



MAY | **2024**

# Community Involvement Plan

Shiprock, New Mexico, 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 community involvement with the Shiprock, New Mexico, 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 Shiprock site through the following activities:

- ✦ Inform the public about current and planned site-related activities.
- ✦ Educate the public about site activities.
- ✦ Provide public access to site information, reports, and other documents.
- ✦ Participate in Navajo Nation fairs, STEM events, and community events.
- ✦ Continue to coordinate with the Shiprock Chapter House to maintain the information kiosk that shares Shiprock disposal cell history and promotes long-term information sharing.

LM will support communication with Shiprock 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 interviews, site files, and community meeting records, and made every effort to make sure the information in this CIP is accurate.



## SECTION 2: SITE OVERVIEW

### 2.1: HISTORY

In 1954, Kerr-McGee built a mill to process locally mined uranium and vanadium. In 1963, Kerr-McGee sold the milling operation to the Vanadium Corporation of America, which ran the site until 1968. The 14-year milling operations produced waste, including radioactive tailings and sludge made up of acids and uranium-processing products that remained on-site after operations stopped. The mill, ore storage area, and raffinate ponds held the spent mill-process liquids.

In 1983, DOE and the Navajo Nation entered into an agreement to clean up the site. The agreement included about 230 acres leased from the Navajo Nation. By September 1986, DOE combined and stored all tailings and contaminated materials in a cell built on top of the old tailings piles.

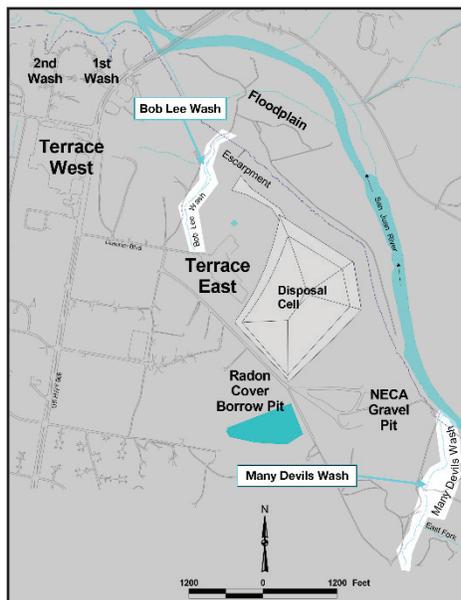
### REGULATORY SETTING

Congress passed the Uranium Mill Tailings Radiation Control Act in 1978. As a result, DOE remediated 24 inactive uranium-ore processing sites under the Uranium Mill Tailings Remedial Action Project according to standards set by the U.S. Environmental Protection Agency in Title 40 *Code of Federal Regulations*, Part 192. DOE stored the radioactive materials in U.S. Nuclear Regulatory Commission-approved disposal cells. The NRC general license for UMTRCA Title I sites is established in 10 CFR 40.27. The Shiprock site was included under the general license in 1996.



*Aerial view of the Shiprock Mill, circa 1954.*

## 2.2: SITE DESCRIPTION AND LOCATION



*Location of the Shiprock, New Mexico, Disposal Site and the three surrounding bodies of water: Many Devils Wash, Bob Lee Wash, and the San Juan River.*

The Shiprock site is on the Navajo Nation in the northwest corner of New Mexico. Land near the site is used for grazing. The San Juan River, which is used for industrial and agricultural purposes, is the main water source in the area. Nearby residences get their water from the Navajo Tribal Utility Authority.

The disposal cell is an asymmetrical pentagon with a maximum side length of 1,800 feet and a minimum side length of 800 feet. The cell takes up about 77 acres of the 105-acre site, and a posted wire fence surrounds the cell. The Shiprock disposal cell cover is a multilayer system that surrounds and protect the contaminated materials.

The disposal cell cover is made up of: 1) a low-permeability radon barrier (the first layer placed over compacted tailings) made of compacted sandy, silty soils; 2) a layer of granular bedding material that serves as a capillary break; and 3) a loose rock (riprap) erosion-protection layer. These cover materials promote fast precipitation runoff to reduce leachate. Rock-lined drainage ditches redirect stormwater runoff from the disposal cell to a rock-lined energy-dissipation area.

Two minor drainages, Bob Lee Wash and Many Devils Wash, bound the site geographically on the terrace, where the disposal cell and former mill site are located. At the northeast terrace, a steep escarpment, or slope — about 50 to 60 feet high — forms the boundary between the San Juan River floodplain and the terrace area. The horizontal distance from the disposal cell to the San Juan River is about 600 feet.

The terrace groundwater system is believed to be the result of past milling operations and irrigation. The alluvial aquifer is north of the disposal cell in the floodplain between the San Juan River and the base of the escarpment. In 1961, the original site owners drilled a test hole on the terrace about a half-mile northwest of the disposal cell area. This hole, drilled to a depth of 1,850 feet, was not capped. Free-flowing spring water flows from this hole, now known as Well 0648, at a rate of about 64 gallons per minute across the terrace into Bob Lee Wash, which drains to the floodplain and eventually into the San Juan River. Water from Well 0648 supplies more than half the groundwater volume in the floodplain. The floodplain aquifer also gets water from the San Juan River and the terrace groundwater system.

Milling operations left contaminants in the terrace groundwater system and the floodplain alluvial aquifer. Contaminated groundwater from the terrace seeped into the upper few feet of the underlying Mancos Shale bedrock and flowed into the alluvial aquifer on the floodplain.

Terrace groundwater also surfaced as seeps, or pools, in several places at the slope edge and in Bob Lee Wash. The concerning contaminants are ammonia, manganese, nitrate, selenium, strontium, sulfate, and uranium.

## SECTION 3: COMMUNITY BACKGROUND

### 3.1: COMMUNITY PROFILE

According to the 2020 census, the Shiprock community has a population of 7,718 people with this racial makeup:

- ✦ 95.1% are Native American.
- ✦ 1.8% are Caucasian.
- ✦ 1.3% are Asian or Pacific Islander.
- ✦ 0.3% are Black or African American.

The age distribution is:

- ✦ 25% are under 18 years old.
- ✦ 12.8% are 65 or older.

Shiprock's median household income is \$36,747 and per-capita income for the census-designated area is \$17,243. More than a quarter of residents — 26.3% — live below the poverty line.

Educational institutions that serve the Shiprock area include:

- ✦ Shiprock High School.
- ✦ Northwest High School.
- ✦ Career Prep High School.
- ✦ Tsé Bit A'í Middle School.
- ✦ Mesa Elementary School.
- ✦ Nizhoni Elementary School.
- ✦ Eva B. Stokely Elementary School.
- ✦ Atsá Biyáázh Community School.
- ✦ Diné College.
- ✦ San Juan College.
- ✦ Navajo Technical University.

Educational achievement in Shiprock:

- ✦ 14.2% have not graduated from high school.
- ✦ 26.5% have a high school diploma or GED.
- ✦ 45.4% have some college or an associate degree.
- ✦ 12.9% have a bachelor's degree or higher.
- ✦ 1.1% have no schooling.<sup>1</sup>

<sup>1</sup> Sources: U.S. Census Bureau and TownCharts.



### 3.2: COMMUNITY INVOLVEMENT

By September 1986, DOE finished all surface remediation, including residual material and debris disposal, compliant with 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 gather with stakeholders to talk and address their 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/UMTRA Department to conduct long-term surveillance and maintenance at the four sites on Navajo Nation<sup>2</sup> to keep the community and environment safe. LM also works with several Navajo Nation departments to protect cultural and biological resources.



*Shiprock, New Mexico, residents asking questions during a public meeting.*

In 2007, Congress directed DOE and other federal agencies — including EPA, NRC, 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.

<sup>2</sup> In addition to the Shiprock, New Mexico, Disposal Site, the three sites on Navajo Nation are: Mexican Hat, Utah, Disposal Site; Monument Valley, Arizona, Processing Site; and Tuba City, Arizona, Disposal Site.

One main directive to come from this plan included developing a network made up of tribal and federal organizations dedicated to community outreach and engagement with Navajo communities. This group, called the Community Outreach Network, now shares tribal information and keeps the lines of communication open between all tribal and governmental entities.

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 its sites on the Navajo Nation, the Navajo Nation Ten-Year Plan, and work done to address uranium issues on the Navajo Nation.

The Navajo Nation Public Affairs team provides community outreach and support to LM in coordination with Community Outreach Network members, tribal and federal partners, and Navajo Nation leadership. The Public Affairs team uses various methods to share information with community leadership and community members.

### 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 Shiprock 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.

## SECTION 4: COMMUNITY INVOLVEMENT STRATEGY

The goal of this strategy is to facilitate communication between community members and LM, while providing opportunities for meaningful and active involvement by the Navajo people in Shiprock site activities. The strategy is based on feedback from community members, community meetings, and comments from local officials.

### 4.1: COMMUNITY INVOLVEMENT ACTIVITIES

#### 1. Share information about current and proposed site activities.

##### *Activity 1A: Present information at Shiprock Chapter meetings.*

Objective:	Present information about site activities.
Method:	LM representatives will offer to present an update at Shiprock Chapter meetings. Tools may include presentations, site information fact sheets, and LM's website to provide detailed site information.
Timing:	Quarterly or at stakeholders' request.

##### *Activity 1B: Notify residents door to door.*

Method:	Before starting nonroutine site projects, Public Affairs staff will go door to door to residences surrounding the site and provide informational materials about the upcoming project. At least one team member is a fluent Navajo-speaking person.
Timing:	One to two weeks before a project begins.

##### *Activity 1C: Hold open houses and site tours.*

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 before a project begins.

#### 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, open houses, and site tours.*

Objective:	Post information about community meetings, open houses, and site tours.
Method:	LM will post meeting information at the Shiprock Chapter House public information board, local businesses, and government offices (tribal, state, and federal).
Timing:	As needed.



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

Objective:	Provide public service announcements and paid advertising for community meetings, quarterly updates, open houses, and site tours, as needed.
Method:	LM will buy advertising with <i>The Navajo Times</i> , KGAK (Gallup, New Mexico), KNDN (Farmington, New Mexico), and KTNN (Window Rock, Arizona) to announce upcoming community meetings, quarterly updates, open houses, and site tours.
Timing:	15-30 days before site meetings, open houses, site tours, and project work, as needed.

*Activity 2C: Post on social media.*

Method:	LM will share public meetings, informational flyers, and videos with Navajo AML/UMTRA and Shiprock social media sites to build awareness with local followers.
Timing:	One day to one week before an event takes place.

**3. Participate in special events.***Activity 3A: Participate in local events and set up information booths.*

Objective:	LM will participate in local events, such as fairs and flea markets, and shares information about LM and the disposal site.
Timing:	As needed.



*LM public affairs kiosk at a Shiprock flea market to share information with community members about a drilling project.*

4.2: COMMUNITY INVOLVEMENT ACTIVITIES TIME FRAME SUMMARY

TOOLS FOR SHARING INFORMATION						
						
<b>Verbal and written updates</b>	<b>Door-to-door notifications</b>	<b>Mailings</b>	<b>Flyers</b>	<b>Radio, newspapers, and newsletters</b>	<b>Social media</b>	<b>Local events</b>
▼	▼	▼	▼	▼	▼	▼
Presented at Shiprock 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 event takes place	Annually and/or when events take place

**SECTION 5: OFFICE OF LEGACY MANAGEMENT REGIONAL CONTACTS**

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*LM site tour with Shiprock Chapter House leadership and Navajo Nation Abandoned Mine Lands Department staff.*