Introduction

The Uranium Mill Tailings Radiation Control Act (UMTRCA) of 1978 (Public Law 95-604) is a federal law that provides for the safe and environmentally sound disposal, long-term stabilization, and control of uranium mill tailings in a manner that minimizes or eliminates radiation health hazards to the public. The U.S. Department of Energy (DOE) remediated 22 inactive uranium-ore-processing sites under the Uranium Mill Tailings Remedial Action Project in accordance with standards promulgated by the U.S. Environmental Protection Agency (EPA) in Title 40 Code of Federal Regulations (CFR), “Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings” (40 CFR 192). The radioactive materials were encapsulated in disposal cells approved by the U.S. Nuclear Regulatory Commission (NRC).

UMTRCA Title I Disposal and Processing Sites

For UMTRCA Title I disposal sites managed by DOE’s Office of Legacy Management (LM), DOE becomes a licensee to NRC. Inspection, reporting, and record-keeping requirements are defined in 10 CFR 40.27, “General License for Custody and Long-Term Care of Residual Radioactive Material Disposal Sites.” The general license for long-term custody is indefinite in duration. Usually, title for the land is assigned to an agency of the federal government, and the land is administratively withdrawn from unrestricted public use. Sites located on tribal land revert to tribal control, and DOE obtains a site access agreement with the tribe that allows DOE to fulfill its custodial responsibilities.

Title I of UMTRCA designated 22 inactive uranium-ore-processing sites for remediation. Remediation of these sites resulted in the creation of 19 disposal cells that contain encapsulated uranium mill tailings and associated contaminated material. The engineered Title I disposal cells collectively contain approximately 40 million cubic yards of low-level radioactive material.

Residual radioactive material was moved from some of the Title I processing sites to offsite disposal locations. NRC does not require a license for remediated processing sites that do not have disposal cells, but NRC is the regulator of contaminated groundwater remains. Groundwater compliance action plans, with compliance strategies that range from natural flushing to active remediation, have been or are being developed by DOE for former processing sites that have contaminated groundwater. These plans require approval by NRC and concurrence by the state and Native American tribe (when applicable). To date, groundwater remedies have been approved and implemented at several former uranium-ore-processing sites.

EPA established standards for UMTRCA remedial action, cell performance, and groundwater quality in 40 CFR 192. Upon NRC concurrence that remedial action has been completed and acceptance of the site-specific long-term surveillance plan, each disposal site comes under the general license for long-term care by DOE. If former ore-processing activities resulted in groundwater contamination at a site, NRC will accept only the surface improvements under the general license; the site will not be fully licensed until groundwater quality meets the applicable regulations. The NRC license mandates annual inspections of the disposal cells.

All but one of the Title I disposal sites are under the general license. A portion of the cell at LM’s Grand Junction, Colorado, Disposal Site will be left open to receive additional contaminated materials until it is filled to capacity or until 2023, whichever comes first.

LM currently manages the following Title I disposal and processing sites:

- Ambrosia Lake, New Mexico, Disposal Site
- Burrell, Pennsylvania, Disposal Site
- Canonsburg, Pennsylvania, Disposal Site
- Durango, Colorado, Disposal Site
- Durango, Colorado, Processing Site
- Falls City, Texas, Disposal Site
- Grand Junction, Colorado, Disposal Site
- Grand Junction, Colorado, Processing Site
- Green River, Utah, Disposal Site
- Gunnison, Colorado, Disposal Site
- Gunnison, Colorado, Processing Site
- Lakeview, Oregon, Disposal Site
- Lakeview, Oregon, Processing Site
- Lowman, Idaho, Disposal Site
- Maybell, Colorado, Disposal Site
- Mexican Hat, Utah, Disposal Site
- Monument Valley, Arizona, Processing Site
- Naturita, Colorado, Disposal Site
- Naturita, Colorado, Processing Site
- New Rifle, Colorado, Processing Site
Old Rifle, Colorado, Processing Site  
Rifle, Colorado, Disposal Site  
Riverton, Wyoming, Processing Site  
Salt Lake City, Utah, Disposal Site  
Salt Lake City, Utah, Processing Site  
Shiprock, New Mexico, Disposal Site  
Slick Rock, Colorado, Disposal Site  
Slick Rock, Colorado, Processing Sites  
Spook, Wyoming, Disposal Site  
Tuba City, Arizona, Disposal Site

UMTRCA Title II Disposal Sites

Uranium-ore-processing sites addressed by Title II of UMTRCA were active when the act was passed in 1978. These sites were commercially owned and regulated under an NRC license. For license termination, the owner conducts an NRC-approved reclamation of any onsite radioactive waste remaining from uranium-ore-processing operations. The site owner also ensures full funding for inspections and, if necessary, ongoing maintenance. DOE then accepts title to a site for long-term custody and care. DOE administers Title II sites under the provisions of a general NRC license granted under 10 CFR 40.28, “General License for Custody and Long-Term Care of Uranium or Thorium Byproduct Materials Disposal Sites.”

LM currently manages six UMTRCA Title II sites. The number will increase as ongoing site reclamations are completed. Ultimately, LM may manage as many as 27 UMTRCA Title II sites.

LM currently manages the following Title II disposal sites:
- Bluewater, New Mexico, Disposal Site
- Edgemont, South Dakota, Disposal Site
- L-Bar, New Mexico, Disposal Site
- Maybell West, Colorado, Disposal Site
- Sherwood, Washington, Disposal Site
- Shirley Basin South, Wyoming, Disposal Site

Contacts

Information about the DOE Office of Legacy Management is available at [http://energy.gov/llm](http://energy.gov/llm).

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