

The 5-Year Plan, along with this and past progress reports, can be found on the US EPA Region 9 website or by contacting the US EPA directly.

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Health and Environmental Impacts of Uranium Contamination in the Navajo Nation

EPA Progress in Implementing a 5-Year Cleanup Plan



U.S. Environmental Protection Agency, Department of Energy, Bureau of Indian Affairs, Indian Health Service, and Nuclear Regulatory Commission are working together to implement a 5-year plan to address the health and environmental impacts of uranium contamination in the Navajo Nation.

The EPA, in consultation with the Navajo Nation, has initiated a plan to specifically address uranium contamination at abandoned uranium mines, contaminated structures and water sources.

In the second year of the plan, EPA is identifying and addressing the most urgent risks, such as residents living in potentially-contaminated structures, and drinking from contaminated water sources.

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April 2009 Progress Report

Drinking Water Alternatives for Black Falls Residents

Black Falls is a community in the Western Agency of Navajo Nation surrounded by abandoned uranium mines that previously relied on unregulated water sources that exceed safe drinking water levels for uranium. There were no alternative drinking water sources within ten miles of the unsafe wells in Black Falls (Coalmine, Leupp and Tolani Lake Chapters). The community struggled to find a local, accessible, and safe drinking water source for years. Residents often traveled approximately 50 miles to Flagstaff, over half the drive on unpaved roads, to haul water.

EPA and IHS recognized Black Falls as a priority area to serve through a water project. In February, IHS and EPA completed a project that extended a water line and constructed a safe water hauling point to serve Black Falls area residents near four unregulated wells contaminated with uranium. In coordination with the opening of the water hauling point, IHS distributed 14 new water hauling tanks to members of the Black Falls community. IHS is developing plans to install cisterns, utilizing EPA funds, for up to nine Black Falls homes within the immediate vicinity of the four unregulated wells contaminated with uranium. As an interim measure, the EPA has been providing bottled drinking water to two families in a very remote area of Black Falls who have relied on unregulated wells contaminated with uranium.



Exterior elevated water tank at a residence in Black Falls area

EPA awarded a \$20,000 Environmental Justice Small Grant to Forgotten People, a non-profit that works with many of the communities in the Western Agency. The grant is being used to identify practical and effective solutions, such as exterior elevated water tanks, for families living in the Black Falls community that do not have access to piped water. Forgotten People is working together with IHS, local businesses, Navajo Nation EPA and others to plan and implement a community-based water project to provide homes with clean, safe drinking water.

Abandoned Uranium Mines (AUMs)

Background

Mine operators extracted nearly four million tons of uranium ore from 1944 to 1986 under lease agreements with the Navajo Nation. As a result, uranium mining has left the Navajo Nation with a legacy of 520 abandoned uranium mines (AUMs). EPA and NN EPA are working to prioritize and address AUMs.

Accomplishments

- Developed Comprehensive GIS Database and Atlas
- Coordinated with Navajo Nation to prioritize by region the mine sites in need of screening and site visits
- On-site screening of AUMs in Eastern Region resulting in 83 Reports
- Detailed assessments under the Superfund Hazard Ranking System of five AUM sites to determine eligibility for inclusion in the National Priorities List

Next Steps on AUMs

- Finalize 83 Screening Reports from Eastern Region.
- Conduct screening-level review and site visits of 160 AUM sites in the Northern region by end of 2009.
- Use the AUM GIS Database to analyze and prioritize debris and waste piles

Northeast Church Rock Mine (NECR)

Background

NECR is the highest priority on the AUM ranking list. The mine adjoins the United Nuclear Corporation uranium mill site, a National Priorities List Site. The mine was closed and mine tailings were removed from the surface; however, a large volume of radium contamination remains posing a public health threat. To address the immediate public health threat, EPA surveyed ten home sites and conducted a time-critical removal at four residences. Additional remediation on the former mine site will be necessary to ensure long-term protection for future uses of the land.

Accomplishments

- Developed an Engineering Evaluation and Cost Analysis (EE/CA) report that proposes potential remedies for the mine site

Next Steps

- Release the EE/CA Report for public review
- Hold a 30-day public comment, including two public meetings to explain the evaluation, analysis, and cleanup options
- Select a remedy
- Negotiate a cleanup agreement with the responsible party
- Conduct mine cleanup

Contaminated Water Sources

Background

USEPA and Centers for Disease Control sampled approximately 250 unregulated water sources and found 22 sources exceeded drinking water standards for radionuclides. Most of these sources are within ten miles of a safe drinking water supply, except sources in Black Falls and Dennehotso areas. USEPA is working with the Navajo Nation, federal agencies, and the DiNEH Project to ensure that Navajo families who haul water for domestic use do not drink from unregulated water sources contaminated with uranium. Navajo Nation policy prohibits the use of unregulated sources for human consumption and recommends the use of regulated water sources which are tested and meet safe drinking water standards. Nevertheless, some residents continue to use unregulated sources due to the lack of suitable water sources in the more remote regions. The use of unregulated water sources represents the greatest public health risk associated with drinking water for the Navajo Nation due to contamination from chemicals, bacteria, and other contaminants including uranium.

Accomplishments

- To ensure that Navajo residents do not drink from unregulated water sources contaminated by uranium, USEPA, Navajo Nation EPA, and partner organizations issued a health advisory, conducted extensive outreach to residents, posted signs in chapter houses, installed warning signs at wells with known uranium contamination, and published an insert in the Navajo Times with locations of contaminated wells and contact information.
- A Navajo Nation EPA circuit rider is providing technical assistance to residents using unregulated water sources.

Next Steps

- In FY 2009 and 2010, EPA, IHS, and Navajo Nation Community Development Block Grant program plans to provide \$14M for the construction of infrastructure to serve 328 homes without piped water in the vicinity of six contaminated water sources in Dennehotso, Monument Valley and the Sweetwater areas.
- EPA will provide funds to the Navajo Nation Department of Water Resources to implement a water hauling feasibility study and pilot program to serve 4000 homes.
- USEPA will continue to fund outreach efforts to provide information on safe water hauling practices
- In partnership with Navajo Nation EPA, USEPA will identify and sample additional high risk wells.
- USEPA will assess abandoned mines that may be contributing to groundwater contamination.



Unidentified water hauler

Contaminated Structures

Background

US EPA is concerned that structures, including homes, hogans and storage buildings may have been constructed of contaminated materials from nearby mines. Building material sources may include rocks, gravel, and aggregate from mine spoils which may have been used in concrete mixing. Structures may also be contaminated by the presence of radiological materials found in outdoor soils and dust that may have been brought into the homes on shoes and clothing.

Accomplishments

- November 2008 – Completed demolition and necessary excavations of 27 structures and nine residential yards
- Negotiated compensation agreements with 18 of families for demolished structures
- Provided two families with funds to initiate reconstruction themselves
- Completed construction of two new homes

Next Steps

- Remediate two contaminated yards in Tuba City
- Assess two homes in Tuba City for potential contamination
- Distribute settlement balances to families seeking financial compensation for demolished structures
- Begin reconstruction of remaining homes that US EPA has agreed to rebuild
- Coordinate with Navajo Nation chapters for outreach to learn about other potentially contaminated structures
- Navajo Nation EPA will test potentially contaminated structures and refer suspected contamination to US EPA Response Program



Replacement structure in Red Valley built by majority Navajo-owned company with energy efficiency improvements