

US EPA ARCHIVE DOCUMENT



# Status of Legacy Mill Cleanup

*Lydia Chang, Chief*

*Special Projects Branch*

*Decommissioning and Uranium Recovery Licensing*

*Directorate*

*Division of Waste Management & Environmental Protection*

*Office of Federal and State Materials and Environmental*

*Management Programs*

## Outline:

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## **NRC's Responsibility:**

- Regulatory oversight for milling activities; no authority over mining of uranium
  - URANIUM MILLING - “Any activity that results in the production of byproduct material...”
  - BYPRODUCT MATERIAL - “The tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content...”

## **Statutory Basis:**

- **Uranium Mill Tailings Radiation Control Act of 1978 (UMTRCA).**
  - **TITLE I: Remedial action at inactive, abandoned, unlicensed sites**
  - **TITLE II: Licensing/Oversight/Remediation of uranium recovery facilities licensed by the NRC or an Agreement State in or after 1978**

# Decommissioning Standards:

- **40 CFR 192:**
  - **Soil and Buildings:**
    - **5 pCi/g averaged over the first 15 cm**
    - **15 pCi/g averaged over 15 cm more than 15 cm below surface**
  - **Radon:**
    - **20 pCi/m<sup>2</sup>sec**
  - **Ground water:**
    - **Background or maximum contaminant level whichever is lower, or**
    - **Alternate concentration limit**

## **Roles and Responsibilities at Title I Sites:**

- **EPA establishes standards for cleanup and disposal of contaminated material**
- **DOE identifies and remediates all Title I sites to EPA standards**
- **DOE also remediates vicinity properties**
- **NRC evaluates and concurs in DOE's site remediation plans and concurs that site remediation has been adequately completed**
- **DOE becomes the long-term site custodian under NRC General License**

# **Title I Sites in New Mexico**

## **– SHIPROCK**

- **Active groundwater remediation ongoing in 2 areas of the site**
- **Will meet with DOE in the Fall to discuss modification to the GCAP**

## **– AMBROSIA LAKE**

- **Site under long-term care/surveillance by DOE**
- **No major issues**



## **Roles and Responsibilities at Title II Sites:**

- **EPA establishes standards for cleanup and disposal of byproduct material**
- **NRC or Agreement State reviews license applications, issues license, conducts inspections, and oversees decommissioning to EPA standards**
- **NRC reviews and concurs on DOE's Long Term Surveillance Plans for conventional mills**
- **NRC or the Agreement State terminates specific license**
- **NRC concurs in Agreement State license termination**
- **DOE becomes the long-term site custodian under NRC General License**

# Historical Perspective on Oversight at Title II Sites:

- **New Mexico became an Agreement State in 1974**
- **Milling activities at UNC-Church Rock, Homestake-Grants, ARCO-Bluewater, and Rio Algom-Ambrosia Lake took place – 1953-1982, 1957-1990, 1953-1982, and 1958-2002, respectively**
- **Uranium Mill Tailings Radiation Control Act - 1978**
- **EPA standards at 40 CFR 192 promulgated in 1983, amended 1987**
- **Homestake and Church Rock Mill sites designated Superfund sites due to leaking tailings impoundments - 1983**
- **NRC assumes regulatory authority - 1986**
- **Final NRC regulations at 10 CFR Part 40, Appendix A promulgated in 1985 (no ground water), amended 1987**

# Title II Sites in New Mexico:

- **ARCO-Bluewater – DOE General License**
  - Surface reclamation completed in 1995
  - NRC approved groundwater ACLs for Ur, Mo, and Se IN 1996
  - License terminated in 1997
  - Site under DOE long-term care/custody
  
- **Homestake-Grants – Decommissioning**
  - EPA superfund site
  - Surface reclamation complete
  - Groundwater restoration ongoing – NRC approved expanded evaporation pond in August 2008
  - License termination expected in 2017
  
- **Rio Algom-Ambrosia Lake – Decommissioning**
  - Surface reclamation nearly complete
  - Groundwater reclamation completed in 2001
  - License termination expected in 2011

## **Title II Sites in New Mexico (cont.):**

- **UNC Church Rock – Decommissioning**
  - EPA superfund site
  - Surface reclamation nearly complete
  - Groundwater restoration ongoing
  - Potential site for disposal of Northeast Church Rock mine tailings
  - License termination – TBD
- **L-Bar – DOE General License**
  - Surface reclamation completed in 2000
  - NRC approved groundwater ACLs for Ur and Se in 1999
  - License terminated in 2004
  - Site under DOE long-term care/custody
- **HRI-Crown Point – In-situ Recovery Facility**
  - License issued in 1998
  - HRI is appealing the court decision that part of the Church Rock site is “Indian Land”

## **Recent Activities Related to Decommissioning Sites in New Mexico:**

- **Participated in 5-Year Plan on Uranium Contamination on Navajo Lands - Continuing**
- **Facilitated meeting with Federal and State Agencies on mill contamination - Jan. 2009**
- **Met with EPA Regions 6 & 9 on UNC Church Rock and Homestake issues - March 2009**
- **Participated with State, other Federal Agencies, and Native American Tribes in UNC Church Rock site visit - May 2009**
- **Organized meeting with DOE, EPA Region 6 & 9, Native American Tribes, and NMED on UNC Church Rock issues - May 2009**
- **Participated in Grants Mineral Belt Partnership meetings - April, June, & August 2009**
- **Participated in the International Institute for Indigenous Resource Management workshop on: American Indian Tribes, Canadian First Nations, and the Production of Uranium - July 2009**

# Questions?

## PLANNED URANIUM RECOVERY FACILITIES

- **NEUTRON ENERGY – MARQUEZ (MARCH 2010)**
- **RIO GRANDE RESOURCES – MT. TAYLOR (APRIL 2010)**
- **STRATHMORE MINERALS CORPORATION – ROCA HONDA (SEPTEMBER 2010)**
- **URANIUM ENERGY CORPORATION – GRANTS RIDGE (JANUARY 2011)**