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REMEDIAL ACTIONS AND COST ESTIMATES FOR AREA 1 THROUGH AREA 8

Department of Transportation

T.O. Number : 04-192201-01

Site Investigation

Highway 880, Cypress Reconstruction
Oakland, California

August 1992

Prepared for :

Department of Transportation

District 4

San Francisco, California



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Ground Water

Hydrocarbons in ground water occur at low concentrations, thus, remediation of ground water is not anticipated. However, it is possible that one ground-water monitoring well will be required by Alameda County to monitor ground-water quality over a period of at least four quarters. The monitoring well installed during this investigation could be used for that purpose.

5.2 THOMAS A. SHORT COMPANY

Soil in proximity to the USTs at Thomas Short were found to contain elevated concentrations of TPH-G and TPH-D, as well as associated fuel additives of benzene, toluene, ethyl benzene, and xylenes. Concentrations of TPH-G, benzene, toluene, ethyl benzene, and xylenes were also detected in ground water. Soils in proximity to the sump tank and former steam cleaning operation were found to contain elevated concentrations of TRPH and volatile organics, as well as metals.

Soil

Soil contamination exceeded 1,000 mg/kg in borings TSC/B-1 and TSC/B-2. Hydrocarbon concentrations are highest at 5 feet bgs in TSC/B-1 (14,000 mg/kg TPH-G), and at 5 feet and 13.5 feet bgs at TSC/B-2 (1,500 mg/kg and 1,700 mg/kg, respectively). However, ND or very low hydrocarbon concentrations were detected in borings TSC/H-1 and TSC/W-1. Based on the locations of these borings relative to the USTs, and the occurrence of hydrocarbons with depth, it is not clear where leakage is occurring although leakage appears to be most prevalent on the south side of the tanks.. Additional sampling information would be required to determine the extent of soil contamination.

Based on the limited data available, potential soil contamination within the vadose zone is suspected to extend to at least the extent of the property in the west direction. For lack of additional data points, soil contamination is assumed to extend approximately 20 feet to the north and south. The existing building may inhibit remedial actions in the east direction. The depth of soil contamination within the vadose zone is estimated

at 13 feet bgs. Based on these dimensions, approximately 3,460 cubic yards (4,500 tons) could require disposal at either a Class II landfill or recycling facility.

The cost of soil excavation, removal, transport and disposal will depend on the facility selected for disposal, as each facility has specific acceptance criteria. However, for the purpose of presenting a cost estimate for site cleanup, a range of potential costs for 4,500 tons is estimated as shown below:

Low Cost Range:

Excavation:	\$2/ton X 4,500 tons = \$9,000
Transportation:	\$21/ton X 4,500 tons = \$94,500
Disposal:	\$54/ton X 4,500 tons = \$243,000
	TOTAL \$346,500

High Cost Range:

Excavation:	\$4/ton X 4,500 tons = \$18,000
Transportation:	\$38/ton X 4,500 tons = \$171,000
Disposal:	\$125/ton X 4,500 tons = \$562,500
	TOTAL \$751,500

In addition, hazardous levels of lead were detected at both hand auger locations within the sump area. To determine the extent of contamination, additional data points are required. However, assuming that soil contamination is limited to the general sump area, an extent of 20 feet x 20 feet x 5 feet deep is assumed. Therefore, approximately 75 cubic yards (100 tons) may require disposal at a Class I landfill or recycling facility.

