



ERP Fact Sheet

February 2006

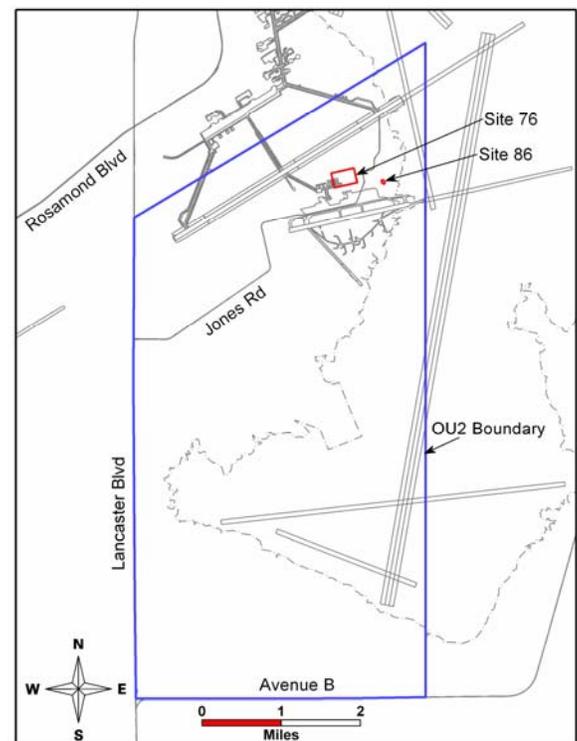
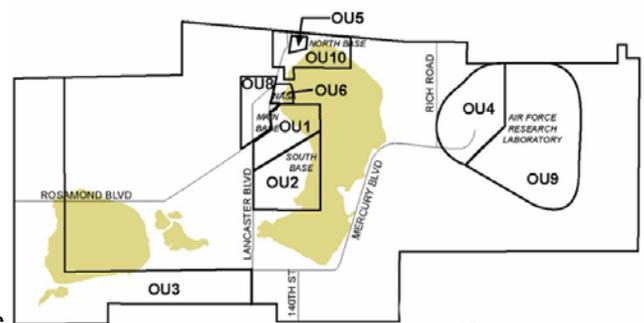
***In Situ* Treatment the Preferred Cleanup Method for Sites 76 and 86 Contaminant Plumes**

This Fact Sheet describes how Edwards AFB proposes to finish its cleanup of Sites 76 and 86, South Base.

Air Force environmental engineers recommend *in situ* treatment as the preferred remediation method to clean up solvent-contaminated groundwater at Sites 76 and 86, which are located in Operable Unit (OU) 2. *In situ* means that the groundwater can be treated underground and does not need to be pumped to the surface, treated, and injected back into the aquifer. Trichloroethene (TCE) is the primary contaminant at the sites. TCE is used to remove grease from metal parts. Out of the four treatment alternatives proposed by the Air Force, the *in situ* method would remove the contamination in the most cost-effective manner.

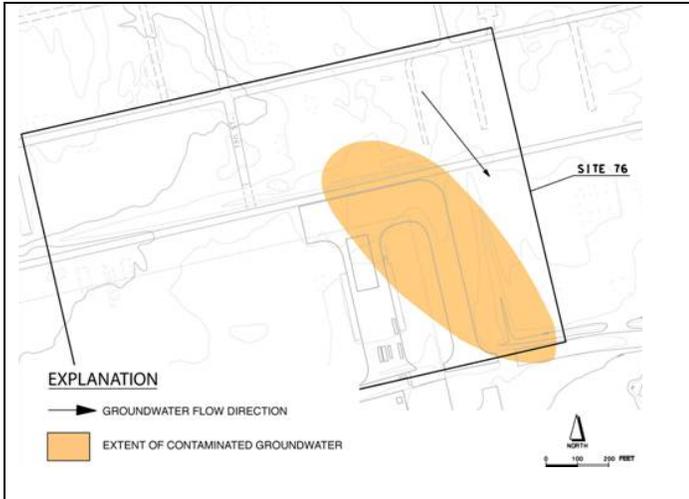
Site 76 is designated the Old South Base Assorted Facilities and occupies the northeast portion of the Birk Flight Test Facility. Fuel, solvents, waste oils and lubricants may have been used and disposed at this facility.

Site 86, the Building 300 Engine Test Cell, is located southeast of Building 300 and consists of a former engine test cell that was constructed in the 1940s. Only concrete foundations of the former facilities remain. Cooling water contaminated with TCE may have



Comments to: Gary Hatch
5 E. Popson Ave., Bldg. 2650A
Edwards AFB Calif., 92324-8060
E-mail: 95 ABW/PAE@edwards.af.mil

The top map shows the location of OU2 within the boundary of Edwards AFB. The bottom map shows Sites 76 and 86 in OU2.



This map shows the contaminant plume at Site 76.

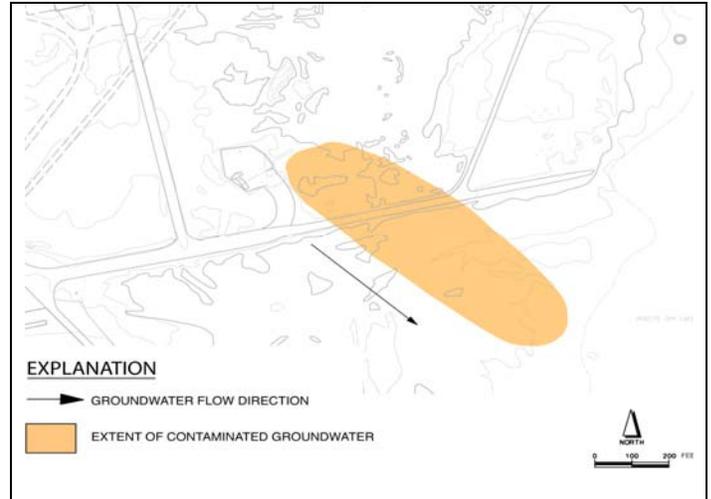
been flushed through the engines and discharged to the surrounding soil and groundwater via drainage channels.

Environmental Management contractors drilled into the ground to collect soil and groundwater samples. These samples were sent to off-Base laboratories to see what chemicals were present. The contractors found no significant contamination in the soils at either site. However, it was found that contaminants (mostly TCE) leaked into the groundwater, which occurs at depths of approximately 52 and 45 feet below ground surface at Sites 76 and 86, respectively.

The contamination in the groundwater at Sites 76 and 86 is limited to the upper 10 to 15 feet of the aquifer. The TCE plume in the groundwater at Site 76 occupies an area approximately 100 feet wide by 400 feet long. The plume covers approximately 0.8 acres and its volume is approximately 750,000 gallons. The TCE plume in the groundwater at Site 86 occupies an area approximately 200 feet wide by 700 feet long. The plume covers approximately 2.6 acres and its volume is approximately 2.6 million gallons.

During the Remedial Investigation, the Air Force determined that the current risk to human health and the environment from the groundwater contamination at Sites 76 and 86 is low. Therefore, only groundwater monitoring and land use controls have been instituted to date.

However, although not currently used for drinking water, the contaminated groundwater is classified as a potential drinking water source under California law.



This map shows the contaminant plume at Site 86.

The Air Force is conducting pilot tests to evaluate which *in situ* chemical and biological treatments work best at the groundwater aquifer underlying OU2. Based on the results of these tests, the most potentially productive and cost-effective treatment for groundwater will be selected. If none of the *in situ* treatments prove effective, other remedial options will be evaluated as part of a five-year review.

The OU2 Proposed Plan offers three alternatives to the preferred *in situ* treatment – No Action, Land Use Controls and Long-Term Monitoring, and Active Groundwater Restoration (*Ex Situ* Treatment).

The No Action alternative would not cost anything, and the contamination would remain in place.

The Land Use Controls and Long-Term Monitoring alternative would cost an estimated \$10 million over 100 years at each site to track the migration of the contaminant plumes and to assure the groundwater is not used as a drinking water source.

The Active Groundwater Restoration (aboveground treatment) would cost an estimated \$1.3 million at Site 76, and an estimated \$2.3 million at Site 86 over five years to install and operate a system to pump out and treat the groundwater aboveground with activated carbon.

The preferred cleanup method, *in situ* treatment, would cost between \$0.8 and \$1.2 million at Site 76 and \$1.2 and \$2.1 million at Site 86 over six years to conduct the pilot testing and perform the treatment.