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For more information about the multi-agency Five-Year Plan visit
<http://www.epa.gov/region9/superfund/navajo-nation/index.html>



EPA Five-Year Plan Progress Report on Cleaning up Uranium Contamination

United States Environmental Protection Agency



The Navajo Nation encompasses more than 27,000 square miles, spread across Arizona, Utah, and New Mexico, and over 250,000 people live on Navajo Nation land. Approximately four million tons of uranium ore were extracted during mining operations within the Navajo Nation from 1944 to 1986. Many Navajo people worked in the uranium mines, often living and raising families in close proximity to the mines and mills.

Uranium mining activities no longer occur within Navajo Nation, but a legacy of uranium contamination remains, including over 500 abandoned uranium mines (AUMs) as well as homes and drinking water sources with elevated levels of radiation. Possible health effects include lung cancer from inhalation of radioactive particles, as well as bone cancer and impaired kidney function from exposure to radioactive particles in drinking water.

In 2007, the U.S. House of Representatives Committee on Oversight and Government Reform charged federal agencies to collaborate and clean up uranium contamination on Navajo Nation land. As a result, the United States Environmental Protection Agency (EPA), along with the Bureau of Indian Affairs (BIA), the Nuclear Regulatory Commission (NRC), the Department of Energy (DOE), the Indian Health Service (IHS), and the Agency for Toxic Substances and Disease Registry (ATSDR) developed a coordinated Five-Year Plan from 2008 to 2012 to address uranium contamination in consultation with Navajo Nation. The Five-Year Plan was the first coordinated federal agency approach, and it outlined a strategy for understanding of the scope of the problem and for addressing the greatest risks first.

Five Year Plan Summary Report Now Available.

The six federal agencies responsible for the five year plan have provided a summary report outlining the results and accomplishments of this effort. The agencies:

- » Addressed the most urgent risks first: contaminated structures, contaminated water supplies, and mines with high exposure near residents
- » Gained good understanding of the scope of uranium contamination on Navajo Nation land that will guide future work
- » Developed working relationships with Navajo Nation, communities, and federal agencies

The report is available on-line at
<http://www.epa.gov/region9/superfund/navajo-nation/index.html>



January 2013 Progress Report

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Replacing Contaminated Structures

The US EPA and Navajo Nation EPA exceeded the Five-Year Plan goal of assessing 500 homes and other structures that were likely to be contaminated with radiation at elevated levels. The US EPA and Navajo Nation EPA surveyed 878 structures and the US EPA demolished and rebuilt or provided financial compensation for 34 structures and 18 residential yards found to be contaminated.

US EPA and Navajo Nation EPA screened 878 structures for potential contamination



What is Radiation?

Radiation is energy emitted from sources like the sun and ground and it naturally exists in every place on earth. Naturally occurring radiation is often referred to as background levels of radiation. US EPA generally considers radiation that is two times higher than naturally occurring levels of radiation to be a possible hazard that may require further investigation. Possible health effects include lung cancer, bone cancer, and impaired kidney function.

Assessing Abandoned Uranium Mines

US EPA and Navajo Nation EPA screened 521 mine sites, which more than doubled the Five-Year Plan goal of conducting on-site screening evaluations of 200-250 mines. In addition, the agencies conducted more detailed assessments at 45 high priority mine areas, which exceeded the Five-Year Plan goal of conducting more detailed assessments at 35 mines.

US EPA has gained a good understanding of radiation at abandoned uranium mines:

- 71 mine sites show levels of radiation at less than two times background levels of radiation. These areas should pose little or no current threat to people.
- 177 mine sites show levels of radiation above two times background levels of radiation and below ten times background levels. People should not build homes, corrals or any structures near these sites, and they should not gather building materials from these sites.

- 226 mine sites show radiation levels higher than ten times background levels. People should stay away from these sites.
- 70 mine sites exceeding two times background levels of radiation are located within a quarter mile of a home, 36 of these mine sites have levels of radiation levels over ten times background levels.

US EPA screened 521 mine sites for elevated radiation



US EPA is focusing on mine sites with high levels of radiation that are near homes. US EPA and Navajo Nation EPA are reaching out to residents in these areas to warn them of health and safety risks, and this work will continue beyond the Five-Year Plan period. Cleanup actions have been initiated at those mines posing the highest risks to human health.

Providing Safe Drinking Water

The US EPA, Navajo Nation EPA, Indian Health Service, Navajo Department of Water Resources (NDWR), and the Center for Disease Control and Prevention (CDC) exceeded the Five-Year Plan goal of testing 70 rural Navajo water sources for unsafe levels of radiation or radioactive particles. Of the 240 sources tested, 29 sources exceeded the drinking water standard for uranium or radioactive particles. Durable signs were posted at these contaminated water sources warning individuals of the health risks

US EPA and Navajo Nation EPA piloted new water hauling service to remote areas

associated with the use of hauled water with elevated radioactive particles and other minerals. With the support of Navajo Chapter officials, three contaminated wells were shut down. Working together, the US EPA, Navajo Nation EPA, Dine Network for Environmental Health (DiNEH) Project, Centers for Disease Control and the University of New Mexico implemented

a comprehensive public outreach campaign including meeting with Chapter officials, posting of warning signs, and announcements in the Navajo Times and local radio stations. In addition, US EPA provided \$2.6 million to the Navajo Department of Water Resources to implement a safe alternate water hauling program to serve residents that live in remote areas.



Cleaning Up Abandoned Mines

US EPA directed cleanups at Northeast Church Mine in 2007, 2009 and 2012. In 2011, EPA issued a cleanup plan for the removal of approximately one million cubic yards of mine waste from NECR. During the five year planning period US EPA and General Electric conducted two large scale interim cleanup actions to remove a total of 130,000 cubic yards of contaminated soil.



In addition to significant cleanup actions at the Northeast Church Rock Mine, the US EPA and Navajo Nation EPA identified additional mines for cleanup actions. These mines were selected based on radiation levels, proximity to residents, and proximity to sensitive areas such as drainage areas that could cause migration of contamination. Between 2007 and 2012, US EPA completed actions at nine mine sites throughout the Navajo Nation. These actions ranged from fencing and stabilization of waste to removal of contaminated soil. In 2011, the first mine cleanup was completed at Skyline Mine, in Monument Valley, Utah. US EPA has worked with the Navajo Nation government and residents to listen, discuss, and implement cleanup actions for abandoned uranium mines.

US EPA completed removal actions at nine priority mine sites

Want to Have Input?

Please come to the Uranium Contamination Stakeholder Workshop and share your input.

2013 Uranium Contamination Stakeholder Workshop
April 16-17, 2013
Gallup Inn
2915 W. Historic Highway 66
Gallup, New Mexico
(505) 722-2201

For more information contact
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US EPA has held five Uranium Contamination Stakeholder Workshops on the Navajo Nation in 2008, 2009, 2010, and 2011. The purpose of the 2013 workshop is for federal agencies to share their progress and work on the Five-Year Plan with other government agencies and the public. We invite everyone to attend and provide input on uranium contamination issues in Navajo Nation and the next Five-Year Plan.