For More Information

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Official Business
Penalty for Private use, $300

Tuba City Community/ Upper and Lower Moenkopi Villages

Leaking Underground Storage Tank Site

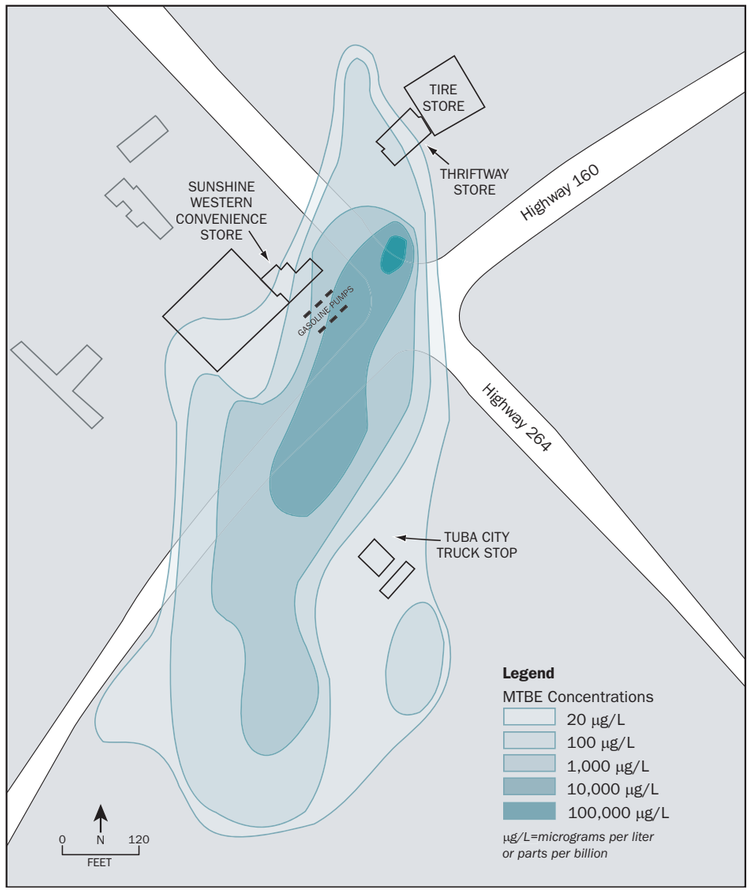
MARCH 2003

Underground storage tanks (USTs) at the two gas stations at the intersection of Highways 160 and 264 have leaked gasoline. One of the stations, Thriftway, leaked approximately 13,000 gallons. It is not known how much the other station, Sunshine-Western (now known as Superfuels), leaked. The leaking USTs have been removed and replaced with new USTs.

The leaked gasoline soaked into the soil at the gas stations and gasoline chemicals have entered the groundwater. Over the past ten years, these chemicals formed a plume of contamination in the groundwater, extending several hundred feet south of the site. The main chemicals of concern are benzene, toluene, ethylbenzene, and xylenes (BTEX), as well as methyl tertiary-butyl ether (MTBE).

EPA, in conjunction with the Hopi Tribe and the Navajo Nation, directed the gas station operators to assess and clean up the petroleum contamination.

MTBE Concentrations in Groundwater



MTBE is the common name for a synthetic chemical called methyl tertiary-butyl ether. It is a flammable liquid made from combinations of chemicals like isobutylene and methanol. It was first introduced as an additive for unleaded gasolines in the 1980s to enhance octane ratings. MTBE is a hazardous substance and poses a significant threat to human health and the environment.

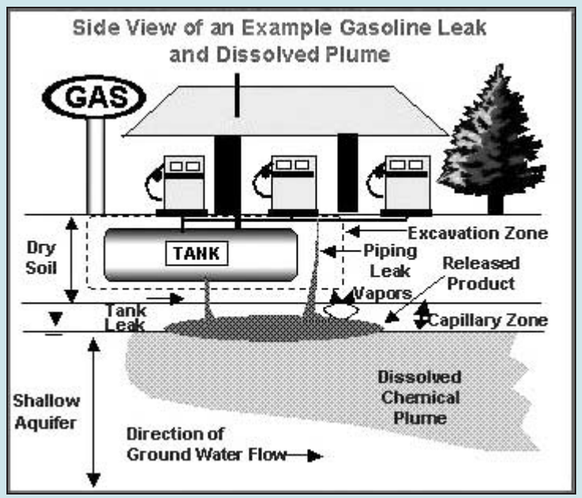
What's being done to clean up the Tuba City Leaking Underground Storage Tank Site?

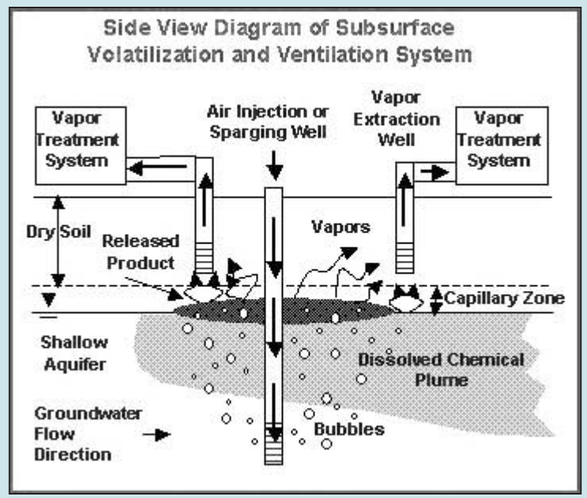
Cleanup systems have removed more than 4,200 pounds of contamination from the ground

A cleanup system at Thriftway has been in operation since September 2000. To date, it has successfully removed over 4,200 lbs. of contamination from the Thriftway gas station site. A second cleanup system started at the Superfuels gas station on October 23, 2002; data on this second system's progress is not yet available. **Installation of a third cleanup system, at the Tuba City Truck Stop, is expected in the year 2003.**

The cleanup systems currently in place treat petroleum contamination by injecting air into the groundwater aquifer. As air bubbles rise up through the groundwater, some of the chemicals evaporate from the water into the bubbles. When the bubbles reach the top of the water table, those chemicals are released as vapors into the dry soil in the subsurface. These vapors are collected from the soil by a series of vapor extraction wells. The vapors are then treated at the surface and released to the atmosphere through a stack at levels that are protective of human health.

While you can't see the cleanup system since it's all underground, the cleanup process is working based on sampling results from surrounding groundwater monitoring wells.





Assessing the contamination at the site

EPA and the Tribes approved a Site Assessment Report in June of 2002. Although assessment is a continuous process, the site has been sufficiently characterized to move forward with the selection of the full site cleanup program.

EPA and the Tribes are checking and monitoring the contamination and cleanup

EPA and the Tribes are continually monitoring the contamination to make sure it does not spread and to confirm the cleanup systems are working. Monitoring occurs by taking water samples from existing groundwater monitoring wells that are placed strategically within and around the site. The sample results reveal if the cleanup systems are removing the contaminants of concern from the groundwater. The gas station owners, at the direction of EPA and the Tribes, have installed over 80 of these wells. Twelve new wells were installed in January of 2002.

To date, the groundwater monitoring shows that there is a decrease in the levels of contamination in the plume (area of contamination). Furthermore, results from groundwater monitoring by EPA and Thriftway have shown that *the Hopi and Navajo springs in the area are not contaminated by petroleum.*

EPA and the Tribes will continue monitoring the groundwater and springs in the Tuba City and Moenkopi areas. Groundwater was sampled most recently in October 2002. Future groundwater monitoring is planned for April/May and September/October 2003.

What's coming up next?

- EPA will propose a final cleanup strategy in 2003. The cleanup systems that are already in place are interim measures until the final, comprehensive cleanup strategy is selected.
- EPA, in consultation with the Hopi Tribal Environmental Office and Navajo Nation EPA, will meet with the Navajo and Hopi communities in 2003. EPA will present its recommended strategy and describe the available technologies for cleaning up the entire Site. Informational meetings will be held, as well as a formal hearing to accept public comment.
- EPA will review the public comments and, in consultation with the Hopi Tribe and Navajo Nation, will render a decision on the final cleanup strategy. The cleanup will be implemented in accordance with a Corrective Action Plan (CAP) that will be submitted by the responsible parties.
- EPA is working with the Tribes and responsible parties to install a third cleanup system at the Truck Stop Café and to have it up and operating in the year 2003.
- Groundwater monitoring will continue. In 2003, sampling will occur in April/May and September/October.