



US Army Corps
of Engineers
Kansas City District

FORMER SCHILLING AFB

FACT SHEET

PILOT STUDIES at the Former Schilling Air Force Base

October 2006

Introduction

The Smoky Hill Army Air Base was built in 1942 to support operations during World War II and later during the Korean War. The name of the base was changed to the Smoky Hill Air Force Base in 1946 and to Schilling Air Force Base (SAFB) in 1957. The closure of SAFB was announced in 1964. Between 1966 and 1967, the majority of the property was transferred from the government to the Salina Airport Authority (SAA) with smaller portions of the property being transferred to other entities. Over the past several years, the United States Army Corps of Engineers (USACE), the United States Environmental Protection Agency (USEPA) Region VII, and the Kansas Department of Health and Environment (KDHE) have conducted several environmental investigations at the former SAFB in order to identify what areas have been impacted by former Department of Defense (DoD) operations. Based on these previous investigations, several areas on site were found to contain soil and groundwater contamination. Two of these impacted areas are the Kansas State University (KSU) campus near the Tullis Office Building and the property currently occupied by Raytheon near Buildings 606 and 626. The primary contaminant of concern is Trichloroethylene (TCE).

USACE is the federal agency designated with the responsibility for investigating and addressing contamination at formerly used defense sites. In 2005, USACE contracted with HydroGeologic, Inc. (HGL) to perform a pilot study to evaluate different TCE clean-up technologies at the former SAFB. The purpose of the pilot scale study is to implement two types of technologies at two different locations and gather information that will aid in evaluating whether these technologies will effectively address the existing contamination. During the study, data will also be collected for potential design of a full-scale remediation system based on the tested technologies.

Pilot Study Technologies

The technologies that are being implemented to test the effectiveness of TCE clean-up include:

- In-situ biological treatment of TCE contaminated groundwater on the KSU Campus.
- In-situ, chemical oxidation of TCE contaminated soils and groundwater near Buildings 606 and 626.

In-Situ Biological Treatment at the K-State Campus

New monitoring wells will be installed in order to sample and evaluate the in-situ biological treatment. Injection points will also be installed in order to inject zero valent iron (ZVI) and a biological enhancement product called Anaerobic Biochem® (ABC). The addition of ZVI into the site groundwater will reduce TCE concentrations by reacting with the TCE and causing it to break down into non toxic by products. After the TCE concentrations have been reduced by the ZVI, the ABC product will allow naturally occurring microorganisms to further break down remaining TCE. The onsite wells will be sampled on regular intervals to allow an assessment of the pilot scale treatment.

**Scheduled Activities:**

October 2 through 6, 2006:	Install monitoring and injection points
October 23 through November 3, 2006:	Sample the new wells to obtain baseline TCE concentrations in the groundwater in the treatment area
November 30 through December 8, 2006:	Perform the injections of the ZVI and the ABC
Week of December 4, 2006:	USACE, HGL, and KDHE personnel will be on site for one designated day to answer the public's questions regarding the pilot study performed at the KSU site and the Raytheon site.
December 9, 2006 through June 1, 2007:	Monitor performance

- Orange fencing will be placed around the work area. Non authorized personnel are not allowed to enter the work area.
- HGL employees may wear white protective clothing within the fenced area to prevent splashing of the product onto their work clothes

Activities to be performed at the Raytheon facility (606/626 Buildings)

New monitoring wells will be installed in order to sample and evaluate the in-situ chemical oxidation treatment. Injection points will also be installed to inject a purple-colored oxidant (potassium permanganate for the soils and sodium persulfate for groundwater) in order to reduce TCE contamination in both the soils and groundwater. The addition of the purple-colored oxidant into the site subsurface will reduce TCE concentrations by breaking down the TCE into non toxic products. After the oxidant has been added, samples will be collected from the monitoring wells and analyzed for TCE and its break-down products to evaluate the success of the treatment performed. The monitoring wells will be sampled at regular intervals to allow an assessment of the pilot scale treatment and to ensure long term effects.

Scheduled Activities:

October 2 through 6, 2006:	Install monitoring and injection points
October 23 through November 3, 2006:	Sample the wells to get baseline TCE concentration in the soils and groundwater.
November 13 through 29, 2006:	Perform the injections of the purple-colored oxidant.
December 1, 2006 through June 1, 2007:	Monitor performance

- Orange fencing will be placed around the work area. Non authorized personnel are not allowed to enter the work area.
- HGL employees may wear white protective clothing within the fenced area for protection against the chemicals that they will be injecting.

This fact sheet is published by the U.S. Army Corps of Engineers for the Former Schilling Air Force Base site. Comments or questions about this fact sheet should be directed to Robyn Kiefer at the Kansas City District Corps of Engineers, (816) 389-3615. Information repositories for the site are being maintained at the Salina public library. The library website is located at: http://www.nwk.usace.army.mil/projects/schilling/SalinaLibrary_intercept.htm. For additional information, visit our web site: <http://www.nwk.usace.army.mil/projects/schilling>