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:

• NRC’s Responsibility
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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$^2$/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
• 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
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)