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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

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Attn: Grace Ma (NV 1/13) San Francisco, CA 94105 75 Hawthorne Street (SFD-6-3) United States Environmental Protection Agency, Region 9



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

United States Environmental Protection Agency



mines and mills.

elevated levels of radiation. Pos- dressing the greatest risks first. sible health effects include lung cancer from inhalation of radioactive particles, as well as bone The report is available on-line at tion from exposure to radioactive

The Navajo Nation encompass- In 2007, the U.S. House of Represen- Five Year Plan Summary Report es more than 27,000 square tatives Committee on Oversight and Now Available. miles, spread across Arizona, Government Reform charged fed-Utah, and New Mexico, and over eral agencies to collaborate and The six federal agencies responsi-250,000 people live on Navajo clean up uranium contamination ble for the five year plan have pro-Nation land. Approximately four on Navajo Nation land. As a result, vided a summary report outlining million tons of uranium ore were the United States Environmental Pro- the results and accomplishments extracted during mining opera-tection Agency (EPA), along with the of this effort. The agencies: tions within the Navajo Nation Bureau of Indian Affairs (BIA), the Nufrom 1944 to 1986. Many Navajo clear Regulatory Commission (NRC), people worked in the uranium the Department of Energy (DOE), the mines, often living and raising Indian Health Service (IHS), and the families in close proximity to the Agency for Toxic Substances and Disease Registry (ATSDR) developed near residents a coordinated Five-Year Plan from Uranium mining activities no lon- 2008 to 2012 to address uranium » Gained good understanding of ger occur within Navajo Nation, contamination in consultation with the scope of uranium contamibut a legacy of uranium con- Navajo Nation. The Five-Year Plan tamination remains, including was the first coordinated federal that will guide future work over 500 abandoned uranium agency approach, and it outlined mines (AUMs) as well as homes a strategy for understanding of the and drinking water sources with scope of the problem and for ad-

cancer and impaired kidney func- http://www.epa.gov/region9/superfund/navajo-nation/index.html



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- Addressed the most urgent risks first: contaminated structures, contaminated water supplies, and mines with high exposure
- nation on Navajo Nation land
- Developed working relationships with Navajo Nation, communifies, and federal agencies



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.



878 structures for potential contamination

US EPA and

Navajo Nation

EPA screened

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

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

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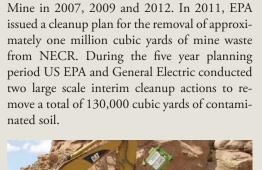
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US EPA and Navajo Nation **EPA** piloted new water hauling service to remote areas

associated with the use of hauled water with a comprehensive public outreach campaign inelevated 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

cluding 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.





US EPA directed cleanups at Northeast Church

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

US EPA completed at nine priority mine sites

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 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.



Cleaning Up Abandoned Mines

areas that could cause migration of contamination. Between 2007 and 2012, US removal actions EPA completed actions at nine mine sites throughout the Navajo Nation. These actions ranged from



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 Alejandro Diaz at (415) 972-3242 or uranium_conf@epa.gov

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