



MAY | **2024**

Community Involvement Plan

Tuba City, Arizona, Disposal Site



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SECTION 1: OVERVIEW

The U.S. Department of Energy Office of Legacy Management developed this Community Involvement Plan to facilitate communication and encourage involvement within Navajo Nation and Hopi communities around the Tuba City, Arizona, Disposal Site. LM will use the community involvement activities outlined in this plan to inform community members and provide them opportunities to get involved.

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

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

LM will support communication with Tuba City site stakeholders by:

- ✦ Participating in regular meetings with stakeholders.
- ✦ Sharing information through in-person outreach activities.
- ✦ Being open to all input and suggestions.

LM used multiple information sources to develop this plan, including community feedback through outreach, site files, and community meeting records, and made every effort to make sure the information in this CIP is accurate.



LM presenting to Tuba City Hopi and Navajo Tribal partners.

SECTION 2: SITE OVERVIEW

2.1: HISTORY

Rare Metals Corporation 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 about 800,000 tons of uranium ore. Milling operations created low-level radioactive mill tailings (sandy waste material). The tailings were carried in slurry from the mill to a nearby impoundment. The mill's tailings impoundment and evaporation ponds covered a 55-acre area, and windblown tailings affected 250 more acres northeast of the mill site.

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

Handling waste from mill operations led to contaminated groundwater in the Navajo aquifer, which is the drinking-water source for communities in the western part of the Navajo Nation. The main contamination source is from water that drained from the unlined tailings impoundment and process ponds and passed into the subsurface. Groundwater contaminants with concentrations higher than standards in Title 40 *Code of Federal Regulations*, 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 40 CFR does not regulate these, their groundwater concentrations are high enough to cause concern, and DOE, in collaboration with tribal agencies, set reclamation goals.



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

2.2: SITE DESCRIPTION AND LOCATION



Location of the Tuba City, Arizona, Disposal Site.

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

The site is about 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 located on top of the Navajo aquifer, the drinking-water source for Navajo communities in the western part of the Navajo Nation. Currently, nearby residences do not use the water, and the people of Tuba City get their water from Navajo Tribal Utility Authority wells. This water comes from a well in the bedrock aquifer about 1.5 miles northwest and hydraulically upgradient of the site.

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

SECTION 3: COMMUNITY BACKGROUND

3.1: COMMUNITY PROFILE

The Tuba City community is located on the western side of the Navajo Nation and is governed by a locally elected Chapter House. Moenkopi, a Hopi village, is 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 with this racial makeup:

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

Age distribution of the population shows¹:

- ✦ 28% are under 18 years old.
- ✦ 61% are between 18-64 years old.
- ✦ 11% are 65 years and older.

Tuba City's median household income is \$54,171. About 24.8% of the population live 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.
- ✦ Nizhoni Accelerated Academy.
- ✦ Diné College.

¹ <https://censusreporter.org/profiles/16000US0476010-tuba-city-az/>

Educational achievement in Tuba City:

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

The community of Moenkopi, Arizona, is home to the Hopi Tribe. It is next to Tuba City, off State Highway 160. Moenkopi is split into the villages of Upper and Lower Moenkopi. According to 2020 census data, Moenkopi has a population of 771 people.

The median household income in Moenkopi is \$51,518. About 40.4% of the population lives below the poverty line.²

Educational institutions for 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.
- ✦ Moenkopi Day School.

² https://data.census.gov/profile/Moenkopi_CDP,_Arizona?g=160XX00US0447330

3.2: COMMUNITY INVOLVEMENT

By 1990, DOE finished all surface remediation, including residual radioactive material and debris disposal, compliant with U.S. Environmental Protection Agency cleanup standards and regulations. LM stays 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 about ongoing groundwater remediation activities, technical studies done on behalf of tribal agencies, and any potential community impacts.

Under a cooperative agreement, LM works with the Navajo Nation Abandoned Mine Lands Reclamation/ Uranium Mill Tailings Remedial Action Department and the Hopi Department of Natural Resources to conduct long-term surveillance and maintenance at the Tuba City disposal cell to keep the community and environment safe. LM also works with several Navajo nation departments to protect cultural and biological resources. LM includes Hopi DNR and Navajo AML in Tuba City site outreach work.

In 2007, Congress directed DOE and other federal agencies — including the EPA, the U.S. Nuclear Regulatory Commission, the U.S. Bureau of Indian Affairs, the 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 federal government's first coordinated effort 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 main directive to come from this plan included developing a network of tribal and federal organizations dedicated to community outreach and engagement with the Hopi and Navajo communities. This group, called the Community Outreach Network, now shares tribal information and keeps the lines of communication open between all tribal and government entities.



A Hopi Department of Natural Resources representative brought his grandson to see the drone flights.

In June 2016, LM and the LM Support 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 work done to address abandoned uranium mines and related issues on the Navajo Nation. LM and LMSP staff provide community outreach and coordination on LM's four sites on the Navajo Nation. They are also responsible for science, technology, engineering, and math education and other outreach activities.

3.3: OUTREACH MATERIALS

LM provides informational materials at outreach events, all of which are also on LM's website:

- ✦ Site fact sheets.
 - ✦ Mexican Hat, Utah, Disposal Site fact sheet.
 - ✦ Monument Valley, Arizona, Processing Site fact sheet.
 - ✦ Shiprock, New Mexico, Disposal Site fact sheet.
 - ✦ Tuba City, Arizona, Disposal Site fact sheet.
 - ✦ Working with the Navajo Nation and Hopi Tribe fact sheet.
 - ✦ Window Rock, Arizona, Navajo Nation Community Outreach Network Office fact sheet.
- ✦ Women of the Manhattan Project coloring book.
- ✦ LM overview brochure.
- ✦ LM Strategic Plan brochure.
- ✦ LM video about work done on the Navajo Nation.
- ✦ Window Rock, Arizona, Outreach Office map.
- ✦ Uranium and Radiation on the Navajo Nation resource list.
- ✦ LM children's brochure.
- ✦ Community Outreach Network information sheet.

Many Tuba City site projects require specific project information sheets that detail the work being done. LM distributes and shares these information sheets with the Chapter House, local businesses, and residences near the site. The same materials are shared with Hopi Leadership and members of the Hopi Villages.



SECTION 4: COMMUNITY INVOLVEMENT STRATEGY

The goal of this strategy is to facilitate communication between community members and LM and 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, community meetings, and comments from local officials.

4.1: COMMUNITY INVOLVEMENT ACTIVITIES

1. Share information about current and proposed site activities	
<i>Activity 1A: Present information at Tuba City Chapter meetings.</i>	
Objective:	Present information about site activities as needed.
Method:	LM and LMSP representatives will provide verbal and written updates at the Tuba City Chapter meeting and Moenkopi community meeting. Tools may include presentations, site information fact sheets, and the LM website.
Timing:	At least three meetings a year.
<i>Activity 1B: Notify residents door to door.</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:	Before starting a nonroutine site project, Public Affairs staff will travel door to door to residences surrounding the site and provide informational materials about the upcoming project. At least 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 before a project starts.
<i>Activity 1C: Send stakeholder notification mailings.</i>	
Method:	LM will email and mail information about upcoming site work to elected officials, community leaders, emergency personnel, and federal and tribal partners.
Timing:	Two weeks to one month before the project starts.



2. Perform timely outreach and share information about 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 and in tribal newspapers and newsletters.

Objective:	Provide public service announcements and place paid advertising about community meetings, site activities, site open houses, and site tours, as needed.
Method:	LM will contact KTNN and KUYI; place ads in <i>The Navajo Times</i> , <i>Navajo-Hopi Observer</i> , and in Hopi newsletters announcing upcoming community meetings, quarterly updates, site open houses, and site tours; and establish a site point of contact for follow-up, as needed.
Timing:	Up to one month before a project begins.

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 local followers.
Timing:	One day to one week before an event takes place.



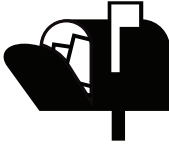




3. Special Events

Activity 3A: Participate in local events.

Objective:	Participate in local events, such as fairs and STEM events and hand out information about LM and the disposal site.
Timing:	Annually and/or when events take place.



4.2: COMMUNITY INVOLVEMENT ACTIVITIES TIME FRAME SUMMARY

TOOLS FOR SHARING INFORMATION						
						
Verbal and written updates	Door-to-door notifications	Mailings	Flyers	Radio, newspapers, and newsletters	Social media	Local events
▼	▼	▼	▼	▼	▼	▼
Present at Tuba City Chapter meetings, at least four times a year	One to two weeks before a project starts	Two weeks to one month before a project starts	As needed	Up to one month before a project begins	One day to one week before an event takes place	Annually and/or when events take place

SECTION 5: OFFICE OF LEGACY MANAGEMENT REGIONAL CONTACTS

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SECTION 5: OFFICE OF LEGACY MANAGEMENT REGIONAL CONTACTS

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