DEQ SITE ASSESSMENT PROGRAM - STRATEGY RECOMMENDATION

Site Name: U.S. West Argyle Service Center

Site CERCLIS Number: None

DEQ ECSI Number: 270

Site Address: 2111 NE Argyle St.
Portland, OR 97211

Recommendation By: Gil Wistar, Voluntary Cleanup and Site Assessment Section, DEQ Northwest Region

Approved By: Mike Rosen, Manager, Voluntary Cleanup and Site Assessment Section, DEQ Northwest Region

Date: March 4, 1997

Background: DEQ has little historical information on this U.S. West vehicle maintenance/refueling facility, which is located in Northeast Portland along the southern edge of the Columbia Slough (Figure 1). It is not known when U.S. West, formerly known as Pacific Northwest Bell (PNB), began to lease the site. However, DEQ records show that underground storage tanks (USTs) were installed at the facility in December 1979, suggesting that the site became active around this time. The facility consists of a maintenance garage, shed, and fuel island, as shown in Figure 2.

According to DEQ's UST registration records, four USTs were installed in 1979: two 15,000-gal. gasoline tanks, one 15,000-gal. diesel tank, and one 550-gal. waste oil tank. The three larger USTs were located in a common pit along the southern fence line, while the waste oil tank was sited adjacent to the maintenance building.

PNB first registered the site as a hazardous waste generator in July 1986, listing ignitable waste (RCRA code D001) on the required notification form. This code probably applied to petroleum-based parts-cleaning solvents, which are typically used in repair shops. DEQ has classified the Argyle Service Center as a Conditionally Exempt Small Quantity Generator of hazardous waste since 1991.

In March 1987, as part of a project to re-slope the floor of the maintenance building, PNB asked Crosby & Overton (C&O) to remove a hydraulic lift within the building. (The precise location of the

lift is not known, and is therefore not shown on Figure 2.) C&O found an oil layer on groundwater in the concrete-lined hoist pit. For reasons that are not documented, C&O suspected the waste oil UST to be the source, and asked an analytical lab to compare a sample of oil from the pit with a sample from the waste oil tank. Using an infrared scan, the lab concluded that the samples were "very similar but not entirely identical." C&O then dug a trench immediately downslope of the UST, but found no evidence of oil in either soil or groundwater. This suggested that the waste oil UST had not leaked, and that the oil in the hoist pit was from another, unknown, source. (A precision leak test performed on the waste oil UST the previous month had in fact shown this tank to be tight.)

During hoist removal, C&O collected an "oily" soil sample from the pit, presumably to determine worst-case contamination levels. This sample contained 25,000 parts per million (ppm) oil & grease, 8 ppm diesel, and 1 ppm perchloroethylene (PCE). The sample was also analyzed for leachable metals using the EP-TOX test then recognized by the U.S. Environmental Protection Agency. The only detected metal leachate was zinc, at 0.25 mg/L.

C&O removed as much contaminated soil as possible from the pit in April 1987, but stopped excavating when it determined that further removals might damage the building's foundation. C&O then took two soil samples, one from each side of the concrete containment structure, and had them analyzed for petroleum compounds and volatile organic compounds (VOCs). There is no information on the depth of these samples, nor on whether they were collected from above or below the water table. The samples contained 14 and 16 ppm diesel, 2.3 and 1.0 ppm oil & grease, and 8 and 3 ppm PCE. Excavated soil was initially stockpiled on-site, and later disposed of at St. Johns Landfill in North Portland.

After this sampling, C&O requested and received permission from DEQ's Northwest Region to backfill the pit. C&O's report states that before backfilling, a cement wall was constructed in the pit to act as a "weir." The report provides no description of the weir or its purpose. There is a later reference in the same report to an oil/water separator at the site, and it is possible that the weir was designed for this purpose. In addition, C&O installed a monitoring well in the pit behind the weir, either prior to or after backfilling. The report provides no construction details for this well. Apparently, neither PNB nor U.S. West has ever sampled this well; its current status is unknown.

The waste oil tank referred to above was removed in December 1988, and PNB did not report any contamination to DEQ at that time. After removing this old tank, PNB installed a new, double-walled UST for waste oil storage, in the same pit.

In January 1996, U.S. West contracted for the removal of all USTs at the site, consisting of two 15,000-gallon gasoline tanks, one 15,000-gallon diesel tank, and the waste oil tank that had been installed in 1988. Figure 2 shows decommissioned UST locations. Hydrocarbon contamination was reported in both soil and groundwater during the removal of the gasoline/diesel USTs, leading to the excavation and off-site treatment of about 600 tons of soil, and the pumping of about 35,000 gal. of groundwater from the common UST pit. Soil and groundwater samples were analyzed for only the required hydrocarbons and BTEX (benzene, toluene, ethylbenzene, and xylene) - there were no analyses for VOCs, which include PCE. Because of the possibility that uncharacterized residual contamination remains in this southern portion of the site, DEQ's UST Section may require additional work there (LUST log #26-96-036). (U.S. West has installed new USTs in this area.)

U.S. West's contractor, Century West Engineering (CWE), found no evidence of releases from the 550-gal. waste oil UST; soil from below the tank, at a depth of 5.5 feet, contained no detectable petroleum. These samples were not analyzed for VOCs. Because water entered the pit at 6 feet, CWE collected a groundwater grab sample, and had it analyzed for total petroleum hydrocarbons (TPH), BTEX, and polynuclear aromatic hydrocarbons (PAHs); it contained 600 ppb TPH, BTEX between 1.2 and 9.9 ppb, and the PAHs pyrene (0.3 ppb), fluoranthene (0.2 ppb), and phenanthrene (0.12 ppb). These BTEX/PAH levels are all below Oregon groundwater cleanup standards (Oregon Administrative Rules 340-122-242); the UST Section will therefore require no further work at the former waste oil UST.

In April 1996, responding to a DEQ Site Assessment request for information, U.S. West asked CWE to collect VOC data from around the former waste oil UST. CWE hand-augured two borings, in the locations shown in Figure 2, and collected one soil and groundwater sample from each. Water table depth was 6 feet, and CWE obtained soil samples from just above this level. Samples were analyzed for EPA Method 8010 VOCs. The soil samples contained no detectable VOCs; the groundwater samples did contain low levels of PCE and several other VOCs, as shown in the table below.

Compound found at or above method detection limits	HA-1 results (ppb)	HA-2 results (ppb)	U.S. EPA's Safe Drinking Water Level (ppb)
Perchloroethylene (PCE)	1.3	1.1	5
1,1,1-trichloroethane	1.0	<0.5	200
Cis-1,2-dichloroethylene	<0.2	0.6	70
1,1-dichloroethane	0.2	<0.2	none established

Recommendation/Action: Further investigation into the source(s), magnitude, and extent of subsurface VOC contamination is needed at the U.S. West Argyle Service Center. This investigation, ideally with the oversight of DEQ's Voluntary Cleanup Program, should address the following specific issues:

- Determine locations of soil samples collected in 1987, in conjunction with the hydraulic hoist removal.

- Research historical usage and handling practices for chlorinated solvents at the site.

- Identify means by which past VOC releases/spills in the maintenance shop or elsewhere may have migrated into the subsurface (e.g., floor drains, dry wells, catch basins).

- Sample groundwater from the existing monitoring well, and, as needed, obtain VOC data from other monitoring points. This should include a determination of shallow groundwater flow direction and an analysis of potential impacts of site contamination on the Columbia Slough.

The primary pathway of concern at this site is surface water -- and due to the shallow water table, this includes the potential for groundwater-to-surface water migration. It is unlikely that there are any active drinking water wells within at least 2 miles of the site. Further state action at the U.S. West Argyle Service Center is a low-to-medium priority.

The site should be added to the Confirmed Release List, due to PCE contamination that has been documented in soil and groundwater.

References: Site Assessment has reviewed the following key references in preparing this strategy recommendation:

- Letter report from Century West Engineering to U.S. West on soil borings around former waste oil tank, dated April 19, 1996.

- LUST file #26-96-036, located in DEQ's Northwest Region office and containing the following principal reference: Underground Storage Tank (USTs 1-4) Closure Report, Century West Engineering Corp., September 14, 1996.

- Letter reports and lab results from Crosby & Overton to Pacific Northwest Bell, March and April 1987.

Referrals Within or Outside DEQ: This site has not been referred to another division of DEQ or to an outside regulatory agency.

Because this document is a federal screening, DEQ has the option of referring this site to EPA Region 10 for follow-up action.

Other: This site is currently listed on DEQ's ECSI database; it will be updated with information contained in this decision document, and to reflect Site Assessment's decision for further action at the site.