



# ***EPA Update: NESHAP Uranium Activities***

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# Overview

- General requirements applicable to Subpart B and Subpart W
- EPA regulatory requirements for underground uranium mining operations (Subpart B)
- EPA regulatory requirements for operating uranium mill tailings (Subpart W)
- Status update on Subpart W activities
- Some Conclusions



# General Requirements Applicable to Subpart B and Subpart W

- Subpart B and W facilities are subject to the general requirements of 40 CFR 61.01 - .19
  - Approval to operate
  - Application for construction and modification
  - Notification of startup
  - Compliance with monitoring/maintenance requirements
- Subpart W facilities are subject to the design and ground-water requirements of 40 CFR 192.32(a)



# **EPA Regulatory Requirements for Underground Uranium Mining Operations (Subpart B)**



# EPA Regulatory Requirements for Underground Uranium Mining (Clean Air Act)

- 40 CFR 61.20, Subpart B regulations limiting radon emissions from underground uranium mines include:
  - Applies to 10,000 tons/yr ore production, or 100,000 tons/mine lifetime
  - Ambient air radon standard not to exceed 10 mrem/yr to any member of the public-compliance determined with COMPLY-R, or equivalent, approved code
  - Annual reporting requirements – by 3/31 each year, emissions calculations for the year, monthly if not in compliance
  - Record keeping requirements: Five years



# **EPA Regulatory Requirements for Operating Uranium Mill Tailings (Subpart W)**



## 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 (after 12/15/89) during and following the processing of uranium ores
  - Preconstruction approval, 40 CFR 61.07
  - Impoundment construction and operation requirements in 40 CFR 192 cross referenced in Subpart W
  - 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<sup>2</sup>/sec -- annual reporting requirements, notification in advance of testing
- The radon emission standard is for existing sources only (existing before 12/15/89)
- All operators must comply with 40 CFR 192.32(a)  
See <http://www.epa.gov/radiation/neshaps/subpartw/index.html> for more information





# Status Update on Subpart W Activities



# Status of Subpart W Review Activities

- Per Clean Air Act Amendments of 1990, EPA is obligated to review, and possibly 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
  - Workplan, Communications Plan, Analytic Blueprint have been completed, basically, how are we going to approach the task



# 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



# Status of Subpart W Review Activities

- We are researching if Method 115 continues to be current, or whether other methods could be employed for monitoring and analysis of radon flux
- We are planning to work with all stakeholders in reviewing/revising the standards
- The Agency continues to believe that conventional tailings piles, certain evaporation ponds from ISL operations, and heap leach piles, are subject to the requirements of Subpart W
- We base our decision on a review of existing regulatory language



# Applicability of Subpart W (Clean Air Act)

- 40 CFR 61.250 –

“The provisions of this subpart apply to owners and operators of facilities licensed to manage uranium byproduct materials during and following the processing of uranium ores, commonly referred to as uranium mills and their associated tailings. This subpart does not apply to the disposal of tailings.”



## Subpart W Definition of Uranium Byproduct Material

- 40 CFR 61.251 (g) –

*“Uranium byproduct material or tailings means the waste produced by the extraction or concentration of uranium from any ore processed primarily for its source material content. Ore bodies depleted by uranium solution extraction and which remain underground do not constitute byproduct material for the purposes of this subpart.”*



# EPA Regulatory Requirements for Uranium Operations (Clean Air Act)

- What is an impoundment (per 40 CFR 192.32, which cross references 40 CFR 260.10)?
  - “...a facility or part of a facility which is a natural topographic depression, man-made excavation or diked area formed primarily of earthen materials (although it may be lined with man-made materials) which is designed to hold an accumulation of liquid wastes, or wastes containing free liquids, and which is not an injection well. Examples of impoundments are holding, storage, settling, and aeration pits, ponds and lagoons.”



# Some Conclusions

- We are in the process of reviewing and possibly revising Subpart W
- Owners/operators of ISL facilities that utilize evaporation ponds containing byproduct material produced by the extraction or concentration of uranium should assume you are subject to the requirements of Subpart W
- We appreciate the assistance of all stakeholders to inform and enable us to craft a protective and enforceable rule.





# Questions?

