



New Mexico Environment Department

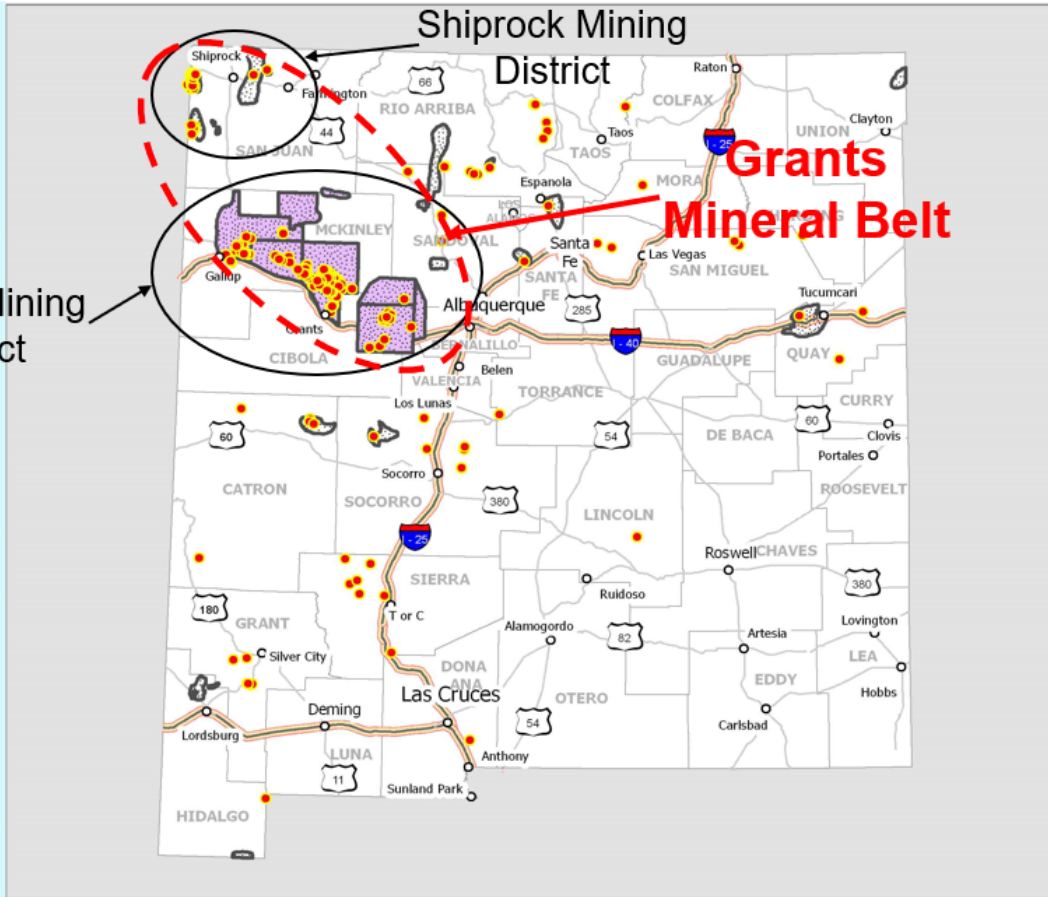
Uranium Mine and Mill Cleanup
Miori Harms, Uranium Mine Reclamation Coordinator
August 1, 2024
Indian Affairs Committee



Former Uranium Mine Sites

New Mexico Grants Uranium Belt and State-wide Distribution of Abandoned Uranium Mines (AUM)

Grants Mining District

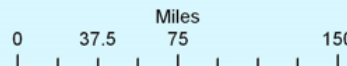
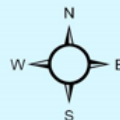


Federal: 66
State: 7
Private: 76
Tribal: 96
Mixed: 16
Total: 261

Created by New Mexico Mining & Minerals Division for NM Environment Dept, January 2009

North American Datum 83
Universal Transverse Mercator
NM Zone 13

Data:
Mining & Minerals Div. (NM Energy, Minerals & Nat. Res. Dep.),
New Mexico Bureau of Geology and Mineral Resources;
New Mexico Resource GIS Program (<http://rgis.nm.edu>)



1:4,113,602



HB 164 (NMSA 9-7A-16)

NMED Activities

- ❑ Strategic Plan
- ❑ Centralized Data Repository (Database & Dashboard)
- ❑ Consultation and Coordination
- ❑ DOE, EPA, NRC, BLM, USFS, Communities, NGO, Tribal
- ❑ Reclamation Activities on State Permit Sites
- ❑ Workforce Development
 - ❑ Economic Development Dept.
 - ❑ Dept. of Workforce Solutions
 - ❑ Industry
 - ❑ Intern hiring

EMNRD Activities

- ❑ Strategic Plan
- ❑ Centralized Data Repository (Database & Dashboard)
- ❑ Consultation and Coordination
- ❑ DOE, EPA, NRC, BLM, USFS Communities, NGO, Tribal
- ❑ Reclamation Activities on State Permit Sites
- ❑ Abandoned Uranium Mine Field Site Visits
- ❑ Technical Data Review & Site Inventory and Assessments



Formerly Operating Uranium Mine and Mill Sites Dashboard

A collaborative project with



And



For Dashboard Instructions: [Click Here](#)
For Data Sources: [Click Here](#)

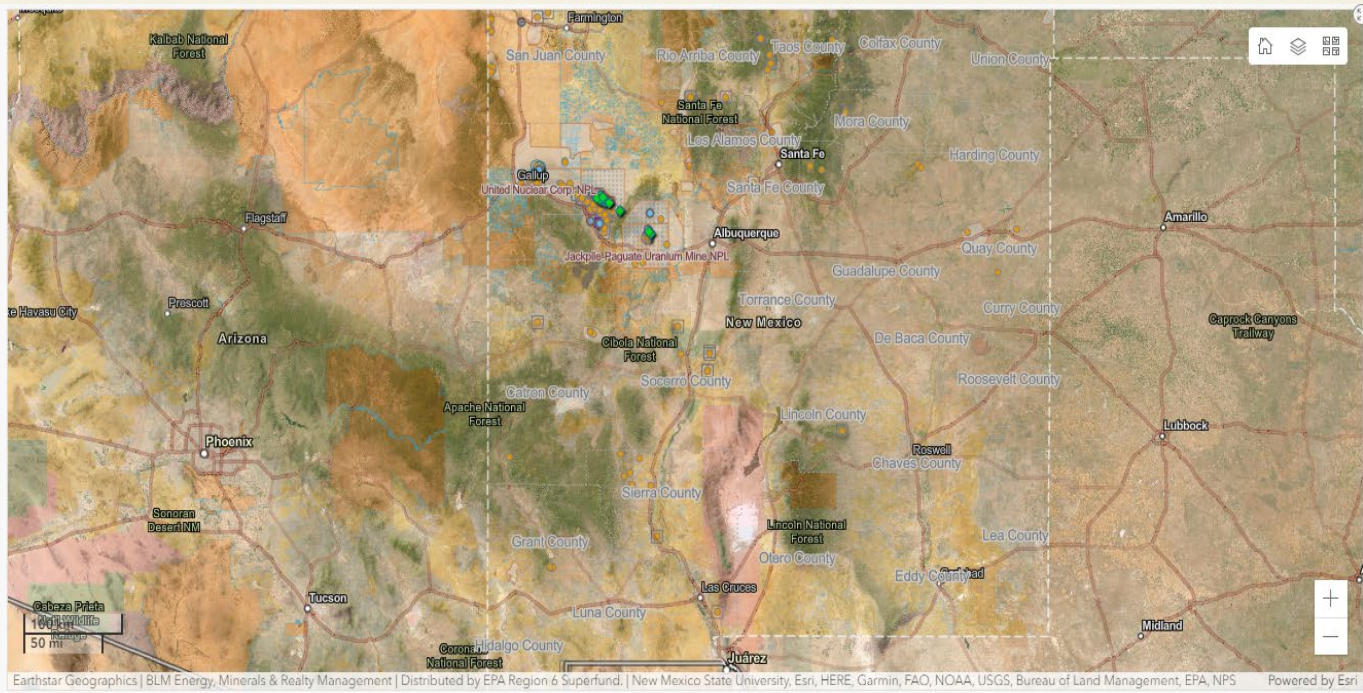
This map shows locations of former uranium mine and mill sites in NM.

- Detailed information is shown by clicking on a point on the map. The pop up menu will display data about map features.
- Zoom or pan the map to see number mines and mills in the extent view.
- Charts can be expanded for a better view; click on the circle in upper right of the chart rectangle. To minimize, click on the circle again.

More Information

- What is a DRUM Site? [Click Here](#)
- What is a Tronox Mine? [Click Here](#)
- What is a Superfund Site? [Click Here](#)
- What is the NPL? [Click Here](#)

No warranty or representation is made, expressed or implied, about the accuracy,



Map Legend

- Formerly Operating Uranium Mine Under a Reclamation Permit (Green diamond)
- Formerly Operating Uranium Mill (Blue circle)
- Formerly Operating Uranium Mine (Orange circle)
- Formerly Operating Uranium Mine Superfund National Priorities List (NPL) Sites (Purple square)
- Formerly Operating Uranium Mine Under Tronox Settlement (Light blue circle)
- EPA Region
 - Region 6 (Red circle)
 - Region 9 (Blue circle)
- Formerly Operating Mine Under Defense Related Uranium Mine Program (White square)
- Uranium Superfund Site Boundaries (White square)

Former Uranium Mines

261

Number of features in extent shown.

Former Uranium Mills

8

Number of features in extent shown.





HB 164 (NMSA 9-7A-16)

Other Coordinating State Agencies

- ❑ Dept. of Cultural Affairs
- ❑ Dept. of Game and Fish
- ❑ Dept. of Health
- ❑ Dept. of Transportation
- ❑ Dept. of Workforce Solutions
- ❑ Dept. of Indian Affairs
- ❑ Economic Development Dept.
- ❑ Office of Natural Resources Trustee
- ❑ Office of the State Engineer
- ❑ State Land Office

Section 27 Temporary Repository





HB 164 (NMSA 9-7A-17)

Uranium Mine Reclamation Revolving Fund

- To advance large scale cleanup, funding is required.
- No money has been appropriated for the Uranium Mine Reclamation Revolving Fund and the balance remains at zero dollars.
- In the future, funds received into the account may be used for site assessments, safeguarding, surface reclamation, groundwater remediation, and monitoring, where appropriate.



Erosion at J.J. No. 1 Mine



EMNRD Permitted Mine Sites

Mining & Minerals Division

- Mt. Taylor Mine
- St. Anthony Mine
- Section 27 Mine
- Section 12 Mine
- Old Stope Leach Mines
- J.J. No. 1 Mine



St. Anthony Mine Pit 1



Section 12 Mine





NMED Permitted Mine Sites

- J.J. No. 1 Mine (Abatement)
- Mt. Taylor Mine (DP and Abatement)
- Rio Algom and associated Old Stope Leach Mines (DPs and Abatement)
- Section 27 Mine (Abatement)
- St. Anthony Mine (Abatement)



Section 2 Radon and Weather Station



Department of Energy DRUM (Defense Related Uranium Mine) Program

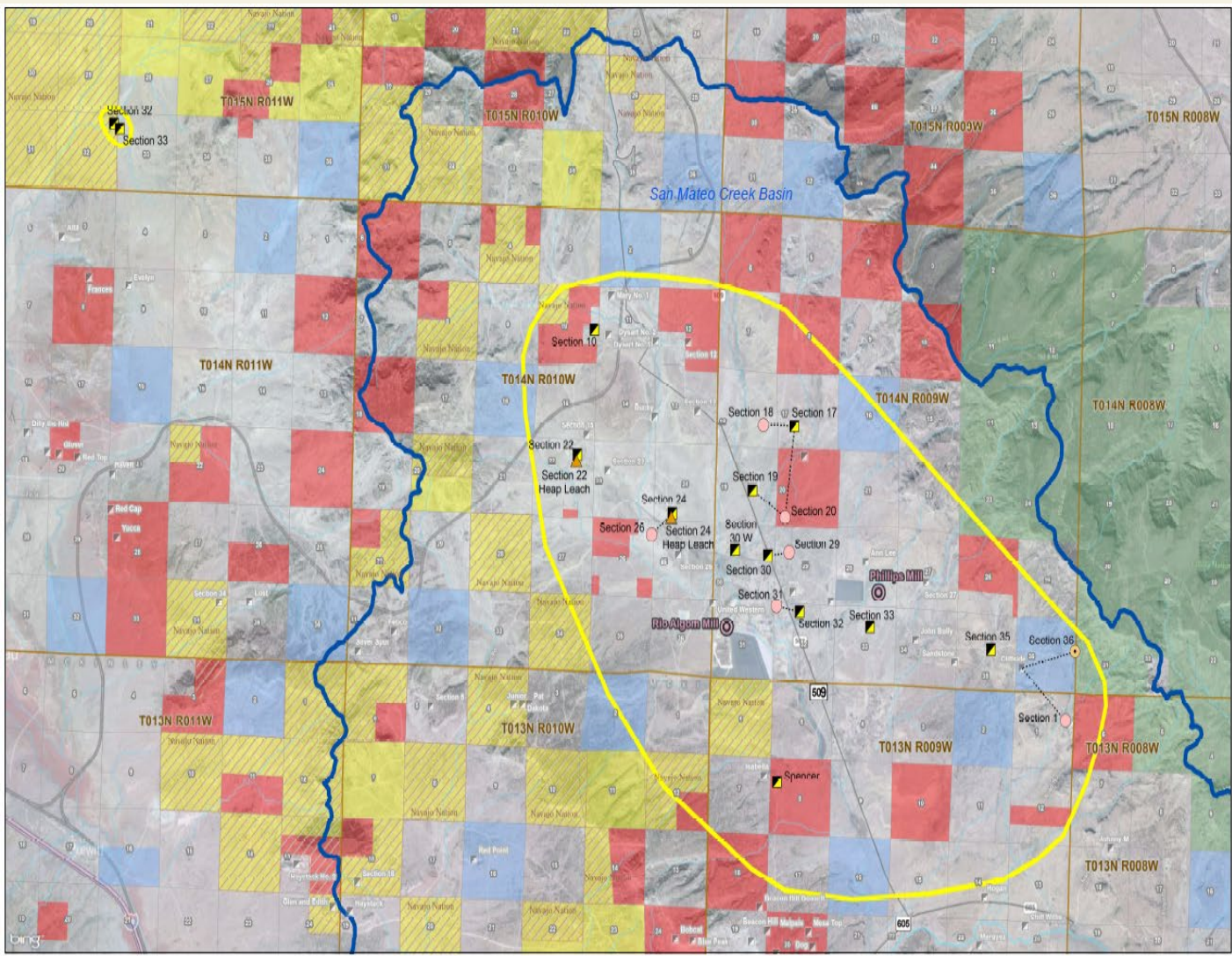
La Paloma DRUM Site



- Verification & Validation (V&V) work on federal and tribal lands complete or near complete
- V&V Work to begin on state and private lands in summer of 2024 and 2025, respectively

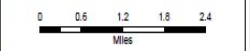


EPA Region 6 Tronox Settlement



Non-Tribal Tronox AUM Sites
San Mateo Creek Basin
McKinley County, NM

- ⊙ Uranium Mill
- Drill Holes
- ▲ Heap Leach
- Section Mined Through Shaft
- Vertical Shaft
- Non-Tronox AUM Site
- Related Mine Features
- Tronox Area of Interest
- San Mateo Creek Basin
- Township/Range
- Section
- Navajo Nation
- Land Ownership
- BLM
- Forest Service
- Tribal Land
- Private Land
- State Land



Sources:
Non-Tribal Tronox AUM Sites: EPA Region 6 & 9 Superfund, MMS and Non-Tronox AUM Sites: 2008 MMD AUM Inventory, Tronox Area of Interest: AS production/extent of study area, Related Mine Features: EPA Region 6 Superfund, Section/Township/Range: USGS PLSS, Bing Image, Navajo Nation: 2010 TIGERLine, Basin: USCA/NRCS.



DRAFT MAP ONLY

- 20 Mines in NM
- 12 Mines with surface expressions
- Spencer Mine reclaimed by MMD/AML with BLM funding
- NMED and MMD provide technical assistance



EPA Region 9 Tronox Sites



Red Rocks Repository
Proposed Location (view
looking south from landfill)

- ❑ Quivira Mine Waste
 - ❑ Church Rock 1
 - ❑ Church Rock 1 East
 - ❑ Church Rock 2
- ❑ Section 32/33 Mines
- ❑ EPA's preferred alternative for these sites in the Engineering Evaluation /Cost Analysis is disposal near the Red Rocks Landfill (Northwest NM Regional Solid Waste Authority property) ~5 miles outside of Thoreau, NM



National Priority List (NPL) and Superfund Alternative Approach Sites



Jackpile-Paguate Site

- Homestake Mill: NPL, Non-Tribal Land
- Jackpile-Paguate: NPL, Laguna Pueblo
- UNC Church Rock Mill: NPL, Navajo Nation, Non-Tribal Land
- Central Study Area: Superfund Alternative Approach Site, Non-Tribal Land



Other Uranium Work in the State

- ▶ Bureau of Land Management (BLM) Completed Cleanups (with NM Abandoned Mine Land Program)
 - ▶ Spencer and Barbara J 1, 2, and 3 Mines
- ▶ Forest Service (USFS) Completed Cleanups
 - ▶ Old La Jara, Taffy, Vallejo, and Zia Mines
 - ▶ San Mateo Mine – Responsible Party led under USFS oversight
- ▶ Other EPA sites in progress
 - ▶ Johnny M Mine – Removal Action
 - ▶ Haystack – Navajo Nation – Removal Action
 - ▶ Mac No. 1 and 2, Black Jack No. 1 and 2, Ruby 1, 2, 3, 4 – Navajo – Removal Action, Navajo Nation
 - ▶ Homestake Mines – Mary #1, Dysart #1, #2, Section 13, Section 15, Section 23, Section 25, and Section 32; Removal Action
 - ▶ United Nuclear Corporation – AnnLee, John Bully, and Sandstone



Uranium Mill Regulation

- ❑ **Ambrosia Lake Mill (Phillips)**
 - ❑ DOE long-term stewardship
- ❑ **Ambrosia Lake West Mill**
 - ❑ Responsible Party: Rio Algom Mining LLC
 - ❑ NRC Regulation, NMED (Discharge Permit and Abatement)
- ❑ **Bluewater Mill**
 - ❑ DOE long-term stewardship
- ❑ **Bokum Mill**
 - ❑ Decommissioned, never operated
- ❑ **Church Rock Mill**
 - ❑ Responsible Party: United Nuclear Corp.
 - ❑ NRC Regulation, EPA (NPL Superfund)
- ❑ **Homestake Mill**
 - ❑ Responsible Party: Homestake Mining Company of California
 - ❑ NRC Regulation, EPA (NPL Superfund), NMED (DP and Abatement)
- ❑ **L-Bar Mill**
 - ❑ DOE Long-term stewardship
- ❑ **Shiprock (Navajo) Mill**
 - ❑ DOE long-term stewardship

Homestake Mill

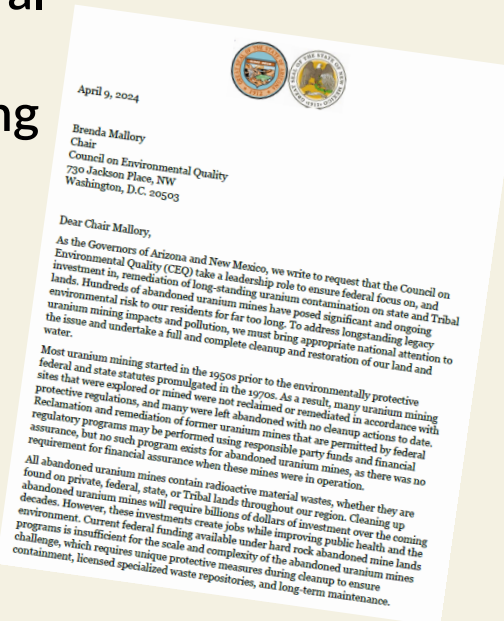




Engaging Beyond New Mexico

NM & AZ Joint Letter

- On April 8, 2024, the New Mexico and Arizona Governors sent a joint letter to the Council on Environmental Quality (CEQ) calling for coordination of federal agencies to address the largest roadblocks holding back uranium cleanup.



CEQ Responded

- On July 17, 2024, NM Secretary of Environment Department (James Kenney) and AZ Secretary of Department of Environmental Quality (Karen Peters) met with CEQ to discuss a path forward.
- Future conversations may discuss the potential for a federal working group.



**Thank you for your
time.**