



PHOENIX GOODYEAR AIRPORT AREA (SOUTH) SUPERFUND SITE

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Goodyear, Maricopa County, Arizona

FIVE-YEAR REVIEW COMPLETE

The United States Environmental Protection Agency (EPA) announces completion of a five-year review for the Phoenix-Goodyear Airport (South) Superfund Site located in Goodyear, Maricopa County, Arizona. This review was conducted between March and September 2005. This fact sheet presents site background, the five-year review process, the review findings, conclusions and recommendations, and contact information.

Five-Year Review Results

The contaminant concentrations in groundwater at the Phoenix-Goodyear Airport (South) Superfund Site (PGAS) have been reduced, and treated groundwater from the treatment systems has met cleanup goals throughout the period of operation. Groundwater still contains levels above specified cleanup goals.

There are some issues relating to the effectiveness of the remedy. The primary issues include: 1) the removal of trichloroethene (TCE, a common industrial solvent) from Subunit A groundwater has not been optimized due to the presence of chromium, and 2) some additional sampling of groundwater for metals may be required to confirm effectiveness of remedial actions.

Other issues identified during the five-year review process relate to the possible presence of trace metals in soil and groundwater, and maintenance of treatment systems. Newly identified issues which were not previously addressed include the possibility of intrusion of vapor containing volatile organic compounds (VOCs, such as solvents and degreasers) into industrial buildings at the site, a lack of comprehensive institutional controls, limited information on risk to ecological receptors, and encroaching contaminants such as VOCs from the Western Avenue WQARF site.

Recommendations have been made and these issues are to be addressed during the remainder of 2005 and into 2006.

Site Background

A five-year review of the Phoenix-Goodyear Airport (South) Superfund Site (PGAS) in Goodyear, Maricopa County, Arizona was completed in September 2005. The five-year review is required due to the fact that hazardous substances, pollutants or contaminants remain at the site above levels that allow for unrestricted use and unrestricted expo-

sure. The purpose of the five-year review was to evaluate whether the remedial action objectives (or cleanup goals) remain protective of human health and the environment. Remedial action objectives were described in the 1987 and 1989 Records of Decision (RODs, the cleanup approaches selected by EPA), a 1991 Action Memorandum, and four Explanations of Significant Difference (ESDs) issued in 1991, 1993, 1995 and 1998. The triggering action for this review was the initiation of remedial activities in 1990.

In 1983, the site was placed on EPA's National Priorities List (Superfund List) as the Litchfield Airport Area Superfund Site. After the airport property was transferred to the City of Phoenix, the site was renamed the Phoenix-Goodyear Airport Area Superfund site. Later, the site was divided into the Phoenix-Goodyear Airport North (PGAN) and South (PGAS) sites due to different contamination sources and different potentially responsible parties (PRPs, companies identified to conduct the cleanup). The PGAS site only was the subject of the five-year review.

For PGAS, the 1987 ROD for Section 16 Operable Unit (OU2) prescribed a remedy addressing VOCs, specifically TCE, in Subunit A groundwater. The objectives of the remedy included containment of the VOC-contaminated plume and treatment of groundwater to selected levels using groundwater extraction and air-stripping. Construction of the groundwater treatment system was completed and operation commenced in 1990. Please see previous fact sheets for details.

Current remedial system operations for Subunit A groundwater include pumping from 12 extraction wells to a vertical air stripping column containing a packing medium (to increase surface area), through which a countercurrent flow of air is introduced. Treated groundwater discharged from the system is reinjected into the aquifer.

The 1989 ROD addressed VOCs in Subunit B/C

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groundwater (OU6) and VOCs in soils (OU1). The remedy for VOCs in Subunit B/C groundwater was to contain the plume using four extraction wells. In 1994, three extraction wells were connected to an air stripping unit, as described above. The remedy for VOCs in soils was to use a soil vapor extraction system (SVE) to remove VOCs from the soil.

Current remedial actions for Subunit B/C groundwater include three extraction wells piped to a Granular Activated Carbon (GAC) treatment system, which filters VOCs from the water. Treated groundwater is reinjected into the aquifer. For soils, extraction of VOCs using SVE has met the requirements of the remedy and was discontinued in 1998.

Chromium and cadmium were also identified in soil at PGAS. These contaminants were addressed in an Action Memorandum issued by EPA in 1991. The remedy was to remove soil containing these metals above regulatory levels and stabilize the soil using cement. This remedial action was completed in January 1993.

Five-Year Review Process

From March 2005 through September 2005, the following components of the Five-year Review Process were performed: Document Review, Data Review, Regulatory Review, Site Inspection, Technical Interviews, Report Preparation.

Document Review - As a part of the five-year review process, a brief review of numerous documents related to site activities was conducted. The documents chosen for review ranged in publication date from 1983 to 2005.

Data Review - The following data collected during the operational history of the remedial action were reviewed: groundwater monitoring, groundwater extraction and treatment water, operation and maintenance of the treatment system, and related data.

Regulatory Review - The applicable or relevant and appropriate requirements (ARARs) and other standards to be considered (as presented in the 1987 and 1989 RODs and the ESDs) for the selected remedies were reviewed for any changes, additions or deletions. It appears that there has been only one significant change in the regulations since issuance of the RODs that may affect the protectiveness of the chosen remedies for groundwater and soil: the lowering of allowable concentrations of cadmium, lead and arsenic in groundwater. Groundwater monitoring will be conducted for further evaluation. In addition, institutional controls were not required by the RODs but may be necessary for continued protectiveness.

Site Inspection - EPA representatives took part in a site inspection on April 28, 2005. The purpose of the inspection was to assess the protectiveness of the ROD remedy, evaluate conditions of the site, and confirm current operational details of the remedy.

Technical Interviews - Selected individuals were interviewed regarding their knowledge of, or concerns about, technical aspects of the remedies described in the RODs, ESDs and Action Memorandum, and about issues related to current operation and maintenance of the treatment systems at PGAS.

Protectiveness Statement - The remedies at PGAS currently protect human health and the environment because exposure pathways that could result in unacceptable risks to human health and the environment are being controlled. However, in order for the remedy to be protective of human health and the environment in the long-term, institutional controls may need to be put into place, and issues identified in the report will need to be addressed.

To insure the remedy continues to be protective of human health and the environment and is not compromised in any way, another review will be conducted within 5 years of the completion of this five-year review report, or by 2010.

For more Information

Please visit the EPA Web site at <http://www.epa.gov/region9/waste/sfund/superfundsites.html>, select "Site Overviews" and click on Phoenix Goodyear Airport Area.

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