NPL Site Narrative for Luke Air Force Base

LUKE AIR FORCE BASE
Glendale, Arizona

Conditions at proposal (July 14, 1989): Luke Air Force Base occupies 4,198 acres in Glendale, Maricopa County, Arizona, 13 miles west of downtown Phoenix. The base is located within the Sonoran Desert and rests on a broad alluvium-filled valley within the western portion of Phoenix Basin. Industrial-type operations started in 1941 and were comparatively small until 1946. After a period of deactivation, the base resumed operations in 1951. During the 1950s, larger quantities of wastes were generated by the expanded maintenance required for the new jet aircraft assigned to the base.

Luke Air Force Base is participating in the Installation Restoration Program (IRP), established in 1978. Under this program, the Department of Defense seeks to identify, investigate, and clean up contamination from hazardous materials. IRP studies identified a number of potentially contaminated areas, including five where hazardous wastes were disposed of.

At the Waste Treatment Annex (Site No. 2), a small quantity of low-level radioactive electron tubes, believed to be encased in concrete, was buried in a pit 12 feet deep in 1956.

The Perimeter Road Petroleum, Oil, and Lubricants (POL) Waste Application Site (Site No. 4) was used during approximately 1951-70. POL wastes were spread on the dirt road around the runway at the western portion of the base. The majority of the wastes consisted of contaminated JP-4 fuel, with some diesel fuel, waste engine oils, and waste solvents. Among the substances that may have been included were methyl ethyl ketone, trichloroethane, trichloroethylene, toluene, cresylic acid, o-dichlorobenzene, phenolic paint strippers, acetone, and paint residues and thinners.

The POL Waste Disposal Trench Site (Site No. 5) was used during about 1970-72. POL wastes were disposed of in numerous trenches approximately 1.5 feet deep and in a shallow lagoon at the northeast corner of the site.

The South Fire Department Training Area (Site No. 6) was used during 1941-46, and again during approximately 1951-63. POL wastes were poured onto old aircraft or simulated aircraft in a cleared, bermed area and then set on fire.

The North Fire Department Training Area (Site No. 7) was used during approximately 1963-73. The disposal method was similar to Site No. 6.

In November 1983, eight water supply wells on the base were sampled as part of IRP. Analysis indicated that two of the wells had low levels of 1,2-dichloroethane and trans-1,2-dichloroethylene. Soil near one of the wells contained 1,2-dichloroethane. An estimated 10,400 people obtain drinking water from base and private wells within 3 miles of hazardous substances on the base.

Status (August 30, 1990): EPA, the State, and the Air Force are negotiating an Interagency Agreement under CERCLA Section 120 to cover future activities at the site.

For more information about the hazardous substances identified in this narrative summary, including general information regarding the effects of exposure to these substances on human health, please see the Agency for Toxic Substances and Disease Registry (ATSDR) ToxFAQs. ATSDR ToxFAQs can be found on the Internet at ATSDR - ToxFAQs (http://www.atsdr.cdc.gov/toxfaqs/index.asp) or by telephone at 1-888-42-ATSDR or 1-888-422-8737.