PEMACO SUPERFUND SITE

U.S. Environmental Protection Agency • Region 9 • San Francisco, CA • February 1999

SOIL CLEANUP EFFECTIVE

Introduction

Maywood, CA

The U.S. Environmental Protection Agency (EPA) is cleaning up soil and groundwater pollution at the former Pemaco facility, a chemical mixing plant located at 5050 Slauson Blvd. On January 19, 1999, the EPA formally added the Pemaco Site to the list of Superfund priority sites, making it one of approximately 1,200 hazardous waste sites across the country that are our highest priority. Once the property is safe to develop, it and several adjacent properties will be transformed into a park by the City of Maywood, the Trust for Public Land and the Santa Monica Mountains Conservancy, as part of the Los Angeles River Greenway Project.

In April 1998, the EPA conducted an emergency cleanup action at Pemaco, including removal of 29 underground tanks, demolition of structures and installation of a soil clean up system. The system removes and destroys underground soil vapors which would otherwise contribute to contamination of the groundwater, which supplies a drinking water aquifer.

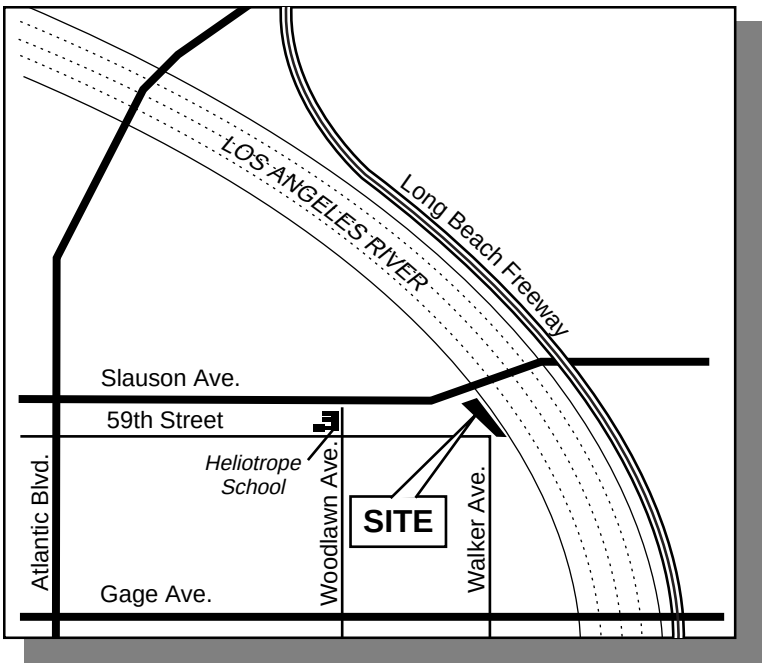

Figure 1: *Location of the Pemaco Superfund Site*

Open House

The public is invited to participate in an open house to meet EPA representatives, to learn about the Superfund program and the treatment system currently in operation, and to participate in the decision-making process. Directly following the open house at 3:00 p.m., EPA will host an open discussion of the ongoing soil cleanup and the Superfund process.

Saturday, February 20
1:00 to 4:00 p.m.
Heliotrope Ave. School
Multipurpose Room
5911 Woodlawn Ave.
Maywood, CA

Superfund Program

The Superfund National Priorities List process allows the EPA to use federal funds to thoroughly study, develop cleanup options and then pay for site cleanups, in the absence of responsible parties. For the remaining soil and groundwater contamination at Pemaco, the EPA will begin a Remedial Investigation and Feasibility Study to look at remaining contaminated soils and groundwater. We will then issue a Proposed Plan for public comment before deciding on the cleanup remedy and will then proceed with final cleanup.

During the initial site assessment study at Pemaco, the EPA discovered high levels of Volatile Organic Compounds (VOCs), including Perchloroethylene (PCE), Trichloroethylene (TCE), Trichloroethane (TCA), Dichloroethane (DCA) and vinyl chloride (VC). These chemicals are known or suspected carcinogens and could pose a serious risk to neighbors if nothing is done to prevent contact with the chemicals. Soil concentrations of these VOCs ranged from 410 to 11,000 parts per billion at the site. As a result of this finding, the EPA decided to fast track cleanup using our emergency response program to deal with the immediate risks and to begin to address the longer-term cleanup with the more thorough Superfund process.

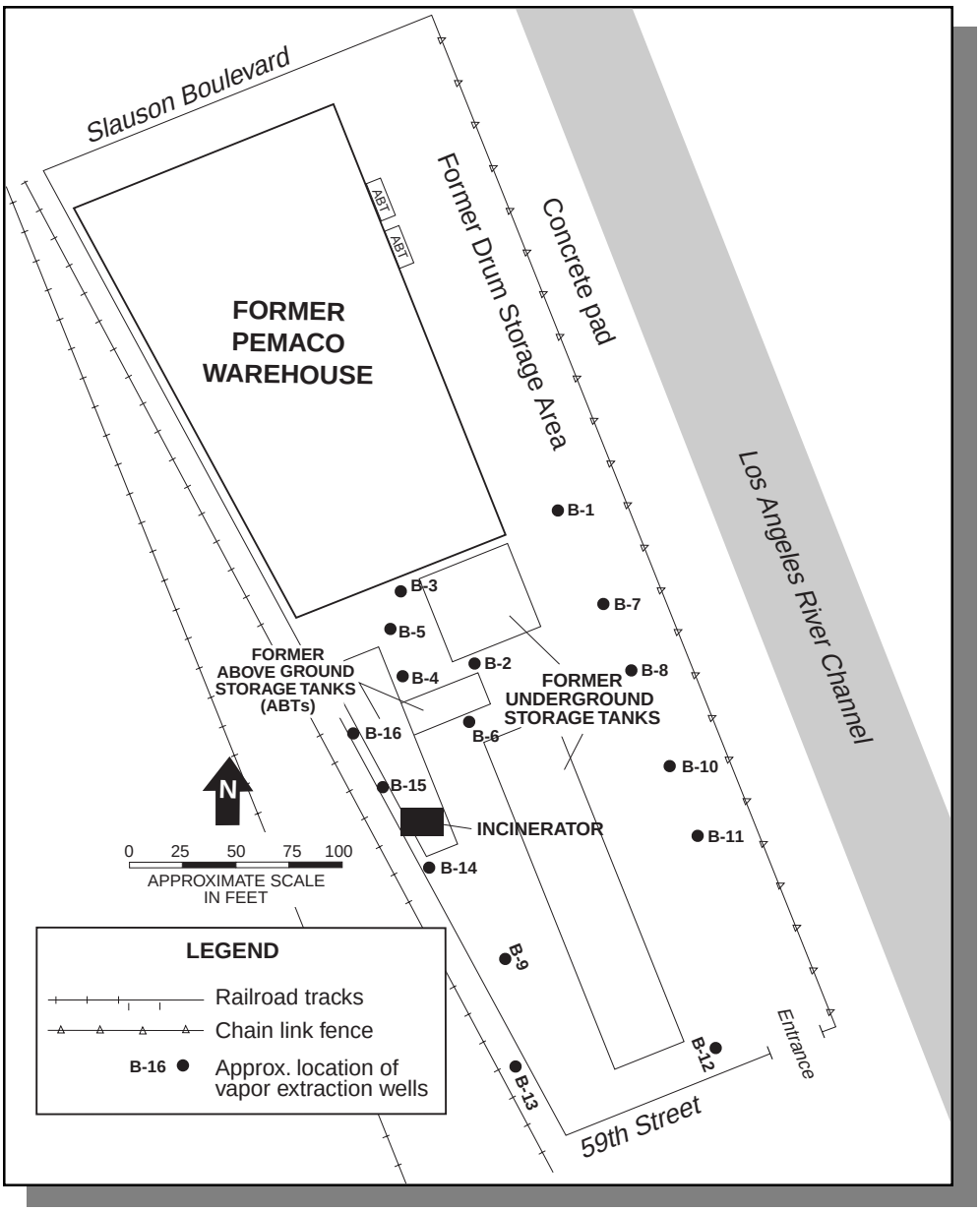

Figure 2: *Location of Vapor Extraction Wells*

Soil Cleanup Effort

Since April 1998, the EPA has extracted the VOCs from the soil by vacuuming the deep soil. The soil gas is first passed through a filter system (granular activated carbon) where a majority of contaminants are captured on the filter material. The remaining contaminants in the soil gas are treated in a thermal oxidation unit (a type of incinerator). The thermal oxidation technology destroys most of the contaminants by heating the soil gas to a high temperature (greater than 1400 degrees F) where the contaminants are broken down. Most of the compounds formed are harmless such as carbon dioxide and water. However, trace amounts of the original contaminants (in this case, VOCs) and some by-product chemicals may be emitted

into the air. Dioxins and furans in trace amounts are the by-product chemicals that are the greatest concern when using thermal oxidation because they are known cancer-causing compounds.

On a weekly basis, EPA collects data on VOCs going into and coming out of the thermal oxidation unit to monitor the efficiency of the unit. EPA also plans to sample the actual dioxin emissions that may be coming from the unit. The air at the fence line is also sampled weekly to verify that no VOCs are leaving the site. Based on EPA experience with similar clean up systems for the types and quantities of vapors that are present at the Pemaco Site, we do not believe that emissions of VOCs, dioxins and furans, if they are occurring, would pose any elevated threat to public health.

Both types of systems (filter and incinerator) are commonly used throughout the country at hazardous waste cleanup sites to treat VOCs and are successful at efficiently cleaning up contamination in the soil.The treatment system has automatic safeguards in place to shut it down if the system is not working properly. The system was tested extensively during its construction to ensure emissions are within limits required by County, State and Federal agencies. EPA expects to operate the system until the soils are cleaned up, and has already observed a decrease of more than 50% in the amount of VOCs present in the ground. By December 1998, the filter and incinerator destroyed 136,000 pounds of hydrocarbons and operated for 5800 hours.

As with any clean up at a hazardous waste site, decisions are made by balancing many factors including risk to the community, compliance with laws, and community acceptance. This cleanup system is the most effective and efficient method of cleaning up the site. ■

Figure 3: *Thermal Oxidation Unit/Incinerator*

..... FOR MORE INFORMATION .....

For additional information about the Pemaco Superfund Site, please contact:

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