Department Decision Recommendation

RE: Facility ID #: xxxxx Cleanup ID #: xxxx UST ID #: 7786

Site: UPRR Tank 4 City: Yakima County: Yakima

In keeping with the requirement of WAC 173-340-310(5) I recommend that the site receive a No Further Action Determination.

Supporting Criteria:

Between November 1989 and July 1990 a total of eight, steel, Underground Storage Tanks (USTs) were decommissioned and removed in the vicinity of Yakima, WA. The tanks were owned and operated by Union Pacific Railroad (UPRR) and removed by U.S. Pollution Control, Inc. (USPCI), a subsidiary of Union Pacific Corporation.

The UPRR Tank 4 site is located 780 feet north of the Nob Hill Boulevard railroad overpass. For reference and clarification, USPCI refers to the tank removal and cleanup activities associated with Tank 4 as Site 2 in associated documents.

November 1989, the 19,000 gallon capacity steel tank was removed. The tank most recently contained diesel fuel, and no fuel was remaining at the time of the removal. Three soil samples were collected from the base of the excavation and analyzed for Total Petroleum Hydrocarbons (TPH); Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX); and lead. Analytical results ranged from 290 to 11,400 mg/kg for TPH, non-detect for BTEX, and less then the laboratory detection limit (LDL) of 0.01 mg/kg for lead.

April 1990, three monitoring wells (YAK-MW-1, YAK-MW-2, & YAK-MW-3) were installed to investigate the extent of the subsurface impacts from petroleum hydrocarbons. Groundwater samples from all wells were below the LDL (1 ug/L) for BTEX and TPH (4,000 ug/L).

Soil samples were collected at approximately 10 and 15 ft bgs at each monitoring well location. Soil samples were below the LDL (1 mg/kg) for BTEX except MW-2 at 15 ft bgs (B=<LDL, T=1 mg/kg, E=4 mg/kg, & X=15 mg/kg). A soil sample collected from MW-3 at 7 ft bgs was below the LDL for TPH. All other TPH soil concentrations ranged from 26 to 1,670 mg/kg, with the maximum occurring at MW-2 at 15 ft bgs.

September 1992, further excavation was performed at the site to remove contaminated soil. The samples were analyzed for TPH-Diesel (D). TPH-D soil concentrations ranged from 28 to 100 mg/kg in the excavation and 210 mg/kg in the stockpile. All results were significantly below the current Model Toxics Control Act (MTCA) Method A cleanup levels for diesel range organics (2,000 mg/kg). Groundwater samples from all wells were below the LDL (1 ug/L) for BTEX and TPH (5,000 ug/L).

Groundwater was encountered at approximately 17 ft bgs in November 1989 and 21 ft bgs in April 1990. The direction of groundwater flow is to the northeast.

Petroleum Contaminated Soil (PCS) excavated in association with the Tank 4 removal was disposed of at Anderson Rock & Demolition Pits in Yakima, WA.

Discussion

At the time of the initial tank removal, the cleanup of petroleum products released from USTs was regulated by the EPA and cleanup standards were site specific as opposed to defined chemical specific concentrations. MTCA was enacted in 1989, then published and adopted into practice in February 1991. Section 8.2 of the Ecology Publication *Guidance for Remediation of Petroleum Contaminated Sites* states, "For independent remedial actions, the standards in effect at the time the final cleanup action actually begins apply to the cleanup."

EPA Method 418.1 was used for the laboratory analysis for total petroleum hydrocarbons. This method is used primarily for diesel and heavy oils and is applicable to "light fuels" like gasoline; however, loss by half can be expected. This is a qualitative method only and does not provide information on the individual constituents of the hydrocarbon mixture. The approximate LDLs are 1 mg/L in water and 10 mg/kg in soil. This was a common method at the time of the site activities. USPCI stated they used a TPH concentration of 100 mg/kg as the minimum cutoff for further action.

Based on the depth to groundwater, the lack of evidence for a release impacting groundwater, the removal of impacted soil, and the closure and removal of Tank 4 (source of contaminants); there appears to be minimal concern for potential impacts to human health and the environment.

This Department Decision and Recommendation should be reviewed and re-evaluated based on any new information about this Site.

Investigator(s) Jennifer Lind

Jennifer Lind

DATE: 2/25/13

Valerie Bound by

Section Manager, TCP

Section Manager

DATE: 7/8/2013

Site: UPRR Tank 4
Date: November 1989
Media: Soil

Sample Number	Location	Depth (ft bgs)	TPH (mg/kg)	B (mg/kg)	T (mg/kg)	E (mg/kg)	X (mg/kg)	Lead (mg/kg)
YAK-4 BG	Excavation stockpile	unknown	320	<LDL	<LDL	<LDL	<LDL	<LDL
YAK-4 N	Base of tank excavation, north side	unknown	350	<LDL	<LDL	<LDL	<LDL	<LDL
YAK-4 M	Base of tank excavation, middle	unknown	290	<LDL	<LDL	<LDL	<LDL	<LDL
YAK-4 S	Base of tank excavation, south side	unknown	11,400	<LDL	<LDL	<LDL	<LDL	<LDL
	Laboratory Detection Limit:		4	1	1	1	1	0.01
	MTCA Method A Cleanup Level:		NA	0.03	7	6	9	250

Site: UPRR Tank 4
Date: April 1990
Media: Soil

Sample Number	Location	Depth (ft bgs)	TPH (mg/kg)	B (mg/kg)	T (mg/kg)	E (mg/kg)	X (mg/kg)	Lead (mg/kg)
YAK-MW-1A	MW-1	10	125	<LDL	<LDL	<LDL	<LDL	--
YAK-MW-1B	MW-1	15	68	<LDL	<LDL	<LDL	<LDL	--
YAK-MW-2A	MW-2	10	733	<LDL	<LDL	<LDL	<LDL	--
YAK-MW-2B	MW-2	15	1,670	<LDL	1	4	15	--
YAK-MW-3A	MW-3	7	<LDL	<LDL	<LDL	<LDL	<LDL	--
YAK-MW-3B	MW-3	15	26	<LDL	<LDL	<LDL	<LDL	--
	Laboratory Detection Limit:		4	1	1	1	1	0.01
	MTCA Method A Cleanup Level:		NA	0.03	7	6	9	250

Site: UPRR Tank 4
Date: September 1992
Media: Soil

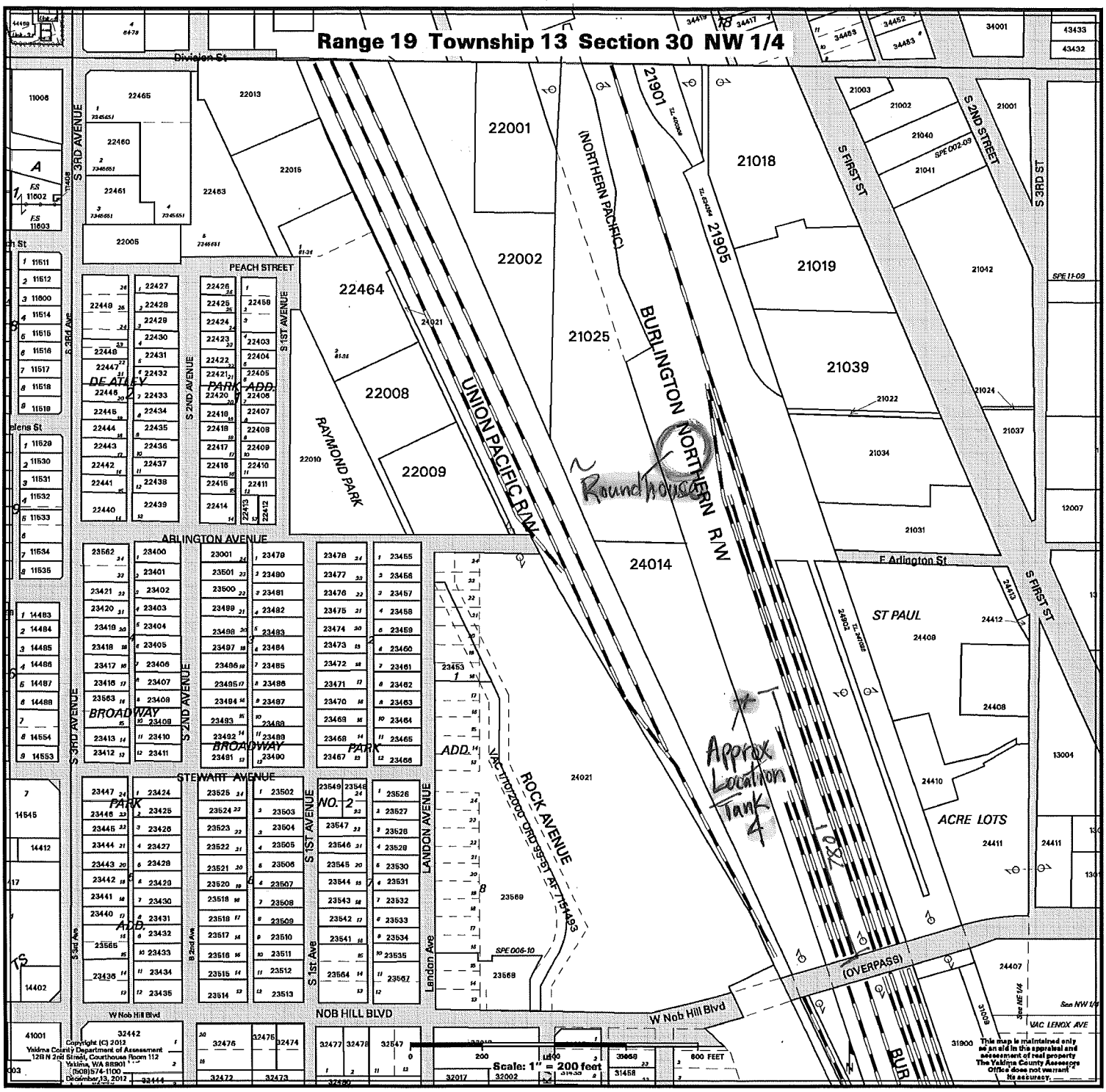
Sample Number	Location	Depth (ft bgs)	WTPH-D (mg/kg)	B (mg/kg)	T (mg/kg)	E (mg/kg)	X (mg/kg)	Lead (mg/kg)
YAK-4-1N	Excavation sidewall, north side	unknown	<LDL	--	--	--	--	--
YAK-4-1S	Excavation sidewall, south side	unknown	<LDL	--	--	--	--	--
YAK-4-1E	Excavation sidewall, east side	unknown	<LDL	--	--	--	--	--
YAK-4-1W	Excavation sidewall, west side	unknown	36	--	--	--	--	--
YAK-4-1NB	Base of excavation, north end	15	100	--	--	--	--	--
YAK-4-1CB	Base of excavation, center	15	61	--	--	--	--	--
YAK-4-1SB	Base of excavation, south end	15	28	--	--	--	--	--
YAK-4-SPN	Stockpile, north end	unknown	<LDL	--	--	--	--	--
YAK-4-SPC	Stockpile, center	unknown	<LDL	--	--	--	--	--
YAK-4-SPS	Stockpile, south end	unknown	210	--	--	--	--	--
	Laboratory Detection Limit:		25	1	1	1	1	0.01
	MTCA Method A Cleanup Level:		NA	0.03	7	6	9	250

Site: UPRR Tank 4
Date: April 1990
Media: Groundwater

Sample Number	Location	Depth (ft bgs)	TPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)
YAK-MW-1	MW-1	21	<LDL	<LDL	<LDL	<LDL	<LDL
YAK-MW-2	MW-2	21	<LDL	<LDL	<LDL	<LDL	<LDL
YAK-MW-3	MW-3	21	<LDL	<LDL	<LDL	<LDL	<LDL
Laboratory Detection Limit:			4,000	1	1	1	1
MTCA Method A Cleanup Level:			NA	5	1,000	700	1,000

Site: UPRR Tank 4
Date: September 1992
Media: Groundwater

Sample Number	Location	Depth (ft bgs)	TPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)
YAK-MW-1	MW-1	21	<LDL	<LDL	<LDL	<LDL	<LDL
YAK-MW-2	MW-2	21	<LDL	<LDL	<LDL	<LDL	<LDL
YAK-MW-3	MW-3	21	<LDL	<LDL	<LDL	<LDL	<LDL
Laboratory Detection Limit:			5,000	1	1	1	1
MTCA Method A Cleanup Level:			NA	5	1,000	700	1,000


Range 19 Township 13 Section 30 NW 1/4
Divielon St
PEACH STREET
ARLINGTON AVENUE
STEWART AVENUE
NOB HILL BLVD
W Nob Hill Blvd
S 3RD AVENUE
S 2ND AVENUE
S 1ST AVENUE
LANDON AVENUE
S 2ND STREET
S FIRST ST
S 3RD ST
E Adington St
INORTHERN PACIFIC
BURLINGTON NORTHERN R/W
UNION PACIFIC R/W
RAYMOND PARK
DE ATLEY PARK ADD.
BROADWAY PARK
WO. 2 ADD.
ROCK AVENUE
VAC 11/07/2000 ORD 99-51 AF 7514493
ST PAUL
ACRE LOTS
(OVERPASS)
VAC LENOX AVE
Roundhouse
Approx Location Tank 4
22001
22002
22464
22008
22009
22010
21025
21018
21019
21039
21034
21031
24014
24021
23569
23568
21901
21905
SPE 002-09
SPE 11-09
SPE 006-10
Scale: 1" = 200 feet
200
0
600 FEET
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128 N 2nd Street, Courthouse Room 112
Yakima, WA 98901
(509)574-1100
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