



Tuba City, Arizona, Disposal Site **COMMUNITY INVOLVEMENT PLAN**



U.S. DEPARTMENT OF ENERGY OFFICE OF LEGACY MANAGEMENT

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SECTION 1: OVERVIEW

The U.S. Department of Energy (DOE) Office of Legacy Management (LM) developed this *Community Involvement Plan* (CIP) to facilitate communication and encourage community involvement within Navajo Nation and Hopi communities surrounding the Tuba City, Arizona, Disposal Site. LM will use the community involvement activities outlined in this plan to ensure that community members are informed and provided opportunities to be involved.

LM plans to support public awareness of the Tuba City site by:

- ✦ Informing the public about current and planned activities related to the site.
- ✦ Educating the public about site activities.
- ✦ Correcting misperceptions about the site.
- ✦ Providing public access to site information, reports, and other documents.
- ✦ Promoting use of the LM website as a source of information.
- ✦ Participating in Navajo Nation fairs, STEM events, and community events.

LM will foster communication with Tuba City site stakeholders by:

- ✦ Participating in regular meetings with stakeholders.
- ✦ Sharing information.
- ✦ Remaining open to all input and suggestions.

LM used multiple information sources to develop this plan, including community interviews, activities currently being performed at the site, site files, and community meeting records.



LM presented to Diné Uranium Remediation Advisory Council (May 2019).



SECTION 2: SITE OVERVIEW

2.1: HISTORY

Rare Metals Corporation of America and its successor, El Paso Natural Gas Company, operated a uranium mill at the Tuba City site between 1956 and 1966. During 10 years of operation, the mill processed approximately 800,000 tons of uranium ore. Milling operations created low-level radioactive mill tailings. The tailings were conveyed in slurry from the mill to a nearby tailings impoundment. The mill's tailings impoundment and evaporation ponds covered a 55-acre area, and windblown tailings affected an additional 250 acres northeast of the mill site.

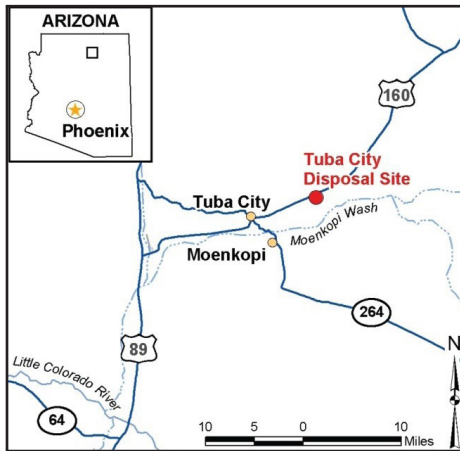
DOE began site surface remedial action in 1988. DOE moved and stabilized all uranium mill tailings from the on-site piles, debris from demolished mill buildings, and windblown tailings in an on-site, engineered disposal cell. The primary reason for stabilizing and covering the tailings and other mill-related debris was to reduce the risks from radon exposure within the community. DOE completed surface remediation in 1990.

Handling waste created during mill operations resulted in contaminated groundwater in the Navajo aquifer. The primary source of contamination is to the water that drained from the unlined tailings impoundment and process ponds and infiltrated into the subsurface. Groundwater contaminants with concentrations that exceed standards in Title 40 Code of Federal Regulations (CFR), Part 192 (40 CFR 192), "Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings," are molybdenum, nitrate, selenium, and uranium. High levels of sulfate, total dissolved solids, and chloride are also present in the groundwater. Although these constituents are not regulated in 40 CFR 192, their concentrations in groundwater are high enough to cause concern, and DOE, in collaboration with tribal agencies, established reclamation goals.



In 1990, DOE completed surface remediation at the former Rare Metals Corporation mill site (Photo taken circa 1960).

2.2: SITE DESCRIPTION AND LOCATION



Location of the Tuba City disposal site.

The Tuba City site is on the western part of the Navajo Nation, in close proximity to the Navajo residents and the Moenkopi Hopi community.

The site is approximately 5 miles east of Tuba City. Land near the site is used for grazing, and the Hopi community uses the water resources for dry and irrigated farming. The site is situated on top of the Navajo aquifer. Currently, the water is not used for nearby residences, and the people of Tuba City receive water from the Navajo Tribal Utility Authority wells. This water comes from a well in the bedrock aquifer approximately 1.5 miles northwest and hydraulically upgradient of the site.

The nearest surface water is located approximately 4,000 feet south of the site, where seeps are present along cliff bands that border the Moenkopi Wash. Surface water flow in Moenkopi Wash is seasonal. Navajo and Hopi residents may use the water for stock watering and agricultural diversions. Early site characterization efforts and ongoing annual monitoring have found no contamination from former milling operations in these seeps.



SECTION 3: COMMUNITY BACKGROUND

3.1: COMMUNITY PROFILE

The community of Tuba City is located on the western side of the Navajo Nation and is governed by a locally elected Chapter House. Moenkopi, a Hopi village, is located south of Tuba City. According to the 2020 census, Tuba City is the second largest Navajo tribal community on the Navajo Nation with a population of 8,611 people.

Racial makeup is:

- 93.3% Native American.
- 1.8% Hispanic or Latino.
- 4.7% Caucasian.
- 0.7% two or more races.
- 0.3% Asian or Pacific Islander.

Age distribution of the population shows:

- * 7.3% persons under 5 years.
- *27.6% person under 18 years.
- *11.2% person 65 years and over.

Tuba City's median household income is \$54,171. Approximately 24.8% of the population are below the poverty line.

Educational institutions in Tuba City include:

- Tuba City High School.
- Greyhills Academy High School.
- Tuba City Boarding School.
- Tuba City Elementary School.
- Tuba City Junior High School.
- Eagles Nest Intermediate School.
- Nizhoni Accelerated Academy.
- Diné College.



Education attainment in Tuba City:

- 14.8% have not graduated high school.
- 26.3% have a high school diploma or GED.
- 37.6% have some college or an associates degree.
- 19.2% have a bachelor's degree or higher.
- 2.1% have no schooling.

The community of Moenkopi, Arizona, is located next to Tuba City, off State Highway 160. Moenkopi is divided into the villages of Upper and Lower Moenkopi. According to the 2020 U.S. Census Bureau, Moenkopi has a population of 771 people.

The median household income in Moenkopi is \$17,458. Approximately 30.8% of the population are below the poverty line.¹

Educational institutions in Moenkopi include:

- Tuba City High School.
- Greyhills Academy High School.
- Tuba City Boarding School.
- Tuba City Elementary School.
- Tuba City Junior High School.
- Eagles Nest Intermediate School.
- Nizhoni Accelerated Academy.
- Diné College.
- Moenkopi Head Start.
- Hopi Junior Senior High School.



3.2: COMMUNITY INVOLVEMENT

By 1990, DOE completed all surface remediation, including disposal of residual radioactive material and debris, in compliance with U.S. Environmental Protection Agency (EPA) cleanup standards and regulations. LM remains involved in the community today by participating in technical meetings, open houses, and other outreach events. Per its mission, LM works and collaborates with affected communities to ensure the protection of human health and the environment. In-person meetings are opportunities for LM to discuss and address stakeholder concerns related to ongoing groundwater remediation activities, technical studies conducted on behalf of tribal agencies, and any potential community impacts.

Under a cooperative agreements, LM works with the Navajo Abandoned Mine Lands Reclamation/Uranium Mill Tailings Remedial Action (AML/UMTRA) Department and the Hopi Department of Natural Resources Department to conduct long-term surveillance and maintenance at the Tuba City disposal cell to ensure community and environmental safety. LM also works with Navajo Nation government programs to help identify and protect cultural resources.

In 2007, Congress directed DOE and other federal agencies — including the EPA, U.S. Nuclear Regulatory Commission, U.S. Bureau of Indian Affairs, U.S. Centers for Disease Control and Prevention, and the U.S. Department of Health and Human Services — to work collaboratively to address the legacy of uranium mines and former processing sites on the Navajo Nation. The federal agencies developed the 2008-2012 Five-Year Plan, which was the first coordinated effort by the federal government to address abandoned uranium mining on the Navajo Nation. A second Five-Year Plan was completed in 2014 and included a major objective to “Support community outreach and information sharing.” A Ten-Year Plan was released in February 2021. One primary directive to emerge from this planning included developing a network made up of tribal and federal organizations dedicated to community outreach and engagement with the Hopi and Navajo communities. This group, the Community Outreach Network, now shares tribal information and keeps the lines of communication open between all tribal and government entities.

Representatives from the Hopi Department of Natural Resources attend the Navajo-Hopi-DOE triannual meetings and are involved in site monitoring of the Tuba City disposal cell.



A representative from the Hopi Department of Natural Resources brought his grandson to see the drone flights (April 2022).



In June 2016, LM and the LM Strategic Partner, opened an outreach office in Window Rock, Arizona. The office provides a public space to learn about LM and the sites on the Navajo Nation, the Navajo Nation Ten-Year Plan, and the work done to address abandoned uranium mines and related issues on the Navajo Nation. LM and LMSP staff conduct community outreach and coordination on the four Legacy Management sites on the Navajo Nation. They are also responsible for science, technology, engineering and math (STEM) education and other outreach activities.

3.3: OUTREACH MATERIALS

LM provides informational materials at outreach events, including:

- ✦ Site fact sheets.
 - ✦ Tuba City, Arizona, Disposal Site.
 - ✦ Working with the Navajo Nation and Hopi Fact Sheet.
 - ✦ Window Rock, Arizona, Navajo Nation Community Outreach Network Office Fact Sheet.
 - ✦ Uranium and Radiation on the Navajo Nation Resource List.
- ✦ Community information sheets.
 - ✦ Tuba City, Arizona, Disposal Cell Aerial Survey 2022.
 - ✦ Tuba City, Arizona Disposal Site Drilling Project 2022.
- ✦ Gamma Goat coloring book.
- ✦ LM overview brochure.
- ✦ LM Sites on Navajo Nation Land brochure.
- ✦ LM Strategic Plan brochure.
- ✦ LM video detailing the work conducted on the Navajo Nation.
- ✦ Window Rock, Arizona, Outreach Office map.
- ✦ Community Outreach Network.
 - ✦ Uranium and Radiation on the Navajo Nation Resource List.
 - ✦ Information Sheet.



SECTION 4: COMMUNITY INVOLVEMENT STRATEGY

The goal of this strategy is to facilitate communication between community members and LM, and to provide opportunities for meaningful and active involvement by Navajo and Hopi communities in Tuba City site activities. The strategy is based on feedback from community involvement interviews, previous community meetings, and comments received from local officials.

4.1: COMMUNITY INVOLVEMENT ACTIVITIES

1. Information on current and proposed site activities	
<i>Activity 1A: Present information at Tuba City Chapter meetings.</i>	
Objective:	Present information regarding site activities as needed.
Method:	LM and LMSP representatives will provide verbal and written updates at Tuba City Chapter meeting and Moenkopi community meeting. Tools may include presentations, site information fact sheets, and the LM website.
Timing:	A minimum of four meetings a year.
<i>Activity 1B: Door-to-door notifications</i>	
Objective:	LM site manager and staff will provide in-depth information to tribal leadership and community members about site activities and the scientific and engineering rationale for activities.
Method:	Prior to the beginning of a non-routine project at the site, Public Affairs staff will travel door-to-door to the residences that surround the site and provide informational materials about the upcoming project. A minimum of one fluent Navajo-speaking person is a member of the team. The Public Affairs team will verbally invite Community Outreach Network members to help with door-to-door notifications.
Timing:	One to two weeks prior to the project beginning.
<i>Activity 1C: Stakeholder notification mailings</i>	
Method:	LM will email and mail information about upcoming site work to elected officials, community leaders, emergency personnel, and tribal partners.
Timing:	Two weeks to one month prior to the project beginning.



2. Timely outreach and information on community meetings, site open houses, and site tours.

Activity 2A: Post flyers in public locations about upcoming community meetings, site open houses, and site tours.

Objective:	LM will post information about community meetings, site open houses, and site tours.
Method:	Post meeting information at the Tuba City Chapter House and provide copies to Hopi Department of Natural Resources to share with Hopi Leadership; post office; local businesses; and tribal, state, and federal offices.
Timing:	As needed.

Activity 2B: Advertise on local radio stations, tribal newspapers, and newsletters.

Objective:	Provide public service announcements on community meetings, site activities, site open houses, and site tours as needed.
Method:	LM will contact KTNN and KUYI, place information ads in <i>The Navajo Times</i> , <i>Navajo-Hop Observer</i> , in Hopi newsletters with information announcing upcoming community meetings, quarterly updates, site open houses, and site tours; and establish a site point of contact for follow-up purposes as needed.
Timing:	First, 15 days prior and, then again, five days prior to site meetings, open houses, and site tours.

Activity 2C: Incorporate social media

Method:	Share public meetings, informational flyers, and videos with Navajo AML and Tuba City social media sites to build awareness with locally based followers.
Timing:	One day to one week before event occurs.

3. Special Events

Activity 3A: Participate in local events.

Objective:	Participate in local events, such as fairs and flea markets, distributing information about LM and the disposal site.
Timing:	Yearly and/or as events occur.



TOOLS FOR SHARING INFORMATION

<p>Verbal/ written updates</p>	<p>Door-to-door</p>	<p>Mailings</p>	<p>Flyers</p>	<p>Radio/ newspapers/ newsletters</p>	<p>Social media</p>	<p>Local events</p>
<p>▼</p> <p>Presented at Tuba City Chapter meetings. Minimum four per year.</p>	<p>▼</p> <p>One to two weeks prior to start of project.</p>	<p>▼</p> <p>Two weeks to one month prior to start of project.</p>	<p>▼</p> <p>As needed.</p>	<p>▼</p> <p>First 15 days prior and, then again, five days prior to site meetings, open houses, and site tours.</p>	<p>▼</p> <p>One day to one week before event occurs.</p>	<p>▼</p> <p>Yearly and/or as events occur.</p>



APPENDIX A: LM REGIONAL CONTACTS

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