

U.S. DEPARTMENT OF ENERGY

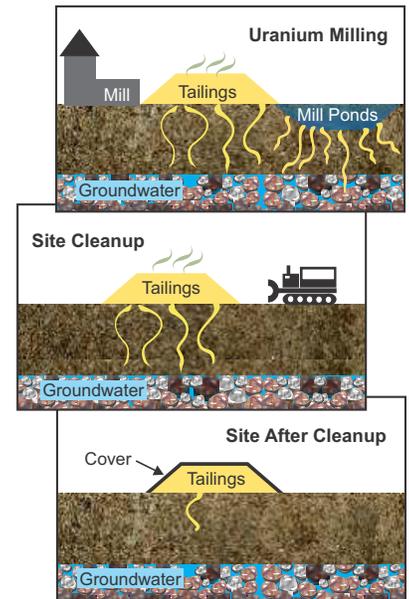
Legacy Management

Tuba City, Arizona, Disposal Site

COMMUNITY INFORMATION

Tuba City Site Background

- 1954–1955 Tuba City mill is built.
- 1956–1966 Rare Metals Corporation and El Paso Natural Gas Company operate the uranium- and vanadium-ore processing mill. Chemicals from tailings piles and ponds leak into the soil and groundwater during milling operations.
- 1988 U.S. Department of Energy (DOE) cleans up materials from former milling operations.
- 1990 Mill tailings are placed in a disposal cell. A cover that prevents radon gas from escaping, and reduces the amount of water drainage through the disposal cell, is constructed over the materials.
- 1996–Now DOE performs long-term care at the Tuba City site.



Drawings not to scale.

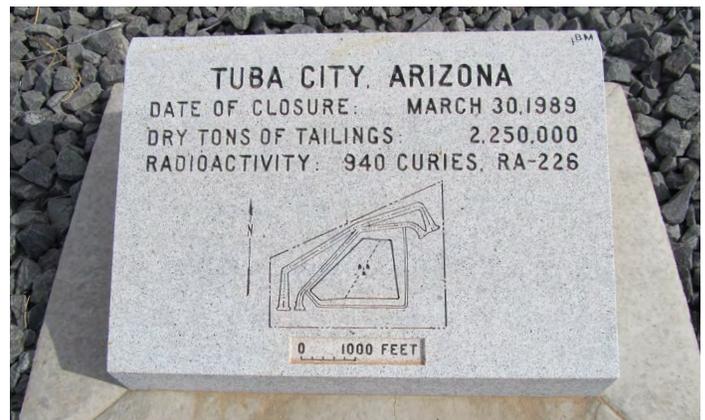
DOE Activities at the Tuba City Site

Site Inspections

DOE inspects the Tuba City site once a year. Inspectors check the disposal cell to make sure it is protective of human health. During the inspection, items that need maintenance are identified and repaired. DOE also works with the Navajo Nation to inspect the groundwater cleanup system and to watch the site between annual inspections.

Groundwater Cleanup

Groundwater is extracted through 37 wells and pumped through underground pipes to a water-treatment facility. Groundwater enters the well through a screen-like section at its base, and is then directed through the pipeline with the help of a suction pump. The extracted water is evaporated and distilled at the water-treatment facility. The clean water is returned underground through pipes or injection wells. The distilled water naturally trickles back to the down-gradient wells over time. Groundwater is sampled twice a year to measure its chemical levels.



Tuba City, Arizona, Disposal Site marker.



Solar panels supply energy to operate the groundwater treatment plant.

Frequently Asked Questions

Q Will contaminated water ever reach the Moenkopi Wash?

A We don't think so. DOE is working on a new groundwater model that will help us understand what will happen to contaminated groundwater in the future. However, our studies to date show the groundwater under the cell is continuously moving very slowly.

Q Is the treatment plant safe?

A We believe the plant is safe for humans and the environment; it operates 7 days a week and is staffed with 6 employees. The plant is monitored for radiation, and is set up to shut down automatically if a problem occurs.

Q Is the groundwater contaminant plume moving or growing?

A No, the contaminated groundwater has only moved about 1/4 of a mile since 1954. It will continue to move very slowly; however, contamination will become less concentrated during this process due to natural dispersion.

Q DOE has been saying the plant may not work in the long term. Why is that?

A The plant has had technical problems since it was built in 2003. This is the only plant of its kind in the United States, and it's difficult to get replacement parts. Also, the plant has not been effective in treating groundwater because of natural conditions in the ground including the small amount of groundwater and its slow movement.

Q Does DOE have any plans to use a different plant for treatment?

A We are evaluating other treatment methods that could be used in place of the current system in the event that it fails and is beyond repairing.

Additional Information about the Tuba City Site

DOE is responsible for caring for the disposal cell and cleaning up groundwater at the Tuba City site to protect human health and the environment. The Navajo Nation provides oversight for DOE activities.

If you have questions about the site, please visit DOE's website at <http://www.lm.doe.gov/tuba/Sites.aspx> or contact:

Rich Bush
Site Manager
U.S. Department of Energy
Office of Legacy Management
Phone: (970) 248-6073
Email: rich.bush@lm.doe.gov

Madeline Roanhorse
Program Manager
Navajo AML/UMTRA Department
Phone: (928) 871-6982
Email: mroanhorse@frontiernet.net

Other Navajo Nation, Uranium-Related Programs

If you have questions about uranium exposure and your health, following are programs and people you may contact to learn more about the services available to you.

Agency and Contact Information	Program
<p>Navajo Area Indian Health Service Phone: (505) 368-7402 or 1-800-549-5644, ext. 7402 Email: dolores.gruber@ihs.gov</p>	<p>Community Uranium Exposure Journey to Healing Program: This program provides health monitoring, health promotion, and health education to people across the Navajo Nation. It focuses on people exposed to uranium by living in the community rather than by working at uranium mines or mills.</p>
<p>Navajo Area Indian Health Service Contact: Rena Gould Phone: (505) 368-7054 Email: rena.gould@ihs.gov</p>	<p>Radiation Exposure Screening and Education Program (RESEP): This program offers assistance to miners and millers, including applying for compensation and healthcare services.</p>
<p>Navajo Area Indian Health Service Contact: Johnna Rogers Phone: (505) 368-7397 or 1-800-549-5644, ext. 7397 Email: johnna.rogers@ihs.gov</p>	<p>Navajo Birth Cohort Study: The primary goal of this study is to determine whether exposure to uranium waste affects birth outcomes and childhood development on the Navajo Nation.</p>