Navajo Nation
Abandoned Uranium Mine Projects

Navajo Superfund Program (NSP)
Navajo Nation Environmental Protection Agency (NNEPA)

August 22, 2012

Freida S. White, NNEPA NSP Environmental Program Supervisor, (928) 871-6859
Navajo Nation EPA Organization

- *ADMINISTRATION
- *CRIMINAL ENFORCEMENT DEPARTMENT
- *AIR & TOXICS DEPARTMENT
- *WASTE REGULATORY & COMPLIANCE DEPARTMENT
- *SURFACE GROUNDWATER PROTECTION DEPARTMENT

The Navajo Environmental Protection Commission was established in 1972 and in 1995 became the NNEPA through legislation.
NNEPA SUPERFUND PROGRAM (NSP)

FULL–TIME NSP Staff:
- 1 FTE – Environmental Program Supervisor
- 4 FTEs – Support Staff (Sr. Office Specialist, Accounting Clerk, Geographic Info. Specialist, Sr. Public Information Officer)
- 4 FTEs – Technical Staff (Health Physicist, Chemist, Sr. Environmental Engineer, Sr. Environmental Specialist)

FULL–TIME time Assistance (Non–NSP Staff):
- 2 FTEs – U.S. EPA IPAs (Attorney – started 3/14/11, Environmental Scientist – started 4 Yr Term from 1/18/09)

Assistance:
Radon Personnel (2)
NNDOJ Attorney
Abandoned Uranium Mines

- In the 1940’s, widespread mining and milling of uranium ore on the Navajo Nation (NN) for national defense and energy purposes led to the current legacy of abandoned uranium mines.

- The NN brought these concerns to national attention:
  2) In October 2007, EPA testified at a House Oversight and Government Reform Committee hearing, followed by a meeting with select committee members to identify and respond to current issues raised by the NN.

- Result: In June 2008, EPA and several other Federal agencies developed a Five Year Action Plan to address and cleanup the legacy of AUM issues.
COMMUNITY INVOLVEMENT:

- Notification & Scheduling with Chapter officials
  1) Schedule and attend Planning Meeting
  2) Attend Planning Meeting to Give Synopsis of Presentation Followed by Approval to Present at Regular Community Chapter Meeting
  3) Give presentation at Community Chapter Meeting
  4) Repeat Process as Needed

- Work with affected local residents to obtain Access Agreements and/or meet at family homes
- Receive requests from local residents
- Work with grassroots organizations
- Conduct Annual Stakeholder Meetings
CONTAMINATED STRUCTURES PROJECT (CSP)

- In 2008, NSP built capacity while assisting USEPA in completing assessments of 199 structures.
- NSP purchased the same equipment used by USEPA, completed assessment of 800 structures, and referred to USEPA only structures above the Investigation Level.
- 64% were referred to USEPA and underwent detailed USEPA assessment using more sensitive gamma radiation detection equipment.
- USEPA demolished 34 structures with 17 rebuilt.
- USEPA provided grant to NNCHID to demolish and rebuild 9 homes in Spring 2013.
An Example of A CSP Structure

Before

After
Completed Homes Under CSP

2009

2012
Preliminary Screens and Preliminary Assessments were performed by NSP to find radioactive contamination at Abandoned Uranium Mine sites.

These same mines are now prioritized for assessment and cleanup work.

Preliminary screen is being performed by NNEPA staff at the Northeast Church Rock site.
Abandoned Uranium Mines

- EPA completed 524 screens for 524 mines
- EPA and NSP determined priority mines
- NSP has oversight authority of ongoing work
- Priority Mine completed in November 2011:

**Skyline Mine in Oljato, Ut**
- Removal Assessment – May 2009
- Removal Action March 2011
- Completion October 2011
- Strong Community Involvement
- Interim Repository
- Cost – At least $7.8 M
**Priority AUMs**

**Northeast Churchrock (NECR) Mine Site:**
- Highest prioritized site, largest underground Uranium Mine in Country
- Investigation in 2006 – 2008
- Responsible Party (RP) involved
- Completed 1 structure, 4 yards, and step-out area removals
- Removed 100,000 yd$^3$ of Soil
- TPH discovered – to continue to be addressed
- Fall 2012 – Soil Removal to occur in Drainage Area
- Waste Removal to UNC site
- Principle Threat Waste ($\geq$ 200pCi/gm) to certified disposal facility
- Water Study still to occur

**Quivera Mine Site:**
- RP performed characterization
- Soil removal is being planned and disposal is to be discussed
Priority AUMs

Mariano Lake Mine Site:
- Screening and assessments were completed
- RP was found and made responsible
- RP characterized extent of contamination in April 2012
- Water sampling of three local wells to occur in 2012
- Exposure reduced by fencing mine site and chip sealing road

Tronox–related AUMs:
- Two Transfer Stations in Cove, AZ
- Mesa I Mines in Cove, AZ to undergo a PA
- Section 32 and 33 in Casamero Lake, NM

Ruby Mines 1–4:
- RP to fence #1 and post signage in Fall 2012
- RP to close large open adit collapsing into hill in Spring 2013