

# ENVIRONMENTAL Fact Sheet



*Moses Lake Wellfield Contamination Superfund Site*

U.S. Environmental Protection Agency, Region 10

February 2005

## What's Happening at the Moses Lake Site?

The U.S. Army Corps of Engineers (USACE) completed the Skyline replacement well about a year ago. The new well provides clean drinking water to users of the Skyline water system near Moses Lake. This is an important accomplishment, but work at the site is far from finished. This fact sheet discusses the long-term plans for cleaning up the trichloroethylene (TCE) contamination at this site.

The U.S. Environmental Protection Agency (EPA) has been overseeing USACE investigation activities at the Moses Lake Wellfield Contamination Superfund site. We refer to this work as the remedial investigation/feasibility study. The process includes these steps:

- Gather the data necessary to determine the type and extent of contamination at the site.
- Establish criteria for cleaning up the site.
- Identify and screen cleanup alternatives.
- Analyze the technology and costs of the alternatives.

## What We're Finding from this Study

The investigation at the Moses Lake site has been challenging because we have not been able to identify how and where the TCE entered the water beneath the ground. Twenty-eight potential source areas were identified for testing and evaluation. They included landfills, open pits, ditches and drains. Various methods were used to obtain information, including review of historical information and aerial photographs, personal interviews, field mapping, geological study, landfill trenching, surface soil sampling, soil gas sampling, and installation, sampling and analysis of monitoring wells.

### What Is TCE?

TCE is a solvent historically used by industries to remove grease from metals. It is also used in the manufacture of other chemicals.

TCE is a common contaminant in water beneath the ground. Because TCE evaporates easily, most TCE released into the environment finds its way into the air. However, when TCE is trapped by soil and groundwater, it can remain there for years, because the solvent dissolves very slowly over decades or centuries.

People get exposed to TCE by drinking water or breathing air containing TCE. Studies of people show that long-term exposure to TCE at low levels is associated with health effects, including some types of cancer. Children and adults with health problems may be more affected than healthy adults.

In some situations, TCE can increase the health effects of other chemicals. For this reason, TCE needs to be considered along with other contamination in the environment.

More information about the possible health effects of TCE is available on the EPA website for Moses Lake listed on the last page of this fact sheet.

## What We're Finding from this Study *continued*

USACE identified a large area of TCE-contaminated soil during an investigation at the Liquid Oxygen Generating Plant east of the Grant County International Airport runways. They removed two underground tanks, piping and contaminated soil from areas around the plant. There is no clear link between this TCE source and groundwater contamination at the site.



*Drillers installed monitoring wells, which are tested periodically for groundwater contamination. (Montgomery Watson Harza photo)*



*Workers dug trenches to search for contamination sources in landfills. (USACE photo)*

USACE has been investigating other possible historical sources of contamination at the site, such as landfills. It now appears that the South Base Dump in the southeast part of the site may have been a source of contamination to groundwater.

## What's Next?

USACE is continuing investigative field work at the Moses Lake site. EPA will use the information from this work to develop a proposed cleanup plan. Because the site is large and complex, there will undoubtedly be a great deal of uncertainty about locations and sources of TCE in the groundwater.

The proposed cleanup plan will meet these needs:

- Being flexible enough to accommodate the uncertainty and to change as new information is collected.
- Providing an approach for managing the site in a way that will protect current and future residents near the site.

- Identifying EPA's preferred alternative for cleaning up, safely containing, or limiting exposure to the contamination at the site.
- Addressing both the groundwater and surface soil contamination.

The completion of the proposed plan will be a key opportunity for you to review the investigation and cleanup documents, and to give us input on what should be done at the site. EPA expects the plan to be completed by about the summer of 2005. We will issue a public notice when the plan is ready for review, and we will hold a public meeting to share the information with the community. EPA will review and consider public comments before reaching a cleanup decision.

**What's Next?** *continued*

The cleanup decision will be presented in a document called a record of decision. It will include EPA responses to public comments received on the proposed cleanup plan. EPA expects to complete the record of decision in about the fall of 2005.

It is important to EPA that your concerns are reflected in the final cleanup decision for the Moses Lake site. We hope you'll take advantage of our notices and meetings to share your thoughts with us. Please feel free to contact us if you have questions or need information.

**Site Background**

The Moses Lake Wellfield Contamination Superfund site is an area of some 12 square miles located in Grant County, about three miles northwest of the city of Moses Lake, Washington. The area around the site is residential, agricultural and commercial. The site includes at least one plume of TCE-contaminated groundwater within an area at least a mile wide, up to three miles long, and from 100 to 310 feet deep, underlying and extending south from the former Larson Air Force Base.

The U.S. Air Force used the base from 1942 until the mid 1960s, when it was decommissioned and sold. Currently, the Port of Moses Lake owns most of the land, operating part of it as Grant County International Airport. Some of the land is leased to commercial enterprises. Most investigations into potential sources of TCE have centered on the former base, because of its long history of TCE use for cleaning parts and aircraft.

During sampling by the Washington Department of Health in 1988 and 1989, elevated TCE levels were found in some of the Moses Lake municipal wells at the former base and in the two Skyline water system wells. The City of Moses Lake protected municipal water system users by closing the contaminated municipal wells or sealing off the shallow contaminated basalt aquifers. EPA and USACE protected Skyline water system users by constructing and then deepening a groundwater well serving about 100 homes.

TCE is not detected everywhere on the site, even in shallow groundwater. The deeper groundwater sources have yielded clean water for thousands of people. The current difficulty is managing groundwater where TCE remains above the drinking water standard of 5.0 parts per billion.

**How to Get More Information**

Contact an EPA or USACE representative:

**General Information**

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EPA representatives can also be reached toll-free at 1-800-424-4372.

(See *Information Repository sites on the back page.*)



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*Planning for long-term cleanup  
Moses Lake Wellfield Contamination Superfund Site  
Moses Lake, Washington  
February 2005*

### **For More Information**

You can find written information about the site at these locations:

EPA website: <http://yosemite.epa.gov/r10/cleanup.nsf/sites/moses>

EPA Region 10 Superfund Records Center  
1200 Sixth Avenue, ECL-076  
Seattle, WA 98101-1128  
206-553-4494 (*call for an appointment*)

Big Bend Community College Library  
Building 1700  
7662 Chanute Street  
Moses Lake, WA 98837  
509-762-6246



*Alternative formats are available. For reasonable accommodation,  
please call Cindy Schuster at 1-800-424-4372.*