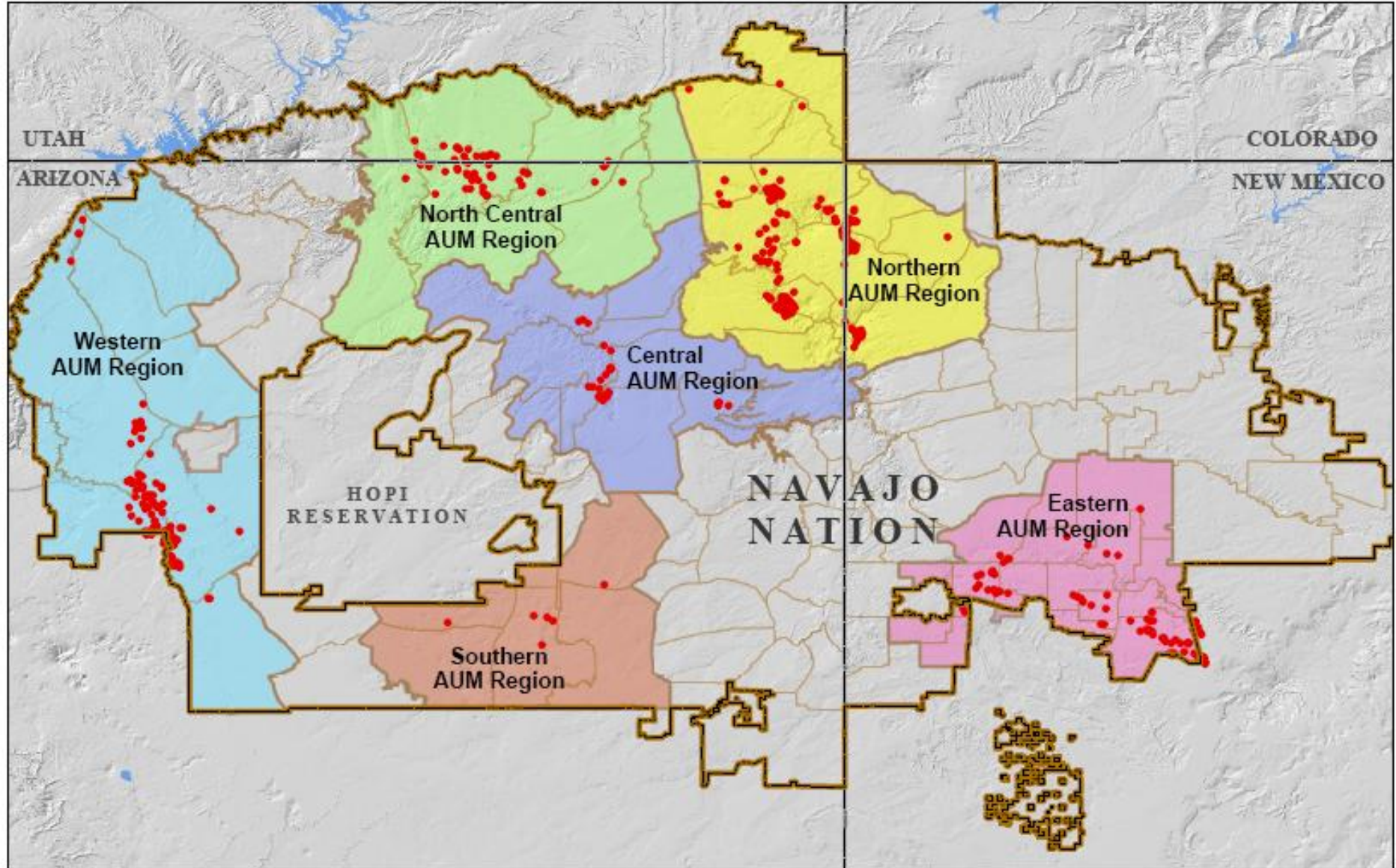


US EPA ARCHIVE DOCUMENT



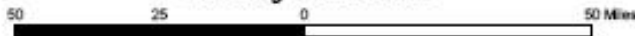
# Addressing Navajo Uranium Contamination

August 2010 Update



**Abandoned Uranium Mine Locations  
and AUM Regions  
on the  
Navajo Nation**

• Abandoned Uranium Mines



# 5-Year Plan to Address Uranium Legacy

- ❖ EPA – Structures, Water, Mines
- ❖ Indian Health Service – Health Assessment
- ❖ Bureau of Indian Affairs – Tuba City Dump
- ❖ Department of Energy – Mill Sites
- ❖ Nuclear Regulatory Commission – Regulated Facilities



# Structures - Background

- ❖ Waste rock used for building homes
- ❖ 2007 – EPA mapped and identified ~500 structures near mines
- ❖ Plan: Assess 100 structures per year, clean up or replace contaminated homes



**Contaminated Structure Removal**

# Structures - Update

- ❖ EPA and Navajo EPA assessed 199 structures in CY 2008 and 2009
- ❖ Demolished 27 structures and removed 10 yards in CY 2008, completed 14 replacement homes in CY 2010.



**New Replacement Home**

# Structures – Next Steps

- ❖ At least 100 additional structures assessed by end of CY 2010
- ❖ Clean up or replace 7 structures in FY11
- ❖ Goal: Complete 500 structure assessments and remediation by end of CY 2012



**Outdoor Radiation Analysis**

# Water Sources - Background

- ◆ 30% of Navajo families haul drinking water (<1% nationwide)
- ◆ Unregulated water sources can exceed uranium, arsenic, and other standards
- ◆ Plan: Outreach, pilot hauling program, and new waterlines



**Livestock Well Used for Water Hauling**



# Water - Update

- ◆ Tested 235 unregulated water sources in CY 2008 and 2009. 27 above uranium standard
- ◆ Wells posted, residents notified. Two wells shut down
- ◆ In FY 09/10, EPA, IHS & HUD committed over \$22 million for infrastructure within 10 miles of 18 contaminated water sources, including:
  - ◆ Drinking water infrastructure serving over 300 homes;
  - ◆ Funded pilot water hauling program to serve up to 3,000 homes

***Díí baa' ádahotłchijh!***  
**Water from these wells\* in Baca-Prewitt-Haystack is NOT safe to drink**



**16B-38**  
Paddy Martinez Well

**16T-317**  
Sam Long Well

**16T-521** Platero Well

**16T-552**  
Helen Martinez Well

Advisory issued jointly by DINEH Project and NNEPA-PWSSP  
Dec. 2007, Rev. Feb., Mar. 2008  
Call 505-262-1862 or 928-871-7755  
or visit [www.navajopublicwater.org](http://www.navajopublicwater.org)

*\*Navajo Nation policy is that these wells are for livestock use only and are not to be used for human drinking water.*

# Water – Next Steps

- ◆ Continue outreach and education regarding contaminated water sources
- ◆ Oversee waterline construction projects
- ◆ Navajo Department of Water Resources will begin implementing the pilot water hauling program funded in FY 09 and 10
- ◆ Provide regulated water sources



**WATER FROM  
THIS WELL  
IS NOT SAFE  
TO DRINK**

**This water has been tested and found to exceed Navajo EPA and U.S.EPA human drinking water standards for uranium or other contaminants.**

**Navajo Nation policy is that livestock-use-only wells are not to be used for human drinking water.**

# Abandoned Uranium Mines - Background

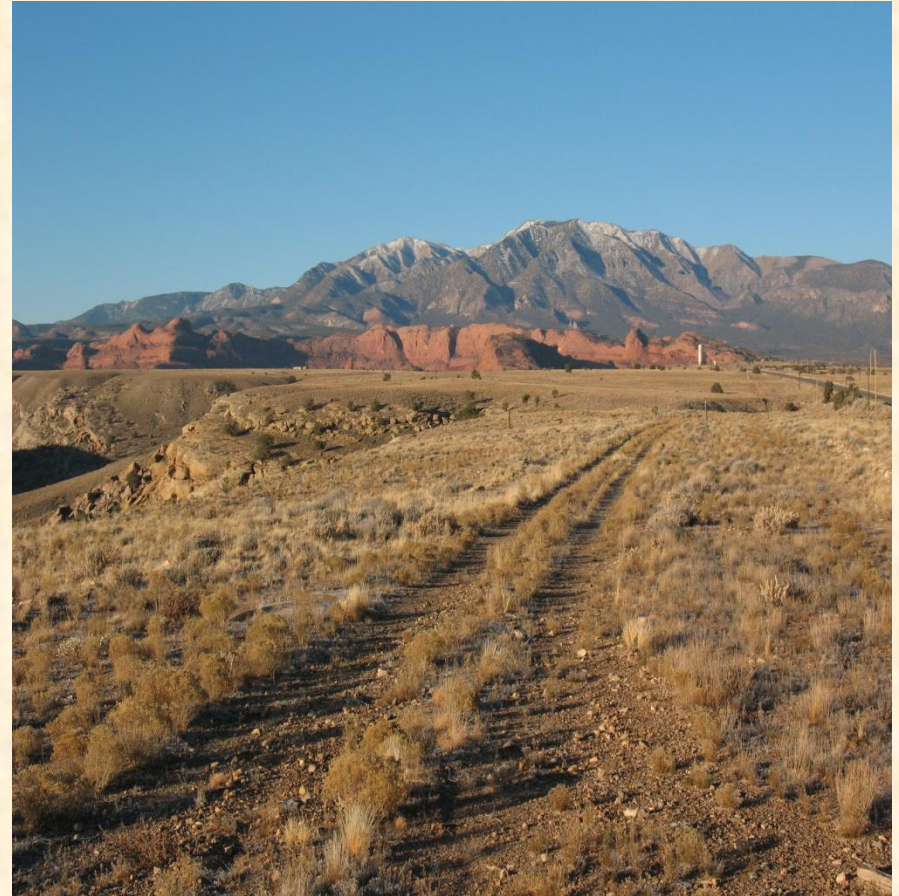
- ◆ 2007: EPA completed multi-year effort to assess uranium contamination – 520 mines identified
- ◆ Plan: On-site screening of all 520 mines by end of CY 2011; clean up the highest risk mines



**Ruby No. 3 Mine**

# Mines - Update

- ◆ Completed on-site screening of 197 mines in CY 2008 and 2009
- ◆ 87 mine screens in process
- ◆ Conducted removal assessments at Northeast Church Rock and Skyline mines



# Abandoned Uranium Mines – Next Steps

- ◆ Screen remaining mines by end of CY 2011
- ◆ Work on highest priority mines
- ◆ Identify Potential Responsible Parties for cleanup
- ◆ Start removal assessments at Quivira and Mariano Lake mines in CY 2011



**Mariano Lake Mine**

# Northeast Church Rock Mine

- ◆ Largest underground uranium mine in country and highest priority mine for Navajo Nation
- ◆ CY 2006-2008: Completed extensive site investigations
- ◆ 2007: Completed cleanup of 1 structure and 4 yards
- ◆ 2009: Completed Engineering Evaluation of cleanup options
- ◆ 2010: Completed the removal of 100,000 cubic yards of contaminated material



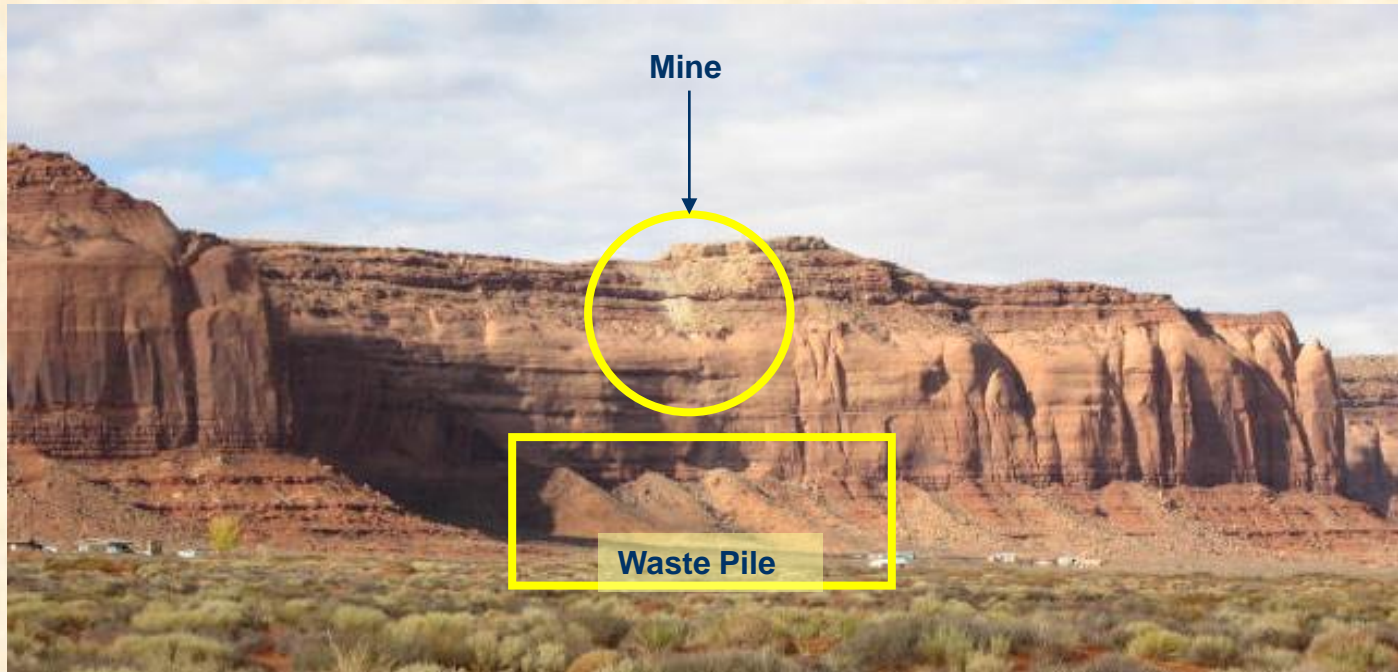
**Regrading Wastepile**

# Northeast Church Rock Area – Next Steps

- ◆ Conduct road paving in CY 2010
- ◆ Complete an evaluation of area groundwater in CY 2010
- ◆ Assess contamination and cleanup options for the nearby Quivira Mine beginning in CY 2011
- ◆ Continue community participation to determine an acceptable way to clean up the area
- ◆ Goal is to select a cleanup alternative for NECR mine in CY 2010

# Skyline Mine

- ◆ Removal Assessment May 2009
- ◆ Community Workshops Spring/Summer 2010
- ◆ Preparations for Removal Action to begin in CY 2010



**Skyline Mine**



# Summary

## ◆ EPA Investment

- ◆ Approximately \$12 M per year
- ◆ Responsible parties spent additional \$5 M so far
- ◆ 30+ EPA staff
- ◆ Grant funding for Navajo EPA

## ◆ Results

- ◆ Assessed 199 structures in three mining regions, remediated 27 contaminated structures and 10 residential yards
- ◆ Screened or assessed 197 mines, ordered removal action on highest priority mine
- ◆ 235 wells tested, \$22M in new water lines serving 300 homes