



EPA

Del Amo Superfund Site Update

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U.S. EPA Completes First Five-Year Review of Del Amo Waste Pits

The United States Environmental Protection Agency (U.S. EPA) has completed its first Five-Year Review Report as well as designs for the Soil Vapor Extraction (SVE) system at the Waste Pits area of the Del Amo Superfund site in Los Angeles, California. The purpose of the Five-Year Review process is to evaluate whether the cleanup remedy continues to be protective of human health and the environment. Under the Superfund law, U.S. EPA is required to review clean-up actions every five years if contaminants remain at a site at levels that do not allow for unlimited use of the property or unrestricted exposure to humans.

Background

The Waste Pits area is a five-acre parcel situated at the southern end of the 280-acre Del Amo Superfund Site, which is located in an area of Los Angeles known as the Harbor Gateway. The Waste Pits area is located at the corner of Vermont Ave. and Del Amo Blvd. The area was formerly used to dump industrial waste from the synthetic rubber plant that had operated there from 1943 to 1972. Wastes were dumped into six unlined pits and three evaporation ponds.

Environmental investigations revealed that the waste had contaminated the surrounding soil and groundwater with volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs). Benzene, naphthalene, ethylbenzene and phenol were the contaminants the most detected.

Selected Cleanup Remedy

In 1997, the U.S. EPA selected a remedy for the Waste Pits, including:

- Multi-layer, impermeable cap over the waste pits
- Soil Vapor Extraction (SVE) system
- Land-Use Restrictions

The cap was installed in 1999. It has been operated and maintained since its completion and will continue indefinitely. Land-use restrictions were implemented in 2000 and 2005. These restrictions prohibit using the site for hospitals, schools, day care, or residences and prohibit disturbance to the cap, SVE system or monitoring wells without notification and approval of U.S. EPA.

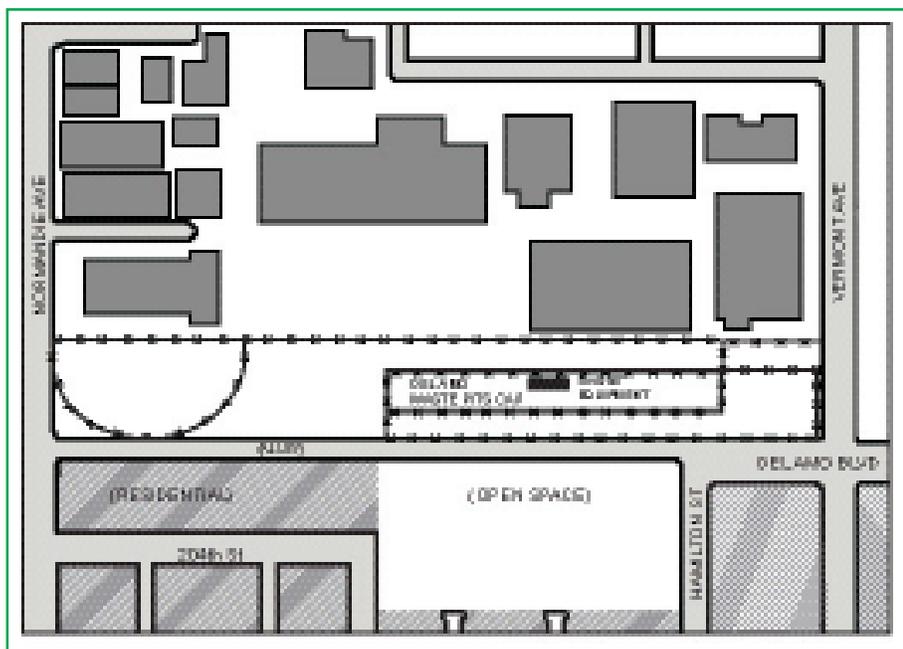


Figure 1: Location of Del Amo Waste Pits

Five-Year Review Findings

Through this Five-Year Review, U.S. EPA has determined that the completed portions of the cleanup remedy are performing as designed, and the original exposure pathways are being controlled for the present time. When the SVE system is completed, the remedy is expected to be fully protective of human health and the environment for the long term. When U.S. EPA concludes that a Superfund site cleanup remedy is protective, this means that the system is preventing contaminants from contact with people and the environment at levels that would cause an increased risk. This is the case at the Waste Pits area.

Five-Year Review Recommendations

Through the Five-Year Review, the following recommendations were made, and the ensuing actions will be taken:

- Evaluate methods to more efficiently monitor and operate the cap's gas collection and treatment system. U.S. EPA will work with the Respondents (the entities responsible for the contamination) to do this.
- Evaluate whether any other state or regional environmental regulations would apply to the new SVE system being designed. U.S. EPA will do this.
- Install the new SVE system to reduce impacts to groundwater and achieve the remedial action objectives for the Waste Pits area. U.S. EPA is already working with the Respondents to do this.

The next five-year review for this site is scheduled for 2010.

SVE System Update

SVE is a common soil treatment technology for cleaning up soil containing volatile contaminants – ones that readily evaporate. It works by extracting contaminated vapors from underground, removing the contaminants from the air stream, then releasing the cleaned air. Removing the contamination from the air stream can be done in a variety of ways. U.S. EPA initially designed a “thermal oxidation” system to do this, a technology that combusts the contaminated vapors. Due to concerns raised by the community, the U.S. EPA in 1999 worked with the community, the State, and the Respondents to consider alternatives to thermal oxidation. Fifteen technologies were screened for feasibility and five were costed-out. In 2003, U.S. EPA worked with the Respondents to pilot test a resin adsorption technology, but did not select that technology for the final design. Instead, the Respondents proposed and U.S. EPA approved carbon adsorption to be used in the SVE sys-

tem, along with an “in-situ bioventing technology” (SVE/IBT). Designs for this SVE/IBT system have been finalized and construction will start at the end of January or in February 2006.

How In-Situ Bioventing Works

As shown on the diagram on the next page, the SVE/IBT system will use a blower to extract soil vapor from the existing SVE extraction wells. Then, 25% of the extracted vapors will go to the carbon filter to be cleaned and released to the air. The remainder of the vapor will have oxygen added to it and be re-injected into the contaminated soil area. The soil contains naturally occurring bacteria that are capable of breaking down the contaminants. The injected oxygen allows the bacteria to grow and eat more contamination. This process is called biodegradation. The SVE/IBT system is preferable to other methods because it reduces the amount of vapors that require treatment above the ground.

What Happens Next?

Construction of the SVE/IBT system is expected to begin in February 2006 and will take approximately two months to complete. There will be minimal construction disruption to the community. No major earthwork will occur, but new pipes will be installed within the soil that covers the cap. Workers will be very careful not to damage the thick plastic liners within the cap. Operation of the SVE/IBT system will begin shortly after installation.

The new SVE/IBT system will consist of the existing SVE extraction and monitoring wells (already installed), a blower, a carbon adsorption filter, an oxygen generator, pipes, controls and measurement devices. The above-ground equipment will be centrally located adjacent to the existing equipment related to the cap operation. It will be located on the northern side of the Waste Pits area. When completed, the treatment system will occupy a relatively small, 40 x 20-foot area, and will be surrounded by a fence.

Operation and maintenance of the SVE/IBT system will involve a technician visiting the site once or twice a week. The carbon filters will be replaced regularly, more frequently at first, while vapor contamination concentrations are high. As those concentrations decrease, the filter replacements will be less frequent. The replacement process will involve trucking in new carbon filters and safely removing the spent ones. The SVE/IBT system will be operated and maintained until clean-up goals are reached.

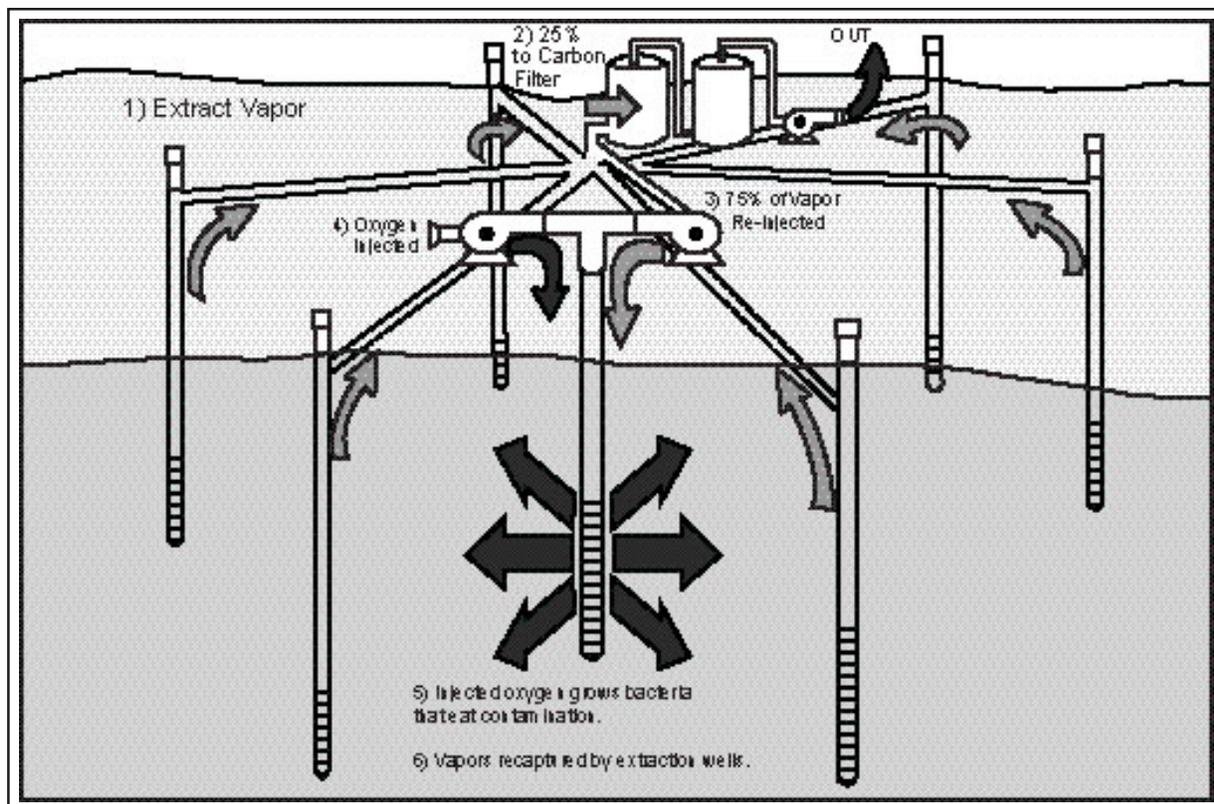


Figure 2: Conceptual diagram of the SVE treatment system

INFORMATION REPOSITORIES

The Five-Year Review Report for the Del Amo Waste Pits is available to the public, along with other documents related to the investigation and cleanup of the Del Amo Superfund Site, at the public libraries listed below:

Torrance Civic Center Library

3301 Torrance Blvd.
Torrance, CA
(310) 618-5959

Carson Public Library

151 East Carson Street
Carson, CA
(310) 830-0901



WEB PAGE



The Five-Year Review Report, and other information about the site, is also available on EPA's webpage at: www.epa.gov/region09/waste/sfund. Click on "Superfund Sites," then "Site Overviews" and scroll down to "Del Amo."

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FOR MORE INFORMATION

If you have questions about the Del Amo Superfund site or would like to be added to the mailing list, please contact:

Alhelí Baños

Community Involvement Coordinator (SFD-3)
(213) 244-1808
banos.alheli@epa.gov



Dante Rodriguez

Project Manager (SFD-7-1)
(415) 972-3166
rodriguez.dante@epa.gov

U.S. EPA

75 Hawthorne St.
San Francisco, CA 94105
(800) 231-3075



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U.S. Environmental Protection Agency, Region IX
75 Hawthorne Street (SFD-3)
San Francisco, CA 94105
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