Review of 40 CFR 61 Subpart W

- National Emission Standard for Hazardous Air Pollutants (NESHAP) for radon emissions for operating mill tailings

- Review began after receiving Notice of Intent to Sue (NOI) by two Colorado environmental groups
  - Based on EPA’s alleged failure to review & revise regulation within ten years after enactment of Clean Air Act Amendments of 1990 (11/15/2000)
  - Plaintiffs filed suit against EPA
  - Settlement agreement reached November 2009
Existing Subpart W Summary

- Applies to radon emissions from operating uranium mill tailings
  - Radon emissions flux standard: 20 pCi/m²/sec

- After 12/15/1989, new impoundments were required to meet one of two new work practices:
  - Phased disposal – Impoundment size ≤ 40 acres
  - Continuous disposal – dewatered tailings with no more than 10 acres uncovered
  - Both must meet design, construction, ground-water monitoring standards at 40 CFR 192.32(a)

- Work practices were designed to achieve at least equivalent risk reductions as obtained by the numerical standard
Existing Subpart W, continued

- Regulation originally written with emphasis on conventional impoundments
- In Situ Leach/Recovery (ISL/ISR) extraction has become more commonplace since original promulgation
  - Does not generate significant tailings
  - Wastes containing uranium byproduct material are placed in evaporation ponds/impoundments
- ISL/ISR, conventional mill, heap leach operations expected
EPA is proposing several revisions (under authority of the Clean Air Act Amendments of 1990):

- Clearly stating that the standards apply to all units that contain uranium byproduct material. These units include, but are not limited to:
  - conventional tailings impoundments
  - evaporation ponds or other nonconventional impoundments at uranium recovery facilities
  - heap leach piles
Propose that all uranium recovery facilities comply with Generally Available Control Technology (GACT), or management practices

- Management practices incorporate existing “work practices” for conventional impoundments
- Management practices also specified for evaporation ponds and heap leach piles
- This standard requires double liners and leak detection systems per 40 CFR 192.32(a)
Proposed Subpart W Revisions, cont.

- Proposed GACT removes the requirement for monitoring radon, but still limits the amount of byproduct material that can be exposed
  - For conventional impoundments, limit tailings exposure using either phased disposal or continuous disposal
  - For heap leach piles, limit tailings exposure using phased disposal and maintain a 30% moisture content in the pile
  - For evaporation ponds, require at least one meter of liquid be constantly maintained in the pond
Proposed Subpart W Revisions, cont.

- Add definitions for:
  - uranium recovery facility
  - operation and standby
  - Conventional impoundment
  - non-conventional impoundment
  - heap leach pile

- Require the owner/operator of a uranium recovery facility to maintain records that confirm that impoundments have been constructed according to the requirements
The proposed rule was published in the *Federal Register* on May 2, 2014 (79 FR 25388)

EPA will accept comment until July 31, 2014 (90 days after the proposed rule was published)

A public hearing will be held during the comment period
EPA plans to revise its regulations for uranium and thorium milling

Regulatory changes will focus on groundwater protection, restoration and stability at ISR sites

Revisions are currently undergoing interagency review

Anticipate Federal Register publication this fall with public hearings soon thereafter
40 CFR 192 - Background

- Issued under authority of Uranium Mill Tailings Radiation Control Act (UMTRCA) of 1978
- Establishes standards protective of public health, safety and the environment for active and closed mill sites
- Addresses residual radioactive material at Title I (inactive) sites and byproduct material at Title II (active) sites
- Issued in 1983; last revised in 1995
ISR now dominant form of uranium extraction in the US

ISR directly alters groundwater chemistry

Current standards lack explicit provisions for ISR operations

NRC and Agreement States use license conditions to protect public health, safety and the environment

We plan to propose an additional subpart focused on uranium in-situ recovery
40 CFR 192 – Primary Objectives for Rule Revisions

- Ensure that background groundwater conditions are adequately characterized
  - ... with enough detail to provide the data necessary to help determine when groundwater restoration has occurred

- Align groundwater standards in the revised rule with current regulatory criteria

- Ensure that groundwater is stable and likely to stay that way
  - ...by providing detailed requirements regarding restoration metrics and post-restoration monitoring
Proposal submitted to OMB for Executive Order 12866 review in late April

We expect the proposal will be published in the *Federal Register* this fall

Comments will be accepted for 90 days after publication date