



April 2003

Air Force Real Property Agency – Williams AFB
Arizona Department of Environmental Quality
Environmental Protection Agency

FACTSHEET

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WILLIAMS AIR FORCE BASE ENVIRONMENTAL CLEANUP PROGRAM

Introduction

Remedies are in place for almost all environmental cleanup sites at the former Williams AFB in Mesa and the Air Force has transferred 94% of the 4,043-acre former base to state and private ownership. Only one major cleanup action remains, the former Fuel Storage Area (ST012). This information bulletin will give you information on the cleanup at ST012 and a few other nearly complete cleanup efforts.

Why a Cleanup Is Needed

Flight training activities at the former Williams AFB, between 1942 and 1993, resulted in discharges and disposal of fuels, industrial solvents, metals, polychlorinated biphenyls (PCBs), and some pesticides into the soil and groundwater.

Risks to human health and the environment have been eliminated as a result of investigations and cleanup activities that began in 1983. All exposure pathways to contaminated soils and waste have been eliminated through remediation or restricted access. Exposure pathways to contaminated groundwater are incomplete since the contamination is stable, monitored, and limited in extent within the Williams property boundaries. No water supply wells are known to be impacted.

Initially 32 sites were identified as potentially contaminated areas, including the fuel storage area, a hazardous material storage area, a pesticide burial pit, a low level radiological disposal area, landfills, fire training areas, surface storm drainage areas, skeet and firing ranges, and fuel storage tanks.

Soil cleanup actions included excavation and off-site disposal, natural biological treatment, fuel vapor extraction, soil capping, and restricting future use of some sites for non-residential purposes. A small quantity of low level radiological wastes (radium painted dials from cockpit instruments) were removed and disposed of at an approved facility. Groundwater treatment has only been required at one site, and no water supply wells are known to have been impacted.

Site ST012 – the Most Complex Remaining Cleanup Project

Although people don't come into contact with the fuel at Site ST012, the cleanup is required to protect the future use of groundwater and to promote property transfer for redevelopment.



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Several interim cleanup systems have been used at the site in an effort to remove an estimated 500,000 to 1.5 million gallons of fuel in the soil and groundwater. Complex geology and unique groundwater conditions have made the site difficult to clean up. The most successful technology to date has been soil vapor extraction, which “vacuums” the fuel products out of the soil as they vaporize.

This fall, the Air Force will install thermal-enhanced soil vapor extraction, which uses hot air or steam to speed vaporization of the fuel in the ground. The thermal-enhanced vapor extraction systems, along with groundwater extraction and natural breakdown, should speed the cleanup at ST012. The effectiveness of this system, which is still under design, will be watched closely to ensure that cleanup goals are being met.

Other Current Cleanup Projects

The main landfill of the former base, Site LF004, was one major cleanup site. The landfill was capped with soil and covered with river rock. Groundwater monitoring wells were installed so that the Air Force may take corrective action quickly if contaminants leach out of the landfill and begin to move off-site. Solvents were detected below the landfill in 1997 and a supplemental investigation in 2000 determined no specific source. Monitoring and cap maintenance will continue and a restriction prohibiting residential use will be placed on the deed when the property is transferred.

Another cleanup project is located at a fire training area, Site FT002. At the site, all structures, piping, and 117 cubic yards of surface soil were removed and transported to approved off-site disposal areas. In addition, 25,000 cubic yards of contaminated soil located deeper underground was treated in place with bioventing. Bioventing blows air into the ground to stimulate the activity of naturally occurring microbes. The microbes feed on the contaminants and break them down.

Bioventing didn't bring the contamination in the deeper soil to levels that would allow unrestricted use. The Air Force conducted a risk assessment, in accordance with state regulations, based on the actual industrial use of the property. The risk assessment showed that existing conditions, combined with land use controls (i.e. prohibiting deep excavations), form an acceptable remedy for the site. The Air Force is proposing an amendment to the cleanup decision to adopt risk based cleanup standards and appropriate land use controls prohibiting deep excavations.

The Air Force also investigated a former paint shop and pesticide storage building, Site SS017. Both soil and groundwater there were found to be impacted by the pesticide dieldrin. The Air Force removed the top 13 feet of soil and backfilled with clean soil. The Air Force plans to conduct long-term groundwater monitoring and to prohibit excavation below 13 feet at the site.



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The removed soil is being treated on the former base. The on-site temporary treatment facility is using bioremediation, which relies on microbes to break down the pesticide. The treatment does not appear to be entirely successful and the Air Force is evaluating other alternatives to complete the cleanup.

Major Completed Projects

A skeet range on the base, Site SS019, required an extensive cleanup effort. Airmen practiced shooting at clay pigeons on the range when Williams was an active base. The skeet range was demolished and graded in 1950, and South Desert Village eventually was built on the land. Arizona State University (ASU) East uses this development for student housing.

Lead was found in the soil as a result of the skeet range's operations. To ensure the health and safety of residents, the top six inches of soil were removed and replaced with six inches of clean soil. The replacement soil provides a protective cap over the remaining lead, and the cap will be maintained by ASU East. Deed restrictions for this property don't allow children under age seven to live in this housing.

Investigation of Base Production Well No. 6 found PCBs in the shallow soil. PCBs are synthetic organic chemicals that were used widely as coolants and lubricants for transformers, capacitors, and other electrical equipment. The contaminated soil was subsequently removed and disposed of at an approved disposal facility. Lead contamination above background levels was found in soil below the base water tower, but it did not exceed residential cleanup standards. Tests show that groundwater was not impacted.

Conclusion

The former Williams AFB was built on a site in southeast Mesa. The base opened in 1942 and was the Air Force's foremost pilot training facility, graduating more student pilots and instructors than any other base in the country and supplying 25% of the Air Force's pilots annually.

The base closed in 1993, but the Williams story continues with redevelopment. Among those using the land are the Williams Gateway Airport, Arizona State University, Embry Riddle University, the University of North Dakota-Aerospace, Chandler-Gilbert Community College, Mesa Community College, and the Toka Sticks Golf Course, owned by the Gila River Indian Community. Since 1996, the former base has also been home to the House of Refuge East, which provides housing to homeless families.



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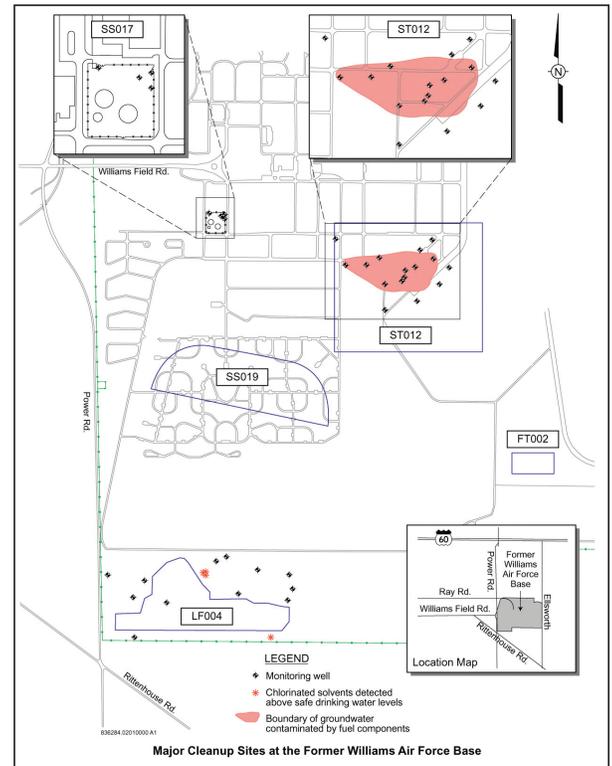
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You Can Get Involved

The cleanup and redevelopment has been a great success, and you can help take us the rest of the way by joining the Williams RAB or attending its meeting. RABs are advisory boards made up of officials from the Department of Defense, Environmental Protection Agency and Arizona Department of Environmental Quality, as well as members of the communities affected by the cleanup activities at a base. For more information on the RAB and Air Force cleanup efforts, contact the AFRPA Public Affairs Officer, Douglas Karas, at (866) 725-7617, or write him at 143 Billy Mitchell Blvd, Suite 1, San Antonio, TX 78226. You do not need to be a RAB member to attend RAB meetings. The RAB will hold meetings open to the public at least once a quarter.



Site records are maintained for review. A copy of the Air Force Administrative Record is located at:

ASU East Library
7001 E. Williams Field Road
(Building 20)
Mesa, AZ 85121
(480) 727-1037

ADEQ Records Center
1110 W. Washington Street
Phoenix, AZ 85007

Please call ADEQ at (602) 7714380 or (800) 234-5677 to schedule an appointment.