U	100 U	250 U	100 U	--	100 U
Oil-range organics	µg/L	500	--	200 U	--	200 U	--	200 U
Polycyclic Aromatic Hydrocarbons (PAHs)								
Naphthalene	µg/L	160	1.0 U	0.50 U	1.0 U	0.50 U	1.1 U	0.50 U
Acenaphthylene	µg/L	--	1.0 U	--	1.0 U	--	1.1 U	--
Acenaphthene	µg/L	--	1.0 U	--	1.0 U	--	1.1 U	--
Fluorene	µg/L	--	1.0 U	--	1.0 U	--	1.1 U	--
Phenanthrene	µg/L	--	1.0 U	--	1.0 U	--	1.1 U	--
Anthracene	µg/L	--	1.0 U	--	1.0 U	--	1.1 U	--
2-Methylnaphthalene	µg/L	--	1.0 U	--	1.0 U	--	1.1 U	--
Fluoranthene	µg/L	--	1.0 U	--	1.0 U	--	1.1 U	--
Pyrene	µg/L	--	1.0 U	--	1.0 U	--	1.1 U	--
Benzo(a)anthracene	µg/L	--	1.0 U	0.010 U	1.0 U	0.010 U	1.1 U	0.010 U
Chrysene	µg/L	--	1.0 U	0.010 U	1.0 U	0.010 U	1.1 U	0.010 U
Benzo(b)fluoranthene	µg/L	--	1.0 U	--	1.0 U	--	1.1 U	--
Benzo(k)fluoranthene	µg/L	--	1.0 U	--	1.0 U	--	1.1 U	--
Benzofluoranthenes (total)	µg/L	--	--	0.010 U	--	0.010 U		0.010 U
Benzo(a)pyrene	µg/L	--	1.0 U	0.010 U	1.0 U	0.010 U	1.1 U	0.010 U
Indeno(1,2,3-c,d)pyrene	µg/L	--	1.0 U	0.010 U	1.0 U	0.010 U	1.1 U	0.010 U
Dibenzo(a,h)anthracene	µg/L	--	1.0 U	0.010 U	1.0 U	0.010 U	1.1 U	0.010 U
Benzo(g,h,i)perylene	µg/L	--	1.0 U	--	1.0 U	--	1.1 U	--
cPAHs (MTCA TEQ-ZeroND)	µg/L	0.1	--	0 U	--	0 U	--	0 U
cPAHs (MTCA TEQ-HalfND)	µg/L		--	0.0071 U	--	0.0071 U	--	0.0071 U
Volatile Organic Compounds (VOCs)								
2-Methylphenol	µg/L	--	1.0 U	--	1.0 U	--	1.1 U	--
4-Methylphenol	µg/L	--	1.0 U	--	1.0 U	--	1.1 U	--
bis(2-Ethylhexyl)phthalate	µg/L	--	1.2 JB	--	1.2 JB	--	1.3 JB	--
Butyl benzyl phthalate	µg/L	--	1.0 U	--	1.0 U	--	1.1 U	--
Carbazole	µg/L	--	1.0 U	--	1.0 U	--	1.1 U	--
Dibenzofuran	µg/L	--	1.0 U	--	1.0 U	--	1.1 U	--
Diethylphthalate	µg/L	--	1.0 U	--	1.0 U	--	1.1 U	--
1,2,4-Trimethylbenzene	µg/L	--	1.0 U	--	1.0 U	--	1.0 U	--
1,3,5-Trimethylbenzene	µg/L	--	1.0 U	--	1.0 U	--	1.0 U	--
Acetone	µg/L	--	5.0 U	--	5.0 U	--	5.0 U	--
Benzene	µg/L	5	1.0 U	0.20 U	1.0 U	0.20 U	1.0 U	0.20 U
Chloroform	µg/L	--	1.0 U	--	1.0 U	--	1.0 U	--
Cymene	µg/L	--	1.0 U	--	1.0 U	--	1.0 U	--
Ethylbenzene	µg/L	700	1.0 U	0.20 U	1.0 U	0.20 U	1.0 U	0.20 U
iso-Propylbenzene	µg/L	--	1.0 U	--	1.0 U	--	1.0 U	--
n-Butylbenzene	µg/L	--	1.0 U	--	1.0 U	--	1.0 U	--
n-Propylbenzene	µg/L	--	1.0 U	--	1.0 U	--	1.0 U	--
Styrene	µg/L	--	1.0 U	--	1.0 U	--	1.0 U	--
Tetrachloroethene	µg/L	5	1.0 U	0.20 U	1.0 U	0.20 U	1.0 U	0.20 U
Toluene	µg/L	1,000	1.0 U	0.12 JQ	1.0 U	0.26	1.0 U	0.20 U
Trichloroethene	µg/L	--	1.0 U	0.20 U	1.0 U	0.20 U	1.0 U	0.20 U
Xylene (meta & para)	µg/L	--	1.0 U	0.40 U	1.0 U	0.40 U	1.0 U	0.40 U
Xylene (ortho)	µg/L	--	1.0 U	0.20 U	1.0 U	0.20 U	1.0 U	0.20 U
Xylene (total)	µg/L	1,000	1.0 U	0.60 U	1.0 U	0.60 U	1.0 U	0.60 U

Notes:

Bold/Red Indicates a concentration that exceeds the screening level.

-- Not applicable or not analyzed.

1 Napthalene result of 6,400 µg/L by USEPA 8260C is also available; the result presented is for the USEPA 8270C analysis of PAHs.

2 Napthalene result of 6.8 µg/L by USEPA 8260C is also available; the result presented is for the USEPA 8270C analysis of PAHs.

Abbreviations:

cPAH Carcinogenic polycyclic aromatic hydrocarb
µg/L Micrograms per liter
mg/L Milligrams per liter
MTCA Model Toxics Control Act
TEQ Toxic equivalent

Qualifiers:

J Analyte was detected, concentration is considered an estimate.
JB Analyte was detected, concentration is considered an estimate due to possible blank contamination.
JQ Analyte was detected between the reporting limit and method detection limit, concentration is considered an estimate.
U Analyte was not detected at the given reporting limit.

Table 5
Summary of Site Groundwater Sample Results

		Location	WE4		WM2	WW1	
		Sample ID	WE-4 102004	WE4-030218	WM2-030218	WW-1 102004	WW1-030218
		Sample Date	10/20/2004	03/02/2018	03/02/2018	10/20/2004	03/02/2018
Analyte	Units	Screening Level					
Metals							
Arsenic	mg/L	5	0.0015	0.00015 JQ	0.00016 JQ	0.025	0.000082 JQ
Barium	mg/L	--	0.044	--	--	0.62	--
Cadmium	mg/L	--	0.0020 U	--	--	0.0020 U	--
Chromium	mg/L	50	0.0050 U	0.0019	0.00085	0.12	0.0015
Lead	mg/L	15	0.0010	0.00013	0.00016	0.018	0.00010 U
Mercury	mg/L	2	0.00010 U	0.00010 U	0.00010 U	0.00020	0.00010 U
Selenium	mg/L	--	0.050 U	--	--	0.050 U	--
Silver	mg/L	--	0.0030 U	--	--	0.0030 U	--
Total Petroleum Hydrocarbons (TPHs)							
Gasoline-range organics	µg/L	800	--	100 U	100 U	--	100 U
Diesel-range organics	µg/L	500	--	100 U	100 U	--	100 U
Oil-range organics	µg/L	500	--	200 U	200 U	--	200 U
Polycyclic Aromatic Hydrocarbons (PAHs)							
Naphthalene	µg/L	160	1.0 U	0.50 U	0.50 U	1.0 U	0.50 U
Acenaphthylene	µg/L	--	1.0 U	--	--	1.0 U	--
Acenaphthene	µg/L	--	1.0 U	--	--	1.0 U	--
Fluorene	µg/L	--	1.0 U	--	--	1.0 U	--
Phenanthrene	µg/L	--	1.0 U	--	--	1.0 U	--
Anthracene	µg/L	--	1.0 U	--	--	1.0 U	--
2-Methylnaphthalene	µg/L	--	1.0 U	--	--	1.0 U	--
Fluoranthene	µg/L	--	1.0 U	--	--	1.0 U	--
Pyrene	µg/L	--	1.0 U	--	--	1.0 U	--
Benzo(a)anthracene	µg/L	--	1.0 U	0.010 U	0.010 U	1.0 U	0.010 U
Chrysene	µg/L	--	1.0 U	0.0010 JQ	0.0010 JQ	1.0 U	0.010 U
Benzo(b)fluoranthene	µg/L	--	1.0 U	--	--	1.0 U	--
Benzo(k)fluoranthene	µg/L	--	1.0 U	--	--	1.0 U	--
Benzofluoranthenes (total)	µg/L	--	--	0.010 U	0.010 U	--	0.010 U
Benzo(a)pyrene	µg/L	--	1.0 U	0.010 U	0.010 U	1.0 U	0.010 U
Indeno(1,2,3-c,d)pyrene	µg/L	--	1.0 U	0.010 U	0.010 U	1.0 U	0.010 U
Dibenzo(a,h)anthracene	µg/L	--	1.0 U	0.010 U	0.010 U	1.0 U	0.010 U
Benzo(g,h,i)perylene	µg/L	--	1.0 U	--	--	1.0 U	--
cPAHs (MTCA TEQ-ZeroND)	µg/L	0.1	--	0.000010 J	0.000010 J	--	0 U
cPAHs (MTCA TEQ-HalfND)	µg/L		--	0.0070 J	0.0070 J	--	0.0071 U
Volatile Organic Compounds (VOCs)							
2-Methylphenol	µg/L	--	1.0 U	--	--	1.0 U	--
4-Methylphenol	µg/L	--	1.0 U	--	--	1.0 U	--
bis(2-Ethylhexyl)phthalate	µg/L	--	7.6 JB	--	--	1.6 JB	--
Butyl benzyl phthalate	µg/L	--	1.0 U	--	--	1.0 U	--
Carbazole	µg/L	--	1.0 U	--	--	1.0 U	--
Dibenzofuran	µg/L	--	1.0 U	--	--	1.0 U	--
Diethylphthalate	µg/L	--	1.0 U	--	--	1.0 U	--
1,2,4-Trimethylbenzene	µg/L	--	1.0 U	--	--	1.0 U	--
1,3,5-Trimethylbenzene	µg/L	--	1.0 U	--	--	1.0 U	--
Acetone	µg/L	--	5.0 U	--	--	5.0 U	--
Benzene	µg/L	5	1.0 U	0.20 U	0.20 U	1.0 U	0.20 U
Chloroform	µg/L	--	1.0 U	--	--	1.0 U	--
Cymene	µg/L	--	1.0 U	--	--	1.0 U	--
Ethylbenzene	µg/L	700	1.0 U	0.20 U	0.20 U	1.0 U	0.20 U
iso-Propylbenzene	µg/L	--	1.0 U	--	--	1.0 U	--
n-Butylbenzene	µg/L	--	1.0 U	--	--	1.0 U	--
n-Propylbenzene	µg/L	--	1.0 U	--	--	1.0 U	--
Styrene	µg/L	--	1.0 U	--	--	1.0 U	--
Tetrachloroethene	µg/L	5	1.0 U	0.20 U	0.20 U	2.0	2.4
Toluene	µg/L	1,000	1.0 U	0.16 JQ	0.20 U	1.0 U	0.20 U
Trichloroethene	µg/L	--	1.0 U	0.20 U	0.20 U	1.0 U	0.20 U
Xylene (meta & para)	µg/L	--	1.0 U	0.40 U	0.40 U	1.0 U	0.40 U
Xylene (ortho)	µg/L	--	1.0 U	0.20 U	0.20 U	1.0 U	0.20 U
Xylene (total)	µg/L	1,000	1.0 U	0.60 U	0.60 U	1.0 U	0.60 U

Notes:

Bold/Red Indicates a concentration that exceeds the screening level.

-- Not applicable or not analyzed.

1 Napthalene result of 6,400 µg/L by USEPA 8260C is also available; the result presented is for the USEPA 8270C analysis of PAHs.

2 Napthalene result of 6.8 µg/L by USEPA 8260C is also available; the result presented is for the USEPA 8270C analysis of PAHs.

Abbreviations:

cPAH Carcinogenic polycyclic aromatic hydrocarb
µg/L Micrograms per liter
mg/L Milligrams per liter
MTCA Model Toxics Control Act
TEQ Toxic equivalent

Qualifiers:

J Analyte was detected, concentration is considered an estimate.
JB Analyte was detected, concentration is considered an estimate due to possible blank contamination.
JQ Analyte was detected between the reporting limit and method detection limit, concentration is considered an estimate.
U Analyte was not detected at the given reporting limit.

Table 5
Summary of Site Groundwater Sample Results

		Location	WW2		WW2D	WW3	
		Sample ID	WW-2 102004	WW2-030218	WW2D-030218	WW-3 102004	WW3-030218
		Sample Date	10/20/2004	03/02/2018	03/02/2018	10/20/2004	03/02/2018
Analyte	**Units**	**Screening Level**					
Metals							
Arsenic	mg/L	5	0.012	0.00022	0.00063	0.022	0.000099 JQ
Barium	mg/L	--	0.39	--	--	0.75	--
Cadmium	mg/L	--	0.0020 U	--	--	0.0020 U	--
Chromium	mg/L	50	0.10	0.00038 JQ	0.00029 JQ	0.15	0.0015
Lead	mg/L	15	0.015	0.00048	0.00011	0.023	0.00010 U
Mercury	mg/L	2	0.00020	0.00010 U	0.00010 U	0.00020	0.00010 U
Selenium	mg/L	--	0.050 U	--	--	0.050 U	--
Silver	mg/L	--	0.0030 U	--	--	0.0030 U	--
Total Petroleum Hydrocarbons (TPHs)							
Gasoline-range organics	µg/L	800	--	100 U	100 U	--	100 U
Diesel-range organics	µg/L	500	**1,900**	**880**	100 U	--	100 U
Oil-range organics	µg/L	500	--	320	200 U	--	200 U
Polycyclic Aromatic Hydrocarbons (PAHs)							
Naphthalene	µg/L	160	**2,600** [1]	0.51	0.50 U	1.0 U[2]	0.50 U
Acenaphthylene	µg/L	--	18	--	--	1.5	--
Acenaphthene	µg/L	--	35	--	--	9.5	--
Fluorene	µg/L	--	3.8	--	--	3.8	--
Phenanthrene	µg/L	--	15	--	--	2.3	--
Anthracene	µg/L	--	2.3	--	--	1.9	--
2-Methylnaphthalene	µg/L	--	130	--	--	1.0 U	--
Fluoranthene	µg/L	--	2.2	--	--	7.9	--
Pyrene	µg/L	--	1.3	--	--	7.4	--
Benzo(a)anthracene	µg/L	--	1.1 U	0.013	0.010 U	1.0 U	0.0010 JQ
Chrysene	µg/L	--	1.1 U	0.015	0.010 U	1.1	0.0030 JQ
Benzo(b)fluoranthene	µg/L	--	1.1 U	--	--	1.0 U	--
Benzo(k)fluoranthene	µg/L	--	1.1 U	--	--	1.0 U	--
Benzofluoranthenes (total)	µg/L	--	--	0.015	0.010 U	--	0.0040 JQ
Benzo(a)pyrene	µg/L	--	1.1 U	0.011	0.010 U	1.0 U	0.010 U
Indeno(1,2,3-c,d)pyrene	µg/L	--	1.1 U	0.0080 JQ	0.010 U	1.0 U	0.0020 JQ
Dibenzo(a,h)anthracene	µg/L	--	1.1 U	0.0020 JQ	0.010 U	1.0 U	0.010 U
Benzo(g,h,i)perylene	µg/L	--	1.1 U	--	--	1.0 U	--
cPAHs (MTCA TEQ-ZeroND)	µg/L	0.1	--	0.015 J	0 U	--	0.00073 J
cPAHs (MTCA TEQ-HalfND)	µg/L		--	0.015 J	0.0071 U	--	0.0062 J
Volatile Organic Compounds (VOCs)							
2-Methylphenol	µg/L	--	1.9	--	--	1.0 U	--
4-Methylphenol	µg/L	--	10	--	--	1.0 U	--
bis(2-Ethylhexyl)phthalate	µg/L	--	3.6 JB	--	--	1.1 JB	--
Butyl benzyl phthalate	µg/L	--	1.4	--	--	1.0 U	--
Carbazole	µg/L	--	16	--	--	2.1	--
Dibenzofuran	µg/L	--	1.1 U	--	--	1.0 U	--
Diethylphthalate	µg/L	--	1.5	--	--	1.1	--
1,2,4-Trimethylbenzene	µg/L	--	120	--	--	1.0 U	--
1,3,5-Trimethylbenzene	µg/L	--	42	--	--	1.0 U	--
Acetone	µg/L	--	6.8	--	--	5.0 U	--
Benzene	µg/L	5	**1,700**	0.38	0.20 U	3.4	0.20 U
Chloroform	µg/L	--	1.0 U	--	--	6.8	--
Cymene	µg/L	--	5.4	--	--	1.0 U	--
Ethylbenzene	µg/L	700	580	0.040 JQ	0.20 U	1.0 U	0.20 U
iso-Propylbenzene	µg/L	--	40	--	--	1.0 U	--
n-Butylbenzene	µg/L	--	59	--	--	1.0 U	--
n-Propylbenzene	µg/L	--	11	--	--	1.0 U	--
Styrene	µg/L	--	99	--	--	1.0 U	--
Tetrachloroethene	µg/L	5	1.0 U	0.20 U	4.4	1.0 U	3.2
Toluene	µg/L	1,000	200	0.63	0.040 JQ	2.6	0.20 U
Trichloroethene	µg/L	--	1.0 U	0.20 U	0.20 U	1.0 U	0.20 U
Xylene (meta & para)	µg/L	--	630	0.12 JQ	0.40 U	1.4	0.40 U
Xylene (ortho)	µg/L	--	510	0.10 JQ	0.20 U	1.0 U	0.20 U
Xylene (total)	µg/L	1,000	**1,100**	0.22 JQ	0.60 U	1.4	0.60 U

Notes:

Bold/Red Indicates a concentration that exceeds the screening level.

-- Not applicable or not analyzed.

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2 Napthalene result of 6.8 µg/L by USEPA 8260C is also available; the result presented is for the USEPA 8270C analysis of PAHs.

Abbreviations:

cPAH Carcinogenic polycyclic aromatic hydrocarb
µg/L Micrograms per liter
mg/L Milligrams per liter
MTCA Model Toxics Control Act
TEQ Toxic equivalent

Qualifiers:

J Analyte was detected, concentration is considered an estimate.
JB Analyte was detected, concentration is considered an estimate due to possible blank contamination.
JQ Analyte was detected between the reporting limit and method detection limit, concentration is considered an estimate.
U Analyte was not detected at the given reporting limit.

Table 5
Summary of Site Groundwater Sample Results

		Location	WW4			WW5
		Sample ID	WW-4 102104	CAM-WW4-0505	WW4-030218	WW5-030218
		Sample Date	10/21/2004	05/10/2005	03/02/2018	03/02/2018
Analyte	**Units**	**Screening Level**				
Metals						
Arsenic	mg/L	5	0.027	--	0.000091 JQ	0.00020 JQ
Barium	mg/L	--	0.38	--	--	--
Cadmium	mg/L	--	0.0020 U	--	--	--
Chromium	mg/L	50	0.087	--	0.00039 JQ	0.00019 JQ
Lead	mg/L	15	0.012	--	0.00011	0.00010 U
Mercury	mg/L	2	0.00020	--	0.00010 U	0.00010 U
Selenium	mg/L	--	0.050 U	--	--	--
Silver	mg/L	--	0.0030 U	--	--	--
Total Petroleum Hydrocarbons (TPHs)						
Gasoline-range organics	µg/L	800	--	250	100 U	220
Diesel-range organics	µg/L	500	**860**	**660**	100 U	150
Oil-range organics	µg/L	500	--	--	200 U	230
Polycyclic Aromatic Hydrocarbons (PAHs)						
Naphthalene	µg/L	160	3.3	--	0.50 U	0.50 U
Acenaphthylene	µg/L	--	1.9	--	--	--
Acenaphthene	µg/L	--	4.8	--	--	--
Fluorene	µg/L	--	1.0 U	--	--	--
Phenanthrene	µg/L	--	5.9	--	--	--
Anthracene	µg/L	--	1.0 U	--	--	--
2-Methylnaphthalene	µg/L	--	1.0 U	--	--	--
Fluoranthene	µg/L	--	1.0 U	--	--	--
Pyrene	µg/L	--	1.0 U	--	--	--
Benzo(a)anthracene	µg/L	--	1.0 U	--	0.010 U	0.010 U
Chrysene	µg/L	--	1.0 U	--	0.010 U	0.010 U
Benzo(b)fluoranthene	µg/L	--	1.0 U	--	--	--
Benzo(k)fluoranthene	µg/L	--	1.0 U	--	--	--
Benzofluoranthenes (total)	µg/L	--	--	--	0.010 U	0.010 U
Benzo(a)pyrene	µg/L	--	1.0 U	--	0.010 U	0.010 U
Indeno(1,2,3-c,d)pyrene	µg/L	--	1.0 U	--	0.010 U	0.010 U
Dibenzo(a,h)anthracene	µg/L	--	1.0 U	--	0.010 U	0.010 U
Benzo(g,h,i)perylene	µg/L	--	1.0 U	--	--	--
cPAHs (MTCA TEQ-ZeroND)	µg/L	0.1	--	--	0 U	0 U
cPAHs (MTCA TEQ-HalfND)	µg/L		--	--	0.0071 U	0.0071 U
Volatile Organic Compounds (VOCs)						
2-Methylphenol	µg/L	--	1.0 U	--	--	--
4-Methylphenol	µg/L	--	1.0 U	--	--	--
bis(2-Ethylhexyl)phthalate	µg/L	--	1.2 JB	--	--	--
Butyl benzyl phthalate	µg/L	--	1.0 U	--	--	--
Carbazole	µg/L	--	14	--	--	--
Dibenzofuran	µg/L	--	5.6	--	--	--
Diethylphthalate	µg/L	--	1.0 U	--	--	--
1,2,4-Trimethylbenzene	µg/L	--	1.0 U	--	--	--
1,3,5-Trimethylbenzene	µg/L	--	1.0 U	--	--	--
Acetone	µg/L	--	5.0 U	--	--	--
Benzene	µg/L	5	3.3	1.4	0.20 U	0.20 U
Chloroform	µg/L	--	1.0 U	--	--	--
Cymene	µg/L	--	1.0 U	--	--	--
Ethylbenzene	µg/L	700	1.0 U	1.0 U	0.20 U	0.20 U
iso-Propylbenzene	µg/L	--	1.1	--	--	--
n-Butylbenzene	µg/L	--	1.0 U	--	--	--
n-Propylbenzene	µg/L	--	1.0 U	--	--	--
Styrene	µg/L	--	1.0 U	--	--	--
Tetrachloroethene	µg/L	5	1.0 U	--	0.20 U	**79**
Toluene	µg/L	1,000	1.0 U	1.0 U	0.68	0.090 JQ
Trichloroethene	µg/L	--	1.0 U	--	0.20 U	0.20 U
Xylene (meta & para)	µg/L	--	1.0 U	1.0 U	0.40 U	0.40 U
Xylene (ortho)	µg/L	--	1.0 U	1.0 U	0.20 U	0.20 U
Xylene (total)	µg/L	1,000	1.0 U	1.0 U	0.60 U	0.60 U

Notes:

Bold/Red Indicates a concentration that exceeds the screening level.

-- Not applicable or not analyzed.

1 Napthalene result of 6,400 µg/L by USEPA 8260C is also available; the result presented is for the USEPA 8270C analysis of PAHs.

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Abbreviations:

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JQ Analyte was detected between the reporting limit and method detection limit, concentration is considered an estimate.
U Analyte was not detected at the given reporting limit.

Table 6
Summary of Non-Detect Analytes in Site Groundwater

Analyte	Units	Number of Non-Detect Results	Minimum Non-Detect Value	Maximum Non-Detect Value
Polychlorinated Biphenyls (PCBs)				
PCB Aroclor 1016	µg/L	1	0.10	0.10
PCB Aroclor 1221	µg/L	1	0.10	0.10
PCB Aroclor 1232	µg/L	1	0.10	0.10
PCB Aroclor 1242	µg/L	1	0.10	0.10
PCB Aroclor 1248	µg/L	1	0.10	0.10
PCB Aroclor 1254	µg/L	1	0.10	0.10
PCB Aroclor 1260	µg/L	1	0.10	0.10
PCB Aroclor 1262	µg/L	1	0.10	0.10
PCB Aroclor 1268	µg/L	1	0.10	0.10
PCBs (Total, Aroclors)	µg/L	1	0.10	0.10
Semivolatile Organic Compounds (SVOCs)				
1,2,4-Trichlorobenzene	µg/L	16	1.0	5.0
1,2-Dichlorobenzene	µg/L	16	1.0	1.1
1,3-Dichlorobenzene	µg/L	16	1.0	1.1
1,4-Dichlorobenzene	µg/L	16	1.0	1.1
2,4,5-Trichlorophenol	µg/L	8	5.0	5.4
2,4,6-Trichlorophenol	µg/L	8	5.0	5.4
2,4-Dichlorophenol	µg/L	8	5.0	5.3
2,4-Dimethylphenol	µg/L	8	1.0	1.1
2,4-Dinitrophenol	µg/L	8	10	11
2,4-Dinitrotoluene	µg/L	8	5.0	5.4
2,6-Dinitrotoluene	µg/L	8	5.0	5.4
2-Chloronaphthalene	µg/L	8	1.0	1.1
2-Chlorophenol	µg/L	8	1.0	1.1
2-Nitroaniline	µg/L	8	5.0	5.4
2-Nitrophenol	µg/L	8	5.0	5.4
3,3'-Dichlorobenzidine	µg/L	8	5.0	5.4
3-Nitroaniline	µg/L	8	5.0	5.4
4,6-Dinitro-o-cresol	µg/L	8	10	11
4-Bromophenyl phenyl ether	µg/L	8	1.0	1.1
4-Chloro-3-methylphenol	µg/L	8	5.0	5.4
4-Chloroaniline	µg/L	8	5.0	5.4
4-Chlorophenyl phenyl ether	µg/L	8	1.0	1.1
4-Nitroaniline	µg/L	8	5.0	5.4
4-Nitrophenol	µg/L	8	5.0	5.4
Benzoic acid	µg/L	8	10	11
Benzyl alcohol	µg/L	8	5.0	5.4
bis(2-Chloroethoxy)methane	µg/L	8	1.0	1.1
bis(2-Chloroethyl)ether	µg/L	8	1.0	1.1
bis-Chloroisopropyl ether	µg/L	8	1.0	1.1
Dimethyl phthalate	µg/L	8	1.0	1.1
Di-n-butyl phthalate	µg/L	8	1.0	1.1
Di-n-octyl phthalate	µg/L	8	1.0	1.1
Hexachlorobenzene	µg/L	8	1.0	1.1
Hexachlorobutadiene	µg/L	16	1.0	5.0
Hexachlorocyclopentadiene	µg/L	8	5.0	5.4
Hexachloroethane	µg/L	8	1.0	1.1
Isophorone	µg/L	8	1.0	1.1
Nitrobenzene	µg/L	8	1.0	1.1
N-Nitroso-di-n-propylamine	µg/L	8	5.0	5.4
N-Nitrosodiphenylamine	µg/L	8	1.0	1.1
Pentachlorophenol	µg/L	8	5.0	5.4
Phenol	µg/L	8	1.0	10
Volatile Organic Compounds (VOCs)				
1,1,1,2-Tetrachloroethane	µg/L	8	1.0	1.0
1,1,1-Trichloroethane	µg/L	8	1.0	1.0
1,1,2,2-Tetrachloroethane	µg/L	8	1.0	1.0
1,1,2-Trichloroethane	µg/L	8	1.0	1.0
1,1,2-Trichlorotrifluoroethane	µg/L	8	2.0	2.0
1,1-Dichloroethane	µg/L	8	1.0	1.0
1,1-Dichloroethene	µg/L	22	0.20	1.0
1,1-Dichloropropene	µg/L	8	1.0	1.0
1,2,3-Trichlorobenzene	µg/L	8	5.0	5.0
1,2,3-Trichloropropane	µg/L	8	3.0	3.0
1,2-Dibromo-3-chloropropane	µg/L	8	5.0	5.0
1,2-Dibromoethane	µg/L	8	1.0	1.0
1,2-Dichloroethane	µg/L	8	1.0	1.0

Table 6
Summary of Non-Detect Analytes in Site Groundwater

Analyte	Units	Number of Non-Detect Results	Minimum Non-Detect Value	Maximum Non-Detect Value
VOCs (cont.)				
1,2-Dichloropropane	µg/L	8	1.0	1.0
1,3-Dichloropropane	µg/L	8	1.0	1.0
2,2-Dichloropropane	µg/L	8	1.0	1.0
2-Chloroethyl vinyl ether	µg/L	8	5.0	5.0
2-Chlorotoluene	µg/L	8	1.0	1.0
2-Hexanone	µg/L	8	5.0	5.0
4-Chlorotoluene	µg/L	8	1.0	1.0
Acrolein	µg/L	8	50	50
Acrylonitrile	µg/L	8	1.0	1.0
Bromobenzene	µg/L	8	1.0	1.0
Bromochloromethane	µg/L	8	1.0	1.0
Bromodichloromethane	µg/L	8	1.0	1.0
Bromoethane	µg/L	8	2.0	2.0
Bromoform	µg/L	8	1.0	1.0
Bromomethane	µg/L	8	1.0	1.0
Carbon disulfide	µg/L	8	1.0	1.0
Carbon tetrachloride	µg/L	8	1.0	1.0
Chlorobenzene	µg/L	8	1.0	1.0
Chloroethane	µg/L	8	1.0	1.0
Chloromethane	µg/L	2	1.0	1.0
cis-1,2-Dichloroethene	µg/L	22	0.20	1.0
cis-1,3-Dichloropropene	µg/L	8	1.0	1.0
Dibromochloromethane	µg/L	8	1.0	1.0
Dibromomethane	µg/L	8	1.0	1.0
Iodomethane	µg/L	8	1.0	1.0
Methyl ethyl ketone	µg/L	8	5.0	5.0
Methyl iso butyl ketone	µg/L	8	5.0	5.0
Methylene chloride	µg/L	8	2.0	2.0
sec-Butylbenzene	µg/L	8	1.0	1.0
tert-Butylbenzene	µg/L	8	1.0	1.0
trans-1,2-Dichloroethene	µg/L	22	0.20	1.0
trans-1,3-Dichloropropene	µg/L	8	1.0	1.0
trans-1,4-Dichloro-2-butene	µg/L	8	5.0	5.0
Trichlorofluoromethane	µg/L	8	1.0	1.0
Vinyl acetate	µg/L	8	5.0	5.0
Vinyl chloride	µg/L	22	0.20	1.0

Abbreviation:

µg/L Micrograms per liter

Table 7
Data Gaps Investigation Soil Vapor Sample Results

		Location	GM1	GM2	GM3
		Sample ID	GM1-021318	GM2-021318	GM3-021318
		Sample Date	02/13/2018	02/13/2018	02/13/2018
Analyte	**Units**	**Screening Level**			
Gases by GC/TCD					
Helium	ppt	--	100 U	100 U	100 U
Petroleum Fractionation by TO-15					
C5-C8 Aliphatics	ppbv	23,700	7.50 U	38.3	32.5
C9-12 Aliphatics	ppbv	771	26.5	40.7	14.2
C9-C10 Aromatics	ppbv	1220	22.6	34.6	12.1
BTEX by TO-15					
Benzene	ppbv	3.35	0.200 U	0.200 U	0.446
Toluene	ppbv	20,200	0.315	0.317	1.41
Ethylbenzene	ppbv	3500	0.300 U	0.300 U	0.329
Xylene (meta & para)	ppbv	--	0.284	0.207	0.613
Xylene (ortho)	ppbv	--	0.200 U	0.200 U	0.271
Xylenes (total)	ppbv	350	0.284	0.207	0.884
VOCs by TO-15					
1,1,1-Trichloroethane	ppbv	--	0.200 U	0.200 U	0.200 U
1,1,2,2-Tetrachloroethane	ppbv	--	0.300 U	0.300 U	0.300 U
1,1,2-Trichloroethane	ppbv	--	0.500 U	0.500 U	0.500 U
1,1,2-Trichlorotrifluoroethane	ppbv	--	0.500 U	0.500 U	0.500 U
1,1-Dichloroethane	ppbv	--	0.200 U	0.200 U	0.200 U
1,1-Dichloroethene	ppbv	769	0.200 U	0.200 U	0.200 U
1,2,4-Trichlorobenzene	ppbv	--	0.300 U	0.300 U	0.300 U
1,2-Dichlorobenzene	ppbv	--	0.500 U	0.500 U	0.500 U
1,2-Dichloroethane	ppbv	--	0.200 U	0.200 U	0.200 U
1,2-Dichloropropane	ppbv	--	0.500 U	0.500 U	0.500 U
1,3-Dichlorobenzene	ppbv	--	0.300 U	0.300 U	0.300 U
1,4-Dichlorobenzene	ppbv	--	0.300 U	0.300 U	0.300 U
Benzyl Chloride	ppbv	--	0.500 U	0.500 U	0.500 U
Bromodichloromethane	ppbv	--	0.300 U	0.300 U	0.300 U
Carbon tetrachloride	ppbv	--	0.200 U	0.200 U	0.200 U
Chlorobenzene	ppbv	--	0.200 U	0.200 U	0.200 U
Chloroethane	ppbv	--	0.500 U	0.500 U	0.500 U
Chloroform	ppbv	--	0.200 U	0.200 U	0.306
Chloromethane	ppbv	--	0.500 U	0.500 U	0.500 U
cis-1,2-Dichloroethene	ppbv	--	0.200 U	0.200 U	0.200 U
cis-1,3-Dichloropropene	ppbv	--	0.500 U	0.500 U	0.500 U
Dibromochloromethane	ppbv	--	0.500 U	0.500 U	0.500 U
Dichlorodifluoromethane	ppbv	--	0.450	0.432	0.479
Freon 114	ppbv	--	0.500 U	0.500 U	0.500 U
Hexachlorobutadiene	ppbv	--	1.00 U	1.00 U	1.00 U
Methylene chloride	ppbv	--	1.50 U	1.50 U	1.50 U
Naphthalene	ppbv	0.467	0.300 U	0.300 U	0.300 U
Tetrachloroethene	ppbv	47.2	4.81	0.300 U	0.300 U
trans-1,2-Dichloroethene	ppbv	--	0.200 U	0.200 U	0.200 U
trans-1,3-Dichloropropene	ppbv	--	0.500 U	0.500 U	0.500 U
Trichloroethene	ppbv	2.29	0.200 U	0.200 U	0.200 U
Trichlorofluoromethane	ppbv	--	0.300 U	0.300 U	0.300 U
Vinyl chloride	ppbv	3.64	0.200 U	0.200 U	0.200 U

Note:

-- Not applicable or not analyzed.

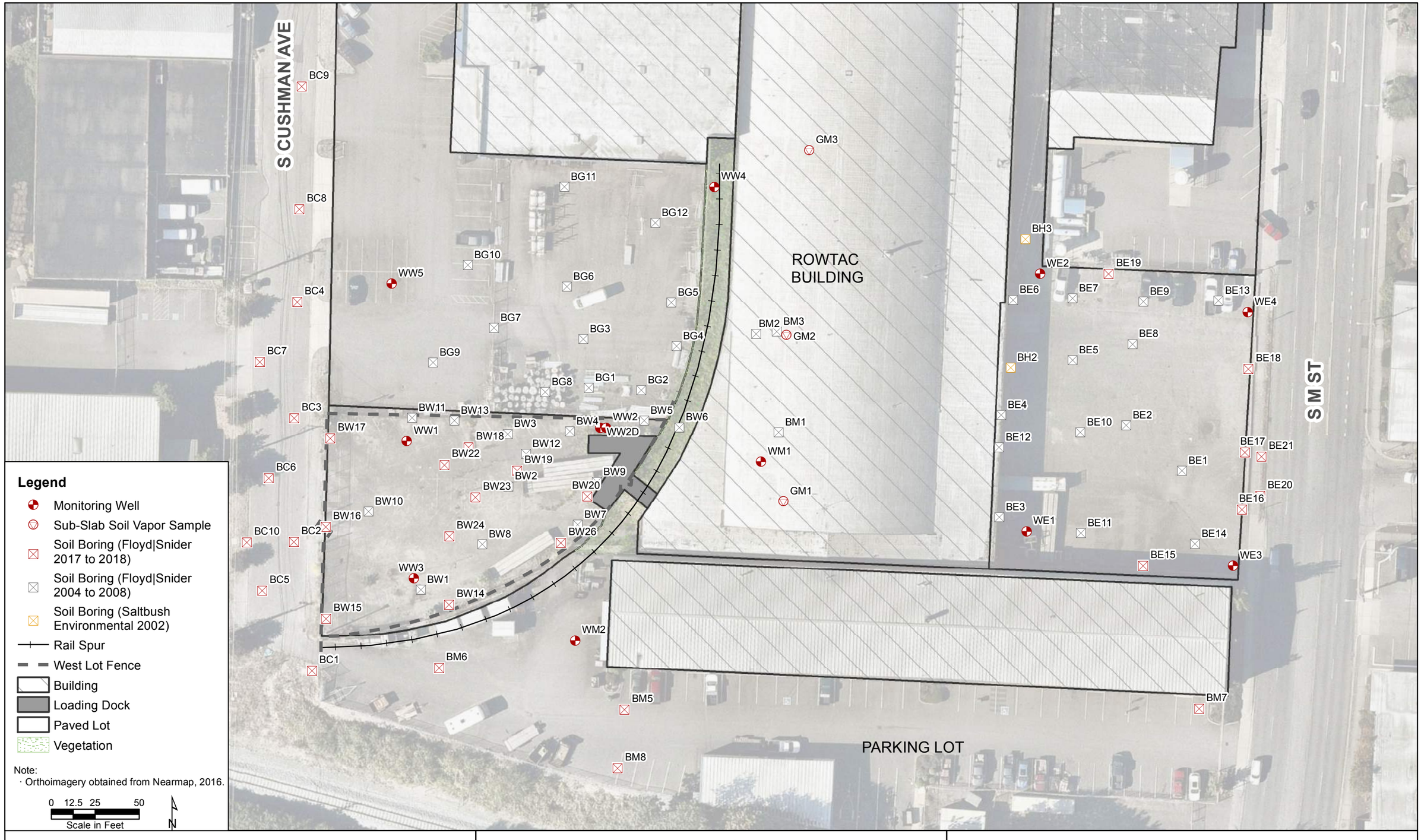
Abbreviations:

BTEX Benzene, toluene, ethylbenzene, and xylenes
ppbv Parts per billion by volume
ppt Parts per trillion
VOC Volatile organic compound

Qualifier:

U Analyte was not detected at the given reporting limit.

Figures



Legend

- Monitoring Well
- Sub-Slab Soil Vapor Sample
- Soil Boring (Floyd|Snider 2017 to 2018)
- Soil Boring (Floyd|Snider 2004 to 2008)
- Soil Boring (Saltbush Environmental 2002)
- Rail Spur
- West Lot Fence
- Building
- Loading Dock
- Paved Lot
- Vegetation

Note:
· Orthoimagery obtained from Nearmap, 2016.

0 12.5 25 50
Scale in Feet

N

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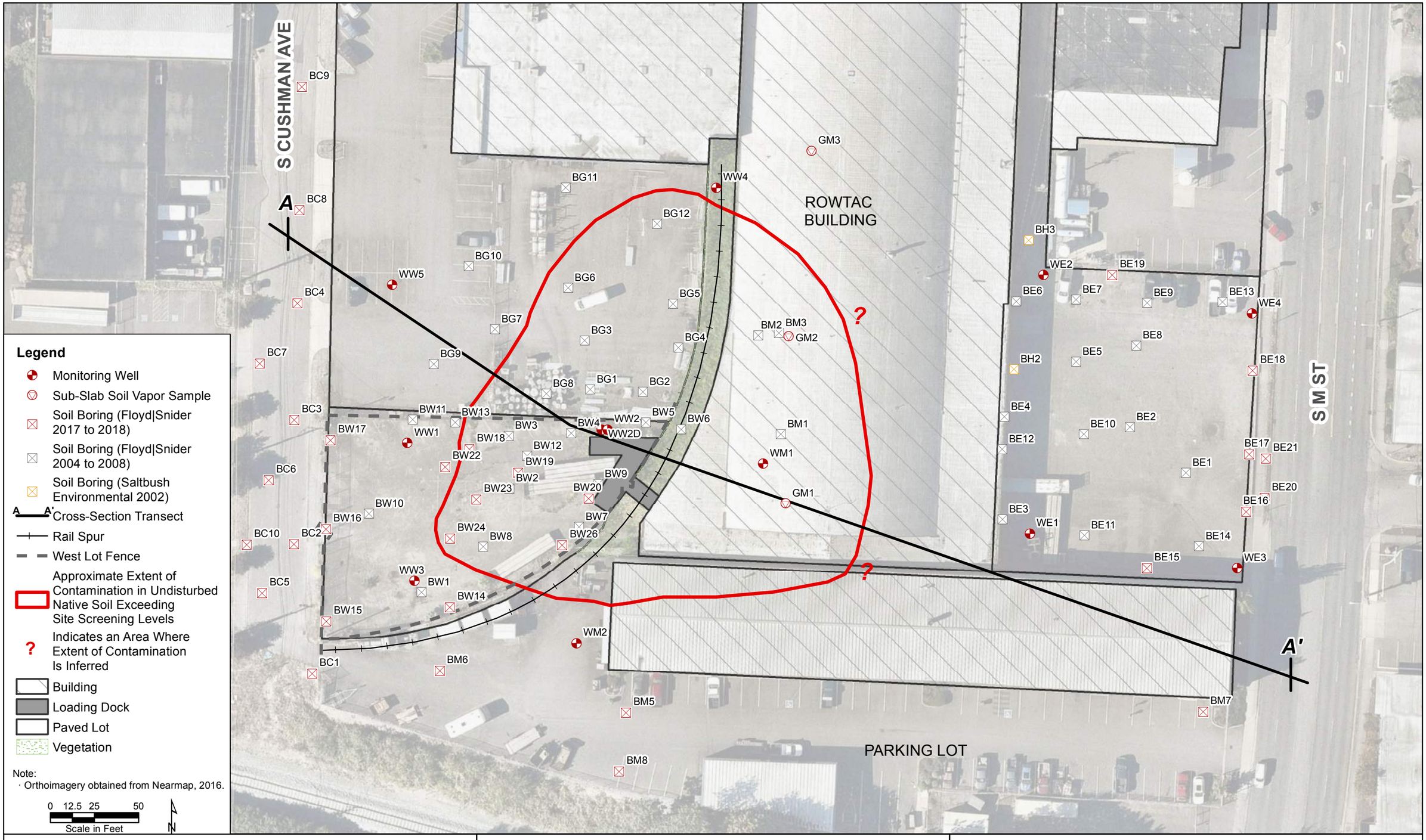
Figure 1
All Sample Locations

I:\GIS\Projects\Camas-RowTac\MXD\Data Report 2018\Figure 1 All Sample Locations.mxd
6/14/2018



Legend

- Monitoring Well
- Sub-Slab Soil Vapor Sample
- Soil Boring (Floyd|Snider 2017 to 2018)
- Soil Boring (Floyd|Snider 2004 to 2008)
- Soil Boring (Saltbush Environmental 2002)
- A — A' Cross-Section Transect
- Rail Spur
- West Lot Fence
- Approximate Extent of Contamination in Undisturbed Native Soil Exceeding Site Screening Levels
- ? Indicates an Area Where Extent of Contamination Is Inferred
- Building
- Loading Dock
- Paved Lot
- Vegetation

Note:
· Orthoimagery obtained from Nearmap, 2016.

0 12.5 25 50
Scale in Feet

N

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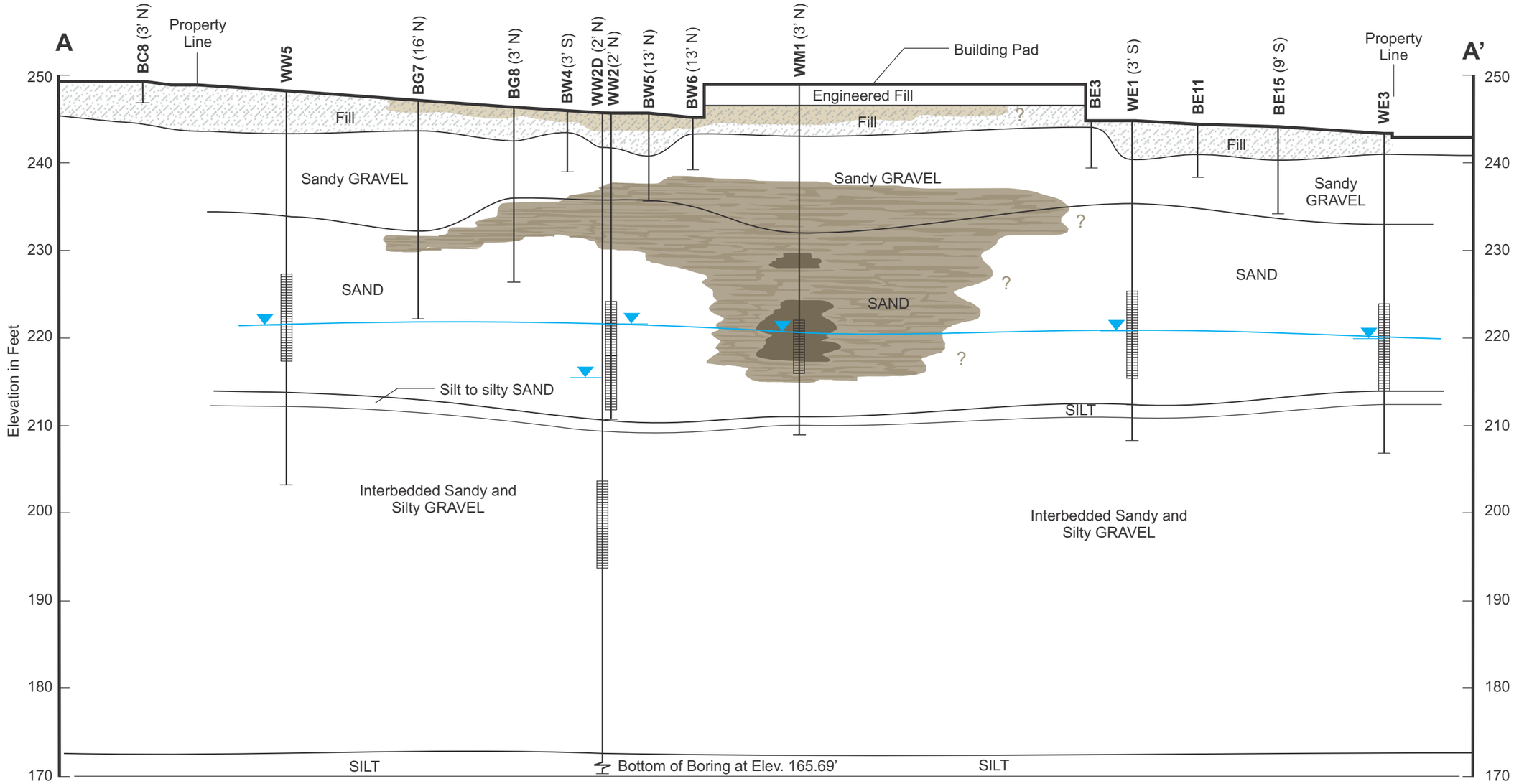
Figure 2
Extent of Native Soil Contamination and Cross-Section Transect Location

I:\GIS\Projects\Camas-RowTac\MXD\Data Report 2018\Figure 2 Extent of Native Soil Contamination and Cross-Section Transect Location.mxd
6/14/2018



Field indications of contamination

- Oily fill soil contamination with debris
- Vitreous/tarry fill soil contamination
- NAPL stringers/sheen
- NAPL-saturated soil
- ? Indicates an area where extent of contamination is inferred

Water table elevation
(during March 2018 groundwater monitoring)

Horizontal Scale in Feet
0 50 100
0 12.5 25
Vertical Scale in Feet
Vertical Exaggeration X 4

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Figure 3
Cross-Section A-A'

G:Project\Clients\Floyd Snider\Camas\Section A-A'.cdr

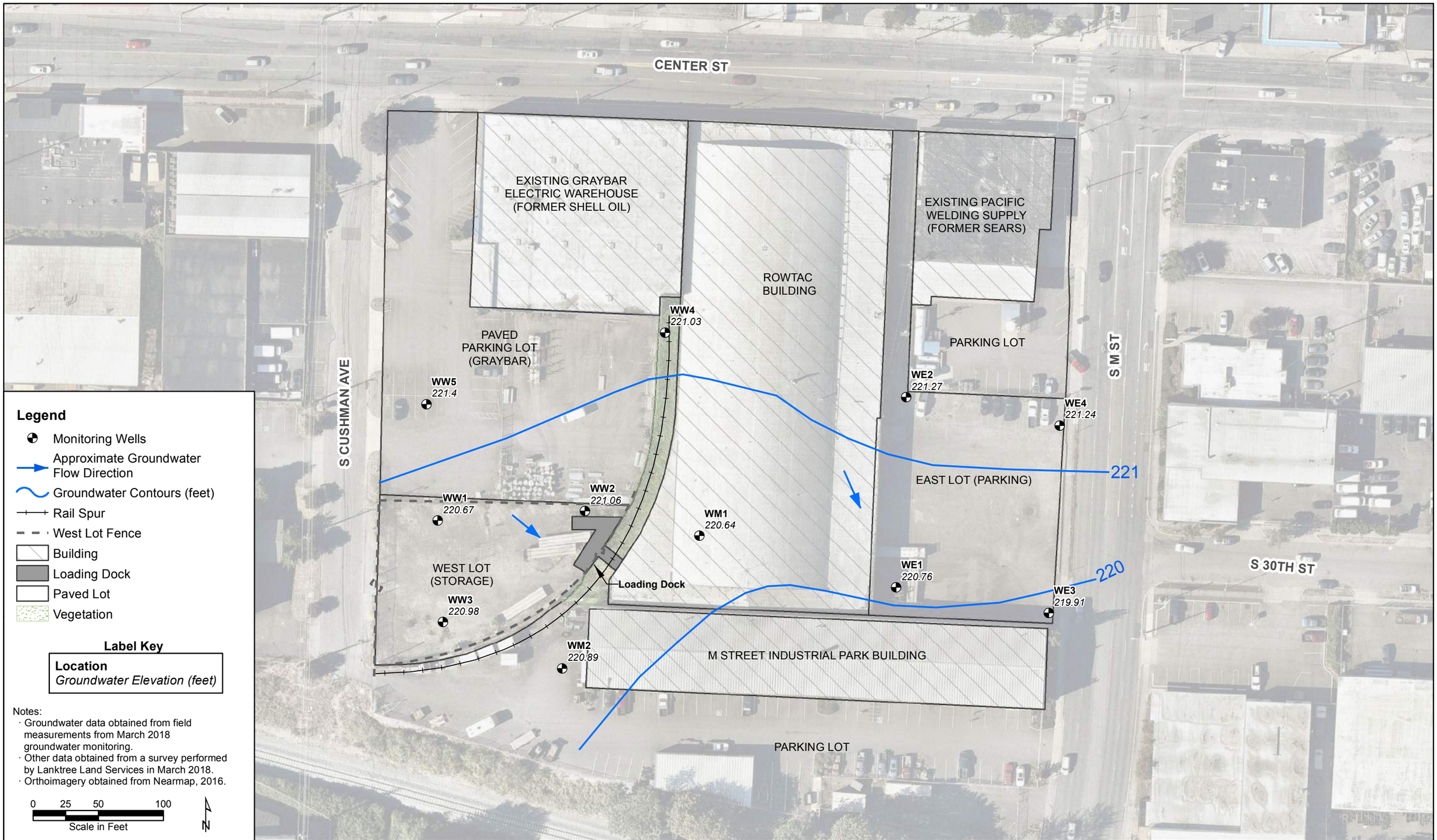

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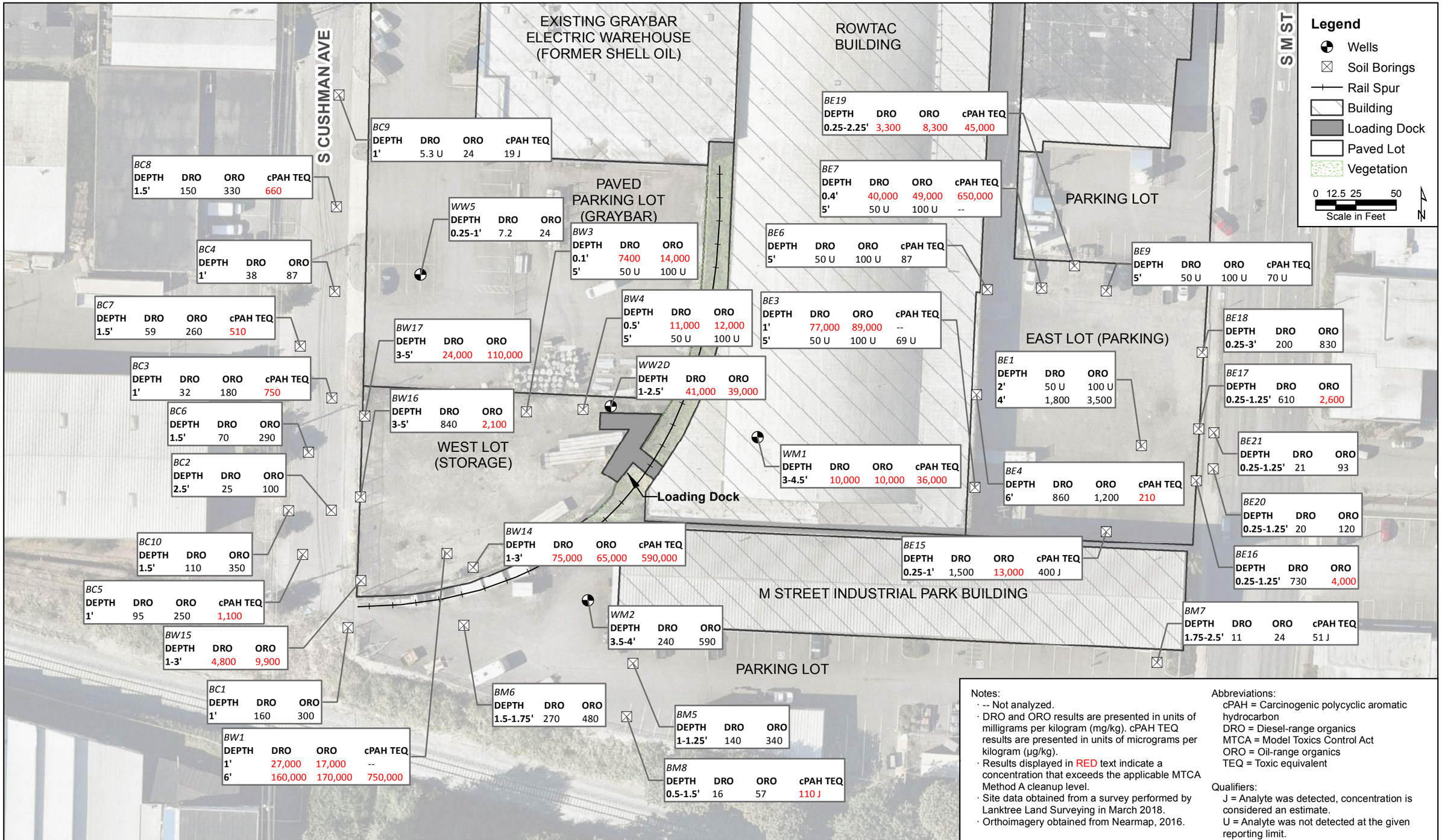
Figure 4
Groundwater Elevations, March 2018

I:\GIS\Projects\Camas-RowTac\MXD\Data Report 2018\Figure 4 Groundwater Elevations, March 2018.mxd
6/14/2018



Notes:
- -- Not analyzed.
- DRO and ORO results are presented in units of milligrams per kilogram (mg/kg). cPAH TEQ results are presented in units of micrograms per kilogram (µg/kg).
- Results displayed in RED text indicate a concentration that exceeds the applicable MTCA Method A cleanup level.
- Site data obtained from a survey performed by Lanktree Land Surveying in March 2018.
- Orthoimagery obtained from Nearmap, 2016.

Abbreviations:
cPAH = Carcinogenic polycyclic aromatic hydrocarbon
DRO = Diesel-range organics
MTCA = Model Toxics Control Act
ORO = Oil-range organics
TEQ = Toxic equivalent

Qualifiers:
J = Analyte was detected, concentration is considered an estimate.
U = Analyte was not detected at the given reporting limit.

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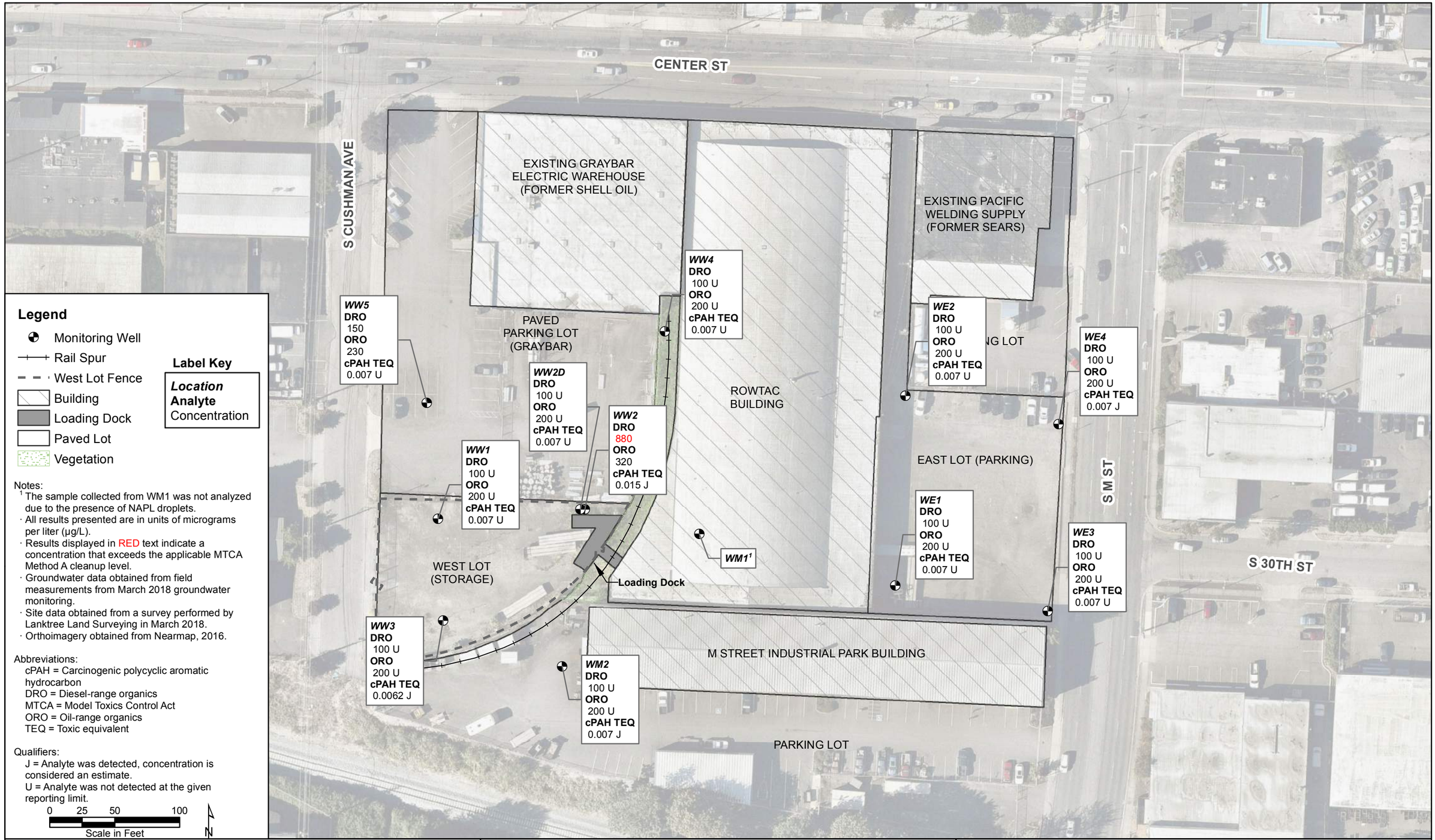
Figure 5
DRO, ORO, and cPAHs in Fill Soil

I:\GIS\Projects\Camas-RowTac\MXD\Data Report 2018\Figure 5 DRO, ORO, and cPAHs in Fill Soil.mxd
6/14/2018



Notes:
[1] The sample collected from WM1 was not analyzed due to the presence of NAPL droplets.
- All results presented are in units of micrograms per liter (µg/L).
- Results displayed in RED text indicate a concentration that exceeds the applicable MTCA Method A cleanup level.
- Groundwater data obtained from field measurements from March 2018 groundwater monitoring.
- Site data obtained from a survey performed by Lanktree Land Surveying in March 2018.
- Orthoimagery obtained from Nearmap, 2016.

Abbreviations:
cPAH = Carcinogenic polycyclic aromatic hydrocarbon
DRO = Diesel-range organics
MTCA = Model Toxics Control Act
ORO = Oil-range organics
TEQ = Toxic equivalent

Qualifiers:
J = Analyte was detected, concentration is considered an estimate.
U = Analyte was not detected at the given reporting limit.

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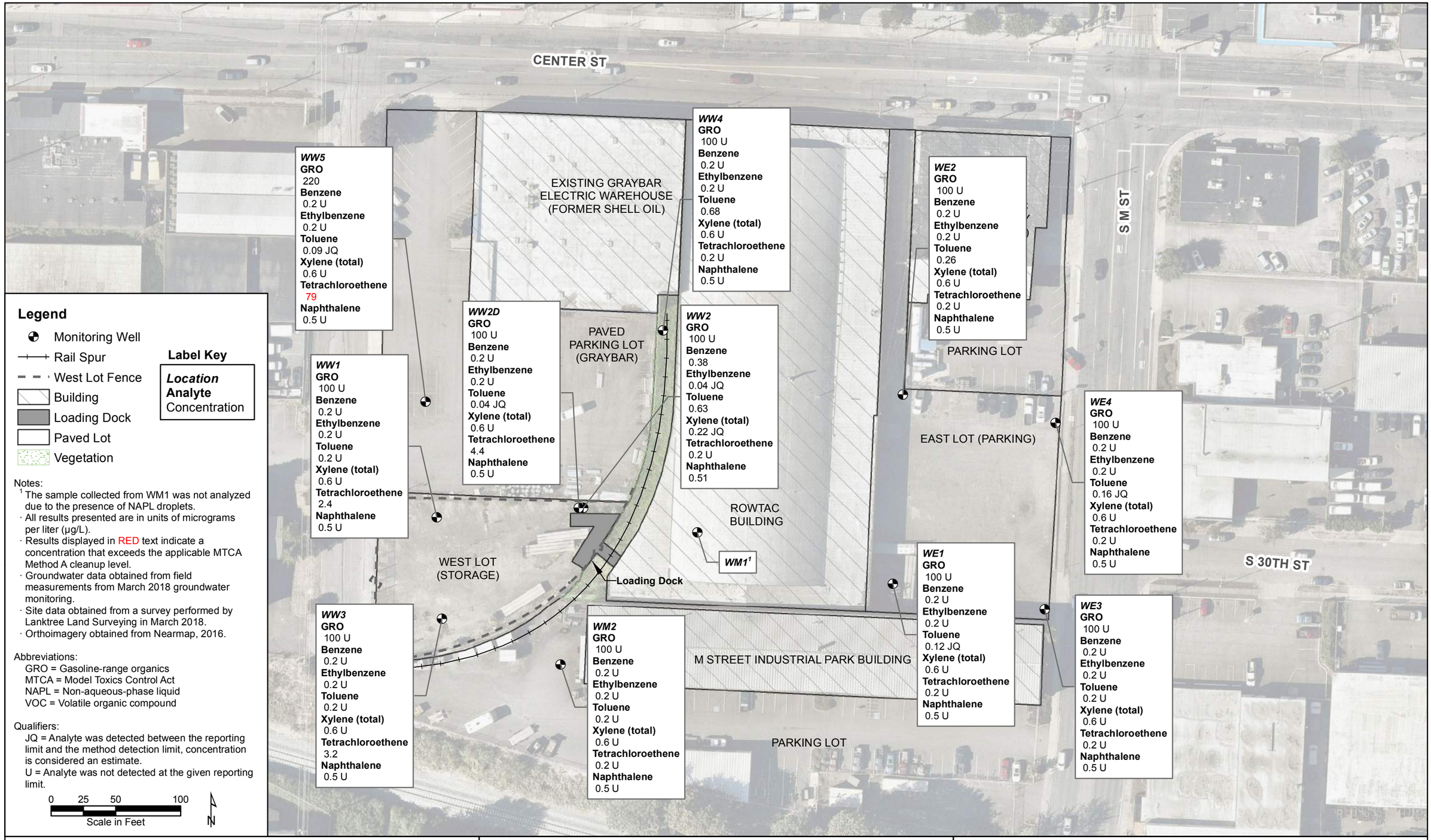
Figure 6
Groundwater DRO, ORO, and cPAH Analytical Results, March 2018

I:\GIS\Projects\Camas-RowTac\MXD\Data Report 2018\Figure 6 Groundwater DRO, ORO, and cPAH Analytical Results, March 2018.mxd
6/14/2018



Legend

- Monitoring Well
- Rail Spur
- West Lot Fence
- Building
- Loading Dock
- Paved Lot
- Vegetation

Label Key

Location
Analyte
Concentration

Notes:
[1] The sample collected from WM1 was not analyzed due to the presence of NAPL droplets.
· All results presented are in units of micrograms per liter (µg/L).
· Results displayed in RED text indicate a concentration that exceeds the applicable MTCA Method A cleanup level.
· Groundwater data obtained from field measurements from March 2018 groundwater monitoring.
· Site data obtained from a survey performed by Lanktree Land Surveying in March 2018.
· Orthoimagery obtained from Nearmap, 2016.

Abbreviations:
GRO = Gasoline-range organics
MTCA = Model Toxics Control Act
NAPL = Non-aqueous-phase liquid
VOC = Volatile organic compound

Qualifiers:
JQ = Analyte was detected between the reporting limit and the method detection limit, concentration is considered an estimate.
U = Analyte was not detected at the given reporting limit.

0 25 50 100
Scale in Feet

N

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Figure 7
Groundwater GRO and VOC Results, March 2018

I:\GIS\Projects\Camas-RowTac\MXD\Data Report 2018\Figure 7 Groundwater GRO and VOC results March 2018.mxd
6/14/2018