EPA'S
Clean Air Act Requirements:
Uranium Mill Tailings
Radon Emissions Rulemaking

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Presentation to Navajo
Uranium Contamination
Workshop
November 3, 2009

Overview

- EPA regulatory requirements for operating uranium mill tailings (Subpart W)
- Status update on Subpart W activities
- Outreach/Communications

EPA Regulatory Requirements for Operating Uranium Mill Tailings (Clean Air Act)

- 40 CFR 61 Subpart W requirements apply to facilities licensed to manage uranium byproduct materials during and following the processing of uranium ores

- Limit on number/size of impoundments

  - Phased Disposal – lined impoundments no more than 40 acres, no more than two in operation at any time

  - Continuous Disposal – tailings are dewatered and immediately disposed, no more than 10 acres uncovered at any time

EPA Regulatory Requirements for Uranium Operations (Clean Air Act)

Subpart W Requirements (continued)

- Radon emission standard of 20 pCi/m^2/sec -- annual reporting requirements, notification in advance of testing

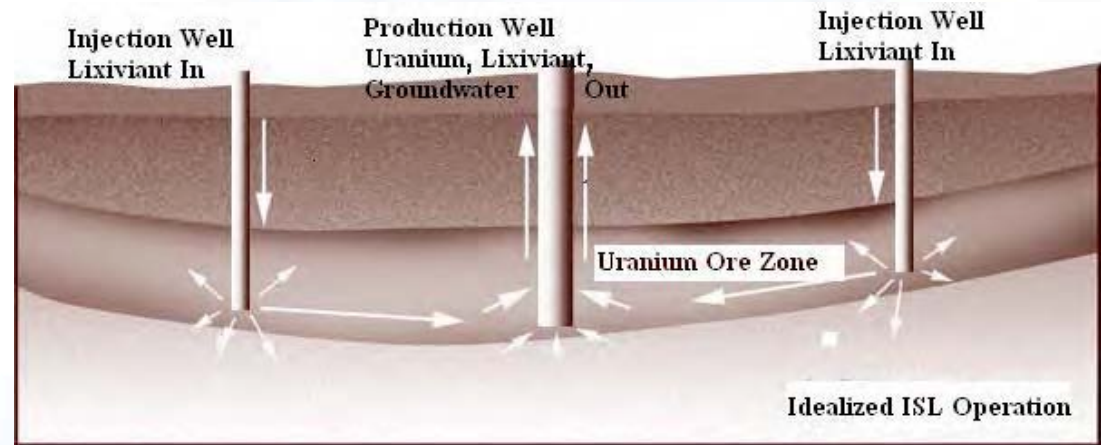- The radon emission standard is for existing sources only (existing before 12/15/89)

- See

  http://www.epa.gov/radiation/neshaps/subpartw/index.html for more information

Uranium Recovery Methods

Conventional methods – Surface mill

Rio Algom Ambrosia Lake mill, New Mexico, USA (1958-1985)

Unconventional methods-- In Situ Leaching (ISL)

Injection Well Lixiviant In

Production Well Uranium, Lixiviant, Groundwater Out

Injection Well Lixiviant In

Uranium Ore Zone

Idealized ISL Operation

Unconventional methods-- Heap leaching

Solution Sprinklers
Ore Heap
Leaching Pad
Pregnant Pond
Uranium Mill
Lixiviant
Yellowcake

INJECTION WELL
PRODUCTION WELL
PRODUCTION ZONE MONITOR WELL
OVERLYING AQUIFER MONITOR WELL
UNDERLYING AQUIFER MONITOR WELL

PRODUCTION ZONE MONITOR WELL RING
MINING UNIT PROJECTED LIMIT
500' TYPICAL
500' MAX
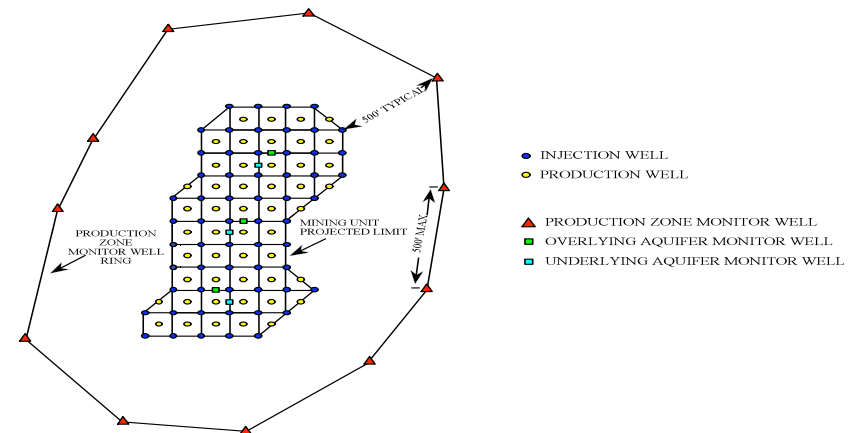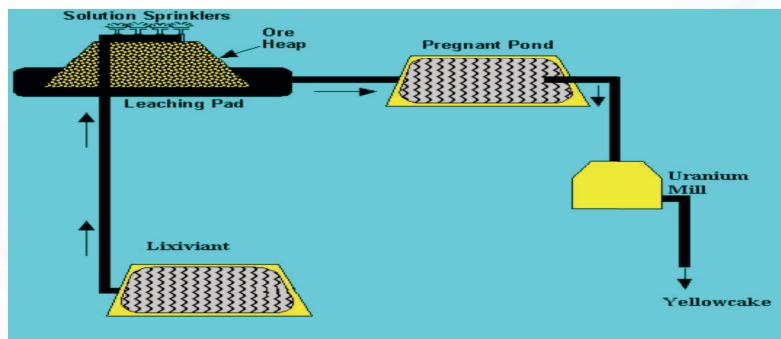
Uranium Mill Tailings   In-Situ Leach Impoundments

Uranium Recovery Facility Applications/Restarts/Expansions

- Total applications already received (8/2009) by NRC – 8
- Total new applications expected – 17
- Total restart/expansion applications – 9

- Wyoming – 15
- New Mexico – 4
- Nebraska - 4
- South Dakota – 1
- Arizona – 1
- Nevada – 1 (?)

Status Update on Subpart W Activities

Status of Subpart W Review Activities

- Per Clean Air Act Amendments of 1990, EPA is obligated to review/revise Subpart W

- A workgroup has been established
  - Members from across the Agency
  - Represent ORIA, OGC, ORD, OSWER, OECA, OPEI, OW, Regions 6, 7, 8 and 10

Status of Subpart W Review Activities

- We are conducting historical research on the risk assessment work originally done in support of the 1989 standard

- We have begun a survey of existing technologies

- Office of Enforcement and Compliance Assurance has sent information request letters to numerous uranium recovery facilities

- Answers better inform the workgroup of the universe of facilities, and the types of uranium recovery processes that exist

- We have also requested that ISL facilities provide radon flux data from their evaporation ponds

Communications Plan

- EPA is committed to maintaining an open and transparent rulemaking process
- Objectives:
  - Inform stakeholders of potential changes in EPA's Subpart W requirements
  - Give stakeholders an opportunity to provide feedback
- Audiences:
  - Tribes
  - States
  - Offices/Regions within EPA
  - Other Federal Agencies: NRC, DOE, BLM, others
  - Mining companies

Communications Plan

- Strategies:
  - Develop clear, compelling messages and materials to explain the potential amendments to Subpart W
  - Educate stakeholders by using communications tools to provide easy-access to information
  - Work with stakeholder representatives and EPA regional staff to identify additional audiences and methods of dissemination
  - Communicate a timely and consistent message to stakeholders (Industry, Public, Tribes, States, other government agencies)

Outreach

- Holding stakeholder meetings to inform and receive input
    - Canon City, CO – June 2009
    - Rapid City, SD – October 2009
    - Gallup, NM – November 2009
    - Blanding, UT – Spring 2010
- Establishing a dedicated web site to act as an information outlet
- National webinar planned for early 2010
- Establishing quarterly conference calls to answer stakeholder questions

Thank you for your attention