



PROGRESS UPDATE: FEDERAL ACTIONS TO ADDRESS URANIUM CONTAMINATION ON NAVAJO NATION

2020-2029

U.S. Environmental Protection Agency • Region 9 • San Francisco, CA • July 2025

Introduction

In February 2021, the U.S. Environmental Protection Agency (EPA) issued the [Federal Actions to Address Uranium Contamination on Navajo Nation 2020–2029](#), also known as the "Ten-Year Plan." EPA issued a fact sheet in 2021 and 2022 to provide annual updates on the status of milestones outlined in that document. This fact sheet provides updates and includes a summary of 2023-2024 accomplishments, as well as 2025 focus areas.



U.S. Environmental Protection Agency Update



EPA contractors load contaminated soil onto a truck in preparation for transport to Deer Trails landfill in Colorado.

From January 2023 through December 2024, EPA made significant progress in advancing the cleanup of abandoned uranium mines (AUMs) on the Navajo Nation. This included cleanup of the Cove Transfer Stations 1 and 2 in the Northern Region of the Navajo Nation, which entailed excavating approximately 20,000 cubic yards of mine waste from the transfer stations within the Cove community and transporting material to the Deer Trails Subtitle C landfill in Colorado. Additionally, EPA issued cleanup decisions for eight mine sites. One of these included the first site in the Western Region of EPA contractors load contaminated soil onto a truck in preparation for transport to Deer Trails landfill in Colorado. Navajo Nation ("Charles Huskon #12"), which will involve the on-site closure of approximately 16,000 cubic yards of mine waste in 2026. The other seven mine sites were in the Eastern Region of Navajo Nation. With these eight clean up actions, EPA will be cleaning up over one million cubic yards of mine waste. Combining these actions with previously selected actions, the total waste volume addressed amounts to approximately 20% of the waste on Navajo Nation. This process involved evaluating cleanup alternatives, significant community outreach to solicit comments, and government- to-government consultation.

EPA added the Lukachukai Mountain Mining District to the National Priorities List (NPL) in March 2024. This NPL site encompasses 88 mines representing approximately one million cubic yards of mine waste. This includes 11 additional mines, not previously covered under existing settlement agreements. Finally, EPA initiated consent decree negotiations with United Nuclear Corporation/General Electric to clean up the Northeast Church Rock (NECR) Mine Site (Eastern Agency). This cleanup will entail removing approximately 1 million cubic yards from the NECR Mine site and consolidating and capping the waste at the United Nuclear Corporation Superfund Site in EPA Region 6. Depending on when the consent decree is negotiated and entered, cleanup is scheduled to begin in 2025 or 2026.

EPA continued to test and evaluate treatment technologies that could be used to reduce the toxicity, mobility, or volume of AUM waste. In 2023, EPA completed and published a [Treatability Study of High-Pressure Slurry Ablation](#) final report, which was reviewed and approved by EPA's Office of Research and Development. Additionally, during the 2023 Cove Transfer Station cleanup, EPA implemented a pilot study on a soil sorting technology that successfully reduced the volume of material needing removal off-site. The results of that study are currently being analyzed, and a final report is expected to be published in 2025. In July 2023, EPA achieved a long-standing goal of establishing an EPA field office in Flagstaff, Arizona. The new office is co-located at the United States Geological Survey campus,



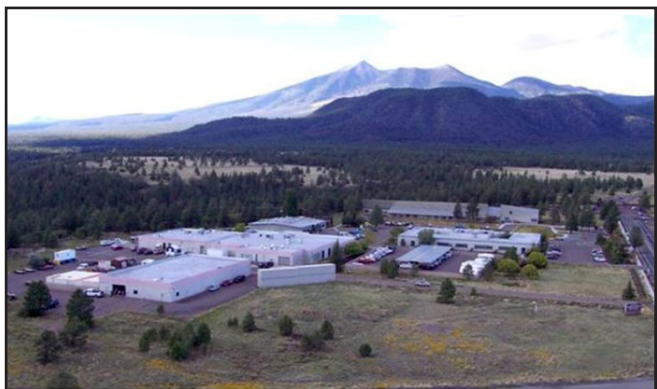
Water tower at Lukachukai Chapter of Navajo Nation. The Lukachukai Mountain Mining District was listed to the Superfund National Priorities List in 2024.

supporting two EPA managers and approximately ten EPA employees. This increased EPA field presence is expected to accelerate the pace of cleanups and aid in contractor oversight during fieldwork.

EPA also continued to coordinate with federal partners. This included coordinating closely with the Department of Energy Defense-Related Uranium Mines program and Navajo Abandoned Mine Lands to complete field investigations at numerous Navajo AUMs. During the year, EPA held interagency meetings with federal partners to continue exploring potential mine waste disposal options on federal land.

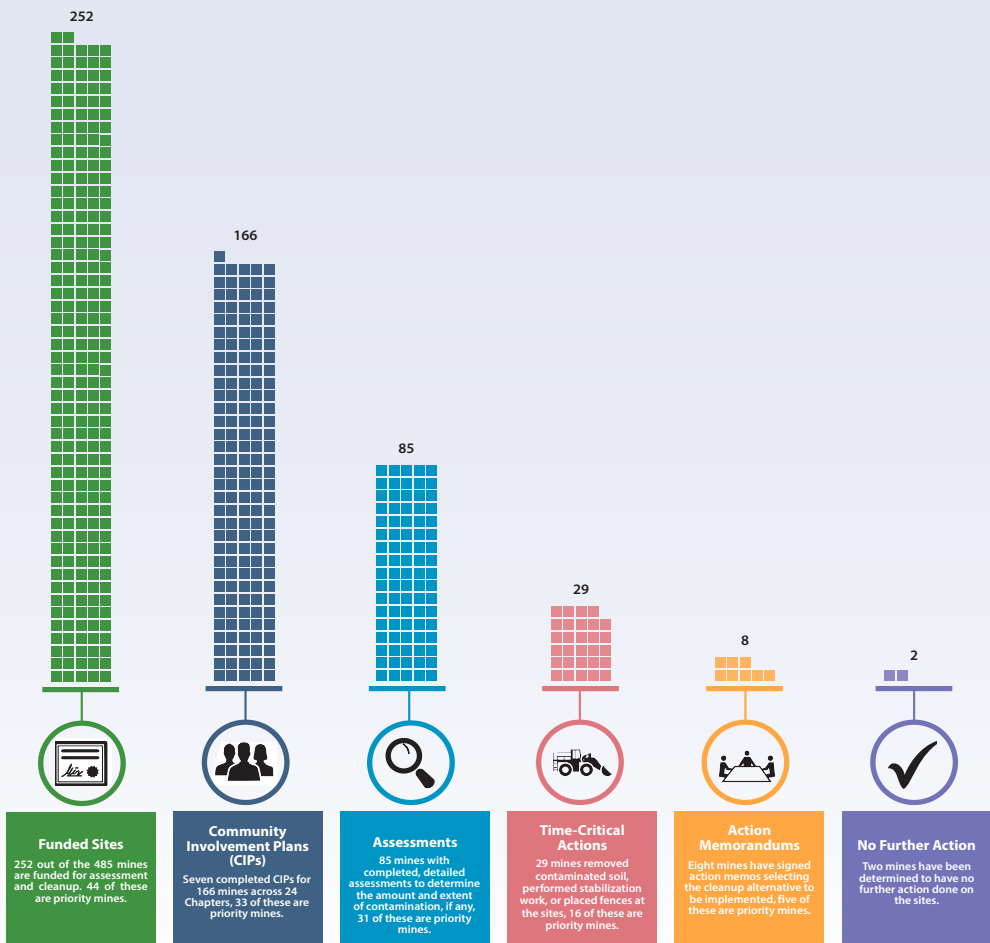


EPA Flagstaff Field Office ribbon-cutting ceremony. Navajo EPA Director Stephen Etsitty (L), and EPA Region 9 Superfund and Emergency Management Division Director Mike Montgomery (R).

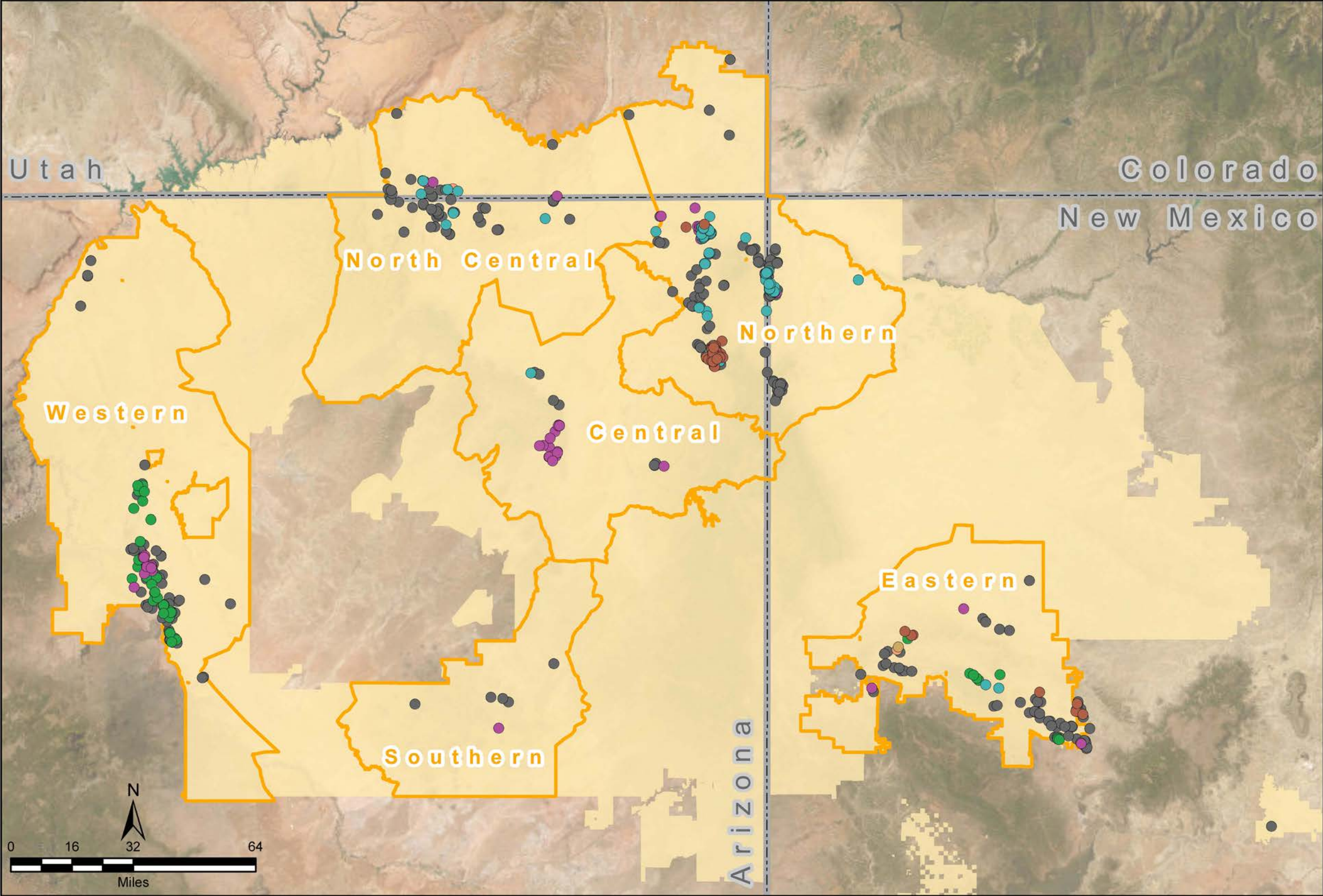


Aerial photo of the EPA Flagstaff Field Office on the USGS campus.

Navajo Abandoned Uranium Mine Superfund Progress Status of the 252 Funded Mine Sites



(continued on page 4)



- Mines**
- | | |
|-------------------------------|-------------------------|
| ● Cyprus Amax/Western Nuclear | ● Navajo Superfund Lead |
| ● Other Private Companies | ● US EPA Funded |
| ● Phase 1 and Phase 2 Trusts | ● Currently Unfunded |
| ● Tronox | |

Navajo Nation Abandoned Uranium Mines
Current Settlements and Funded Mines

- AUM Region
■ Navajo Nation
■ U.S. State





Bureau of Indian Affairs Update

- Completed consultation with the Navajo and Hopi Tribes regarding the Tuba City Dump.
- Completed design and closure plans for the off-Hopi land alternative for the Tuba City Dump.
- Implemented the Administrative Order on Consent for the Tuba City Dump.
- Completed construction contract and modification with the Hopi Tribe for the construction of the access road and staging area at the Tuba City Dump, and the initial excavation, characterization, and transportation of Tuba City Dump solid waste.



Nuclear Regulatory Commission Updates

- **United Nuclear Corporation Church Rock uranium mill site:** Nuclear Regulatory Commission (NRC) coordinated with EPA on next steps and timelines for construction activities to bring mine waste from the NECR site onto the mill site and developed mill site erosion control measures for the Pipeline Arroyo. NRC will continue to coordinate with EPA as this cleanup is anticipated to start in 2025.
- NRC coordinated with DOE and Navajo Nation for on-going work at the Tuba City, Shiprock, and Mexican Hat sites. NRC provided comments on the Tuba City, AZ Groundwater Compliance Action Plan Work Plan and reviewed the Interim Treatment Plan and the 90% Design for Water Treatment Unit Infrastructure plan for the Shiprock, NM site, as DOE works to enhance the groundwater remediation actions at each site. NRC also reviewed the Phase II Geotechnical Sampling and Materials Testing Work Plan for the Mexican Hat, UT site. The field and laboratory data gathering, and evaluation will ensure the continued efficiency and protection of the site disposal cell.
- In late 2024, NRC staff started to implement the NRC Commission's direction on "[Options for Licensing Emerging Technologies Used for Remediation of Mine Waste](#)." The NRC staff is reviewing remediation of AUM waste licensing applications under the NRC's source material framework via a service provider license.



U.S. Department of Energy Update

Defense-Related Uranium Mine Program Update: In 2024, DOE completed 46 field investigations at Navajo AUMs in coordination with Navajo Abandoned Mine Lands, totaling 104 completed investigations in the Northern and North Central AUM Region. Looking ahead for the 2025 field season, DOE will finish the three remaining mines in the Northern AUM Region, seven in North Central, as well as start in the Western AUM Region. Additionally, DOE has initiated planning for safeguarding activities in coordination with Navajo Abandoned Mine Lands and will begin conducting biological and cultural surveys in Fall 2025.

Uranium Mill Tailings Radiation Control Act:

Shiprock, NM: In 2023, DOE Legacy Management (DOE-LM) completed the annual inspection of the disposal cell, routine maintenance of the groundwater extraction network, quarterly pond liner inspections and an environmental assessment of the upcoming Evaporation Pond Removal Project. DOE-LM also completed geophysical surface and subsurface surveys at the site to update the conceptual site model and groundwater flow data for the Groundwater Compliance Action Plan. In 2024, DOE-LM performed road repairs and culvert replacements on key access roads



2023 Cove Transfer Station cleanup in Cove, AZ

around the site. DOE-LM also initiated the design and fabrication of a water treatment unit and associated infrastructure which will utilize electrocoagulation and closed-circuit reverse osmosis to treat mill-impacted groundwater from the site, as an alternative to the current pump and evaporate environmental remedy. In 2025, DOE-LM plans to install the water treatment unit, and supporting infrastructure/utilities, as well as initiate planning for the drawdown and stabilization of the existing 11-acre evaporation pond. Through the course of this work, DOE-LM held meetings with Tribal agencies, Chapter House Leadership, and will host a public meeting to inform community members of the project status.

Tuba City, AZ: Continued site investigation and characterization efforts to understand the extent and transport of the nitrate, uranium, and sulfate contamination in the shallow groundwater. Community meetings are held routinely with both Navajo and Hopi Tribal partners. Many updates have been completed at the unoccupied site including solar system repairs, electrical maintenance in the extraction wells, and repairs to buildings. Community meetings were held with Navajo community members on January 24 and August 26, 2024, and with Hopi community members on January 25 and August 27, 2024. On September 19, 2024, a celebration with the Navajo and Hopi communities took place at the Tuba City Chapter House, in recognition of the site receiving the 2024 National Federal Facility Excellence in Site Reuse Award. In 2024, DOE-LM conducted two routine groundwater and surface water sampling events in the spring and fall, respectively. In May 2024, DOE-LM conducted the annual inspection of the site. DOE will continue their commitment to Chapter House Leadership by hosting two public meetings each year on both the Navajo Nation and the Hopi Reservations to provide updates to community members. Leak detection and remaining life expectancy testing was performed on the site's evaporation pond by a specialty contractor, and their results and methodologies were reviewed by third-party experts. This testing proved so successful and valuable, it became a benchmark and model for all pond liners across the entire program. DOE-LM will collaborate with the Navajo and Hopi Tribes on the design and construction of interpretive signage to be installed at the Turvi Travel Center in Tuba City, AZ. Additionally, DOE-LM will continue executing the pump and evaporate environmental remedy while concurrently executing an infrastructure condition assessment in preparation for evaluating preferred alternatives to increasing groundwater treatment capacity and improving effectiveness of shrinking the groundwater plume.

Monument Valley, AZ: DOE-LM conducted annual maintenance on the System Operation and Analysis at Remote Sites (SOARS) station to continue to monitor site conditions. To further site investigation and characterization efforts, a large sonic drilling project was performed to delineate the extent and transport of the nitrate, uranium, and sulfate groundwater plumes. DOE-LM also conducted hydrologic slug testing and solid phase testing as part of field characterization efforts to support the development of a groundwater compliance action plan. Also, there was a STEM and community outreach event held at the Halchita community center. In 2025, DOE-LM will complete groundwater characterization work, monitoring well slug testing, and solid phase column analysis for plume delineation, as well as perform groundwater flow and transport modeling in support of the development of a groundwater compliance action plan. DOE-LM will perform fence reconfiguration to reduce the former processing site footprints by 78 acres.

Mexican Hat, UT: An aerial survey was conducted in October 2023 to collect high resolution topology data and aerial imagery. Concurrently, settlement plates were surveyed to look for changes in the elevation of the disposal cell. In 2024, DOE-LM performed routine work on site including an annual inspection, asset maintenance, calibration of telemetry equipment, and quarterly exchanges of radiological monitoring devices. Two new telemetry stations (containing a camera and rain gauge) were installed in the northeast and north drainages to monitor runoff. In 2025, DOE-LM will conduct terrestrial and aerial Lidar surveys, and finalize Phase II of the Geotechnical Sampling and Materials Testing Report. DOE-LM will continue to work with the Collaborative Working Group to complete climate, hydrology, and hydraulic modeling and develop Hydrus modeling. DOE-LM will also develop recommendations for the disposal cell cover path forward.

DOE Community Outreach Network Update:

In 2015, federal and Navajo agencies created the Community Outreach Network (network) to coordinate communication with residents about actions addressing uranium contamination on the Navajo Nation. The network includes various tribal and federal representatives working together to deliver and conduct outreach for the Navajo communities.

2024 Network Accomplishments:

- Set up an information table at the Navajo Nation Fair, and Northern Navajo Fair to inform communities of upcoming projects and provided helpful information.

- Network members attended and presented at the Eastern Navajo Land Commission Meeting on January 19, 2024.
- In partnership with the Office of Legacy Management, hosted a STEM and information fair event at the Hunters Boarding School on March 7, 2024.
- Hosted two Uranium 101 presentations and Information Fairs in partnership with network members. Thoreau Chapter House event was held on March 21, 2024, and Lukachukai Chapter House event was held on September 4, 2024. Events are held at chapter houses that request to host an event.
- Updated the Resource List in June 2024, that has been distributed to all network agencies and outside entities to share for outreach efforts with community members.



Agency for Toxic Substances and Disease Registry Update

ATSDR gave a presentation titled “Uranium 101” at a community workshop in Kayenta Chapter in 2023. The presentation covered uranium and radon exposure prevention methods. In 2024, ATSDR also gave this presentation at Thoreau Chapter and mentored presenters to deliver a third workshop in Lukachukai Chapter. During 2023 and 2024, ATSDR also continued as a regular participant in interagency meetings of the Community Outreach Network and provided printed health education materials on uranium and radon for multiple local events and activities.



Indian Health Service Update

The Indian Health Service Sanitation Facilities Construction Program continues to provide water, sewer, and solid waste service to Indian homes within the Navajo Reservation. Its approximately 100 staff members have worked with Navajo Engineering and Construction Authority to provide approximately \$40 million in sanitation facilities construction in calendar year 2024. Part of the \$40 million included Infrastructure Investment and Job Act (IIJA) funding. The Navajo Area Sanitation Facilities Construction Program has:

- Completed construction on the Lupp to Dilkon water main and now are in the process of pressure testing the line and supervisory control and data acquisition development for integration of the well into the existing Dilkon Public Water System.
- Worked with the Bureau of Reclamation on final National Environmental Policy Act documents for the Reach 14.1 and 14.2 water main project.
- Continued partnership with the Navajo Nation Environmental Protection Agency for the testing of individual water wells for Uranium, on an as-needed basis.



Closed portals in Cove Mesa Mines.

Project Area	Summary of Focus Areas for 2025
Abandoned Uranium Mines – EPA	<ul style="list-style-type: none"> • EPA EPA plans to select cleanup alternatives for 10 mines. • EPA plans to begin a Time Critical Removal Action at three of the Mesa V mines located within the Lukachukai Mountain Mining District. This action will remove the waste from the three mine sites and place the waste within a repository on the mesa. • Cleanup decisions will include the Quivira Mine which will entail transporting approximately 1 million tons of mine waste to an off-site repository. • EPA plans to conduct field investigations at 11 mines within the boundaries of the Lukachukai Mountain Mining District NPL site. • EPA anticipates completing 21 Removal Site Evaluations in other regions of the Navajo Nation. • EPA will continue consent decree negotiations for the NECR site. Once the consent decree is finalized, cleanup will begin and is expected to take four years. • EPA plans to continue to seek opportunities to build the capacity of the Navajo Nation. • EPA plans to open a field office in Window Rock, Arizona.
Abandoned Uranium Mines – DOE Defense-Related Uranium Mines Program	<ul style="list-style-type: none"> • Complete field investigations at the three remaining mines in the Northern AUM. • Complete field investigations at the seven remaining mines in the North Central AUM. • Start field investigations in the Western AUM. • Start biological and cultural surveys to prepare for safeguarding hazardous features identified in the Northern AUM.
Former Mills	<p>Shiprock:</p> <ul style="list-style-type: none"> • Install water treatment unit and associated supporting infrastructure. • Begin treating mill-impacted extracted groundwater via the water treatment unit. • Perform Engineering Alternatives Analysis for Evaporation Pond stabilization efforts. <p>Tuba City:</p> <ul style="list-style-type: none"> • Conduct a site condition assessment, to evaluate the functionality and capabilities of existing site infrastructure and soil conditions. A site condition assessment will assist in identifying upgrades or new infrastructure needs to support the installation of a water treatment unit and associated infrastructure to address mill-impacted groundwater. • Perform Engineering Alternatives Analysis for handling water treatment unit byproducts. • Conduct Fluxgate Magnetometer surveys to support future groundwater compliance action plan activities. • Continue mill-impacted groundwater extraction and treatment according to interim treatment plan. <p>Monument Valley:</p> <ul style="list-style-type: none"> • Complete groundwater characterization work, monitoring well slug testing, and solid phase column analysis for plume delineation. • Perform groundwater flow and transport modeling in support of the development of a groundwater compliance action plan. • Perform fence reconfiguration to reduce former processing site footprint by 78 acres.

Project Area	Summary of Focus Areas for 2025
Former Mills (continued)	<p>Mexican Hat:</p> <ul style="list-style-type: none"> Conduct terrestrial and aerial remote sensing using LiDAR, or Light Detection and Ranging, to estimate conditions and measure characteristics of the landscape over large areas. Finalize Phase II of the Geotechnical Sampling and Materials Testing project. Continue to work with Collaborative Working Group to complete climate, hydrologic, and hydraulic modeling and develop Hydrus modeling. Develop targeted evapotranspiration cover enhancement recommendations for the disposal cell cover.
Drinking Water	<ul style="list-style-type: none"> The Indian Health Service and EPA plan to continue to increase access to safe drinking water in the abandoned uranium mine regions of the Navajo Nation by funding high priority water infrastructure projects. Indian Health Service will continue to focus on testing individual wells that may need attention. Indian Health Service will increase assistance to Navajo Tribal Utility Authority to support the ongoing maintenance of water infrastructure on Navajo.
Tuba City Dump	<ul style="list-style-type: none"> In 2025, planned activities include initiation of the construction of the Tuba City Dump access road and staging area and the partial removal and disposal of Tuba City Dump solid waste.
Community Involvement	<ul style="list-style-type: none"> The Network will present Uranium 101 at Resource Fairs hosted by chapter houses and confirm support for the events when organizing. The Network will set up information tables at the agency council meetings The Network will broaden their outreach by cohosting a STEM event in Window Rock and will participate in a Career Fair at Dine' College in 2025. DOE-LM will host annual public meetings at their four Navajo Nation sites each year to inform community members of projects at their sites.
Health	<ul style="list-style-type: none"> ATSDR will coordinate with community, federal, and Navajo Nation partners to address questions about prevention of non-occupational exposure to uranium.
Navajo Workforce Development	<ul style="list-style-type: none"> Through the Response, Assessment and Evaluation Services II contract awarded in 2023, EPA will continue to support educational and employment opportunities for workers and businesses on Navajo.

Points of Contact		
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