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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY • REGION IX • SAN FRANCISCO, CALIFORNIA

EPA Completes Cleanup Of Sanders Site

The U.S. Environmental Protection Agency (EPA) has completed the removal action, or cleanup, of the old Sanders Aviation site in Tempe, AZ (see map this page). After less than two years of EPA presence at the site, the Sanders property no longer presents an imminent and substantial threat to human health or the environment. Now a 20-acre vacant lot, the Sanders Aviation Company operated as an aerial applicator of pesticides from 1951 to 1984. Soils at the site were contaminated with a variety of pesticides; the predominant contaminant was toxaphene.

EPA's actions at the site concentrated on eliminating human and ecological exposure to toxaphene and leaving the site clean enough for safe use in the future.

Deciding How To Clean Up the Site

Beginning in March 1995, the initial phase of the response focused on site stabilization activities including removal of drums, application of a soil sealant, repairs to the perimeter fence and posting of warning

signs. The second phase consisted of performing a low-temperature thermal desorption test to determine whether this technology could be used to safely and effectively treat contaminated soil at the site. The results of the performance test demonstrated that low-temperature thermal desorption could be used to treat contaminated soil at the site, in compliance with federal, state and county requirements.

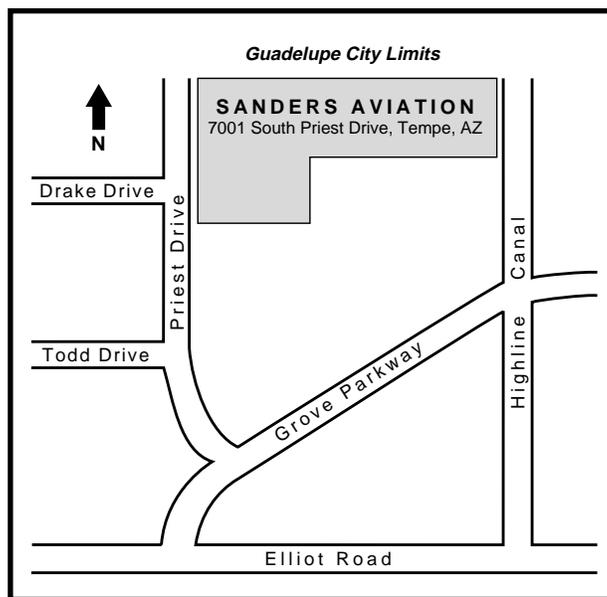
EPA also conducted bioremediation pilot tests to determine whether this technology could be used to treat soils on site. While these bioremediation tests demonstrated that up to 80% removal of toxaphene could be expected, EPA selected the low-temperature thermal desorption technology based on cost, higher level of treatment, time required for treatment and technical practicability.

Site Cleanup

After a delay caused by the federal budget impasse in mid-1995, EPA began full-scale cleanup of the Sanders site in February

1996. Soils which contained levels of toxaphene in excess of the site-specific cleanup standard of 17 mg/kg were excavated and stockpiled for treatment. A maximum depth of six feet was followed. The only areas of the site where contaminated soils were left in place below six feet include the disposal pond, dry well/wash pad area and run-up area.

From May 21, 1996 to January 8, 1997, over 25,000 tons of contaminated soil were treated by the low-temperature thermal desorption method. During the treatment process, contaminated soil was fed into the unit at a rate of 12.5 tons per hour. Treatment continued 24-hours a day, five days a week during this period. Operations proceeded more or less continuously, with only relatively minor delays caused by maintenance and repair needs.



Site location map

The treated soil was sampled on an hourly basis. For each batch of treated soil (that which was treated in a 12-hour period), the hourly process samples were composited and sent to the EPA laboratory in Richmond, CA for analyses. With one exception, all batches of treated soil met the land disposal treatment standard of 1.3 mg/kg of toxaphene. One batch contained 1.5 mg/kg of toxaphene, but this was well-within the treatability variance of 4.0 mg/kg established by EPA. Consequently, the treated soil was used as on-site fill.

Treatment operations at the site were completed on January 8, 1997; backfilling and grading operations ended shortly thereafter and EPA contractors demobilized on January 17, 1997.

Future Use of Property

EPA is currently working with the Arizona Department of Environmental Quality (ADEQ), the City of Tempe and the property owners on issues relating to future use of the property. It is anticipated that deed restrictions forbidding future residential use of the property will be implemented, even though the site was remediated to levels that are within EPA's acceptable risk range for residential property. The reason why EPA feels deed restrictions are necessary is because contaminated soils were left in place below six feet in a few areas of the site.

Summary

The Sanders project was one of the first sites remediated under the Superfund Accelerated Cleanup Model (SACM). The SACM method of cleaning up a site does not follow the traditional course that accompanies a listing on the National Priorities List (NPL), or Superfund list: extensive investigation, feasibility studies, remedial design and remedial action. If the Sanders site had been listed on the NPL, the total cleanup process could have taken five years or more. Instead, this site was moved directly into the cleanup phase, compressing the process into less than two years. The total site budget was \$2.4 million.

Administrative Record

The administrative record contains the documents EPA used to support site-specific decisions. The administrative record for the Sanders site is available to the public at the following locations:



Tempe Public Library
3500 South Rural Road
Tempe, AZ 85252
(602) 350-5555

Superfund Records Center
95 Hawthorne Street
San Francisco, CA 94105
(415) 536-2000



For More Information

If you have questions about the Sanders Aviation site or the work EPA did there, please contact either of us at the numbers below or **TOLL-FREE at (800) 231-3075**.

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