



***U.S. EPA Regulations Review  
Update:  
Subpart W NESHAPS (40 CFR 61)  
Uranium and Thorium Mill Tailings  
(40 CFR 192)***

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**NRC/NMA Uranium  
Recovery Workshop  
May 2, 2012**

# 40 CFR 61 Subpart W Summary

- Applies to radon emissions from operating uranium mill tailings impoundments as of 1989.
  - Radon emissions flux standard: 20 pCi/m<sup>2</sup>-sec.
  - Currently, 3 impoundments qualify
- After 12/15/1989, new impoundments were required to meet one of two new work practices.
  - ✓ Phased disposal – Impoundment size(2)  $\leq$  40 acres.
  - ✓ Continuous disposal – dewatered tailings with no more than 10 acres uncovered.



# 40 CFR 61 Subpart W Summary

- 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.



# Status of 40 CFR Part 61, Subpart W

- Proposed Regulation underwent Final Agency Review in April 2012.
- Package to be sent soon to OMB.
- OMB review is expected to take ~ 90 days.
- EPA will address any comments, questions or changes requested by OMB.
- Proposal in Federal Register after OMB review.



# Subpart W Outreach

- ✓ Established a dedicated web site to act as an information outlet.
- ✓ <http://www.epa.gov/radiation/neshaps/subpartw/rulemaking-activity.html>
- ✓ Site contains:
  - current and historical rulemaking documents,
  - presentations,
  - contact information,
  - useful links.



# Subpart W Outreach

- ✓ Quarterly conference calls to answer stakeholder questions.
- ✓ Next call – July 5, 2012 – 11:00 AM EDT.
- ✓ Call in number is 1-866-299-3188.
  - conference code 2023439563#
- ✓ Public participation by e-mail:
  - [subpartw@epa.gov](mailto:subpartw@epa.gov)



# 40 CFR 192 Rulemaking

- EPA plans to revise its regulations for uranium and thorium milling
- Schedule for major milestones:
  - ✓ 2012 proposal
  - ✓ Anticipate public hearings in early 2013



# Focus of 40 CFR Part 192 Review

- Existing regulations and standards lack explicit provisions for in-situ recovery (ISR) facilities
  - ✓ ISR now principal means of uranium recovery in the U.S.
- Regulatory changes will focus on groundwater at ISR sites
- Science Advisory Board provided recommendations to EPA
  - ✓ Documents are available to the public at <http://epa.gov/sab/>





# SAB Charge Areas

- (1) monitoring network design;
- (2) effective baseline monitoring;
- (3) restoration-phase monitoring to define trends in groundwater constituents and ultimate arrival at stability; and
- (4) data requirements and use of appropriate statistical techniques for reliable conclusions.



# Science Advisory Board Recommendations (examples)

- Identify groundwater constituents and parameters pertinent for monitoring, not limited to those with regulatory limits but also including non-hazardous constituents that can affect the behavior of, or serve as surrogates for, constituents of interest
- Carefully qualify the meaning of “return to pre-operational groundwater quality”
- Collect sufficient pre-operational groundwater monitoring data to support reliable post-operational decision making



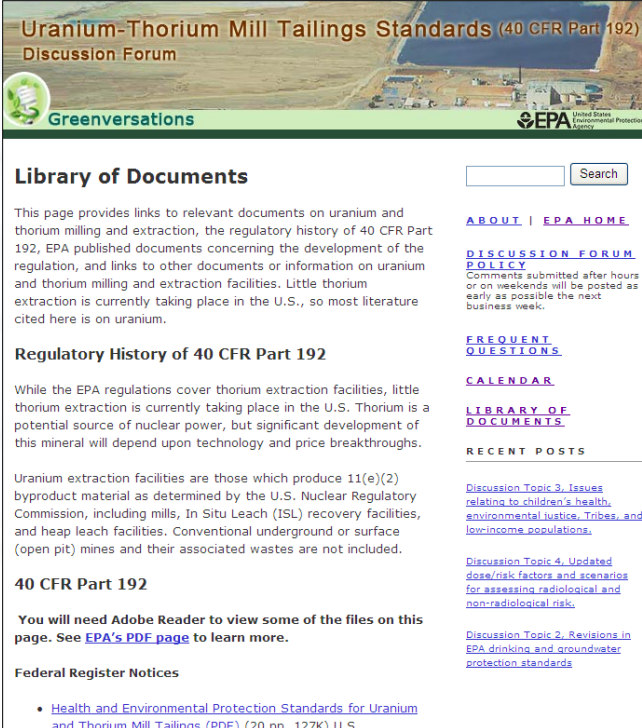
# Additional Information

Background documents available on internet:

<http://blog.epa.gov/milltailingsblog/library-of-documents/>

Public participation by e-mail:

[Uranium.Review@epa.gov](mailto:Uranium.Review@epa.gov)



The screenshot shows the 'Uranium-Thorium Mill Tailings Standards (40 CFR Part 192) Discussion Forum' page. The header includes the EPA logo and the title. Below the header is a search bar and a navigation menu with links for 'ABOUT | EPA HOME', 'DISCUSSION FORUM POLICY', 'FREQUENT QUESTIONS', 'CALENDAR', 'LIBRARY OF DOCUMENTS', and 'RECENT POSTS'. The main content area is titled 'Library of Documents' and contains three sections: 'Regulatory History of 40 CFR Part 192', '40 CFR Part 192', and 'Federal Register Notices'. The 'Regulatory History' section explains that while EPA regulations cover thorium extraction facilities, little thorium extraction is currently taking place in the U.S. The '40 CFR Part 192' section states that uranium extraction facilities produce byproduct material as determined by the U.S. Nuclear Regulatory Commission, including mills, In Situ Leach (ISL) recovery facilities, and heap leach facilities. The 'Federal Register Notices' section includes a link to 'Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings (PDF) (20 pp, 127K) U.S.'.

**Uranium-Thorium Mill Tailings Standards (40 CFR Part 192) Discussion Forum**

Greenversations EPA

**Library of Documents**

This page provides links to relevant documents on uranium and thorium milling and extraction, the regulatory history of 40 CFR Part 192, EPA published documents concerning the development of the regulation, and links to other documents or information on uranium and thorium milling and extraction facilities. Little thorium extraction is currently taking place in the U.S., so most literature cited here is on uranium.

**Regulatory History of 40 CFR Part 192**

While the EPA regulations cover thorium extraction facilities, little thorium extraction is currently taking place in the U.S. Thorium is a potential source of nuclear power, but significant development of this mineral will depend upon technology and price breakthroughs.

Uranium extraction facilities are those which produce 11(e)(2) byproduct material as determined by the U.S. Nuclear Regulatory Commission, including mills, In Situ Leach (ISL) recovery facilities, and heap leach facilities. Conventional underground or surface (open pit) mines and their associated wastes are not included.

**40 CFR Part 192**

**You will need Adobe Reader to view some of the files on this page. See [EPA's PDF page](#) to learn more.**

**Federal Register Notices**

- [Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings \(PDF\) \(20 pp, 127K\) U.S.](#)

**ABOUT | EPA HOME**

**DISCUSSION FORUM POLICY**  
Comments submitted after hours or on weekends will be posted as early as possible the next business week.

**FREQUENT QUESTIONS**

**CALENDAR**

**LIBRARY OF DOCUMENTS**

**RECENT POSTS**

[Discussion Topic 3, Issues relating to children's health, environmental justice, Tribes, and low-income populations.](#)

[Discussion Topic 4, Updated dose/risk factors and scenarios for assessing radiological and non-radiological risks.](#)

[Discussion Topic 2, Revisions in EPA drinking and groundwater protection standards](#)



# Summary

- EPA plans to revise existing regulation and standards
- Revisions focused on ISR issues
- Expect proposal in late 2012
- Public hearings likely in early 2013

