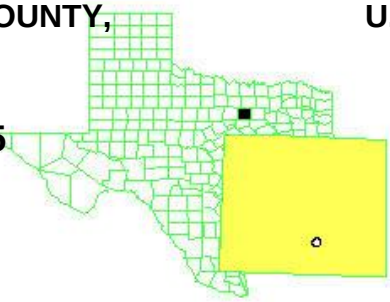
AIR FORCE PLANT 4

FORT WORTH, TARRANT COUNTY, TEXAS

EPA ID# TXD7572024605
Site ID: 0603610



EPA REGION 6
U.S. CONGRESSIONAL DISTRICT 4

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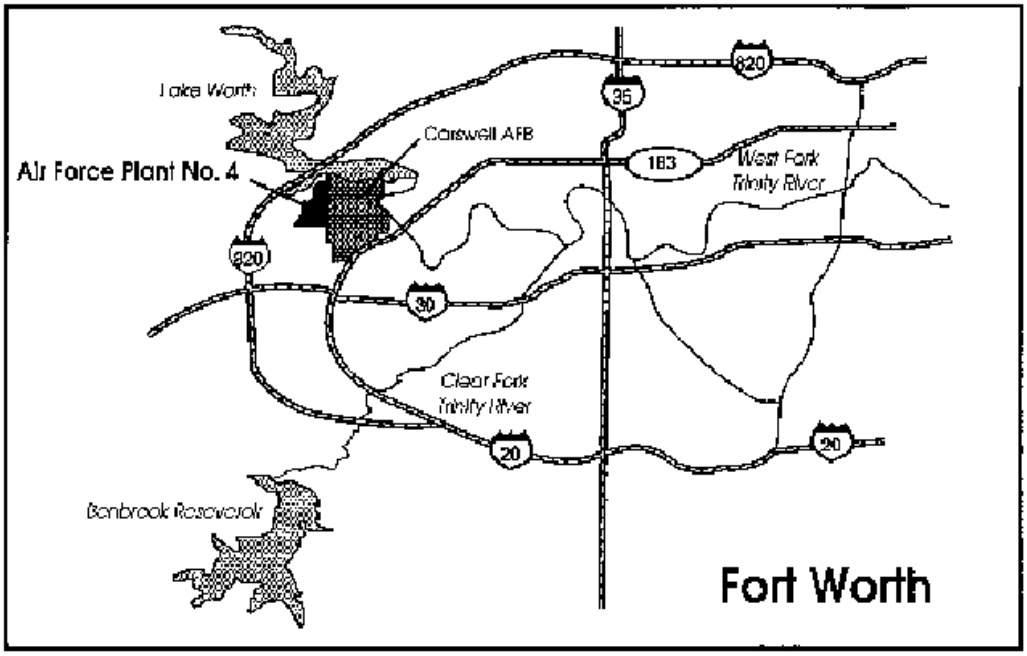
Updated: May 2013

Background

Air Force Plant 4 (AFP4) is located in Tarrant County, six miles northwest of Fort Worth, Texas. The communities of White Settlement, Lake Worth, Westworth, River Oaks, and Samson Park lie within a 3-mile radius of AFP4. Naval Air Station Fort Worth (formerly Carswell Air Force Base) is located adjacent to AFP4 to the east. Approximately 13,000 people reside in White Settlement, Texas.

AFP4 is a government-owned, contractor-operated facility consisting of 760 acres. The facility has manufactured military aircraft since 1942 and is currently owned by the U.S. Air Force (USAF) and operated by Lockheed Martin Corporation. Approximately 15,000 people are employed at AFP4.

Six schools are within a 2-mile radius of AFP4 and the closest school is located 1/2 mile south of the facility. The areas south and west of AFP4 are mainly residential. Lake Worth, bordering AFP4 to the north, provides recreational boating and fishing. This lake also supplies municipal water to the city of Fort Worth, Texas and is a recharge source to the underlying Paluxy Aquifer. The city of White Settlement, Texas, receives municipal water supply from wells completed in the lower Paluxy aquifer.



The AFP4 Superfund Site is generally defined by the base wide trichloroethene (TCE) ground water plume.

TCE and its degradation compounds have been detected beneath AFP4 in the shallow Terrace Alluvium Aquifer, the Upper Sand ground water of the Paluxy Aquifer, and in the upper Paluxy Aquifer above safe drinking water levels. The lower Paluxy Aquifer is used for drinking water and is not contaminated. The nearest drinking water well is located approximately 1/4 of a mile up-gradient from the site. Contaminants have not been detected in this well.

Current Status

AFP4 is currently in the Long-Term Remedial Action (LTRA) phase of the Superfund process. EPA concurred on the Second Five-Year Review for AFP4 on September 25, 2009.

A full-scale ground water pump and treat system has been installed at the east parking lot. The system is presently operating successfully.

A Dense Non-Aqueous Phase Liquid (DNAPL) Electrical Resistive Heating (ERH) and Soil Vapor Extraction (SVE) System has proven to be effective in lowering contamination beneath Building 181. The USAF installed the indoor application of subsurface heating to enhance the recovery of TCE. An approximate 22,000 sq. ft. area beneath Building 181 was heated to 90 degree C by 73 electrodes placed at depths of 35 feet for eight months. A vacuum enhanced vapor/ground water recovery system was operational from 1993 - 2002.

The USAF installed a 1,170 foot long, 2 foot wide, 35 foot deep Permeable Reactive Barrier (PRB) wall across the leading edge of the southern lobe of the TCE plume in 2002. The leading edge of this plume, as defined by the TCE maximum concentration limit of 5.0 µg/L, has since retracted approximately 1,500 feet across the Base Realignment and Closure (BRAC) property.

AFP4 achieved Construction Completion on September 15, 2006.

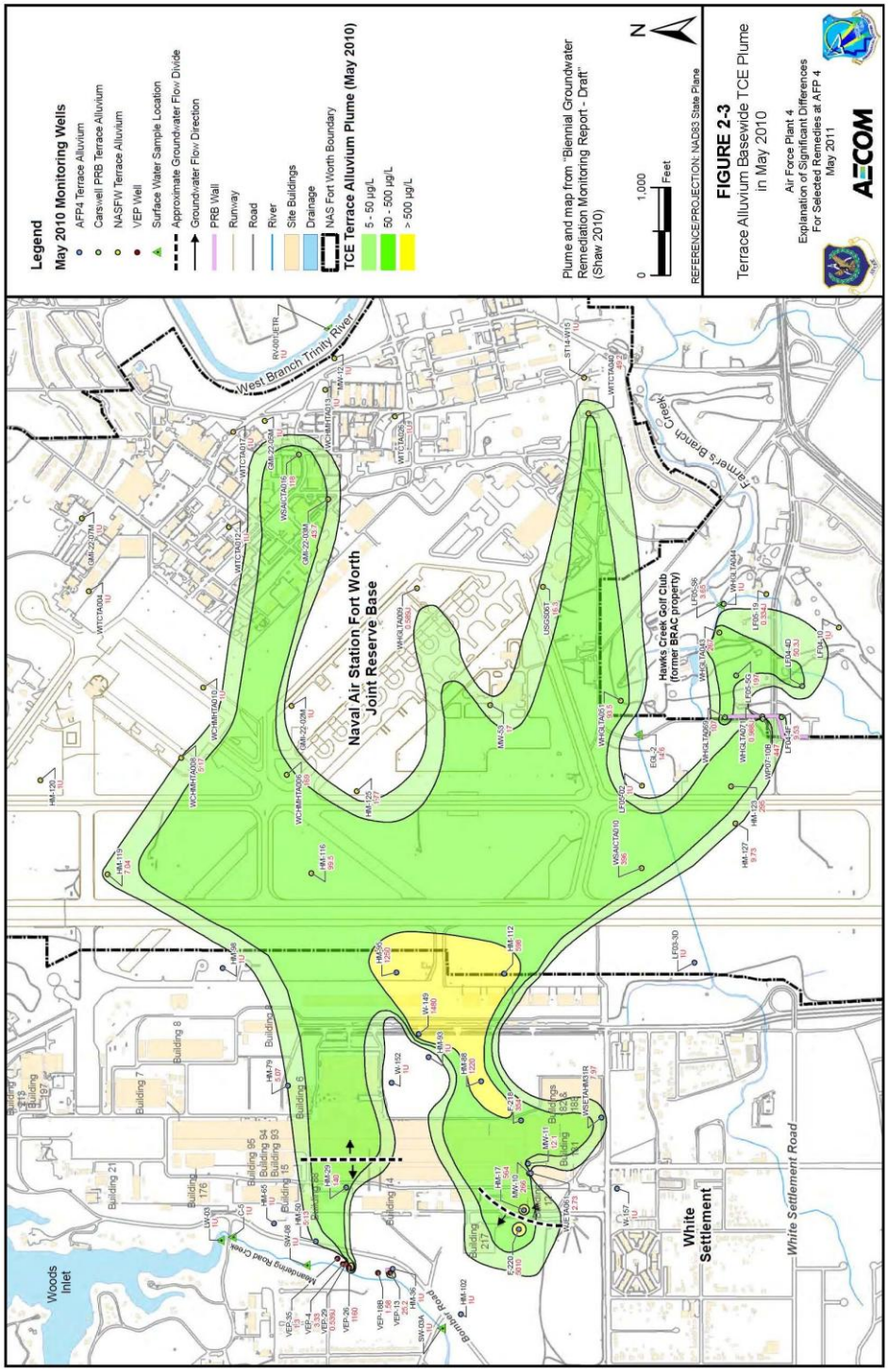
Benefits

The remediation of ground water contamination from AFP4 will protect the drinking water resource for approximately 13,000 people living within one mile of the site, as well as an important recreational area used by many Tarrant County residents.

National Priorities Listing (NPL) History

NPL Proposal Date: October 15, 1984
NPL Final Date: August 30, 1990

Site Map


Legend
May 2010 Monitoring Wells
AFP4 Terrace Alluvium
Carswell PRB Terrace Alluvium
NASFW Terrace Alluvium
VEP Well
Surface Water Sample Location
Approximate Groundwater Flow Divide
Groundwater Flow Direction
PRB Wall
Runway
Road
River
Site Buildings
Drainage
NAS Fort Worth Boundary
TCE Terrace Alluvium Plume (May 2010)
5 - 50 µg/L
50 - 500 µg/L
> 500 µg/L
Plume and map from "Biennial Groundwater Remediation Monitoring Report - Draft" (Shaw 2010)
0
1,000
Feet
N
REFERENCE/PROJECTION: NAD83 State Plane
FIGURE 2-3
Terrace Alluvium Basewide TCE Plume in May 2010
Air Force Plant 4
Explanation of Significant Differences
For Selected Remedies at AFP 4
May 2011
AECOM
Naval Air Station Fort Worth Joint Reserve Base
Hawks Creek Golf Club (former BRAC property)
West Branch Trinity River
Farmers Branch Creek
White Settlement
White Settlement Road
Woods Inlet
Bomber Road
Building 14
Building 6
Building 7
Building 8
Building 21
Building 176
Building 95
Building 94
Building 93
Building 15
Building 277
Building 276
Building 275
Building 274
Building 273
Building 87
Building 119

Wastes and Volumes

The principal pollutant at AFP4 is trichloroethylene (TCE). TCE is a metal cleaning solvent used in the past at many Department of Defense sites. The plant has been operational since 1942. Historic releases of TCE from the Chemical Process Facility (Building 181) have contaminated the ground water beneath AFP4. The exact amount of TCE historically released is not known. TCE is not used presently at AFP4.

Health Considerations

The site is owned by the U.S. Air Force (USAF) and operated by Lockheed Martin Corporation.

The lower Paluxy Aquifer is used by the city of White Settlement as a drinking water source, up-gradient of the ground water flow direction.

Contaminants have been detected on-site in the Upper Sand ground water of the Paluxy Aquifer and in the upper Paluxy Aquifer above safe drinking water levels.

A Long Term Monitoring Program has been in place since 1991. Contaminants of concern have not been detected in the lower Paluxy Aquifer.

Record of Decision (ROD)

EPA signed the Record of Decision on August 26, 1996.

An Explanation of Significant Differences (ESD) for the ROD was issued October 2002 for the east parking lot Soil Vapor Extraction (SVE) System; and April 10, 2007, for the BRAC property transfer.

Site Contacts

EPA Remedial Project Manager:	Mr. Robert Sullivan - (214) 665-2223. E-Mail Address - sullivan.robert@epa.gov
EPA Site Attorney:	Mr. George Malone - (214) 665-8030. E-Mail Address - malone.george@epa.gov
EPA Public Liaison	Donn R. Walters - 214-665-6483, 800-533-3508
TCEQ Project Manager:	Ms. Nancy Johnson (817) 588-5862. E-Mail Address - najohnso@tceq.texas.gov
USAF Project Manger:	Mr. George Walters (937) 255-1988. E-Mail Address - george.walters@wpafb.af.mil

Site Administrative Record: White Settlement Public Library, 8215 White Settlement Road, White Settlement, TX 76108.

A joint Restoration Advisory Board (RAB) has been established for AFP4 and Carswell Air Force Base. A community co-chair has been elected and the RAB holds regular public meetings on a bi-annual basis.

EPA, USAF, and TCEQ have entered into a Federal Facility Agreement. EPA signed the agreement on

August 31, 1990.