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Memorandum

To: Rob Olsen, Tacoma Pierce County Health Department

Copies: Bob Code, Fleischmann's Industrial Park LLC

From: Tom Colligan

Date: September 8, 2016

Project No: CC-Fleischmann's

Re: **Underground Storage Tank Closure Report**
Fleischmann's Industrial Park
Sumner, Washington

This memorandum presents historical and recently collected soil and groundwater data to support the closure of former underground storage tanks (USTs) at the Fleischmann's Industrial Park-owned property located at 1700 Steele Avenue in Sumner, Washington (Figure 1). A permit for UST closure, #RO0000605, was issued on September 30, 2015, for this property by the Tacoma-Pierce County Health Department (TPCHD) and remains pending.

PROPERTY BACKGROUND

The Fleischmann's Industrial Park property (the property) is the site of a former commercial yeast manufacturing facility and current commercial vinegar manufacturing operation. It is located in an area zoned for heavy industrial use by the City of Sumner. The property was divided into several sub-parcels for further industrial and commercial usage in 2008 after the cessation of yeast manufacturing operations. The parcel that is the focus of this memorandum (the subject property) remains in use for vinegar production on its north side and contains associated temporary office and out-buildings on its south side. The structures associated with former yeast manufacturing have been removed. The parcel to the west is currently vacant, the parcel to the southwest has been redeveloped with the Fleischmann's Industrial Park commercial/light industrial facility, and the parcel to the south is owned by the City of Sumner and is the site of a City-owned water supply well that is not currently in use. The subject property and surrounding property uses are shown on Figure 2.

As previously reported to TPCHD, the subject property formerly contained two 15,000-gallon USTs within a concrete vault and one 500-gallon aboveground storage tank (AST). The tanks held heavy fuel oil for use in boilers and backup generators. Several soil investigations performed on the property between 1998 and 1999 identified areas of soil contaminated with diesel-range organics (DRO) and oil-range organics (ORO) originating from these fuel oil tanks, as well as minor

amounts of gasoline-range organics (GRO). The USTs and ASTs, associated concrete pads, vaults, plumbing, and over 1,200 tons of contaminated soil were removed from the property in 2000, with oversight of the tank removal by TPCHD. The presence of buried utilities and other structures prevented full excavation of soils with DRO and ORO exceeding the Model Toxics Control Act (MTCA) Method A cleanup levels. Post-excavation groundwater sampling by URS in 2000 confirmed that the release of heavy fuel oil had not impacted groundwater quality. The previous property investigations, tank closure, and soil excavation are described in detail in the UST and AST Removal and Voluntary Cleanup Action Report prepared by the URS Corporation (URS 2002) and submitted to TPCHD and Ecology in 2002. One well downgradient of the excavation (MW-3-00) was also reportedly sampled by Environmental Resolutions, Inc., in 2003 and did not have detectable DRO or ORO; these results were summarized in a letter to TPCHD (G-logics 2010).

2016 SOIL AND GROUNDWATER INVESTIGATION

In July 2016, Floyd|Snider performed additional direct push borings to assess current soil (Figure 3) and groundwater conditions (Figure 4) in the vicinity of the remaining residually-contaminated soils as recent development activities resulted in more areas of the site being accessible. To assess if additional excavation was feasible, soil borings were advanced near the northern limits of the previous excavation, where previous confirmation samples had indicated residual DRO and/or or ORO concentrations exceeding MTCA Method A cleanup levels, and near the southeastern limits of the previous excavation where confirmation samples had detectable DRO and/or ORO at concentrations less than the MTCA Method A cleanup levels. Borings were also advanced within the footprint of the former power plant and transformers located to the west of the former UST vault, where a chemical odor in soil was noted by construction workers during demolition of those two structures in 2016.

Strong field indications of petroleum contamination were observed in soil samples obtained from two soil borings (FS-05 and FS-06) advanced near the northern limit of prior excavation. These borings were located as close as practicable to the southern limit of multiple active utilities that run east-west in that area. It was likely that this utility corridor limited the extent of the prior excavation. These utilities include a City of Sumner water supply line, multiple storm sewer water lines, and a fire water supply line as well as new concrete footings for an outbuilding that was under construction adjacent to the vinegar manufacturing facility at the time of the investigation. Borings were also advanced as close as possible on the northern side of the utility corridor. However, the samples from these borings did not have any field evidence of contamination, indicating that the heavy fuel release terminates within the utility nest.

Mild to moderate field indications of contamination, including slight staining and petroleum odor, were observed in one other boring (FS-02) located near the southwestern corner of the former excavation but not at boring locations farther to the south. Soil samples were collected for DRO and ORO analysis from intervals in FS-02, FS-05, and FS-06 with field indications of contamination, which was generally encountered between 3.5 and 5.5 feet below ground surface

(bgs), in the moist to wet soils overlying and at the water table. At the other locations where contamination was not apparent, samples were also collected between approximately 3.5 and 5.5 feet bgs, or at depths where prior samples had indicated residual contamination was present. The two most highly contaminated samples were also sampled for analysis of volatile petroleum constituents, petroleum additives, and volatile petroleum hydrocarbons/extractable petroleum hydrocarbons (VPH/EPH). Based on the southerly groundwater flow direction established by URS during post-excavation groundwater sampling, one location (FS-09) to the south of the borings with the greatest field indications of contamination was selected for collection of a groundwater screening sample using a temporary well screen set inside the Geoprobe boring and purged and sampled using a peristaltic pump.

SUMMARY OF SOIL AND GROUNDWATER CONDITIONS

The 2016 supplemental soil boring locations are shown on Figure 3 along with analytical results for DRO and ORO for prior samples in the vicinity with concentrations that exceeded the MTCA cleanup levels. Pre-existing and 2016 soil data and 2016 soil data are shown on Table 1. The 2016 borings served to adequately delineate the extent of residual contamination, which occurs mostly near and within a utility corridor. This area of residual contamination extends less than 20 feet beyond the northern extent of the 2000 excavation, as shown by the samples collected in 2016. The estimated extent of the remaining release is shown on Figure 3.

In other areas to the south and southwest of the 2000 excavation area, which were suspected to have potential residual contamination due to confirmation sample results or recent observations of odor during building demolition, were determined to have DRO and ORO concentrations less than the applicable cleanup levels by results from 2016 soil sampling.

Prior groundwater samples collected at the property have demonstrated that groundwater has not been impacted by releases from the USTs or AST. DRO, ORO, and benzene, toluene, ethylbenzene, and xylenes (BTEX) have not been detected in any groundwater samples analyzed for these compounds. This condition was expected, as heavy fuel oils are nearly insoluble in water. This earlier conclusion of no impact to groundwater was reinforced by the non-detect results from the 2016 groundwater grab sample collected from a boring located downgradient of the area of residual contamination. The extent of the groundwater investigation is shown on Figure 4 and groundwater analytical results for GRO, DRO, ORO, and BTEX are presented in Table 2.

CONCLUSIONS

The heavy fuel oil release from the former USTs at the property was cleaned up to the maximum extent possible during the UST removal completed in 2000. Although some residual contamination of DRO and ORO is present in the soil of the areas to the north and northwest of the former UST vault, removal of this soil remains constrained by active utilities; the removal of structures associated with the former yeast manufacturing operations has not significantly

increased the accessibility of the contaminated soils. The remaining residual DRO and ORO in soil to the west and southwest of the USTs and in the area surrounding the AST are present at concentrations less than MTCA Method A cleanup levels. Recent and historical sampling events, including a 2016 grab sample collected adjacent to and downgradient of the area with the most heavily impacted soil, have determined that groundwater has not been impacted by the heavy oil fuel release.

As demonstrated by the soil and groundwater data presented in this memorandum, the primary closure objectives have been met:

- The extent of accessible contaminated soil has been removed.
- The small amount of residual contamination has been defined
- Shallow groundwater quality has not been impacted.

Normally, under TPCHD regulation, full removal of all impacted soil from a UST is necessary to obtain closure. That is not possible in this case. Therefore, a variance to the TPCHD UST closure permit is an appropriate means to obtain regulatory closure through the UST Program. This UST closure is independent from regulatory closure of the property through the Voluntary Cleanup Program, which will be undertaken following certification of closure from TPCHD.

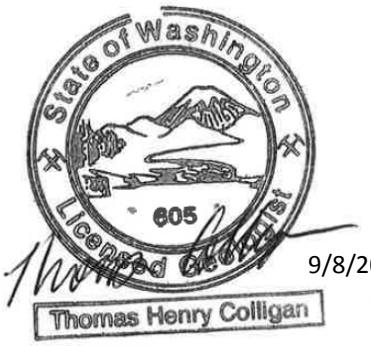
REFERENCES

G-Logics. 2010. Site Status, Underground Storage Tank Removal, Fleischmann's Property, Parcel 0420241150, Permit 2028, Sumner, WA. Letter from Rory Galloway, G-Logics, to Rob Olsen, Tacoma-Pierce County Health Department. 1 November.

URS. 2002. *UST and AST Removal and Voluntary Cleanup Action Report, 11156 Zehnder Street, Sumner, Washington*. Prepared for Mark Henson, Burns Philp Foods, Inc. 17 May.

LIST OF ATTACHMENTS

Table 1	Analytical Results for Petroleum in Soil
Table 2	Analytical Results for Petroleum in Groundwater
Figure 1	Property Vicinity Map
Figure 2	Current Property Usage
Figure 3	Diesel- and Oil-Range Organics in Soil
Figure 4	Diesel-, Gasoline-, and Oil-Range Organics in Groundwater



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Tables

Table 1

Analytical Results for Petroleum in Soil[1]

Location	Depth (feet bgs)	Date	Consultant	Total Petroleum Hydrocarbons by NWTPH-Gx	Total Petroleum Hydrocarbons by NWTPH-Dx		BTEX Compounds by USEPA Method 8021			
				Gasoline-Range Organics (mg/kg)	Diesel-Range Organics (mg/kg)	Oil-Range Organics (mg/kg)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Xylenes (mg/kg)
2016 Floyd|Snider Investigation Data										
FS-01	6–7	7/7/2016	Floyd|Snider	--	50 U	250 U	--	--	--	--
FS-02	3.5–4.5	7/7/2016	Floyd|Snider	--	1,000	250 U	--	--	--	--
FS-03	3–4	7/7/2016	Floyd|Snider	--	50 U	250 U	--	--	--	--
FS-04	8.5–9.5	7/7/2016	Floyd|Snider	--	50 U	250 U	--	--	--	--
FS-05	10–11	7/7/2016	Floyd|Snider	--	50 U	250 U	--	--	--	--
FS-05	3–5.5	7/7/2016	Floyd|Snider	--	**13,000**	**14,000**	0.030 U	0.050 U	0.050 U	0.10 U
FS-06	3.5–5.5	7/7/2016	Floyd|Snider	--	**3,000**	**5,300**	0.030 U	0.050 U	0.050 U	0.10 U
FS-06	7–8	7/7/2016	Floyd|Snider	--	50 U	250 U	--	--	--	--
FS-07	5–6	7/7/2016	Floyd|Snider	--	50 U	250 U	--	--	--	--
FS-08	5–6	7/7/2016	Floyd|Snider	--	50 U	250 U	--	--	--	--
FS-10	3.5–4.5	7/7/2016	Floyd|Snider	--	50 U	250 U	--	--	--	--
FS-11	4.5–5.5	7/7/2016	Floyd|Snider	--	440	440	--	--	--	--
Historical Investigation Data										
P3	0–5	1/8/1998	Hart Crowser	10 U	20 U	50 U	--	--	--	--
P3	5–8	1/8/1998	Hart Crowser	10 U	20 U	50 U	--	--	--	--
P4	0–4	1/8/1998	Hart Crowser	10 U	20 U	50 U	--	--	--	--
P5	0–5	1/8/1998	Hart Crowser	10 U	20 U	95	--	--	--	--
P6	0–5	1/8/1998	Hart Crowser	10 U	20 U	230	--	--	--	--
P7	2–5	1/8/1998	Hart Crowser	10 U	20 U	50 U	--	--	--	--
P11	3–5	1/9/1998	Hart Crowser	10 U	20 U	50 U	--	--	--	--
P12	5–8.5	1/9/1998	Hart Crowser	10 U	20 U	50 U	--	--	--	--
P13	1–4	1/9/1998	Hart Crowser	56	20 U	110	--	--	--	--
P13	4–8	1/9/1998	Hart Crowser	37	20 U	82	--	--	--	--
P14	0–4	1/9/1998	Hart Crowser	10 U	20 U	180	--	--	--	--
P15	0–4	1/9/1998	Hart Crowser	10 U	20 U	50 U	--	--	--	--
S-4	4–7	11/13/1998	Dames & Moore	--	40 U	850	--	--	--	--
S-5	1–4	11/13/1998	Dames & Moore	--	40 U	20 U	--	--	--	--
S-6	1–4	11/13/1998	Dames & Moore	--	40 U	20 U	--	--	--	--
S-7	1–4	11/13/1998	Dames & Moore	--	40 U	20 U	ND[2]	ND[2]	ND[2]	ND[2]
S-7	4–7	11/13/1998	Dames & Moore	--	40 U	20 U	--	--	--	--
S-8	4–7	11/13/1998	Dames & Moore	--	40 U	20 U	--	--	--	--
S-9	1–4	11/13/1998	Dames & Moore	--	40 U	20 U	--	--	--	--
S-10	1–4	11/13/1998	Dames & Moore	--	40 U	20 U	ND[2]	ND[2]	ND[2]	ND[2]
S-11	7–10	11/13/1998	Dames & Moore	--	40 U	20 U	--	--	--	--
P-101	2–4	3/24/1999	Hart Crowser	--	20 U	50 U	--	--	--	--
P-102	0–2	3/24/1999	Hart Crowser	--	20 U	50 U	--	--	--	--
P-103	2–4	3/24/1999	Hart Crowser	--	20 U	50 U	--	--	--	--

Table 1

Analytical Results for Petroleum in Soil[1]

Location	Depth (feet bgs)	Date	Consultant	Total Petroleum Hydrocarbons by NWTPH-Gx	Total Petroleum Hydrocarbons by NWTPH-Dx		BTEX Compounds by USEPA Method 8021			
				Gasoline-Range Organics (mg/kg)	Diesel-Range Organics (mg/kg)	Oil-Range Organics (mg/kg)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Xylenes (mg/kg)
Historical Investigation Data (cont.)										
P-105	2–4	3/24/1999	Hart Crowser	--	20 U	50 U	--	--	--	--
P-107	2–4	3/24/1999	Hart Crowser	--	20 U	50 U	--	--	--	--
P-108	2–4	3/24/1999	Hart Crowser	--	20 U	50 U	--	--	--	--
P-109	0–2	3/24/1999	Hart Crowser	--	20 U	50 U	--	--	--	--
P-109	2–4	3/24/1999	Hart Crowser	--	20 U	50 U	--	--	--	--
P-110	2–4	3/24/1999	Hart Crowser	--	220	50 U	--	--	--	--
P-114	2–4	3/24/1999	Hart Crowser	--	20 U	50 U	--	--	--	--
PEX-1	7.5	10/26/2000	URS	--	91	40 U	--	--	--	--
PEX-4	10	10/26/2000	URS	--	20 U	40 U	--	--	--	--
PEX-5	10	10/26/2000	URS	--	20 U	40 U	--	--	--	--
PEX-6	7	10/26/2000	URS	--	20 U	40 U	--	--	--	--
PEX-7	6	10/27/2000	URS	--	20 U	40 U	--	--	--	--
PEX-8	5	10/27/2000	URS	--	20 U	40 U	--	--	--	--
PEX-11	9	10/27/2000	URS	--	20 U	40 U	--	--	--	--
PEX-14	5	10/27/2000	URS	--	20 U	40 U	--	--	--	--
PEX-15	4.5	10/27/2000	URS	--	20 U	40 U	--	--	--	--
PEX-16	4	10/27/2000	URS	--	20 U	40 U	--	--	--	--
PEX-17	3.5	10/27/2000	URS	--	20 U	40 U	--	--	--	--
PEX-20	9.5	10/27/2000	URS	--	20 U	430	--	--	--	--
PEX-21	6	10/27/2000	URS	--	20 U	40 U	--	--	--	--
PEX-22	4	10/27/2000	URS	--	20 U	40 U	--	--	--	--
PEX-24	5	10/31/2000	URS	--	920	40 U	--	--	--	--
PEX-26	6	10/31/2000	URS	--	43	40 U	--	--	--	--
PEX-27	6	10/31/2000	URS	--	330	40 U	--	--	--	--
PEX-28	6	10/31/2000	URS	--	20 U	40 U	--	--	--	--
PEX-31	5	11/1/2000	URS	--	20 U	40 U	--	--	--	--
PEX-32	7	11/1/2000	URS	--	20 U	730	--	--	--	--
PEX-33	8	11/1/2000	URS	--	20 U	40 U	--	--	--	--
PEX-34	7	11/1/2000	URS	--	20 U	40 U	--	--	--	--
PEX-35	2	11/1/2000	URS	--	20 U	40 U	--	--	--	--
PEX-36	9	11/1/2000	URS	--	26	40 U	--	--	--	--
PEX-38	4	11/1/2000	URS	--	20 U	40 U	--	--	--	--
PEX-39	5	11/1/2000	URS	--	20 U	40 U	--	--	--	--
PEX-42	7	11/2/2000	URS	--	**2,100**	1,500	--	--	--	--
PEX-43	2.5	11/1/2000	URS	--	20 U	40 U	--	--	--	--
PEX-44	4	11/2/2000	URS	--	20 U	880	--	--	--	--
PEX-45	8	11/1/2000	URS	--	20 U	610	--	--	--	--
PEX-46	13	11/6/2000	URS	--	20 U	40 U	--	--	--	--

Table 1
Analytical Results for Petroleum in Soil[1]

Location	Depth (feet bgs)	Date	Consultant	Total Petroleum Hydrocarbons by NWTPH-Gx	Total Petroleum Hydrocarbons by NWTPH-Dx		BTEX Compounds by USEPA Method 8021			
				Gasoline-Range Organics (mg/kg)	Diesel-Range Organics (mg/kg)	Oil-Range Organics (mg/kg)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Xylenes (mg/kg)
Historical Investigation Data (cont.)										
PEX-47	12	11/6/2000	URS	--	20 U	40 U	--	--	--	--
PEX-48	6	11/6/2000	URS	--	20 U	40 U	--	--	--	--
PEX-49	5	11/7/2000	URS	--	20 U	40 U	--	--	--	--
PEX-50	5	11/7/2000	URS	--	20 U	40 U	--	--	--	--
PEX-51	12	11/7/2000	URS	--	20 U	40 U	--	--	--	--
PEX-52	7	11/23/2000	URS	--	1,800	**4,900**	--	--	--	--
PEX-53	7	11/23/2000	URS	--	20 U	40 U	--	--	--	--
TP-5	3.5	10/27/2000	URS	--	20 U	40 U	--	--	--	--
TP-6	5.5	10/27/2000	URS	--	20 U	40 U	--	--	--	--
TP-7	2.5	10/27/2000	URS	--	20 U	40 U	--	--	--	--

Notes:

-- Not analyzed.

bold Indicates a detected concentration that exceeds the MTCA Method A cleanup level.

1 Results were compared to MTCA Method A Soil Cleanup Levels for Industrial Properties (Table 745-1).

2 Reporting limits for BTEX compounds not provided in this report.

Abbreviations:

BTEX Benzene, toluene, ethylbenzene, and xylenes
DRO Diesel-range organics
GRO Gasoline-range organics
mg/kg Milligrams per kilogram
MTCA Model Toxics Control Act
ND Not detected
ORO Oil-range organics

Qualifier:

U The analyte was not detected at the given reporting limit.

Table 2

Analytical Results for Petroleum in Groundwater[1]

Location	Date	Consultant	Total Petroleum Hydrocarbons by NWTPH-Gx	Total Petroleum Hydrocarbons by NWTPH-Dx		BTEX Compounds by USEPA Method 8021			
			Gasoline-Range Organics (µg/L)	Diesel-Range Organics (µg/L)	Oil-Range Organics (µg/L)	Benzene (µg/L)	Ethylbenzene (µg/L)	Toluene (µg/L)	Xylenes (µg/L)
2016 Floyd|Snider Investigation Data									
FS-09	7/16/2016	Floyd|Snider	100 U	160 JM	250 U	1.0 U	1.0 U	1.0 U	1.0 U
Historical Investigation Data									
MW-1-00	11/13/2000	URS	--	200 U	400 U	--	--	--	--
MW-2-00	11/13/2000	URS	--	200 U	400 U	--	--	--	--
MW-3-00	11/13/2000	URS	--	200 U	400 U	--	--	--	--
MW-4-00	11/13/2000	URS	--	200 U	400 U	--	--	--	--
MW-5-00	11/13/2000	URS	--	200 U	400 U	--	--	--	--
MW-4	1/9/1998	Hart Crowser	200 U	800 U	2000 U	--	--	--	--
MW-4	11/13/1998	Dames & Moore	--	200 U	500 U	--	--	--	--
S-9	11/13/1998	Dames & Moore	--	200 U	400 U	--	--	--	--
S-10	11/13/1998	Dames & Moore	--	200 U	400 U	ND[2]	ND[2]	ND[2]	ND[2]
S-11	11/13/1998	Dames & Moore	--	200 U	400 U	--	--	--	--
S-21	11/13/1998	Dames & Moore	--	200 U	400 U	ND[2]	ND[2]	ND[2]	ND[2]
P3	1/8/1998	Hart Crowser	200 U	800 U	2000 U	--	--	--	--
P7	1/8/1998	Hart Crowser	540	800 U	2000 U	--	--	--	--
P9	1/9/1998	Hart Crowser	200 U	800 U	2000 U	--	--	--	--
P13	1/9/1998	Hart Crowser	200 U	800 U	2000 U	--	--	--	--

Notes:

Bold Indicates a concentration that exceeds the MTCA Method A cleanup level.

1 Results were compared to MTCA Method A Cleanup Levels for Groundwater (Table 720-1). There were no exceedances.

2 Reporting limits for BTEX compounds are not provided in this report.

Abbreviations:

BTEX Benzene, toluene, ethylbenzene, and xylenes

µg/L Micrograms per liter

MTCA Model Toxics Control Act

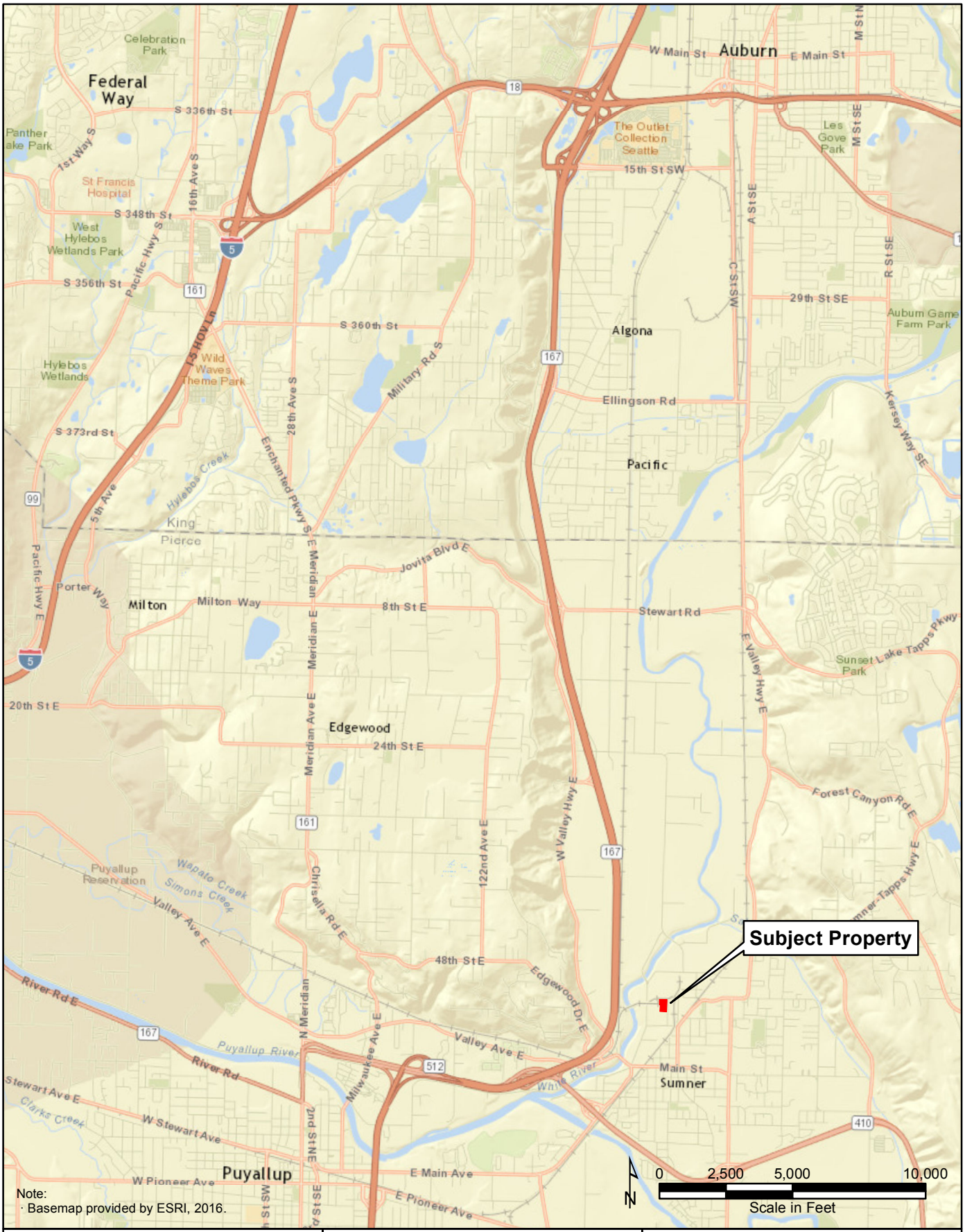
ND Not detected

Qualifiers:

JM Analyte was detected, chromatographic pattern is a poor match to standard used for quantitation, concentration is considered an estimate.

U The analyte was not detected at the given reporting limit.

Figures



Note:
· Basemap provided by ESRI, 2016.

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UST Closure Report
Fleishmann's Industrial Park
1700 Steele Avenue
Sumner, Washington

Figure 1
Property Vicinity Map

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UST Closure Report
Fleishmann's Industrial Park
1700 Steele Avenue
Sumner, Washington

Figure 2
Current Property Usage

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9/8/2016

Legend

- Geoprobe Sample Below Cleanup Level (Floyd|Snider 2016)
- Geoprobe Sample Above Cleanup Level (Floyd|Snider 2016)
- Confirmation Sample Below Cleanup Level (URS 2000)
- Confirmation Sample Above Cleanup Level (URS 2000)
- Test Pit (URS 2000)
- Geoprobe (Hart Crowser 1999)
- StrataProbe (Dames & Moore 1998)
- Previous Excavation Extent
- Approximate Extent of Residual Contamination
- Structures of Interest
- Subject Property

Utilities (Approximate Locations)

- Underground fire hydrant supply line
- Underground power
- Underground sanitary or process waste water sewer
- Underground stormwater line
- Underground water line

Location Labels:

PEX-52
@7-7ft
(Nov-2000)
DRO: 1,800
ORO: **4,900**

- *Location ID*
- *Sample Depth Interval*
- *Sample Month/Year*
- *DRO Concentration in mg/kg*
- *ORO Concentration in mg/kg*

FS-08
@5-6ft
(Jul-2016)
DRO: ND
ORO: ND

FS-05
@3-5.5ft
(Jul-2016)
DRO: **13,000**
ORO: **14,000**

Outbuilding (Under Construction)

FS-07
@5-6ft
(Jul-2016)
DRO: ND
ORO: ND

UTILITY CORRIDOR

FS-06
@3.5-5.5ft
(Jul-2016)
DRO: **3,000**
ORO: **5,300**

PEX-52
@7-7ft
(Nov-2000)
ORO: **4,900**

PEX-42
@7-7ft
(Nov-2000)
DRO: **2,100**

FS-10
@3.5-4.5ft
(Jul-2016)
DRO: ND
ORO: ND

Former Transformer

FS-02
@3.5-4.5ft
(Jul-2016)
DRO: 1,000
ORO: ND

Former Power Plant

Former Boiler USTs

FS-01
@6-7ft
(Jul-2016)
DRO: ND
ORO: ND

Former Diesel AST

Former AST Confinement Vault

FS-03
@3-4ft
(Jul-2016)
DRO: ND
ORO: ND

FS-04
@8.5-9.5ft
(Jul-2016)
DRO: ND
ORO: ND

FS-11
@4.5-5.5ft
(Jul-2016)
DRO: 440
ORO: 440

Notes:
- RED TEXT indicates exceedance of MTCA Method A Cleanup Level.
- Orthoimage provided by NearMap, 2016.
- Tax parcels provided by Pierce County Spatial Services.

Abbreviations:
AST = Aboveground storage tank
DRO = Diesel-range organics
ft = Feet
mg/kg = Milligrams per kilogram
MTCA = Model Toxics Control Act
ND = Non-Detect
ORO = Oil-range organics
UST = Underground storage tank

N

0 15 30 60

Scale in Feet

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UST Closure Report
Fleishmann's Industrial Park
1700 Steele Avenue
Sumner, Washington

Figure 3
Diesel- and Oil-Range Organics in Soil

I:\GIS\Projects\CC-Fleischmanns\MXD\Closure Data Report\Figure 3 Diesel- and Oil-Range Organics in Soil.mxd
9/8/2016

Legend

- Geoprobe Sample (Floyd|Snider 2016)
- Monitoring Well Sample (URS 2000)
- Geoprobe Sample (Hart Crowser 1999)
- StrataProbe Sample (Dames & Moore 1998)
- Approximate Groundwater Flow Direction
- Previous Excavation Extent
- Approximate Extent of Residual Contamination
- Structures of Interest
- Subject Property

Utilities (Approximate Locations)

- Underground fire hydrant supply line
- Underground power
- Underground sanitary or process waste water sewer
- Underground stormwater line
- Underground water line

Location Labels:

FS-08
(Jul-2016)
DRO: 160
GRO: ND
ORO: ND

- ← *Location ID*
- ← *Sample Month/Year*
- ← *DRO Concentration in µg/L*
- ← *GRO Concentration in µg/L*
- ← *ORO Concentration in µg/L*

Outbuilding
(Under Construction)

UTILITY CORRIDOR

FS-09:
(Jul-2016)
DRO: 160
GRO: ND
ORO: ND

MW-2-00:
(Nov-2000)
DRO: ND
ORO: ND

Former Transformer

MW-1-00:
(Nov-2000)
DRO: ND
ORO: ND

MW-5-00:
(Nov-2000)
DRO: ND
ORO: ND

Former Power Plant

Former Boiler USTs

Former Diesel AST

Former AST Confinement Vault

P-3:
(Jan-1998)
DRO: ND
ORO: ND

S-9:
(Nov-1998)
DRO: ND
ORO: ND

MW-4-00:
(Nov-2000)
DRO: ND
ORO: ND

MW-3-00:
(Nov-2000)
DRO: ND
ORO: ND

S-10:
(Nov-1998)
DRO: ND
ORO: ND

S-11:
(Nov-1998)
DRO: ND
ORO: ND

P-13:
(Jan-1998)
DRO: ND
GRO: ND
ORO: ND

Notes:
· Orthoimage provided by NearMap, 2016.
· Tax parcels provided by Pierce County Spatial Services.

Abbreviations:
AST = Aboveground storage tank
DRO = Diesel-range organics
ft = Feet
GRO = Gasoline-range organics
MTCA = Model Toxics Control Act
ND = Non-detect
ORO = Oil-range organics
µg/L = Micrograms per liter
UST = Underground storage tank

N
0 15 30 60
Scale in Feet

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Figure 4
Diesel-, Gasoline-, and Oil-Range Organics in Groundwater

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